Plate I.—THE CORRECT POSTURE.

BILLIARDS EXPOUNDED

TO ALL DEGREES OF AMATEUR PLAYERS

BY

J. P. MANNOCK

WRITTEN AND ARRANGED BY S. A. MUSSABINI

VOLUME I

THE ELEMENTARY SIDE OF BILLIARD-PLAYING

ILLUSTRATED

PREFACE

A S one who has publicly figured as a tutor of billiards for the past twenty years, with, I hope, no inconsiderable amount of success, I wish now, in another form, to place before the tens of thousands of amateur players in this country the lines whereon I consider the royal road to proficiency may be entered. The scarcity of good players will in itself show that billiards is not the easiest game to take up. In my opinion it equals chess in depth of detail. As an indoor pastime it soars above all other games, combining as it does mental with physical exercise. With all its fascination and tremendous list of devotees—for who does not play or try to play billiards ?—the general run of ability amongst amateur players is of a surprisingly low quality. In other recreations, professional and amateur form is pretty well on a par. If in a few instances the former show superiority, the cause can be traced to the extra time and training they devote to their particular branch of sport. The billiard professors, of course, have the same favourable aid to excellence; but this in no

way accounts for their amazing degree of skill as compared with the limited scoring powers of the amateur.

Take amateur championship form and analyze it by the means of the never-failing average test. What do we find? Why, that even the second and third rate professionals can give the best amateur we have ever known something like a third of the game! As for that ubiquitous person the ordinary player—the man who occasionally soars to the realms of 20 or 30 breaks as the result of many years of constant playing—he is a tyro of the most pronounced description. He could not be handicapped with the said second or third rate professionals to have a chance in a game of any length. Folks look upon the stars of the billiard firmament as God-gifted players. But little they know of the years and years of assiduous practice, the careful observation, trained to the degree of the most powerful magnifying glass, the set methods and positions that make for their proficiency. I say without hesitation that billiards is the most mechanical of all games. Ingrain the true principles of it into any one possessed of the ordinary physical gifts, and, granted that the precepts are followed by extensive practice, a capable player will be the inevitable outcome.

The real reason of the lamentable want of ability among amateur cueists is only too apparent. Nine out

of ten have started out on the wrong tack, and steadily
pursued it. The greatest fault is in the position taken
at the table prior to the stroke. Another is the exceed-
ingly unintelligent fashion in which the game is dealt
with. Billiards should be an exercise of the mind as
much as of the body. But how often can this truthfully
be said ? Instead of as in the old days, when it was
looked upon askance, proficiency in billiards should, in
these more enlightened times, be regarded as a valuable
accomplishment. The science of the game provides
most instructive and, at times, abstruse little problems
in dynamics, and of that greatest of all charmers—rotary
motion.   Further, good billiard-playing demands a
control over the emotions. Irritability and excitability
will infallibly depreciate a player's effectiveness. The
more patient and long-suffering one is in the hour of
adversity on the billiard-table, the greater his prospects
of making a good player.

Having said so much, I should like before concluding
to call attention to the long-standing assertion that
"Billiards cannot be learnt from a book!" There have
been many and many books written on the game.
Some have earned good opinions, but the majority have
entirely failed in their mission of providing readable
and sound instructional matter. In the bulk, the
literature of Billiards has been of the opportunist order.
Genuine works have suffered in consequence. "Billiards

Expounded" may meet with a similar fate. Though, whether or no, I take to myself the idea that up to date it is the most serious and genuine attempt to show the theory and practice of the Billiard art in book form.

It was my good fortune to secure as a collaborator Mr. S. A. Mussabini, a well-known writer on the game of Billiards. He has acted as a sort of "Boswell" to me; for all that is recorded in "Billiards Expounded" comes from his pen as a condensation and lucid arrangement of the precepts and principles I have from time to time put before him. How well he has performed his task the reader can now judge.

<div align="right">JOHN PATRICK MANNOCK.</div>

N.B.—ALL THE STROKES SET FORTH ON THE DIFFERENT DIAGRAMS ARE ARRANGED TO BE PLAYED WITH IVORY BALLS. IN EACH THE COURSE OF THE CUE-BALL IS INDICATED BY A CONTINUOUS LINE, THUS ————, AND THE RUNNING OF THE OBJECT-BALLS BY AN INTERSECTED LINE, SO — — — —.

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BILLIARDS EXPOUNDED

CHAPTER I

THE GROUNDWORK OF PLAYING—THE GRAMMAR OF BILLIARDS

IF there is one thing that strikes one more than another when watching a billiard display by professional experts, it is the fluency of the performers' movements of the cue and the unstudied grace of their pose at the table. Depend upon it that style goes a long way towards ensuring proficiency in the gentle art of billiards. A secure position of the feet, the "bridge" hand, the body, and the upper part of the wielding forearm, with the head so lowered that the eyes may glance along the line of the cue to the point you are aiming at, are absolutely vital necessities ; without them playing billiards is a sort of "ploughing the sands," a mere waste of effort and time.

POSITION AT THE TABLE.

Ask the expert player what is the first thing that the novice should learn to acquire. If he knows his business, he will tell you that it is a correct posing of

the body. This can only come with a secure and comfortable planting of both feet. Keep them tight to the ground. Shape up for the shot by throwing out your " bridge " arm to its full extent, for it helps so much in maintaining a firm position. Sight along your cue as you would along a rifle-barrel ; and, above all, stand firmly planted on both feet. Lie down to your work, for it is only the incompetent who stand semi-erect when making the stroke or taking their aim. Placing your eyes near to the plane of the table helps wonderfully in showing the angle, not to mention the greater clearness of outline on the target or object-balls. Take the most gifted players that the history of the game can point to. Take John Roberts, the father and the son, William Cook, W. J. Peall, William Mitchell, down to the lights of the present day—Charles Dawson and H. W. Stevenson. All have had their own peculiar mannerisms, but not one of them was there who did not adhere to the elementary principles of billiards of which I have spoken. The steadiest of poses, the " bridge " arm well thrown out, taking the weight of the upper part of the body, the shoulder of the " bridge " arm pointing straight in the direction of the ball you are aiming at, the cue held in a perfectly straight line from butt to tip (unless it is passing over a cushion, when the head of it is perforce depressed in more or less degree, according to the distance that the cue-ball is away from the cushion), the player's head lowered until but some three or four inches intervene between his chin and the cue, and his body placed as close to the table as possible to further ensure its gaining any support that may be so derived. Only the

hand and arm holding the cue should move, and then only from the elbow downwards. The upper part of the arm is practically stationary, leaving the forearm to alone make those piston-rod, pendulum movements which lay the foundation to the stroke proper. And before disturbing their set position they go right through the stroke. Every part of their bodies has been motionless, as far as they could possibly keep it so, leaving the forearm above the wielding hand to do all the work at the bidding of the eye.

Emphasis must be put upon the advice to keep both feet firmly planted to the ground in the easiest and most comfortable style that comes naturally to the player; for if the supports of the body shift in the slightest degree, so does the body too, and the aim is lost. Being asked to lie over to one side, as it must, to make the stroke, the body resents the proceeding. It is taken from its natural perpendicular, and will surely get back there unless some means are adopted to hold it in the position the stroke demands. For a sound position is the basis of all good billiards. Without it you strike the cue-ball in every way excepting that in which you desire to—the very worst of faults. As in rifle-shooting, unsteadiness distorts the aim. I mention rifle-shooting because there is a remarkable similarity about it to billiard-playing. The billiard cue acts much the same part to the billiard-player as the rifle does to the rifle-shot, and it should be sighted in much the same fashion. This can be done by running the eye along the line of the cue to the objective point, and to obtain which a lowering of the upper part of the body is in-dispensable. The lower the player gets to the stroke

the better will his sight of the object-ball be. Watch
the great professional cueists, and notice how they get
down to the stroke. The longer the range of it the
more is this necessary. Greater care has then to be
exercised in the aim than if the object-ball is close by
you. Thus, when you see the skilled player executing
the nurseries of close cannons, you will observe that he
is standing nearly erect. The balls are right under-
neath him, and there is no need for him to get down to
his work. But take the object-balls a few feet further
away from him. Now you find him bending low to his
cue. He gets his eyes as nearly as he can comfortably
do so on a line with the plane of the table. By so doing
the contour of the object-ball is more sharply thrown
up to him. You have only to reflect on the number of
times you yourself have, or you have seen others do it
times out of number, stooped down, catching hold of
the cushion woodwork, and have tried to assure your-
self by this, the best, means that a position needing a
very thin shot is possible to be scored from in that
way ; or perhaps it has been that you have wanted to
ascertain whether an intended winning hazard of the
almost straight-away variety is really so, or if a little
deviation from the straight line is required ; or, further,
it may be that you have been uncertain as to the balls
" touching " when the cue-ball has been lying very near
to an object-ball. Then, also, it might be that you
were undecided in respect to a ball being in or out of
baulk, or whether it was a " line-ball." Anyhow, what-
ever the incident, I don't doubt that you will recall your
stooping down to get your eyes on a level with the
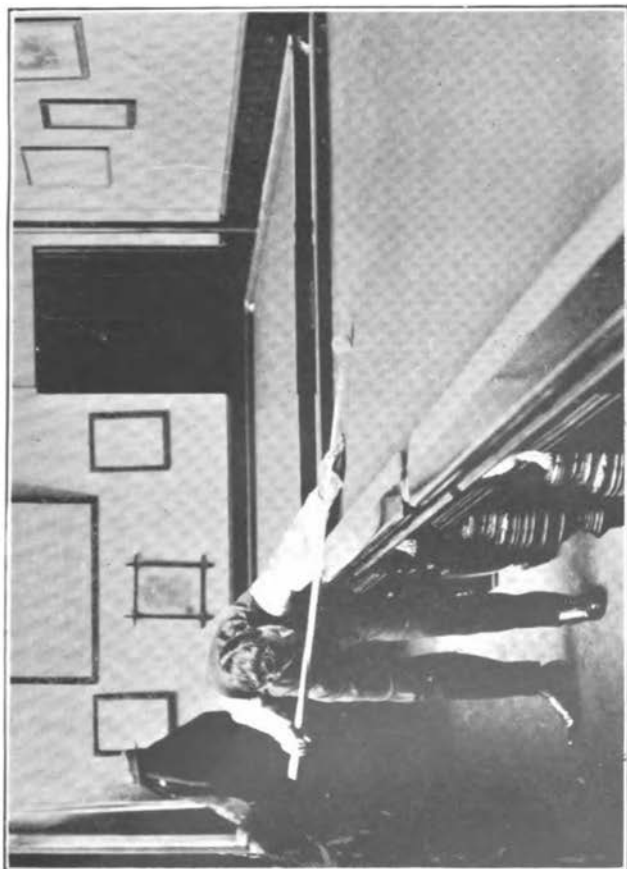cushion-line to best satisfy yourself as to the different

Plate 11.—THE WRONG POSITION.

points you were not sure of. You have gone the best way to obtain a perfect scrutiny of the balls, for their rims are more markedly defined than if viewed from aloft—that is to say, from the semi-erect position adopted by most amateur players, which, too, has been recommended in more than one work on billiards.

Now, if this low bending down to the table position is helpful in the cases that I have mentioned, does it not stand to reason that it will be doubly helpful in the matter of taking aim? Instead of standing half-upright and craning the head forward in the most uncomfortable and most awkward-looking style imaginable, it is ten times easier and ten times less tiring, and will eventually bring ten times better results, to bend down over the cue in the half-bowing, feet-firmly-planted posture that is the chief characteristic of the leading professional exponents of the game. It has rhyme and reason on its side, to say nothing of the most practical experts of this and any other billiard generation. For curiosity's sake alone, put a ball upon the table—say on the pyramid spot—and play at it from the baulk half-circle, trying to hit it thinly to cannon upon a ball placed somewhere behind it. First of all, stand at the table in your ordinary way—usually, with amateurs, a much more erect one than it should be. Try the stroke half a dozen times. Then turn to the professional way of standing at the table and taking aim, bending low down over the cue and running the eyes along it, with your chin some three or four inches above it. Remark which style helps you the most.

This lowering of the head and shoulders to permit of the eye taking in the perspective of the shot that is

to be made also conduces to steadiness of position. Above all, I think the most striking lesson was afforded by John Roberts. Quicker in delivery than any of his contemporaries, there was something about his execution that reminded one of a crack pigeon-shot on his second barrel. No sooner did he sight the stroke than he struck his ball. By a rapid combined movement his head and shoulders dropped, his eyes momentarily, as he took aim, adopting that peculiar sideways glance of the rifle-shot.

The right-hand player will find his aim shift over to the right of the point that he has made his target if his stand is not firm ; but the left-handed player will turn the ball further to the left of the object than he intended if he too fails to adopt a secure foothold. A plain reason for these deflections of the aim taken is that they occur in the way I have stated. The right-hand player has to lean his body over to the right, and the left-handed over to the left to enable a sight to be had along the line of the cue and to assist the wielding arm. Thus, in the respective cases, the whole weight of the body is thrown on to the right or left leg. The great fault of the amateur player is that he does not give the necessary support to the leg which is bearing more than its fair share of the weight; for, as this quickly tires under the added burden, the body imperceptibly sways back towards its accustomed perpendicular—it never nearly approaches it, of course, but goes back sufficiently far to cause one to make a thinner or thicker contact with the object-ball than the aim was made at. The right-handed player will find himself continually catching the object-ball more thinly to its

right side and more thickly on its left side when try-
ing half-ball strokes. This tendency to have your aim
spoiled by the swaying back of the body can only be
counteracted by the secure planting of both legs.   Glue
them to the floor, with the one not bearing the body's
weight acting as a sort of prop to the other.   Let it be
sent out slightly in advance of the real weight-carrier,
and held tight to the floor and kept there until the
stroke is finished.   This action will be found to ease the
weight thrown on to the one leg in a very considerable
degree, and thus to help the body to keep the position
it has assumed in the steadiest manner possible.

Let the body lean well over towards the cue.   It
will help considerably in giving freedom in the delivery.
Notice the pose of the body on Plate III.   To stand too
upright brings a cramped cue action and a great restric-
tion of stroke-power.

As in other matters, there is an exception to the
general rule of position at the table.   Very tall men,
whatever they may gain by their extra length of reach
—no inconsiderable advantage—find it exceedingly
difficult to bend sufficiently to get a perfect focus along
the cue.   I recommend in such cases that the player
shall stand with his legs wide apart.   This will be found
to bring the head much nearer to the table than the
ordinary position does.   The "bridge" hand should be
thrown out in a line with the centre of the body.   Thus
a perfect tripod, a guarantee of the solidity of the
position, will be formed.

THE "BRIDGE."

Equal in importance to a secure stand at the table
is the formation of the "bridge" hand, whether lying out
on the bed of the table, above the cushions, or over a
pocket. Solidity is the great thing to strive at ; for
just as any wavering of the body will distort the aim,
so will a yielding, shaky "bridge."   Few amateurs know
this.   Some stand well at the table, but very, very few
make even a passable "bridge."   All the merit of the one
is nullified by the drawbacks of the other.   And it cannot
be too strongly impressed in the minds of my readers
that, as much as a railway or any other bridge is
expected to be a model of solidity, planted immovably
on its pillars, so should the billiard-player's "bridge" be.
If it rocks at all it throws the cue away from the taken
aim, just in the same way that a movement of the body
will do.   The ball of the thumb is the "bridge" hand's
chief support.   Press it to the table, firmly, yet not
heavily.   Turn the four fingers slightly away from the
thumb, keeping them somewhat apart, using the tips
as their support.   The thumb should be closed against
the hand, leaving *the upper joint of it to support the cue*
(see Plate III.).   It is a mistake to run the latter in the
broad gap between the roots of the forefinger and thumb.
The piece of loose flesh there will not let it do its work
truly.   Stick the upper knuckle of the thumb stiffly out,
and let the cue run over it.   With the raising of the butt
end of the cue the "bridge" must of necessity be raised.
Occasionally circumstances will not permit of the ball of
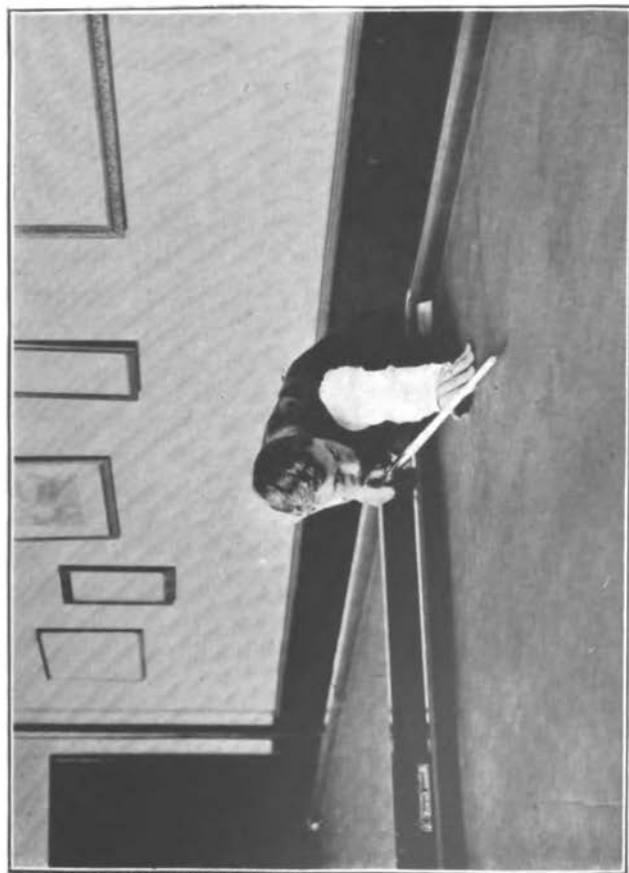the thumb being laid upon the table; then the four fingers

Plate III.—SHOWING A FIRM "BRIDGE," THE POISING OF THE BODY OVER THE CUE, AND A GOOD COMPACT POSITION.

must be pressed more firmly than ever on their tips, and spread very widely apart to provide as firm a base to the "bridge" as can be had. The wider spreading out of the fingers applies to all "bridges" which do not allow of the ordinary formation. For a hopeless combination of mistakes in the making of the "bridge" and general attitude, the reader's attention must be drawn to Plate IV. Can it be that he sees in it some reflex of his own errors?

The most awkward "bridges" to form are those which are asked for when the cue-ball is under a cushion, or close by a pocket opening. As a rule, the amateur finds his thumb a decided inconvenience, for generally in these circumstances the cue has to be shot through the forefinger and second finger. A good example of this class of stroke is given on Plate V., where the "bridge" hand rests solely on top of the cushion. The thumb is tucked inside the hand, and the fingers spread well out, as shown. Another specimen of a "cushion-bridge" is to be seen on Plate VI. Here the "bridge" hand is divided in its use of the cushion and the bed of the table for support. Again the thumb is tucked inside the hand, as it must be in all strokes to make which the cue passes between the forefinger and second finger, to form which is technically known as a "buckled bridge." There are other types of "bridges" that are brought into use when the player's ball is under a cushion or near a pocket mouth. In every case the "bridge" hand must be made as taut as possible. Sometimes a grasping of the front of the cushion will lend great assistance. But when the tips of the fingers only touch the cushion, and the thumb can

gain no support, the most reliable "bridge" one can make is the one that has the broadest base—that is, with the fingers spread widely apart. To form a "bridge" on a pocket-plate (the brasswork above a pocket) is an awkward matter for the novice. The best, and therefore firmest, "bridge" is to be made by getting the thumb under the brasswork, winding the first, second, and third fingers over it, and throwing out the little finger at an angle against the cushion woodwork. The cue passes through the first and second fingers.

There is no definite distance to be stated in respect to the amount of cue that overlaps the "bridge" hand. Every class of stroke has its defined length of cue, from the flowing, free cue thrown at a hard forcing shot down to the ticklish "screw" at short range, in which the cue-point is only an inch or two beyond the "buckled" bridge. The more force that is put into the stroke the greater the length of cue used from "bridge" hand to cue-ball. On the other hand, the more gentle the stroke the less its need. For the ordinary stroke, some ten to twelve inches of cue, according to the feeling of the player, may be used beyond the "bridge" hand. The great thing to discover is how much of it will tend towards a free cue-delivery. Too much is as bad as too little, for both will induce a cramped cue action. The happy medium of not too short and not too long is the thing to be sought for.

THE "RESTS" AND "BUTTS."

The use of the "rest," "spider-rest," half and full "butts" naturally come under the category of "bridges."

Plate IV.—THE WRONG THING ALTOGETHER; BODY, WIELDING ARM, AND "BRIDGE" BEING HOPELESSLY ARRANGED.

In all these instances the accuracy of the stroke depends entirely on keeping the instrument as steady as possible. If it moves when you are on the stroke, then, naturally, away goes the aim.   The method of holding the "rest" can be seen on Plate VII. The left hand grasps it securely to hold it stationary under the cue (not away from it, as is the usual way it is held) while the stroke is being made.   The action of the wielding hand can be more likened to an overhand thrust than anything, the cue-butt lying on the thumb, and being held above by the first and, in a lesser degree, the second finger.   The "spider-rest" is held and played over in the same way. It is brought into play when the cue-ball lies very close to an object-ball and has to be played away from it. The "bridge" of the "spider-rest" is so high that in making the stroke the cue-point descends on the cue-ball, and unless the centre of the latter is truly found, a swerving or curving action is imparted.   This has the effect of spoiling the aim, and must be allowed for.   In using the lengthy "half-butt" and lengthier "full-butt," the same method of holding it and propelling the cue is employed as in the case of the "rest."   Their extra weight, however, makes them uncertain tools to work with in any but slow and medium-pace strokes.   They throw so much power into the cue-ball, by reason of their greater driving power than the lighter ordinary cue possesses, that in forcing and "screw" shots great care has to be exercised to control its force to the required limits. " Playing behind the back " may be so cultivated as to overcome the needs of using the "rest" along the cushions and in the corners of the table, when the cue-ball is awkward to get at.   Plate VIII. shows a stroke of this kind.

HOLDING THE CUE.

In the first place, I recommend the use of a cue of about fifteen ounces in weight (half an ounce either way does not matter), and of about four feet eight inches in height. Ladies, however, will find another two ounces of weight helpful to give them some cue-power.

The cue should lie in a perfectly horizontal alignment in a loop formed by the propelling hand. The straighter the line of the cue as it is directed at the cue-ball the better will the stroke be. It should be held loosely; whether with the whole of the fingers, or one, or two, or three of them is quite immaterial. In this particular let that which comes easiest to you be your guide. Keep the cue close to the body—in fact, as closely as is consistent with the freedom of its leverage. So long as the cue is not operating over a cushion, the dead straight horizontal line of the cue from butt to tip must be adhered to. But when it has to work above a cushion, a certain depression from butt to tip must occur; how great or how little the incline of the cue at the cue-ball depends entirely upon the latter's proximity to the cushion. But whether it lies in a horizontal plane, or the butt be raised, the cue should be thrown in the most level line possible at the cue-ball. To get it out of the straight line is to court disaster at every stroke. " Cross-cueing," that is, failing to keep the butt end of the cue straight behind the tip as it makes the strokes, is the worst of errors.

To guarantee the cue being held correctly, it should be worked under the player's eyes and wielding arm.

Plate V.—MAKING A "BRIDGE" ON TOP OF A CUSHION.

Plate III. will provide a nice illustration of this, the proper position. The body is so bent over to the right that the player's head is poised right over the cue, the latter lying between the eyes, so to speak. The arm and hand holding the cue stands perpendicularly above it. This position is so compact, and places the cue so well under the body, that a line drawn straight through the centre of the elbow of the wielding arm, down between the player's eye, should reach anywhere along the line of the cue. This entire position, shown on Plate III., is an exact replica of Plate I., excepting that an end-on instead of a sideways view is to be had, and that nothing of that important particular of a perfect stand at the table, the disposal of the legs, is to be seen.

The worst habit that one can fall into in holding the cue is to throw the wielding arm away from underneath the forearm and shoulder, as shown on Plates II. and IV. There have been some players who, adopting this unsightly and faulty handling of the cue, have, by dint of assiduous practice, contrived to gain a considerable measure of skill. Such a player as the great spot-stroke celebrity, W. J. Peall, handicapped by his want of height, was compelled to hold his cue in this way. But no one knows better than he that it was but a makeshift for a better method—the keeping of the hand and arm perpendicularly above the cue—which he was forced to take up. To a player less than five feet five inches in height the holding of the wielding arm and hand right above the cue is almost an impossibility. To taller men it is, however, not only possible, but a first necessity of their game. It means the easiest road to stroke-accuracy. A fair comparison may be made of pitching

a stone at a given mark.   The most accurate means will
be found to be a true underhand delivery, the forearm
and hand swinging directly underneath the upper-arm
in taking aim and delivering the stone.   The hand and
forearm are not crooked out at an awkward angle,
which only tends to make the proceeding of taking aim
ten times more difficult, if not absolutely impossible.
Apply this comparison to billiard - playing, and the
reason of my advocacy of a perpendicular alignment of
the hand and arm above the cue, as opposed to their
being thrown wide of that line, should be quite plainly
understood.

In other ways than in the sighting of it the billiard-
cue partakes of the nature of the rifle. Just as the latter
is inanimate without the necessary touches being given
to it to perform its functions, so is the billiard-cue.   The
rifle is sighted, the trigger pulled, and there ends the
shooter's office, for the rifle does the rest.   Everything
subsequently depends upon the trueness of the direction
given, in the imparting of which steadiness is the chief
essential.   The thing is quite mechanical, as the better
the shooter's eye, and the steadier he holds his rifle, so
will the result be.

With respect to the billiard-cue much the same can
be said.   The player's manipulation so controls it as to
provide the needed motive power and the proper direction.
The player may not inaptly be said to have pulled the
trigger when he delivers the cue finally at the cue-ball.
The best teachers have one stock expression for the
effect—" Let the cue do the work."   They mean that
when you have laid it in the proper alignment for the
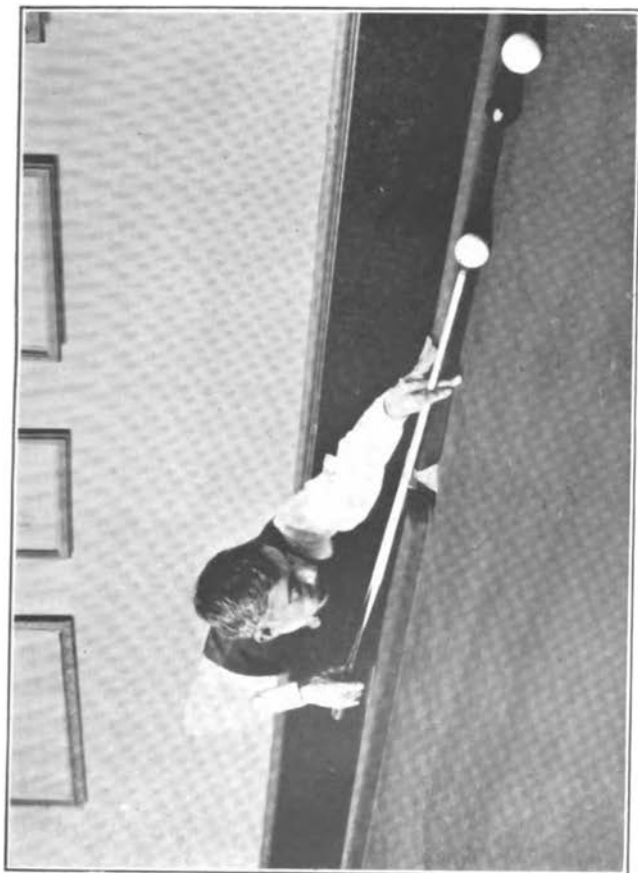intended stroke, and you wish to restrain the run

Plate VI.—A SEMI-CUSHION " BRIDGE."

of the cue-ball, as in " screw-back" or " stun" strokes (of which mention is made further on), you have done all that lies in your power. Everything else is done by the cue, and the cue alone. If you try to help the cue, the odds are that you will only spoil the stroke. Let it go forth freely and cleanly when sending it on to the cue-ball. You have, prior to this, to get it in the line that your sight tells you is the best one for the making of the stroke you are about to attempt, and once having placed it in that line, mark well that you keep it there. It is at this stage that steadiness of position is the all-important matter. The least wavering of feet, "bridge" hand, or body, and your cue is turned away from the direction you originally gave to it, and the aim and the desired stroke thwarted. For "true cueing" is the heart and soul of good billiard-playing. The cue must always be held in as straight a line from butt to tip as it is possible to do. No matter whether the stroke be at the sides, underneath, or on top of the cue-ball, or whether the cue-point is depressed, this rule holds good. Striking the cue-ball with a cross-cue is bad, and breeds miss-cues, or half-strikings, galore.

TOUCH.

One other matter that is most important, and which must not be overlooked by all who desire to acquire freedom of cue and delicacy of touch (I take it that this feeling inspires every one interested in billiards), is the bringing into play of those preparatory movements of sending the cue to and fro at the cue-ball after you have taken aim, so as to measure the strength and gain the needed fluency of your delivery. I am not pretending

that that most delightful accomplishment in billiards—
a perfect "touch" which can cope with any and every
pace which it is needed to impart to the cue-ball—can
be derived from instruction on paper, nor, for the matter
of that, by word of mouth. As a means of helping the
player who has little or no idea of impelling his ball at
the varying speeds which are almost the be-all and
end-all of the professional cueists' methods of break-
making and stroke-manipulation, I feel it necessary,
however, to point out that a mere plain, heavy delivery
of the cue without those preparatory little piston-rod
motions I have spoken of will kill any "touch" you may
possess at the outset. No solid, single cue-movement
will ever do. The ball runs as dead as ditch-water from
all such strikings, instead of carrying that lively, buoyant
motion that follows the crisp, properly regulated, and
timed stroke.

Again I must refer to the leading lights of "the
board of green cloth" for confirmation of my remarks
regarding the value of making initial movements of the
cue prior to striking the cue-ball. You have only to
closely observe them to note how rapidly and loosely
they slither the cue backwards and forwards when
shaping up for a forcing stroke. The same thing, too,
can be observed in those touchy little screw-back or
recoil shots when the cue is placed under the forefinger.
A crisp stroke is required for it, and in those snatchy
little sendings of the head of the cue to the cue-ball, and
its withdrawals therefrom, you may see the player lessen-
ing the force of the blow until he estimates that it will
be in accordance with the demands of position, or the
diminution of pace which is so often an advantage in

Plate VII.—USING THE " REST."

causing a ball to enter a pocket. The medium-pace shot does not need so much attention in this matter of preliminary movement of the cue, as it is your normal degree of striking. But even at this you would be distinctly unwise to disregard the teachings of the greatest performers, who, without exception, always set the cue at their ball at least two or three times ere prodding it. When making use of " side " you will find the preliminary cue-movement absolutely indispensable. Perhaps, in the whole array of strokes known to the game of billiards, it is only when the balls are at very close quarters—say, during the reign of nurseries of cannons—that the professional players are content to indulge in one single movement of the cue to make their stroke. One gentle tap then suffices, as often as not. But few other than a very skilled executant should try to imitate this method of striking, for it is deceptive in appearance, and generally most unsatisfactory when put into practice by the ordinary player.

Once you have laid, aimed, and given the necessary impetus to the cue, let the whole burden of the subsequent work fall upon it. Do not attempt to assist it by any arm-work or contortionist movements of the body. Remember that as soon as you have struck the cue-ball no after-workings of the cue will in any way help you. All that you are at the table for is to try to exercise a certain control over the cue by attuning it to the endless changes of positions which it has to attend to. The player has to give the cue the needed direction and motive power. He may not inaptly be said to have "pulled the trigger" when he finally delivers the cue at the cue-ball.

Striking the Cue-ball.

The impulse given, that is, the stroke upon, a ball by the cue is an interesting study. In it lies the whole art of billiard-playing. All the details of position of the body, the "bridge," etc., have been employed to bring about this, the great result, in the most accurate fashion possible. "The stroke is the thing," may well be written. From it one learns the strength of his play, and, so much more often, his weak points; for a clear conception of one's mistakes, and an analysis of them is to be obtained by a knowledge of the effects of "true cueing" and "untrue cueing." The "miss-cues," the wrong contacts with the object-balls, and suchlike happenings arise from inaccurate strokes on the cue-ball. By the "miss-cue" you are given positive proof that you have played with a "cross-cue" instead of a straight one, or that you have aimed and hit too much away to the sides of the ball. Then the wrongly made contacts on the object-balls, so different from those that your eye told you were necessary, show plainly that you have erred in some respect or another; the cue is not held in a straight line, or your body or "bridge" hand have swayed, or you have involuntarily imparted "side," and so turned the cue-ball from its proper path. These things arise from the incorrect striking of the cue-ball. To know how you make the mistakes which are part and parcel of the game of billiards is no slight step on the road to doing better. Depend upon it that the eye is seldom at fault, and that the general run of tables and

Plate VIII.—PLAYING "BEHIND THE BACK."

balls are not nearly so untrue as is the cue-delivery of the ordinary player.

Many know, but more, I should say, do not know, that there is a strikable face of the cue-ball, and that a billiard-ball has no definite centre.   Fig. 1 presents an illustration of the statement concerning a strikable face of the cue-ball.   Place a ball on the table, and for the life of you you will not be able to put the cue-tip on
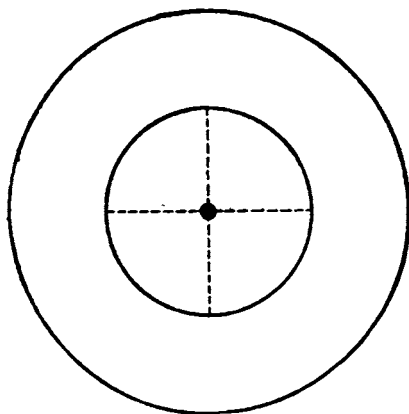

Fig. 1.—The " playable face " of the cue-ball when the cue can strike in a horizontal line.

more than a limited portion of that half of it which directly faces you.   The strikable part may be said roughly to be on an inner circle of about half the size of the ball's full circumference.   This the figure shows.   To impart " side " by hitting the ball to the left or to the right of the centre, or to " screw " by hitting below its centre, or to impart "top" by hitting above its centre, the aim must never be made too near the edge.   The

limit of the aim may be said to be one-eighth of the full ball's bulk away from the rim.   By aiming so near, even as this is, to the edge of the ball, it does not mean that the cue-tip strikes this point, as will be explained.

In only one class of stroke does the cue-tip plant its centre, and thus the full weight of the cue, on to the cue-ball.   It happens solely in the case of a contact with the exact middle of the latter—the thing that one is always trying to do, but so seldom does.   In every other stroke the sides of the cue-tip only are utilized, until at the full limit of the strikable area, at the ball's sides, on top or below, away from its centre, the bare edge of it comes into play.   That is why the professional players first turn the chalk around the edges of the cue-tip, for from there comes the snappy "side" and "screw" strokes. The edges of the cue-tip are its most serviceable force in the higher and scientific side of billiards.

To hit a ball exactly on its centre (that is to say, that centre-point which presents itself to the player) is no easy thing to do.   To begin with, the eye is set a diffi-cult task to fix upon the exact centre of the bulk of ivory in front of it.   Try the thing for yourself.   The great players try to find the ball's centre from its base where the ivory tapers down to very small dimensions.   They place the cue right at the bottom of the ball, then coming up with it, meets the centre-point, or, rather, thereabouts, for the best of them cannot guarantee mechanical accuracy in the stroke.   This low aim at the cue-ball has induced a very widespread belief that the billiard professionals invariably hit it below its centre in every class of shot.   Nothing can be further from the actual facts.   Like all other players, the plain

central ball is the one that does most of their work, and pays them best. They do not use " side " or " screw " unless compelled to.

Now, as concerning a ball having no definite centre. Its horizontal centre, or its vertical centre, may be on a different part at every stoppage it makes. What was in the previous stroke the top may next become the bottom of the ball by the use of " screw." What was its centre can easily be its side in a succeeding position. The reason is simply this—*the player makes his own centre on the cue-ball in every class of stroke.* The line of the cue defines the ball's centre for you. If the whole length of the cue can be propelled over the bed of the table, then the centre of the ball is the exact centre of its height. *But only in this particular class of stroke is this so.* As soon as the butt of the cue is raised, no matter how little, by reason of its being played over a cushion or in a *massé* or *piqué* shot (made by raising the cue almost to the perpendicular), *the centre of the ball is also raised.* Fig. 2 emphasizes these remarks. On this the cue-ball is shown out in the middle of the table ; thence take it nearer and nearer to the cushion until it lies touching there. The black line across the balls shows the gradual rise of the varying centres as the butt of the cue is raised higher and higher to send the cue-head down at the ball. In each case the horizontal centre is denoted by a black dot.

This matter of the rising of the middle of the cue-ball in every stroke, but in the true horizontal alignment of the cue, is one of the most important (really, in my opinion, the most important) in the whole theory and practice of billiard-playing. *For with the rising of the*

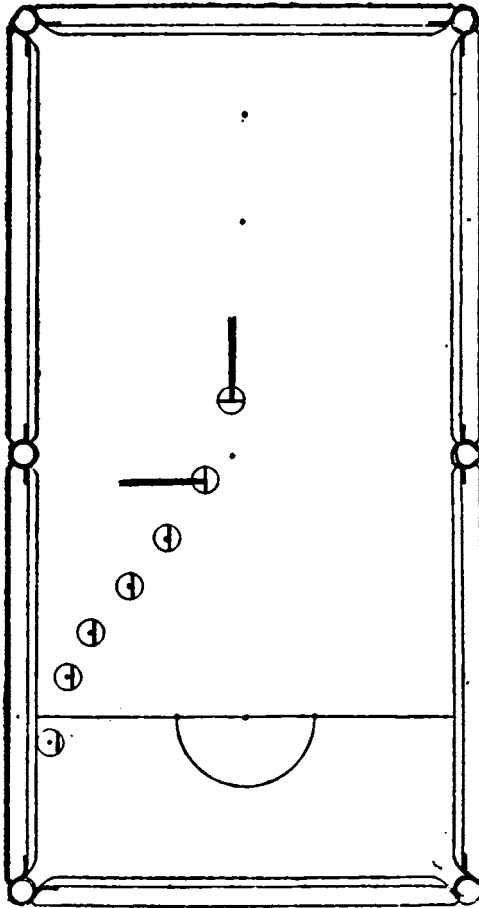*cue-ball's centre comes the rising of the strikable face of it.*

FIG. 2.—The rising of the cue-ball's "playable centre" as it comes closer and closer to a cushion.

Ignorance of this very solid fact is accountable for nine-

tenths of the "miss-cues" that occur. These come mainly as the result of attempts to "screw" a ball (that is, by hitting it below its centre) without allowing for the raising of the "strikable face." The average player tries to hit his ball right underneath (on the very same spot, in fact, as when the cue was held quite horizontally), although he has lifted the butt of his cue well above the line of the cushion. The consequence is that the cue-tip,
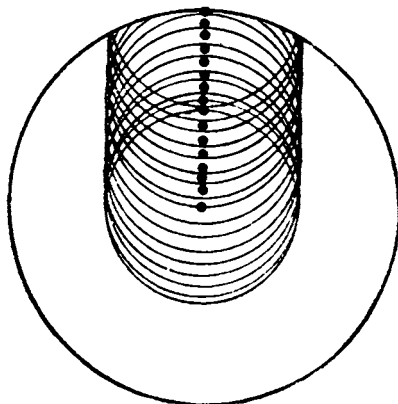
FIG. 3.—The varying "playable faces" of the cue-ball as determined by the plane of the cue-butt.

not getting hold of enough ivory, does not bite, and the "miss-cue" is inevitable. *Never forget that as soon as the butt of the cue is raised the strikable face of the cue-ball rises with it, and no stroke is more affected by this than a "screw."* Fig. 3 provides a rough idea of the various "strikable faces" of a ball. The line of the cue will tell you the latter's approximate centre, just as it does when in the horizontal plane. Divide the ball by the line at which the cue is thrown at it.

Various speed effects may be had by striking the cue-ball at different heights up and down its vertical centre-line, notwithstanding that the cue is used with the same force in each stroke. Hit above its centre, it will run faster and further than a stroke dead on its centre could make it, whilst sending the cue below its centre induces a much slower and less lengthy running still. The "topped" ball is used for high-speed strokes, or gentle "run-throughs," where the minimum of force must be applied to produce the maximum of pace ; the central stroke for the most powerful yet simple "plain-ball" effects with force or at the lowest speed ; the below-the-centre, or "bottom," to help in keeping pace down to its lowest limits. On Fig. 4 an idea of the different speeds which may be imparted to a ball by these strokes may be seen.

In striking the cue-ball, place the head of the cue as close up to it as possible. With the best players the cue-head cannot be seen over the top of the ball, or around its sides, as one looks end-on at their strokes. Almost every time they hit the cue-ball plumb on its centre, and not so very far away from there whether the stroke is a top, bottom, or side one. As they strike the cue goes right through the ball out on to the table, or an inch or two above it (when hitting a ball high up). There is none of the frantic waving of the cue aloft among the gas-shades so often seen. The cue just does the little bit of work they set it to do (that is, hit the cue-ball and follow through it in more or less degree, according to the class of stroke), and not a whit more. All that the waving about of the cue does is to, as often as not, spoil the stroke, for in course of time it becomes

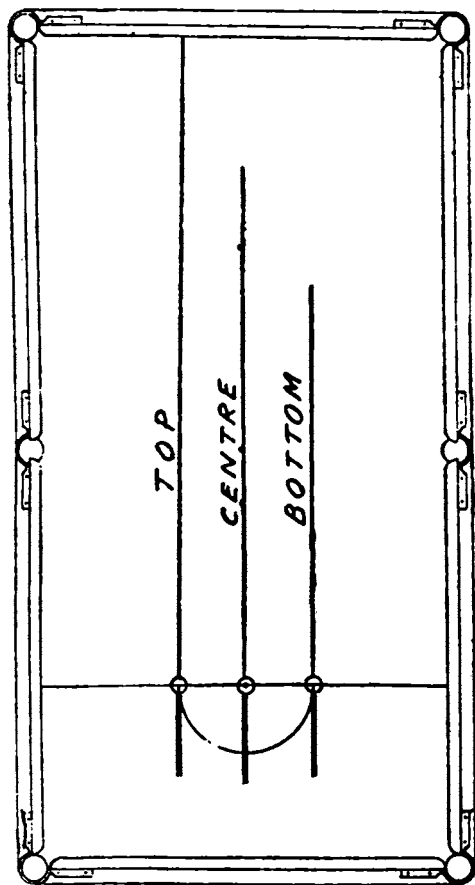a confirmed habit, which will induce the player to do everything but stand still.

FIG. 4.—An example of the differing speeds to be given to the cue-ball by exactly similar power strokes at the top, centre, and bottom of a ball.

The action of the forearm of the wielding hand is

worthy of some comment, for it plays a bigger part than many may imagine. The whole leverage given to the cue comes from the forearm, whether by the barest possible movement (in the delicate touches on the cue-ball), or at medium strength, or with the utmost power you can put into your stroke. Watch a good player, and notice the various distances covered by his forearm from the commencement to the completion of the stroke on the cue-ball. To begin with, the forearm is held perpendicularly above the cue, as shown on Plate I. The range of its swing is not extensive. It stops when the forearm meets the biceps muscle of the upper part of the arm. But within that short range every possible stroke is to be made. The full limit power shot sends the hand holding the cue right across the side of the body it is propelled from, to finish up well clear of the player's breast. The medium-pace stroke only calls for a few inches forward movement of the forearm. In the most gentle touches the motive power comes almost entirely from the wrist, without the forearm moving at all. But the longer the sweep taken by the forearm, the more freedom of delivery must there be in every class of stroke. By cultivation this freedom of cue (one of the greatest billiard gifts) can be attuned to the most delicate work. Acquire a free delivery to begin with, and let the more restrained movements of the cue come along by themselves, as they assuredly will do in course of time.

In speaking of the action of the wielding forearm, I cannot omit mention of a fact that its movements are dictated by rotary motion. Each and every time it sends the cue out to do its work it describes the chord of

an arc—a portion of a circle. Note the position of the wielding hand at the commencement and finish of a full-power stroke which brings the hand past the body. It has come upwards, and already has formed something approaching a quarter of a circle.

PLAYING ON THE OBJECT-BALL.

The very first lesson to be taught in aiming and playing on the object-ball is this—*in every stroke except the full ball to ball one (that is, when the centres of both*
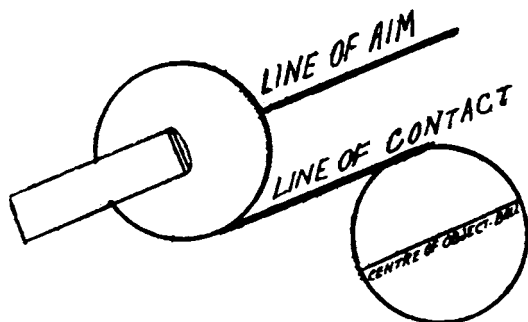

FIG. 5.—The thin stroke.

balls meet) the cue-ball always hits the object-ball halfway nearer the latter's centre than the cue aims for. The reason is that the aim is taken through the centre of the cue-ball, and allowance has to be made for its sides. Therefore the aim must be made wide of the desired point of contact, excepting in the case of a stroke full on the middle of the object-ball. To better explain the theory of making a contact on an object-ball, Figs. 5, 6, and 7 must be requisitioned. On them are shown first

a very thin (aim about half a ball wide of the point of
contact), then a half-ball (aim at the edge of the object-
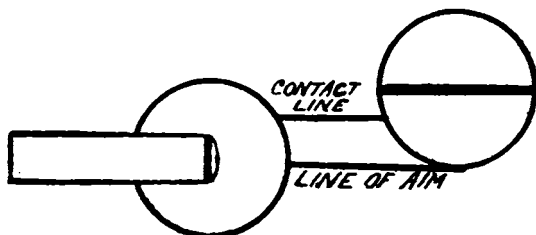
FIG. 6.—Half-ball stroke.

ball), and a three-quarter ball meeting (aim midway
between the rim and centre of the object-ball).   These
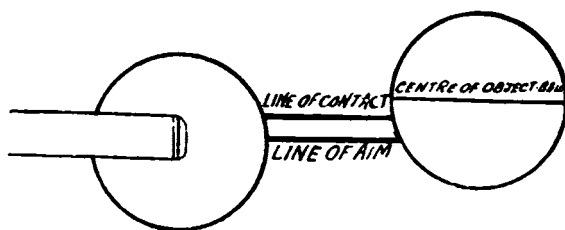
FIG. 7.—Three-quarter-ball stroke.

three strokes should very luminously illustrate the
statement that "the object-ball is hit halfway nearer

to its centre than the point the aim is taken at." In either the line of aim and the actual line of contact is clearly shown.

A very interesting study is the equality of impact between cue-ball and object-ball. The same part of the former must meet its counterpart on the latter ; centre meets centre, edge meets edge, half a ball meets half a ball, and so on through the intervening contacts. This is plainly worked out on Fig. 8, where the lines extending from ball to ball show how a certain part of the cue-ball comes into contact with an exactly similar point of the object-ball.

Coming to the question of the angle thrown by the object-ball, it may at once be said that the "half-ball" contact is the pivot of the whole thing ; for the "half-ball" stroke throws the least obtuse, or widest, angle. Striking nearer to the object-ball's centre, or closer to its edge than that, the angle line taken by the cue-ball (in all plain-ball strokes) becomes more obtuse, or narrower. The thinnest of thin plain-ball strokes will barely turn the cue-ball away from the line in which it has been sent by the cue. A plain-ball stroke full on the middle of the object-ball will cause the cue-ball to follow straight on in the rear of the former. For purposes of identification, it must be explained that the plain-ball stroke is that gained by hitting the cue-ball plainly on its centre-point. Any other striking of it at once induces complex motion.

Variations in the pace of the stroke create varying angles from the same contacts. The more force that is put into the stroke the wider will be the angle of rebound, and the more gently the cue-ball is struck the
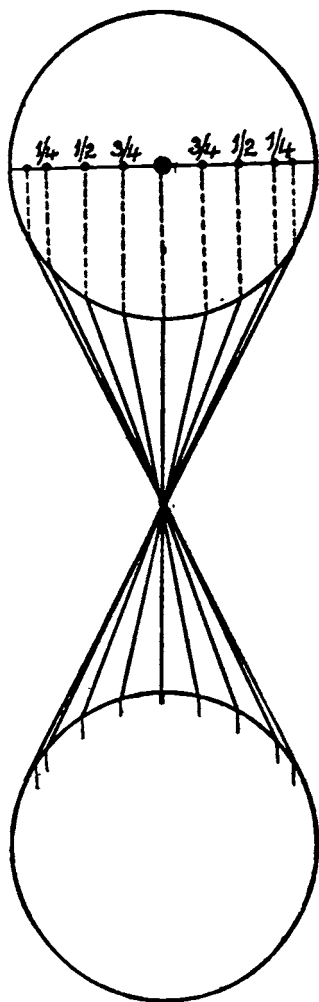
Fig. 8.—Showing the equal points of contact between the cue-ball and object-ball.

more contracted will the angle of its throw-off from
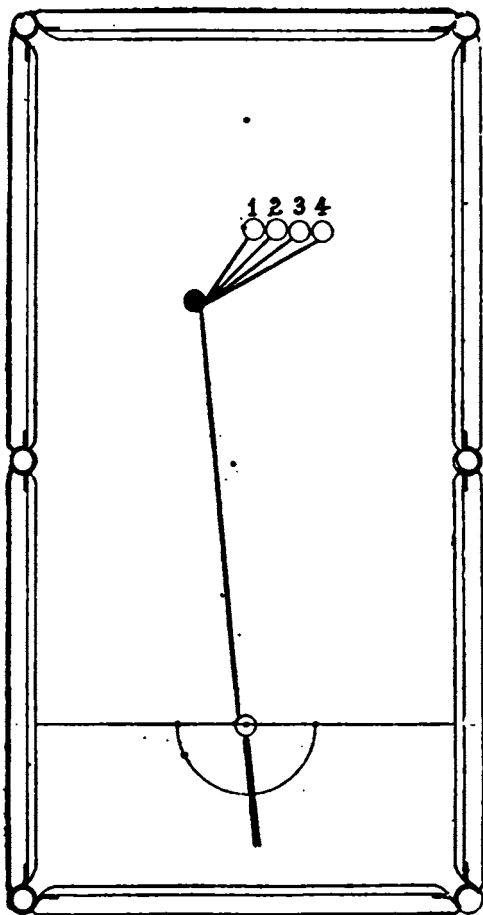

FIG. 9.—Showing the varying angles that alteration of pace will cause from
one given contact.

the object-ball be.   In the judgment of what is the

proper force to use to send the cue-ball off at the vary-
ing angles, lies one of the great secrets of successful
billiard-playing.   On Fig. 9 there will be found some
examples of the varying angles which a slow, medium,
or very fast ball will take from off an object-ball from
exactly the same point of contact.   The cannon on to
No. 1 ball is played quite slowly ; that on to No. 2 ball
at medium pace ; to No. 3 ball by a hard shot ; and to
No. 4 ball by the strongest stroke that the player has at
his command.   Some players, by reason of their greater
freedom of cue, can hit a ball harder than others.
Knack, however, tells more than mere muscular force.
The player who can throw the whole weight of the cue
unrestrainedly at the cue-ball, so as to make every
ounce of it tell, will infuse the greatest amount of power
into its running.

THE GRAMMAR OF BILLIARDS.

By R. H. Rimington-Wilson.

During a good game of billiards one often hears the
remark, " What a good eye he must have ! " and it is no
doubt the general idea that eyes, exceptionally well-
focussed, are necessary for the game.   It is very much
to be questioned whether this is imperatively the case.

Good billiards is a matter of the knowledge that
study and close application give, rather than the out-
come of any physical gift.   Any one who, at the length
of the table, can distinctly define the rim of the ball,
with or without glasses, has eyes sufficiently good for
billiard purposes.

Good health and sound nerves are important factors towards success, but it is wonderful how strength of nerve improves with the strength of one's game. As a rule, the billiard grammar of the amateur is utterly wrong, and his difficulties, in consequence, enormous. It is of the first importance that the grammar should be thoroughly well learnt. This can only be done under a really competent teacher, or, to a minor extent, by the study of a thoroughly good book. Plenty of practice is essential at billiards ; but in the earlier stages, practising by one's self and by the light of nature simply means the establishment and confirmation of habits ruinous to progress, and most difficult to eradicate.

Billiards, competently taught and earnestly studied, is a far simpler game than is generally thought.

The practice of the beginner should be confined to such strokes and ideas as are jotted down in the note-book which ought to accompany every lesson. The beginner will save himself a world of trouble by doing this, and not trying to strike out a line of his own. The construction of the framework of his game will, at first, give him a somewhat dreary time, for he will be debarred the use, or rather the abuse, of the fascinating screw and side strokes. He must, however, console himself by the thought that he is taking the shortest cut in the billiard journey, and that even without these two fascinations a century break is not an utter impossibility to the finished performer.

By the time the framework is complete the student will have heard a great deal about the half-ball stroke —and a most useful stroke it is—chiefly for the reason that the rim of the ball gives a definite target,

and that a slight, or even considerable, error on either side will not greatly affect the track of the striker's ball.

But this is the grammar of billiards, and the student must take care, as he progresses, that his early lessons—insisting on the half-ball stroke—do not contract his billiard horizon. He will now have reached the stage when he is to be initiated into the screw stroke, which should take precedence of the side stroke in his lessons. It is impossible to exaggerate the importance of thoroughly grasping the theory of this stroke, for execution will follow knowledge. It is to the command over this stroke, at all distances, strengths, and contacts, that the master of the cue chiefly owes the strength of his game. His command enables him not only to score, but to control the track of the object-ball to the greatest nicety, and to so simplify his game that he never seems to have a difficult stroke to play, and, as a matter of fact, he rarely has.

The screw stroke is full of pitfalls, and no amount of practice will compensate for the lack of understanding. It is a stroke the foreigners do better than we, especially the *massé*, which is a screw in disguise. The absence of pockets on their tables necessitates the more constant use of the stroke, and hence, no doubt, the foreigners' greater ability.

The beginner generally fails from three causes: (1) He thinks it necessary to play hard; (2) he thinks it necessary to draw back his cue, or give some quaint turn of the wrist; (3) he has but a vague idea that the distance between his ball and the object-ball controls the strength and often the point of contact. Should

the teacher succeed in clearing up these points, he will open out a new world of billiards for his pupil.

Instruction in the side stroke will follow; but much that has been learnt under the head of screw strokes will apply, especially as regards the delivery of the cue, and the consequent impression on the ball.

With a good framework, and a thorough understanding of screw and side, the great interest in billiards begins; but let no one start the study of "the top-of-the-table game" or "nursery" cannons till his knowledge of the above elements is fairly sound. The labour would be in vain.

A billiard delusion most commonly expressed is, "Oh, I thoroughly understand the game, but I confess my execution is moderate;" the knowledge subsequently displayed by the speaker in a game being practically nil.

In conclusion, go to a thorough professional teacher, invest in his book, and in a billiard note-book (Webster & Co., Piccadilly); use the head as much as the hands; and, finally, beware "the amateur grip," which is ruining thousands of players. A free game, as opposed to an over-delicate one, is to be recommended; but the touch of a first-class billiard-player should rival that of a violinist. Try and imagine a Paganini with "the amateur grip."

As to providing a solid groundwork in aiming and striking, with an accompanying instruction in the angles thrown by the object-ball, I can conscientiously recommend the "Half-ball Practice Strokes" given in the following chapter.

CHAPTER II

THE HALF-BALL, OR NATURAL ANGLE, STROKE,
AND OTHER BALL CONTACTS

I DO not here purpose going into the mathematical
dissection of the correct degree of the "natural
angle," which has been so widely, and yet so un-
satisfactorily, discussed.   If, however, the mathema-
ticians are somewhat contemptuously referred to by the
more practical section of the billiard community, both
sides undoubtedly combine in giving the half-ball, or
natural angle, stroke priority over all other ball con-
tacts.   Personally, I call it the foundation-stone of
all billiard-playing worthy the name.   A knowledge of
the angle that the cue-ball is thrown to by the half-ball
contacts (different paces, of course, bring about varying
angles) provides the player with a sign-post, very legibly
inscribed, of the kind of stroke that is required of him.
The disposition of the cue-ball, its approach to the first
objective point (ball or, as it at times happens, cushion),
and that part of the table which contains the second
target, are the elements of billiards.   You may be able
to attain your purpose by means of the half-ball,
or natural angle, stroke.   If so, you do so by the

easiest possible means. It is as though you travelled down a straight-away road, with your destination easily to be arrived at—no complications, no side turnings, simply straight-away travelling. For the half-ball, or natural angle, contact between the cue-ball and first object-ball presents the most defined pathway that a billiard-ball can take as it rebounds from another. The ease of gaining it lies in the fact that *you have a definite mark on the object-ball to aim at. This is its edge,* on the theory of aiming at a ball, which I have explained earlier on. To make the half-ball contact, therefore, you have a guiding mark on the object-ball, which only one other stroke—a full face-to-face impact between cue-ball and object-ball—gives. All other contacts are obscured. To make them one aims somewhat vaguely on to the left or to the right of the object-ball. It is now a question of judgment, not of the certainty the half-ball or dead full contacts supply, a disadvantage which must be very obvious. I compare it to rifle-shooting at an opaque mass with no central point, or bull's-eye, defined upon it. About the only clear mark is the outline of the target ; any aim on the body of it must of necessity be vague.

Thus far I have tried to show why the half-ball, or natural angle, stroke stands out so prominently as it does. It is, as I have said, particularly easy to find the true line of aim at the object-ball. Further, most half-ball strokes do not need the use of "side "—that most pernicious of aim-destroyers. Then, too, a most important consideration to be made full note of is that *the half-ball contacts throw the cue-ball off at the least obtuse, or widest, angle of any.* From the slow, plain

"half-ball" stroke through the different higher-speed
strokes the radius of the cue-ball's operations from the
"half-ball" contacts is a very wide one. On Fig. 9*a* is a
position which well represents my statement that they
throw the "widest angle" of all the "plain-ball" and
"side" stroke contacts. This arises from the fact that
the impact caused between cue-ball and object-ball is then
the most powerful that can be obtained. No other
contact sends the cue-ball off so smartly, and yet gives
such pace to the object-ball. The contact is half a ball
to half a ball, a fair division of the opposing forces, which
produces the beneficial result that places the stroke in
the position of the guiding-line to good billiard-playing.
There is no stroke so much favoured by the professional
players. They have adopted it for the reasons that I
give—firstly, that the "half-ball" contact gives a definite
target on the object-ball, and, secondly, that it throws
the most acute, or widest, angle of all strokes other than
"screw" ones.

In the course of my teachings I so often have to
repeat and reshow the principles of the "half-ball"
stroke, that to further impress the matter I will show a
common cause of misunderstanding concerning it. The
red ball is placed some fifteen inches above the middle
spot, and in a line with the end spots of the baulk half-
circle—as shown on Fig. 9*a*. Put your ball on one of the
baulk outside spots, and try a top-pocket losing-hazard.
It is not an easy stroke, the angle being such a wide
one. Now, after explaining that the "half-ball" contact
throws the widest angle from any stroke short of a
"screw," my pupils have frequently answered my
question of, "How would you play this stroke?" by

saying, "Oh, hit the red a little fuller than 'half-ball' to make the cue-ball fly off at a wider angle!" This is the very thing that it will not do. The thicker or thinner the contact with the object-ball, inside or outside the "half-ball" contact, the more obtuse, or narrow, angle will the cue-ball take as it passes onwards. Find the true "half-ball" contact, and you get the cue-ball thrown off at a wider angle than any but a "screw" stroke can bring about. The more force there is in the stroke the wider will that angle be. "Side," too, can be made to compensate for force, a proof of which is to be had by the losing-hazard I have just had under notice. It provides an optional forcing "half-ball" plain stroke, or one of a slow-running "side" kind—in this case left "side," as the stroke is made into the left top pocket. Either requires a "half-ball" contact. If the object-ball is hit on that point, the "loser" should be made, or the neighbourhood of the pocket easily touched. If hit more thinly, or more fully, just notice the contraction of the angle the cue-ball is thrown to. These approximate movements may be gathered from the annexed diagram.

The reason why I have named the "half-ball" stroke as the foundation-stone of billiards, is because the player should plan out almost all the contacts on the object-ball from it. He should measure them by it. When he once gets the "half-ball," or "natural angle," in his eye (as the accompanying exercises I give at the stroke will infallibly do for him), he will know instinctively whether he can or cannot reach the second object (ball or pocket) by its means. If he can do so slowly, at medium pace, or by force, well and good. If not, then he must

gauge the stroke, thinnish, very thin, half run-through, or three-quarter run-through, by means of the line given
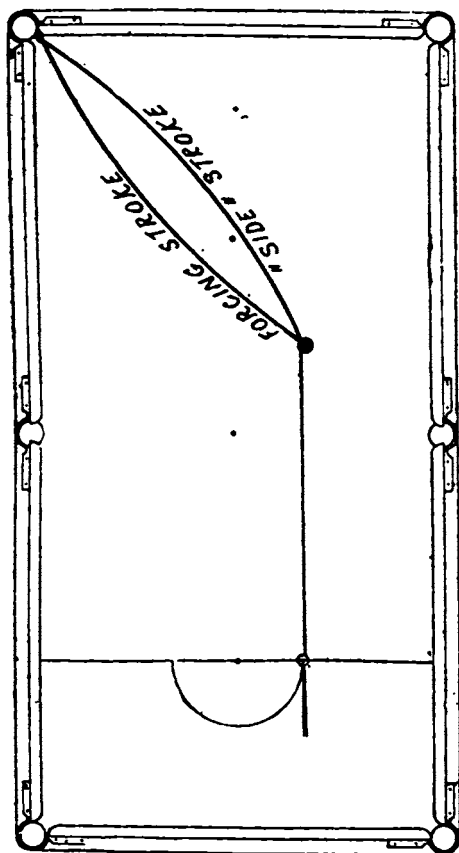
FIG. 9a.—Optional forcing or "side" half-ball stroke.

him by the half-ball or quite full contact (which, as I mentioned, also gives a defined mark to aim at).   To

get the thinnest possible contact, you aim just half a ball
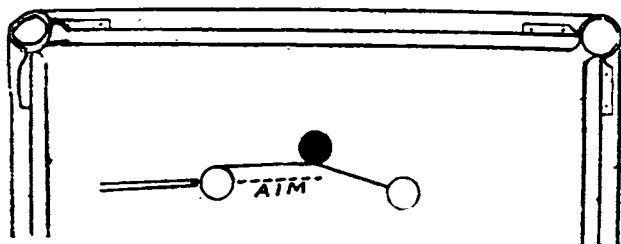wide of the " half-ball " stroke, so—

FIG. 10.—Very thin contact.
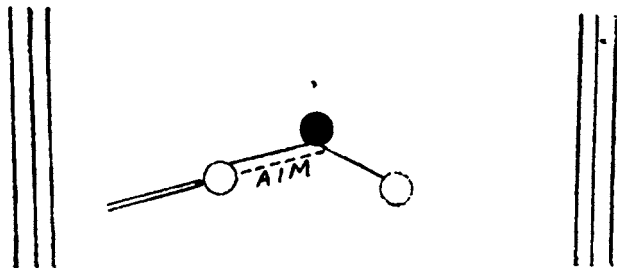
For a thinnish contact, not quite so wide, in this
way—

FIG. 11.—Thinnish contact.

The " half-ball " stroke helps very much in deter-
mining the line at which one aims in these thin strokes.
You know you have to align the cue wide of the edge of
the object-ball to get outside the " half-ball " contact.
Practice at these kind of strokes will soon familiarize
one with the appearance of them, and the limit of the
thin contact, also the medium shot of the same nature.

For the run-through, or fullish contact, strokes, the
" half-ball " contact line is again a helpful factor.   You

know that you have now to aim inside the edge of the
object-ball, somewhere on its bulk, not at the edge or
wide of there, as in the "half-ball" and thin strokes.
The "half-ball" contact assists you to judge right up to
the dead central point of the object-ball (another guiding
mark, as I have said) according to that point behind it
where you wish to direct the cue-ball.   Here is a half
run-through (which shows an optional thin or half run-
through, the class of stroke to be played as the after-
position of the object-ball demands)—
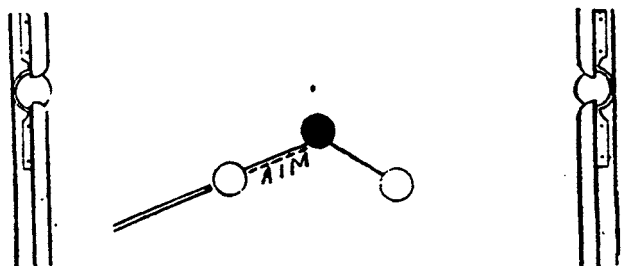
FIG. 12.—Half run-through, fullish, or thin optional stroke.   Here played
fullish for purposes of illustrating an example.

Then the three-quarter run-through—a most useful
stroke, where the aim is directed further on to the
object-ball's centre.

Finally, there is the full ball's centre to ball's centre
impact, in which one has a definite point on the object-
ball to aim at—its centre—mostly employed in "kiss"
strokes and winning hazards.

There are, of course, intervening contacts between
those I have given.   I have merely sketched the ground-
work of the principle out.   Practice, and practice alone,
will tell the player the exact degree of contact he should

make on the object-ball for the limitless arrangements
the second objective-point may be shaped to, outside
the "half-ball" and full ball to ball contacts. The
knowledge of the point to aim at on the object-ball for
all classes of strokes is technically termed as "knowledge
of the division of a ball." Whoever has this best in
his eye should make the better player. All the most
correct judgment in the world, however, is useless unless
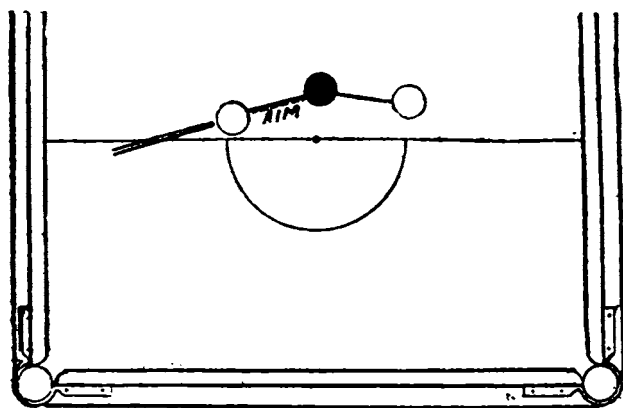one's cue delivery truly follows the eye. This, I must

FIG. 13.—Three-quarter run-through.

repeat, only comes with a solid position at the table,
with the wielding forearm the only movable portion of
your body—or as far as you can control yourself to
make it so, letting the cue do its work as unrestrainedly
as possible.

There are a sweetness and a charm about the "half-
ball" stroke, apart from its pre-eminent usefulness, that
appeal to all billiard-players, whether they are able to
make it in a general way, or whether it arises in an

occasional fashion with them. The cleanness, the swing and dash of a long forcing "half-ball" stroke, particularly of the losing-hazard kind, has no parallel on the billiard-table. It is at once useful and ornamental. It strikes a different note to any other contact, ringing out crisp and clear, so that all may know, without looking at the table even, that a true "half-ball" has been struck. As in other details of billiards, one may play game after game, or practise hour after hour at the "half-ball," and seldom enough touch the correct key. You—and the best players that ever handled cue too —will keep hovering around the "half-ball" contact mark on the object-ball. You will hit it all around (occasionally only truly on) the spot aimed at, for all the world like a rifleman planting a series of "inners," "magpies," and "outers" on the target to an infrequent "bull's-eye." Just as the best judgment of the point the aim must be directed to on the object-ball should make one the best player, the most consistently accurate striking of the "half-ball" mark indicates, undoubtedly, one's worth with the cue. In fact, I can go much further, by saying that the player who can keep very closely in touch with the "half-ball" contact, at all distances and all angles, has mastered one of the most essential parts of this difficult game. There is no telling how far he may not reach. At any rate, he has mastered the *pons asinorum* of billiards, for by his precision of aim he shows that his cue-delivery (a player's all-in-all) is true, and, naturally, that all the remaining details of his stand at the table are as they should be. Having gained this state of efficiency, his daily motto must be—Practice ! Practice ! !   Practice ! ! !

I now give a sequence of "half-ball," "natural-angle" stroke exercises which should be religiously worked at by the beginner, the average player, and the advanced amateur.   They will ingrain the degree of the angle in the beginner's eye, and ask that freedom of cue, firm stand at the table, and truth of cue-delivery which are the stepping-stones to proficiency.   The average player will profit no less from it, and the more advanced will find in these exercises the best medium to regain, or to keep, his form.   Apart from this, these different losing-hazard strokes are quite the most frequently recurring of any in the course of a game.   They show, too, for the most part, the points of the table to where the cue-ball should be guided when the red ball comes up on the billiard spot.   Further, each and every one of them may be taken as representing a ball-to-ball cannon, instead of the actual ball-to-pocket losing hazard.

PRACTICE FOR THE HALF-BALL SHOTS.—NO. 1.

This deals mainly with the true hitting of the cue-ball, the half-ball contact, and that much-discussed abstract quantity—the natural angle.   These three things, I need hardly mention, form the pith and substance of good billiard - playing.   They can be gleaned and experienced by the practice of which the annexed diagram will convey an idea.

This diagram shows losing-hazard play (or "in-offs") into the corner pockets off the spotted red ball from a natural, or half-ball, angle position, which is easy to locate.   *A line drawn from the billiard spot (the one by*

the top cushion on which the red ball goes) to the point of
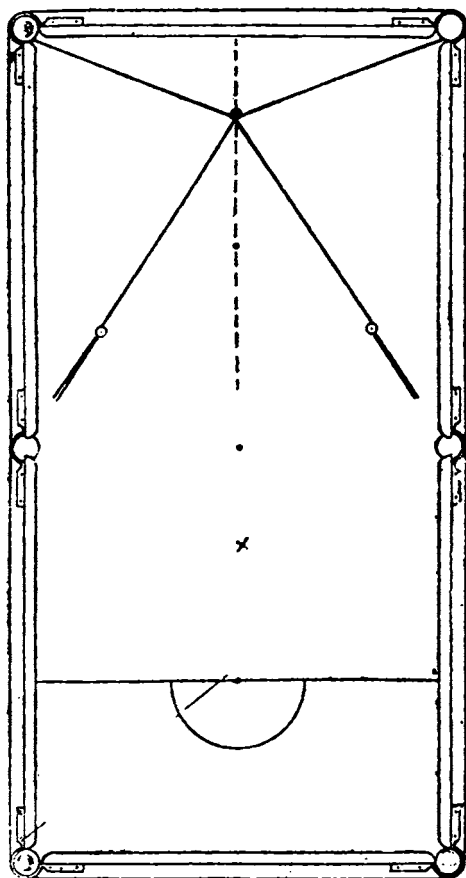
Half-ball losing hazards.—Practice stroke No. 1.

*the nearest middle pocket " shoulder," or projecting point
of the cushion, where it has been cut away to assist in*

shaping the pocket opening, will give it you. Put the cue-ball anywhere along that line, and you have the natural half-ball angle shaped up for you.

Taking it as a matter of course that the player has grounded himself in the rudiments of aiming and striking his ball, I set him in position to make one of these natural half-ball angle losing hazards. If he is a right-handed player, I get him to play from the left side of the table—in the right-handed direction, that is; and if a left-handed player, from the right side of the table, and driving the ball over in the direction which comes easiest to him. It is as well to get beginners to do this, so as to make the work as simple as possible to commence with. They generally want all the encouragement one can give them. I also find that, if given a chance of gaining a notion of what is really required of them in the most comfortable way, they will tackle the more awkward strokes with a greater degree of confidence, born of, perhaps, ready initial success. Therefore, let the beginner play in the right-handed or left-handed direction as comes most natural to him. There will be plenty of time to try a reversed version of the stroke when a certain measure of accuracy has been gained in the first course.

Having placed the cue-ball in the half-ball angle with the spotted red ball, the player bends over the table to take his stroke. His ball should at first be placed some couple of feet short of the centre of the table. Being so far out from the cushion, it gives the player an opportunity of making a firm and solid " bridge," a very important detail to consider. The posing preliminaries adjusted, the question of aiming at the red ball comes in. It provides the beginner with the end-all and be-all of the

priceless half-ball shot, *the aiming through the centre of his own ball at the edge or further rim of the red ball. Every time, to find the half-ball contact, one has to aim at the edge of that side of the object-ball you shoot at.* Different paces will throw the cue-ball away at varying angles, although the true half-ball contact may have been attained every time. The beginner, however, has no concern with this at the present time. His task is to become acquainted with the character and playing of the most primitive of the half-ball natural angles. He must keep on playing the simple losing hazard from the positions I have stated until he astonishes himself when he fails to make it. He must, too, retain the angle in his mind's eye, so that he may recognize it again when a variation of the stroke arises in another part of the table, for either pocket, ball to ball, or cushion play. When he feels that he has familiarized himself with the points of the stroke, then he can turn to others—not before.

Playing these losing hazards, one has only to use a slow stroke, such as will cause the red to travel up by the centre spot. This slow stroke is of assistance in teaching the beginner to hit his ball truly, and also to control his feelings and refrain from the violent tearaway methods most novices take up with. It ingrains some ideas of "touch" in him, for you say to him, "Hit it a bit too hard, and you'll miss going 'in off' the red!"

But the great beauty of the whole proceedings comes with the mechanical accuracy that the red ball checks your defects in delivery of the cue, the aiming and striking of your ball, and also, as I just mentioned, the amount of force you transmit to it. The true half-ball contact will keep the red ball most religiously to

the middle of the table, in the manner that the dotted lines upon the diagram illustrate. It will run down the line of "spots" as it rebounds from the top cushion. If it does not, then you know at once that you have failed to hit the red half-ball. Should it come over to the side of the table you are playing from, then it has been hit too thinly. Should it go on to the opposite half of the board, and wide of the "spots"—as you see it—then it has been hit too fully. It must keep to the middle line of the table, or you have not made the all-important half-ball shot. Often enough you may send your ball into the pocket you aimed for, although the red ball, by its course, proves that no half-ball stroke has been made. Then you can rest assured that you have failed in every detail, as by getting the stroke you absolutely prove that, instead of hitting your own ball plump in the middle, you have made use of some "side;" that is, you have struck it to the left or to the right instead of in the centre. Beginners have nothing to do with "side" at all; they—and much more advanced players—have as much as they can do to hit the cue-ball somewhere near its centre. The tell-tale red ball will faithfully record the truth or the inaccuracy of your strokes in this practice. If it reaches the baulk line, you will probably miss the pocket through having played too hard a stroke. The cross marked on the diagram points out that it should be pretty well the limit of the red ball's run from the top cushion. The pyramid spot—the one between the middle-of-the-table spot and the billiard spot—is the minimum. Keep trying the losing hazard till you get a mastery over it, and never fail to take account of the red ball's checking of your play upon it. Try and hit

your ball in the middle; lie well down to the stroke; play
your ball slowly ; aim at the edge of the red, which must
be kept exactly to the centre of the table; finally, practise
at it till you are fairly proficient. Then try it from the
other side of the board to that which you have been
playing from.   Master that fairly well, and you have the
satisfaction of knowing that you have mounted the first
rung of the far-reaching billiard ladder.

PRACTICE STROKE NO. 2.— THE "LOSER" FROM A
    SET POSITION, THEN FROM "HAND," MAKING
    YOUR OWN ANGLE.

In the previous practice the player has had the half-
ball "natural" angle formed for him, by taking his
bearings from different points of the table as he plays
on the red.   Now he may vary this method by adopting
an independent placing of the cue-ball. He should have
familiarized himself with the aspect of this angle if he has
practised the strokes I have set.

Just, however, to recall it to his mind, the beginner
should again place the red ball upon the billiard spot,
and repeat the Practice Stroke No. 1.   Put your ball
anywhere on a line drawn from the billiard spot to the
nearest "shoulder" of the middle pocket, either or both
of the latter.   Play the slow half-ball losing hazard into
the corner pocket, to bring the red somewhere down the
centre of the table—anywhere past the pyramid spot,
but not too near to the baulk line.

As I have previously stated, the true half-ball stroke
on the red will cause the latter to run over the line of

spots extending towards baulk. When it is deflected
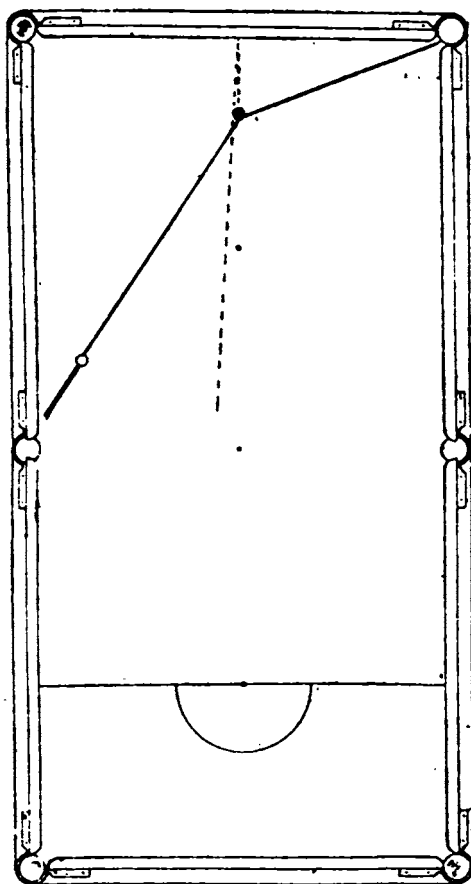
Losing-hazard practice stroke.—No. 2.

over to the left or the right side of the table, it tells
you plainly that, although you may have made the

losing hazard, you have not found the clean half-ball contact. It is seldom enough that one does. You keep on hitting the object-ball, in all your strokes, somewhere near the half-ball point, but very seldom really attain the desired object. The best player at billiards is the man who comes closest to finding the half-ball contact in his strokes. The greatest of them err in this connection.

Taking up again with Practice No. 1, you still keep a check on the accuracy of your delivery and the true-ness of your aim. Every stroke you play will show something in it. There will never be two strokes alike, for in anything like open play that verges on the im-possible. The slightest alteration of your aim, the least change in the character of the power (more or less) you put into your stroke, the merest fractional difference in the impact of the cue-ball on the object-ball, and the whole feature of the play is revolutionized. Try any stroke you like, in which all three balls are requisitioned, and see whether you ever play it twice in an identical way. Something happens to keep each stroke singular to itself. Here, again, the best-player argument comes to the surface. The nearer he can get towards playing two similar strokes in approximately the same fashion, the more finished an executant is he.

Know, then, that although the odds are enormously against you bringing the red ball, in this losing-hazard play, to exactly the same spot and in the same line in any two or three hundred strokes, you may glean some-thing of the margin that is allowed for error in the stroke. What I want you to do is, following your losing hazard in the corner pocket, to then take your ball to.

the D, and play in again off the red from there.   Work
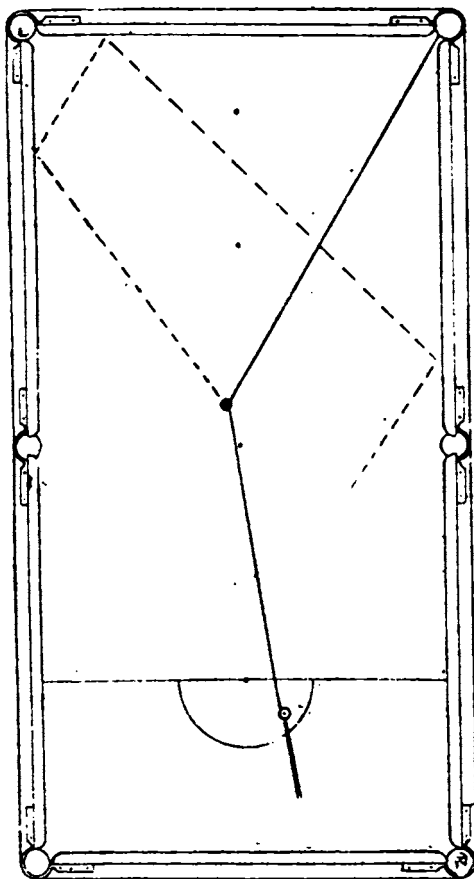
Going in from " hand " from the " leave."

out your own angle.   If you fail at this stroke, start
again with No. 1 stroke, trying to get the half-ball angle

imprinted in your eye. Again and again intersperse it
with the losing hazard from the D. If you make one of
the latter, try a second—that is, if the position of the red
ball gives you an opportunity of doing so. The nearer
the top pocket it lies the easier will the losing hazard
be. In these cases strike the cue-ball slightly below its
centre. The longer the distance intervening between
the object-ball and the corner pockets, the more awk-
ward will the stroke be. Then the nearer the red ball
is to you the higher you hit the cue-ball. A great
point in these longer losing hazards is to try and
maintain an equal distance between all three balls, or as
nearly as you can do so. It shows the angle, or per-
spective, of the stroke up so much more clearly.

Let the cue go out freely and follow on after the
cue-ball. Do not restrain it, but, having applied the
motive power to it, let it do the rest. Now and again
you may get the red sufficiently near to the baulk-line
to "leave" a losing hazard in the middle pocket. Shape
out your angle, as the experience you have had teaches
you, for the half-ball, and tackle it confidently, as the
middle pockets are easier than the top ones.

PRACTICE STROKE No. 3.

Having undergone half-ball aiming and striking
practice at the comparatively short range of practices
Nos. 1 and 2, and attuned his ideas somewhat to the
different angles that alteration of pace induces, the
beginner may turn his attention to longer-range strokes.
None crop up more frequently, or are of more service
when properly played, than the losing hazard from the

object-ball out in the centre of the table. For purposes
of identification, we place the red ball on the pyramid
spot, playing into either top-corner pocket from it.

The half-ball natural angle is at once found by
placing the cue-ball on the one or the other of the end
spots on the baulk half-circle's face. A plain half-ball
stroke on the red ball, and whichever pocket you are
aiming for will assuredly be found. Aim, as I have told
you in the other practices, at the edge or rim of the red
ball, striking the cue-ball in the centre—that is, as nearly
as you can. " Side " of any kind will be pretty certain
to destroy the angle. It is absolutely imperative that
in all these elementary strokes that I am showing the
player must try to get on the middle of his ball, and not
to the left or to the right of it. Keep pegging away
at the plain-ball strokes. One day it will be your turn
to know something of side—but not yet.

I am always dinging it into the ears of those who
come to me for lessons that " side " is mainly the cause
of the general poverty of form amongst amateurs.
Many of them play every stroke with " side," rightly or
wrongly applied, needed or not needed. They have
simply fallen into a bad habit—one of the worst habits
in billiard-playing. From these arise your glaringly
in-and-out players. They bring off all sorts of difficult
shots, only to miss those of the easiest kind. They play
the game week in and week out, and, reaching a certain
pitch of skill, stick leech-like to it, to their own disgust.
If their game was analyzed by an expert, it would as
often as not be found to be suffering from a bad attack
of " side " mania. The aim suffers terribly ; even the
greatest players, with all their experience, find " side "

playing them tricks.   To the amateur it is mostly a
delusion and a snare.

Another, and, I believe, better understood, cause of
failure in the stroke is the faltering stand made by a
player at the table.   Like rifle-firing, accurate billiard-
playing solely depends upon the steadiness of the player's
pose.   The merest movement or wavering will throw the
rifle from its given aim.   The first principle of shooting
is absolute immobility of every part of the shooter's body
except the finger that touches the trigger.   It has its
parallel in billiards. Call the cue your gun, and the
wielding arm the trigger-toucher, and you have the com-
parative material at once in your mind.   Keep every
other part of your body even to rigidity as you send out
the cue to do its work, and in course of time (dependent
on your perseverance and the amount of practice you
take) you will be a better player than most.   Remember,
then, *not to use " side," and to try your utmost to stand and
keep your body still* in the practices I am setting.   Your
time to know something of the former's intricate
workings is when you can make a thirty or forty
" break " with just the ordinary plain-ball stroke.

Once you can hit your ball truly, and drive it
accurately on to any part of the object-ball that you
aim at, you may take my word for it that you are on the
royal road to proficiency.   That is the object of the
practice I am asking you to indulge in.   Many players
of long standing will not do their game any harm by
remodelling it on these lines, and discarding the fallacies
with which it has been encumbered.   When one comes
to know the remarkable all-round effectiveness of the
plain-ball strokes, then will my advice to beware of

side " be better appreciated.   The backbone of billiards
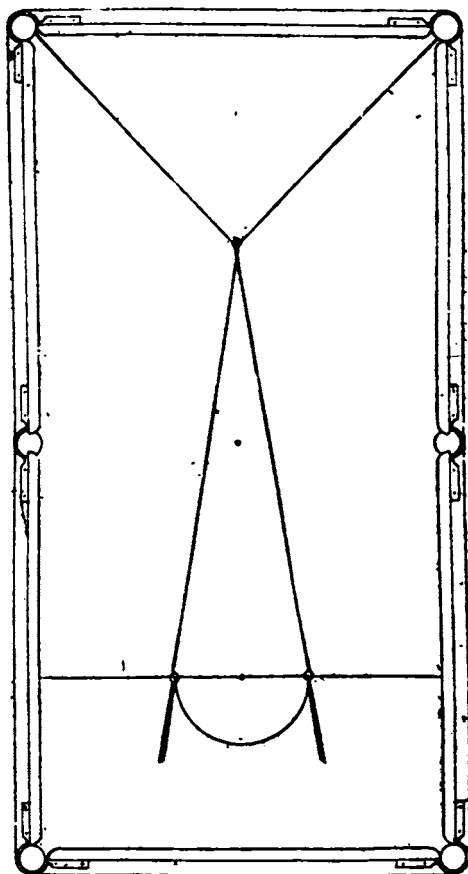
Practice stroke No. 3.—Half-ball stroke with object-ball on
pyramid spot.

is proverbially said to be the losing hazard.   Personally,
I place the plain half-ball stroke of all varieties—

"loser," cannon, or " winner "—far ahead of it.   It is the foundation and the structure, at one and the same time, of billiards.

PRACTICE STROKE NO. 4.—FORCING STROKES.

Having mastered the slower-paced losing hazards to your own satisfaction, or so far as your patience will allow, it is time to pass onwards to strokes at higher speeds. These still continue to be of the invaluable half-ball losing-hazard kind.   You commence by moving the cue-ball out of the guiding natural-angle line provided from the upper shoulder of the middle pocket, further out on the table.   One inch to start with, then two inches, then three inches, four inches, five inches, and six inches.   There is no better practice than comes with these successive losing hazards.   They show the principles of the elementary side of billiards as nothing else can do, though merely proving the virtues of forcing half-ball shots, for now the red ball, at each wider placing of the cue-ball from the side cushion, is brought more and more over to the side of the table you are playing from.   The novice starting with the true half-ball angle, and working his way through the half-dozen wider placings given in this article, cannot fail to gather in his mind the idea of the game, and what may be accomplished by graduating degrees of force in the stroke.   The slower the pace the cue-ball carries, the less acute will be its rebound from the object-ball, dependent, of course, on the part of the latter with which the contact is made, and *vice versâ*.   The more powerful the blow administered to the cue-ball, so long

as it comes with a cleanly delivered thrust of the cue,
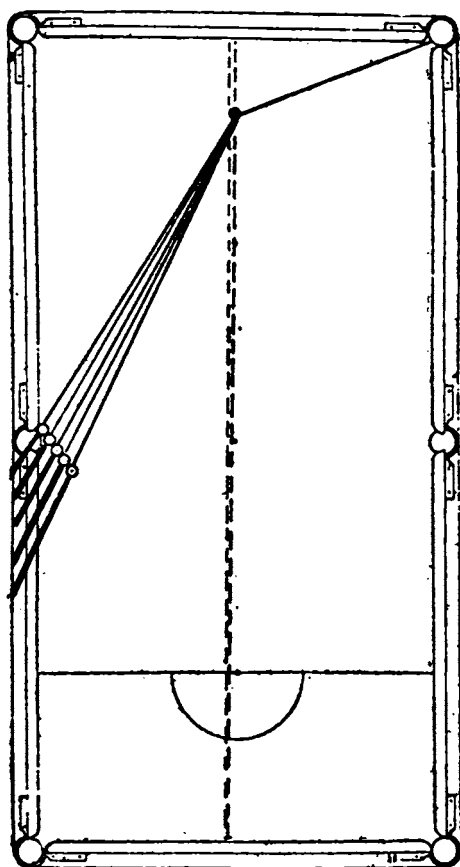
Practice stroke No. 4.—Stronger half-ball losing hazards—Nos. 2, 3, 4, 5, and 6.

the greater the scope of its radiating angle from the object-ball.

Bearing such things in mind, we come to the practical part of the more forcible strokes, beginning with the cue-ball one inch outside the natural angle line. To make the practice more effectual, we now place it close by the side cushion, and close by the middle pocket. This is done with a view to accustom the player to strike a ball when it is under a cushion, and to shoot through the fingers as they form the "bridge" upon the cushion woodwork. You have to play the losing hazard from the red ball with enough speed to make it pass in and out of baulk. The angle of the "loser" is too wide—in a billiard-playing sense—to permit of its being made at the slow pace of the slow half-ball losing hazard. As then, however, the red ball must be kept in the centre of the table. You will find it a bit awkward at first, not being able to form your accustomed "bridge," but you will soon get used to this. Press firmly on the tips of your fingers, and make it as solid as possible. To better judge the pace of the stroke, it is as well to put your ball out on the table, as in No. 1 stroke, but an inch further away from the cushion. You will get the altered angle to the red ball more in your eye, which has become accustomed to No. 1 stroke from the same standpoint.

After you find yourself getting along nicely with No. 2 stroke, making the losing hazard cleanly and causing the red to pass through baulk, move the cue-ball out another inch outside the natural-angle line, anywhere along the line from the side cushion to the red ball, so long as the cue-ball is kept its proper distance—two inches wide of No. 1 stroke angle. Put a little more force in this shot than you did into No. 2,

but with the idea of the movement of the red ball—in and out of baulk—still the same.

Next, put the cue-ball three inches outside the natural angle, anywhere along the length from side cushion to ball that pleases you, bearing in mind, however, that when it is right under the cushion you have the most difficult position of any from which to operate. When you find yourself making this No. 4 stroke, with its need of increased speed on the cue-ball, put the latter out four inches, then five inches, and then six inches wider than the angle of No. 1 stroke, working up the force of your strokes in due proportion until you cannot hit your ball any harder. You will find your arm swinging backwards and forwards, and driving home the stroke as you never hoped you could do. You will see, and feel, the cue-ball catch the red ball badly, moderately well, and perfectly (at times) ; and, as before, the red ball will automatically check your each and every effort as the eye could never do. You don't require to be told when you have made the true half-ball contact, for the crispness of the sound and the velocity of the cue-ball, as it flies over to the pocket, will plainly tell you that you have "got there." The duller and fainter touches, apart from the index finger of the red ball's running, when it goes to one side of the table or the other, instead of keeping to the centre, will just as readily let you know that you have erred in your aim for the half-ball.

Freedom of arm-work, and firmness of the body's position, are the prime factors in the playing of these gradually worked up "double-strength" strokes. Aim right at the edge of the red, and mind that your aim is not allowed to be deflected from it by some wavering of

the body.   Stick out your "bridge" as straight as you can, plant your legs firmly, bend low to the stroke, and hit your ball in the middle.   These details are of vital importance.   But, above all other things in this forcing-stroke play is the need of freedom of cue—a loose swinging of the wielding arm, and a delivery that sends the cue following straight on after the cue-ball when the latter is struck.   And to avoid "stunning" or "screwing" the cue-ball, aim slightly above its centre, which will also assist in the making of the losing hazard, the top-side causing a swerving action.   This makes the ball attack the pocket at an easier angle, and more at the centre of its opening.

Forcing strokes bring out all the worst faults of a player, and a knowledge of what the chief ones are may not be amiss.   Undoubtedly, the worst is a frantic desire on the part of most amateurs to catch hold of the cue —that is, grip it—just at the moment it should be sent on ahead.   They feel it going away from them, as it were, and they cannot resist the impulse to catch hold of it.   The more nervous the temperament, the more pronounced is this failing, which turns a truly aimed forcing stroke into everything except the dashing, brilliant one that it was intended to be.   How often have you seen a big man hit his ball with all his power, and yet not make it career more than a couple of lengths or so of the table ; or drive at an object-ball in a way that threatens to break the cue, smash the balls, and perhaps seriously damage the table, yet hardly get any run upon it worthy the effort !   Often enough, of course, and most of you who read these lines have done the same thing.   You have numbed the effect of your stroke

by catching hold of your cue, half-stunning the cue-ball by not driving it right home and over the place on which the latter stood. Try Nos. 4, 5, and 6 of these forcing losing-hazard strokes, and see how frequently you will make the same mistake. Remember that the cue-ball has to travel the same pace as the object-ball does, if you get hold of the half-ball contact. If it is hit more fully than that—a fault which will come with a movement of the body as it tries to work back to the natural perpendicular, which is only to be averted by a firm planting of the legs and the bridge " arm " stuck rigidly out—a lot of the steam will be taken out of the cue-ball to the benefit of the object-ball. Finer than the half-ball, the want of adequate resistance from the object-ball leaves the cue-ball's speed little, if at all, impaired.

There is a very important point which must not be omitted, or passed unnoticed, in connection with the movement of the hand holding the cue in these forcing strokes. *It must be brought well past the body*, letting it take its full sweep. If it does not come past the body, then, you can depend upon it, you are holding the cue back instead of letting it go forward—a damning fault in forcing-stroke play.

THE LONG HALF-BALL LOSING HAZARD.

The most exacting practice of a " half-ball " stroke nature is to be found in the long losing hazard from a ball placed on the middle spot into the top pockets, the player operating from the D. I consider this stroke to be the best of all to get one into practice, or to test

the cue-delivery and general execution of the player. For the beginner who has persevered with the more elementary "half-ball" practices it opens up a wider and more attractive field. He finds it more difficult than he had supposed, but more gratifying, even, than the preceding losing-hazard strokes when accomplished. As before, all depends upon his steadiness, and the flowing movement of the cue which comes with a shooting out of the wielding hand past the body, so as to practically let the cue do the whole of the work. Hit your ball, if anything, above the centre coming slightly down upon it as the cue is being propelled over a cushion. Throw your left arm well out to take as much of the weight of the body as possible. Lay well over your cue, and let your body go over as much as is comfortable to you on the side you are playing from. Standing too erect, or too squarely, you are always liable to waver upon, and thus to spoil, your stroke. Let the leg under the playing arm bear as much of the body's weight as you feel you can make it do while maintaining an easy, and not a strained, position. The other leg is planted firmly to prevent any swaying, and to minimize the chance of any movement. Swing your cue loosely and evenly, not snatchily. Shoot the cue out to the utmost limit that your arm will allow you to do. Mark well that it goes cleanly and loosely right through the cue-ball. Keep in your position until the stroke is finished—that is, up to the time that the cue-ball enters the pocket. All sorts of bad habits are contracted by a player jumping up and squirming about when his ball is rolling on to its destination. There comes a time when he does

these things on the stroke, or even before he has made
it—result, chaos, and some fantastic movements on, and
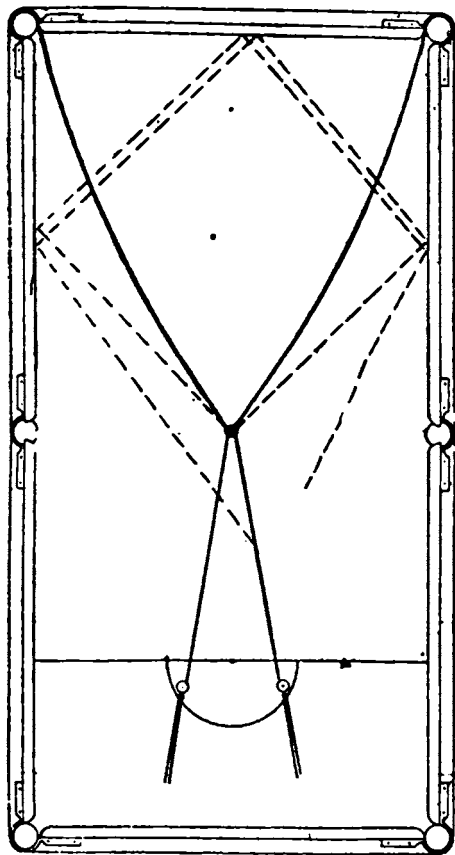
Long half-ball losing hazards.

sometimes off, the table, which surprise their maker.
     For this long losing hazard the cue-ball is placed

7½ inches from the centre spot of the D, on either side of it according to the pocket you are playing to.   With ivory balls of the " standard " (2$\frac{1}{16}$ to 2$\frac{3}{32}$ inches), this measurement gives the true "half-ball" angle to the corner pockets.   The idea of the stroke is to make a losing hazard, and to drive the object-ball around the three upper cushions, to place it again out in the middle of the table for further losing-hazard practice.   This refers to the way it should be played when one is on a "break."   For the present the player has merely to practice a continuous number of these long half-ball hazards.   As in the other practice strokes, the course of the object-ball will tell him how well, or how badly, he has gained contact with it.   A good "half-ball " will cut the object-ball around on to somewhere about the centre of the third, and last, cushion it has to take.   This is illustrated on the figure.   Thinner than the "half-ball" in all the varying degrees, the object-ball will strike the same cushion nearer the top pocket.   Fuller than the " half-ball," it will strike the third cushion nearer the middle pocket.   The true "half-ball " contact is the most correct for the after-position of the object-ball point of view.   As before, the losing hazard will be made by what are quite bad strokes.   This you may gauge by the run of the object-ball.

THE CROSS LOSING HAZARD.

One of the most valuable of losing hazards is that made from the spotted red ball into a top pocket with a ball lying by the opposite corner one.   It is most helpful in the course of a game, though somewhat

tricky for the novice to handle.   Like all other work at
the top of the table, it wants much judging, for there are
many varieties of the same stroke that only experience
can accustom one to.   Get the cue-ball in the "half-
ball" angle line (which is the centre of the corner
pockets as it looks across at the spotted red ball for a
"half-ball" contact), and the stroke is quite simple.
You drop rather slowly in off the red, striking it "half-
ball," or thereabouts.   The pace of the table you are
playing on will tell you the speed you need in your
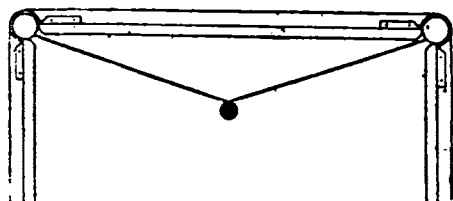
The angle for the cross losing hazard.

stroke, for with every one of these "cross" losing
hazards the red ball should be steered over the further
middle pocket whence you are playing the cue-ball.   It
should strike the side cushion about eighteen inches to
a foot above the centre pocket it is directed to.

When the cue-ball is not lying in the "half-ball"
angle, very nice judgment is required to tell the kind of
stroke one has to play.   "Side" now must be made use
of to overcome the wider or narrower angle.   Running
"side," that is, "side" on the cue-ball in the direction
it is travelling, will up to a certain limit account for
the widened angle as the cue-ball lies away on the top-
cushion side of the pocket.   Reverse "side," that is,
"side" on the cue-ball against the line of its travel, will

compensate in some measure for the narrow angle
which occurs when the cue-ball is on the side-cushion
side of the pocket. The best means, however, of play-
ing this narrow angle "cross" losing hazard is by a
plain-ball thin stroke, for this reverse "side" play is
decidedly difficult of execution.
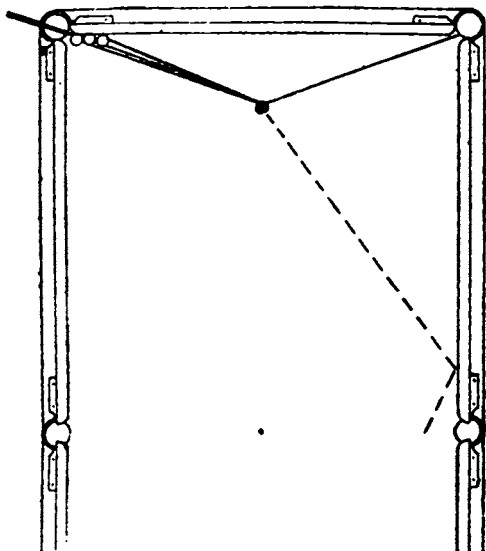
Using "side" for the cross losing hazard.

With the cue-ball standing about one ball's distance
out of the "half-ball" angle (as gauged by the centre of
the corner pockets to the edge of the spotted red), and
on the top-cushion side of the pocket, a touch of running
" side," left or right, in accordance with the pocket you
are trying for, must be used. Another ball's distance
out of the angle, and more " side " has to be employed.

Still more must, of course, be given to the cue-ball when you gather that it is something like three balls' distance out of the angle—in fact, you now pile on all the "side" your "touch" can impart.   With a four balls' distance, or some eight to nine inches, out of the natural "half-ball" angle, the "swerving-ball," or "half-*massé*" side stroke (shown in the chapter devoted to "side"), comes into operation.   It represents the limit of the slow "cross" losing hazard, which enables the player to steer the red ball directly across to the centre pockets.   With the cue-ball further out of the angle than the given distances, the red ball has to be driven through baulk by a forceful stroke with "side," or a "screw" and running "side" fast shot.   This stands good until the cue-ball comes up to a point almost directly behind the spotted red, and so long as it is not tied up against the top cushion.   Better practice than these different strokes I do not know for giving one an insight into angular "screw" and "side" strokes.   The object-ball has to be hit so nicely, quite often most thinly, to get the cue-ball thrown into the required angle.   More than ever now, do not fail to remember you must stand still.   Wait until the cue-ball has gone into the pocket before you budge one inch from your position.   Keep the "screw" lesson fresh in your mind when you tackle the faster strokes.   Soon the hazards will come to you.

The narrow angle reverse "side," or thin, strokes do not permit of anything like such a latitude as the companion "cross" losing hazard on the top-cushion side of the corner pockets.   Get the cue-ball only one ball's distance out of the angle, and you at once have a very nasty stroke.   Shots of this kind require much

practice. It is always best, however, to carefully guard against the cue-ball being left on the side-cushion side of the pocket in these "cross" losing hazards. The top cushion gives a much more negotiable area.

The Range of the Plain-ball Strokes.

These different "half-ball" practice strokes should instil some knowledge into the beginner of the effectiveness of the "plain-ball" (gained by striking the cue-ball at its centre-point). As long as the "plain-ball" can command the stroke, always use it. It takes a straight path to the object-ball. There is none of the devious and uncertain course of the "side" stroke about it. It is, as its name implies, plainness itself. But, of course, the plain-ball has its limitations. These, as examination of Fig. 14 will reveal, are many ; for, though the "plain-ball" will compass some fifty per cent. of the strokes that occur during the course of a game, there are others which it cannot cope with at all. The range of the "plain ball's" effectiveness stops at the forcing half-ball stroke (the "plain-ball limit"), as shown on Fig. 14.

"Plain-ball" Unnatural Angles.

Of course, the player seeks the "natural" angle, or half-ball stroke, for its ease. But in many instances it does not present itself, and the player, in the course of a break, is ever happening upon strokes where the balls get into positions making an angle more obtuse than the "natural" one. Such shots are made by a "finer" or "fuller" contact with the object-ball, a run-through

stroke being played if the latter method is adopted. Both varieties — the very acute and the obtuse — are
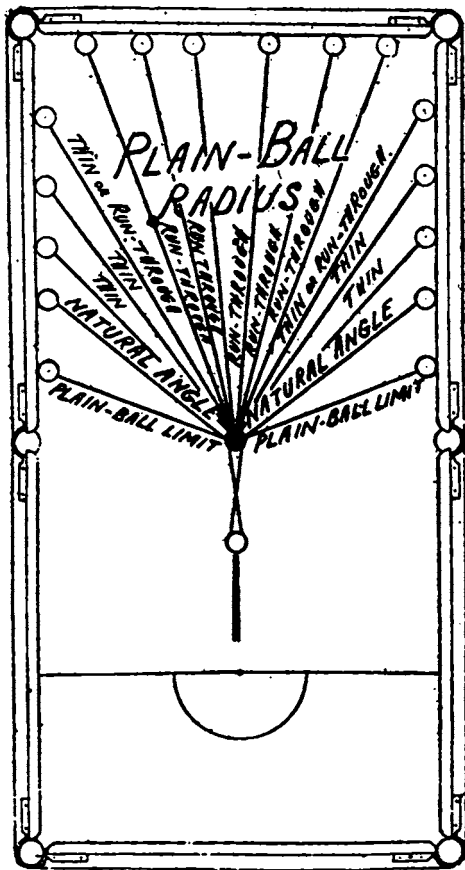
FIG. 14.—The range of the "plain-ball" strokes.

known in the technique of billiards as unnatural angles ; or, to put the matter with greater simplicity, every

stroke that is not a "natural" angle is of necessity an unnatural one.

All obtuse (known to billiard players as narrow angle) angle strokes are made by one of two means, either by striking the object-ball fuller or finer than the half-ball "natural" angle shot, according to the exigencies of the situation.   This, of course, is merely following out the principle that the half-ball shot produces the most acute angle.   It frequently happens that the player has the option of playing one or the other—the "fine" or "full" shot.   One can naturally produce a more obtuse angle by hitting the object-ball "full" than by hitting it "fine."   A stroke or two on the table with the balls placed as in the accompanying figure (15) will show the beginner this.   Stroke 1 shows the half-ball shot, stroke 2 a thin shot, and stroke 3 a run-through.   Thus, in this last position, a "run-through" stroke is the only one possible to make a cannon direct.

The great bulk of amateur players invariably prefer "fine" shots to "run-through" ones, whether it be for pockets or for cannons.   This seems an extraordinary proceeding to me, beyond the fact that the impact on a "fine" ball is so very little that it appeals more to the generality of ordinary players than the "run-through" shot, which obtains greater varieties of angle.   Too often in the latter eventuality the player does not make allowance for the different degrees of power emitted to the cue-ball.   While on this subject I feel that I must point out that, as in other strokes, *pace considerably influences the course of the cue-ball after contact with the object-ball in the matter of "run-through" strokes.*   How often one sees a player attempt a "forcing run-through"

shot!—that is, playing it considerably above the pace he normally applies to his strokes. And the result attained too frequently is that he misses the cannon or pocket, whichever he tried for, by quite a surprising margin. The reason of it is that the player has aimed and hit exactly on that part of the object-ball as if he were playing it in the manner he has been accustomed to at normal pace. The consequence of so doing is to make the cue-ball take a more acute angle than the one desired.
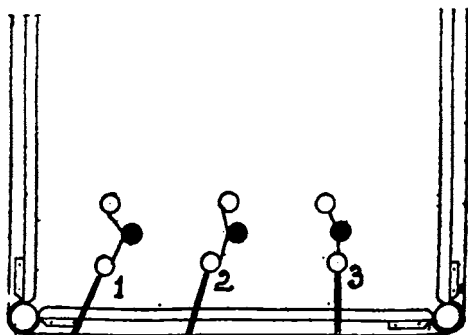
FIG. 15.—The "natural angle" and "unnatural angle" strokes.

Now, with regard to this question of the "fine" or "full" ball, let me say that there is no golden rule as to which of these two ways you should select when an obtuse angle comes upon the scene. Hundreds of positions may be instanced where you can place the balls so that, in each case, a "fine" or "full" ball would equally suffice to obtain the desired aim of a good placing of the balls for the succeeding shot. Fig. 16 shows how instrumental these strokes are in obtaining command of the table, and also it demonstrates that the

needs of the moment must direct the player's judgment as to which stroke will pay him best—the " fine " or the " run through " one.

It will be seen that I have drawn a red ball on either side of the table for the purposes of my exposition that a player is guided in the use of either the
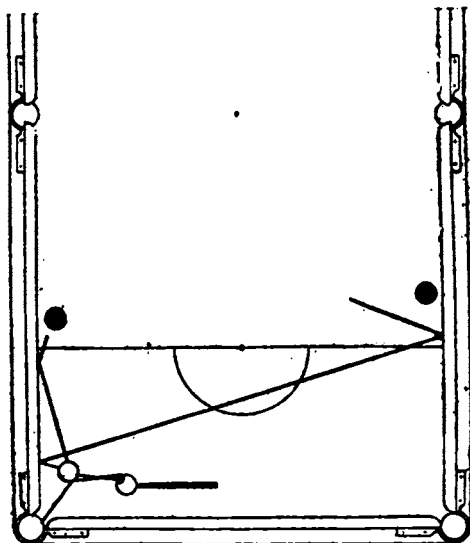
FIG. 16.—Optional thin or fullish contact dependent upon the position of the second object-ball.

"fine" or "full" shot, according to the course he wishes the object-ball to pursue. The white balls are behind the "baulk line," and the "game" is obviously to make a losing hazard into the left baulk pocket; but the "natural" angle does not hold out any hopes of accomplishing this stroke by its agency. The player has to look to another means of doing it. Also, he has to

mark the location of the second object-ball. Well, say, for example, that it lies a few inches above the " baulk line," by the left-hand side cushion, as does one of the red balls in Fig. 16. What more easy than to just "clip" the object-ball, drive it up to the red, and go into the pocket from it? But if, on the other hand, the red ball should happen to be placed on the opposite cushion, as again the figure shows, then must the "run through" be applied, and the result will be that its effects ensure that the object-white crosses the table to remain in close proximity to its partner, the red ball. This little explanation will, I trust, make clear that the "fine" or "full" ball shots permit of the same angle being taken by the cue-ball, although the striking of the object-ball varies considerably in each. By their means you are enabled to steer it to any direction you may desire outside the given line it is bound to take from the natural angle half-ball stroke.

I have spoken of the latter earlier, and having disposed of the "thin" and "run through," I come to the last of the plain-ball angle strokes—the one that ensues from the "forcing" shot. The maximum of force you can emit to the cue-ball will cause the latter, after "half-ball" contact with the object-ball, to take a course which lies midway between the natural angle and the right angle.

THE "SCREW" SHOT

I HAVE said that I consider the "plain-ball" stroke to be of sufficient utility to account for fifty per cent. of the positions one falls across upon a billiard-table. The remaining fifty per cent. of the various placings of the balls are overcome by three different rotary motions, singly or in combinations, which the player can apply to his own ball. It is taking the novice a great step ahead to bring him in touch with these eminently difficult, but all useful, means of gaining the ascendency over positions on the table at which the "plain" ball does not permit of a score being brought about. Practice and a strict adherence to the principles I shall lay down will show, I think, that a gradual enlightenment on each in turn will prove of more service to those who wish to learn the inner secrets of them than a hasty jump into them which the beginner left to his own devices is apt to take.

The three rotary motions of which I speak are respectively—"screw," "side," and "top-side." Eith er singly or in conjunction, they are often used for the purpose of gaining position from strokes which could be made with a "plain" ball. Just as frequently, however

the one rotary motion or the other is brought into play by the skilful cueist to make strokes more simple, or to negotiate those which would not be possible by the sole agency of the "plain" ball.

Of the three varieties, "screw," "side," and "top-side," the first-mentioned is the principal stroke when the player is attacking a ball; that is, getting straight-away contact from ball to ball or from a ball to a pocket. When he has to deal with cushion-play, then the matter wears an entirely different aspect, for then the "side" strokes take undoubted precedence.

I propose, however, to deal first of all with the "screw" strokes, as played either at ball-to-ball cannons or in losing hazards. Next to the "plain-ball" they are the most valuable to the beginner, for, as Figs. 14 and 17 will demonstrate, "plain-ball" and "screw" shots domi-nate every portion of the table. I have known many amateur players who have been quite unable to apply any other motion to the ball they play with than the two strokes I have mentioned, and yet they have played fairly well, as ordinary players go.

By a survey of Fig. 17, which is a companion one to that showing the range of the "plain-ball" strokes (Fig. 14), it can be observed that every part of the table can be reached by the aid of "plain-ball" and "screw" strokes. The "plain-ball," working in a for-ward direction, can cover nearly half the table. The "screw" strokes combined with the "plain-ball" enable the player to command the whole of the table. Thus when attacking a ball the great value of the "screw" shot should be more than made apparent.

The "screw," or retrograde motion applied to the

cue-ball, is produced by striking it below the centre
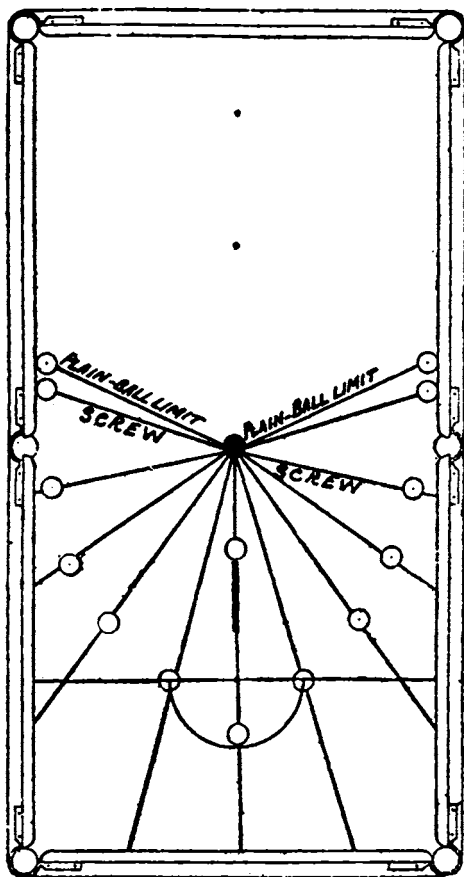
FIG. 17.—The range of the " screw " strokes.

point. The cue should be kept in a horizontal position, the "butt" being aligned with the tip as accurately as

possible to keep it in the plane of the table. Swing the cue lightly to and fro, taking care to strike the cue-ball below its centre. Do not, however, try to imitate the action of the cue-arm you may have seen when a good player is making that pretty shot—a screw-back! It will lead you into a bad habit, and one with which many useful players are cursed. This defect in their game is occasioned by their inability to gauge the exact moment they should grip their cue when trying a screw-back shot. Instead of letting their cue get into contact with the object-ball before putting pressure on the cue, they grip it before the stroke is made at all. The consequence is that the weight of the cue is doubled, and, though they make the stroke, it is always at the expense of position, for played in such a manner the object-ball must be driven away at a terrific pace. In addition, this method of gripping the cue tightly before, instead of after, the contact with the object-ball, is most ungainly, there being a palpable "jerk" and spasmodic action about it which does not please the eye. However, the very great majority of players, who have acquired a certain proficiency in billiards from their own observation, do play the "screw-back" stroke in this fashion. So a little attention on their part to what I have to say on this subject, as well as on that of the beginners among my readers, may be rewarded by some compensation to them.

Place a ball, say on the middle spot, and another one, which is to act as the cue-ball, some nine or ten inches behind it in a straight line with the centre pockets. Now I shall ask you to screw back from the ball on the middle spot into one of the centre pockets. Before

letting you make the stroke, I must tell you exactly what I want you to do. I want you to strike your ball low down, at the base of its strikeable face, in point of fact.

Make the stroke lightly, yet crisply. Hit the cue-ball in the centre of the line I have drawn across the bottom of the full-sized ball shown (Fig. 18). As soon as you feel that you have hit the cue-ball, then is the moment to tightly grip, thus adding to its power. Up to that point the action of the cue is exactly the same as though you were striking your ball to send it on and follow the object-ball. It is this last gripping of the cue that obtains the necessary momentum for the cue-ball.

After you have tried the stroke in this way—the proper way—many times, you will in course of time observe that your cue goes through the cue-ball before you arrest its forward movement by gripping it tightly. The cue-tip will be seen to rest almost exactly on the spot which; the further side of the object-ball covered prior to being struck, therefore the cue-tip goes through the whole diameter of the object-ball. When, however, the "screw-back" stroke is improperly played in the way that I have mentioned—by gripping the cue before contact is made with the object-ball—then the cue-tip stops dead immediately on that part of the object-ball it strikes.

In the stroke I have instanced, with the object-ball on the middle spot, it is not easy for the beginner to discern the point on which his cue-tip rests after delivering the stroke. Being a straight "screw-back" it necessitates a hasty moving of the cue to one side as

a preventive to "fouling" the cue-ball as it returns from its impact with the object-ball. This being so, I would advise the stroke being played at an angle which would not permit of the cue-ball returning over that part of the table which the head of the cue covers after the stroke is made. In this way my advice will be better displayed than when the cue has to be hastily moved away. Remember that in playing "screw" shots you get the restraint necessary on the cue-ball *after* you have struck it and *not before*.

There is another defect occasioned by the gripping of the cue before the cue-ball is struck, and that is the tendency it has to render the player's aim inaccurate on his own ball. The spasmodic clutch he gives prior to contact with the cue-ball will as often as not cause him to strike somewhere about the centre of the ball. At times, too, the cue-tip will slither away on to the left or right of the player's ball. In the first instance there will be no "screw" imparted to the cue-ball, simply a stunning of it, that is all, and in the second a "miss-cue" will generally be the outcome of this uncertain striking of the cue-ball.

There is no stroke on the table, not even when "side" is requisitioned, that is the generator of so many miss-cues as the "screw" stroke. I have mentioned one of the causes, but that one is of insignificant account compared with the failures to strike the cue-ball accurately, which arise from a fact which is little understood. This fact is simply that, no matter at what angle your cue is depressed or whether it lies in a horizontal alignment, *the same quantity of ball* must be struck. But how many of the ordinary amateur players know this? Very few, as far

as my experience goes. They will be seen, when the position of the cue-ball necessitates a depression of the cue over a cushion, endeavouring to hit the same part of it as when the cue can be placed in a perfect horizontal line. What is the consequence? Why, they barely hit any ivory at all. Therefore the cue-ball "jumps" and goes slightly forward, instead of taking the desired retrograde motion. The annexed illustration of a ball (Fig. 18)˙standing at different distances from the cushion, will give an idea of what is required. I do not pretend that the lines drawn are exactly to scale, but they are approximately so.

The different angles made in "screw" strokes all the way around from the point where the plain ball loses its virtue, to the straight "screw-back" shot, are entirely dependent on the part of the object-ball you strike, and the amount of force that is used. As in other strokes, the striking of the side of the object-ball with great force will ensure the cue-ball taking a more acute angle than if the latter had had normal or slight pace imparted to it. The "pull back" some players invariably make whenever they try a screw stroke arises from the fact that they strike the object-ball too fully. For the benefit of these players, I must point out that they can obtain a guiding line from the object-ball to the point they wish the cue-ball to be transmitted. Striking the object-ball at various points, from "fine" to quarter, half-ball, three-quarter-ball, and "full-ball" (which latter guarantees the making of the recoil cannon), instead of perpetually on the same spot (nearly full), will bring about the desired result. A little time spent in practising this way of gaining the various "screw-stroke" angles by yourself

will speedily show the reason of previous shortcomings in this direction.
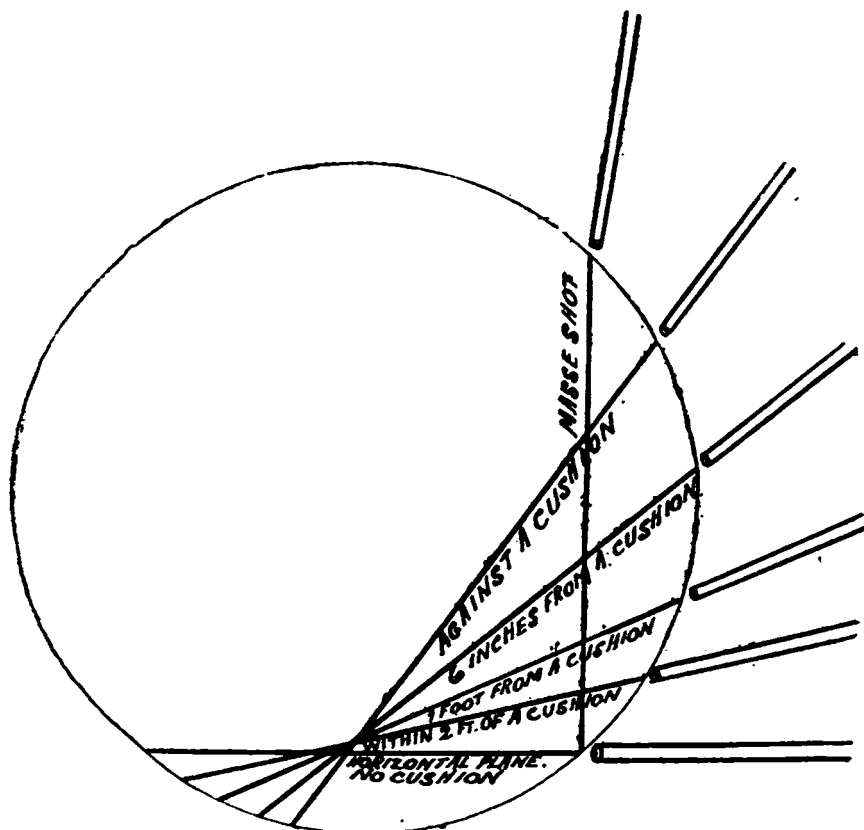
FIG. 18.—Striking the cue-ball at different points for the "screw" according to its proximity to the cushion.

There is another matter in connection with "screw" strokes, and that is the very common use which most

amateur players make of running "side," or the "side" in the direction which the cue-ball is running. Even those of them who are able to put together a fifty break almost invariably play their "screw" shots with running "side." They have a hazy notion that it will influence the course of the ball towards its destination. Now, as a matter of fact, it makes no difference whatever.

The cue-ball in a "screw" stroke will not alter its direction whether you apply running "side" or reverse "side" to it. Of course, "side" is a very important factor in "screw" strokes, particularly when one has to play an awkward losing hazard, or from the first object-ball on to a cushion. But at ball-to-ball "screw" cannons of which I have written only as yet, it is of no assistance to the very great majority of billiard players. Really beyond the great professional players and a few gifted amateur exponents of the game, to whom the niceties of "position" are gained by many intricate strokes of a like character, there is no need to run the risk of a miss-cue by adding "side" to your "screw" shots when on cannons bent.

The most fruitful source of "miss-cues" with most players is, without doubt, caused by their eager desire to impart "side" to their ball at any and every position of the balls, when a plain "screw" stroke only is required. It should always be borne in mind that the *maximum amount of "screw"* you can give to the cue-ball *will come from its centre* and *not from the side* of it. Therefore, you only weaken the element of "screw" by an unnecessary use of "side." I want my readers to grasp this point in its full significance. Not only does the quite unwarranted application of "side" tend, in a

measure, to neutralize the effects of the "screw," but it has a further derogatory influence—the causing of that bugbear to most average amateur players, the "miss-cue." Therefore, do not forget that in playing ball-to-ball cannons you do not require to impart "side" to the cue-ball.

Writing of "miss-cues" brings up to my mind the mistaken notion which generally prevails as to their origin. I have pupils come to me who ask me what should be done to meet such-and-such a placing of the balls, where a "screw" stroke only will meet the case. I tell them to "screw" the cue-ball to acquire a certain position for the ensuing stroke. They answer—"Oh, I cannot do that ; I should cut the cloth !" My invariable response is—"How will you hold your cue when you make the stroke ?" Nine times out of ten when I have been shown the alignment the cue would take, I am constrained to say—"But it is impossible to cut the cloth in that way. You are striking a point of the ball almost parallel to its centre point. Your cue-tip cannot run counter to the cloth, can it ?" As they are generally undecided as to what answer they shall make to my concluding words, I give them a practical illustration of my meaning. This I do by making various "screw" shots. I show them that there is absolutely no danger to be felt when the cue is vertically or horizontally aligned. It is, however, quite another matter when the cue strikes the cue-ball at a tangent, say, at an angle of 45 degrees, then there is danger. It will always happen when the cue-ball is close to a cushion, for, of course, such an elevation of the cue would not be made—unless by a tyro of tyros—when the ball was near the centre of

the table. If the player fails to fairly hit the cue-ball
with his cue dropped at an angle of 45 degrees, or there-
abouts, and the cloth is a trifle "loose," as it often is
around the vicinity of the middle pockets, then a "cutting
of the cloth" is no improbable contingency. The cue
will "dig" into the cloth, which will "ruck" up, and a
tear will often follow. Although not a matter of primary
consequence, as far as billiard lessons go, a knowledge
of how such things occur will, I take it, be of interest.
What is there more embarrassing than to make a *faux
pas* of this kind? "Miss-cues" may happen (the common
fault among novices when trying a "screw" shot is to
send their cue right under the cue-ball) without the cloth
ever being likely to suffer damage. I find, however, that
the mistaken impression so generally prevails that any
failure at any variety of "screw" stroke endangers the
cloth, that I feel it almost my duty to rectify it. To
better exemplify my precepts I show Fig. 19.

By this you will see that so long as you keep your
cue in a horizontal line, no fears need be experienced of
causing damage to the cloth, nor need there be any on
the same score when a *massé* shot is being attempted.
But, as I said before, keep your eyes open when, as a
matter of necessity, you raise the butt end of the cue to
depress its point to something akin to the angle I show
as the danger line.   Then, and then only, need there be
apprehensive feelings as to the result.

The " screw " shot, when a raising of the butt of the
cue is required, is of great assistance when the balls are
in close company.   Out on the bed of the table, where
the whole of the "bridge" hand can be placed, there
the "bridge" has to be raised.   Care must be taken to

get well hold of the cue-ball, and at the same time to impart the desired amount of "screw" to it.

"Screw" is more or less a knack. The player who can throw the cue with all its velocity at a certain point of the object-ball, and can arrest the progress of the cue
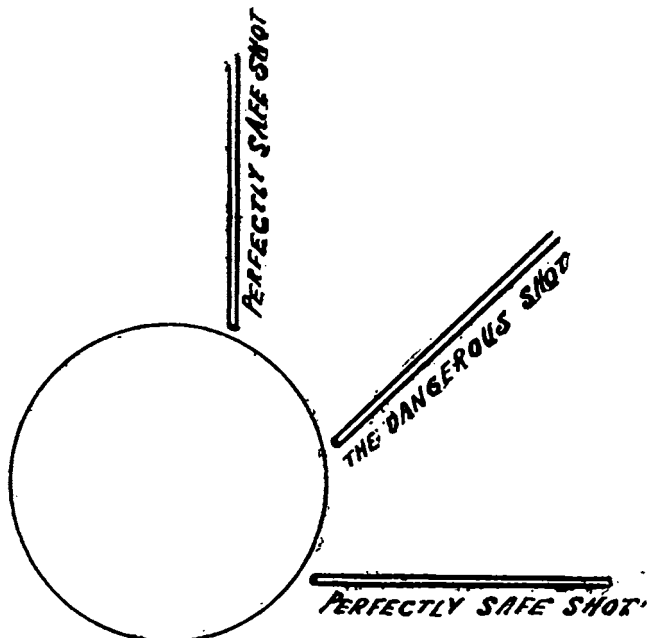
FIG. 19.—"Cutting the cloth"—the safe and the dangerous alignments of the cue.

point at a given spot, has reached the acme of excellence as a "screw" stroke player. Such a player will never entertain those doubting hopes of success and fears of a "miss-cue." For, unless some untoward incident, like the non-chalking of the cue (a grave

omission in this regard), or a "kicking" (which arises from the presence of some foreign substance on the table or balls), it will be an impossibility.

A very striking fault that amateur players habitually commit is the one of trying to regulate the amount of "screw" they put upon their own ball when they desire it to take an awkward forward "angle" after contact with the object-ball.   This invariably leads to unhappy results.   Instead of so doing, they should allow for it by striking a lesser portion of the object-ball in varying
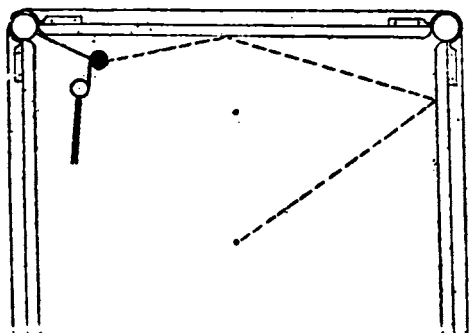
FIG. 20.—A thin "screw" losing hazard.

degrees than the natural "screw" angle—the right angle.   It is a common error to suppose that the object-ball must be struck "fully," or nearly in the centre, to ensure the cue-ball "screwing" from it.   Never was there a greater mistake, yet, at the same time, it is a most popular one.   "Screw" will act on the cue-ball, though the object-ball be struck as finely as a hair's-breadth.   And it is in this manner that the player should gain his different angles. *Always put the normal amount of "screw" on your ball and make the angle at*

*the pocket or cannon which you try for from the object-ball
by striking it on the point which will give the cue-ball the
direction you desire it to take.*   Just as you play a thin,
quarter-ball, half- or three-quarter-ball " plain " stroke at
an ordinary cannon or hazard.   At these you do not
strike the object-ball eternally on one spot, and there is
no more reason, believe me, that you should do so when
making " screw " shots.   I give two illustrations (Figs.
20 and 21) which show a couple of ordinary positions,
when the hitting of the object-ball very " thinly," and
with little force, is necessary to ensure a desirable after-
placing of the balls.   Now, I think I am quite right in
saying that most amateurs would in each instance strike
the object-ball fairly " full " and with considerable force,
particularly in the case of the " screw " loser from the
baulk half circle into the bottom pocket.   Ordinary
amateur players, when such a stroke presents itself, hit
the red ball with all their power, they generally " over-
screw " the losing hazard, but hope to " double " the red
after it has run across the table half a dozen times or so.
Instead of this, were they to try a slow " screw " from
the red ball, hitting it fairly " fine " (it only wants a
little practice and patience) into the baulk pocket, they
would leave the object-ball in the middle of the table—
the best of positions with the cue-ball " in hand."   The
top-pocket losing hazard is of the same nature.   Instead
of driving the red ball around the table or into baulk by
a heavy full stroke upon it, it should be " cut " as finely
as possible.   In both figures the dotted lines denote the
course the object-ball should take.   My readers will
find that, whatever time they may devote to exercise
upon these and similar ways of making the " angle " of

a screw-stroke from the object-ball, they will, I am
certain, consider it not to have been ill-spent.

The leading professionals invariably take the cue
under the forefinger of the left hand—the buckled
"bridge"—to make "touchy" little screw shots that
necessitate great delicacy of manipulation.   For these
it possesses the advantage of the "bridge" hand being
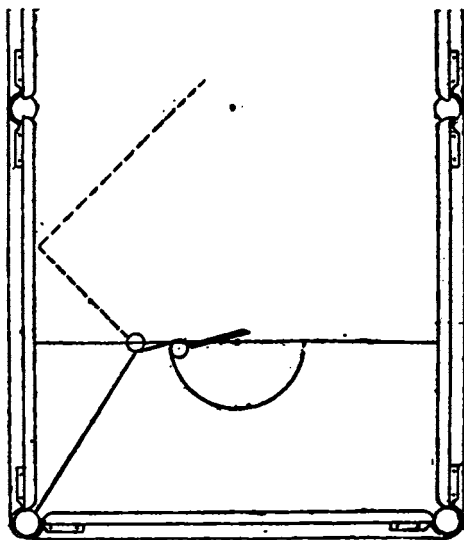
FIG. 21.—Another thin "screw."

brought much closer to the point of the cue—a decided
gain.

On the other hand, this method of projecting the
cue through the fingers quite nullifies all freedom in the
stroke.   The fore-arm suspends its ordinary movement
to and fro, and barely suggests that it joins in the work
of the wrist, hand, and cue.   The greatest factor in the
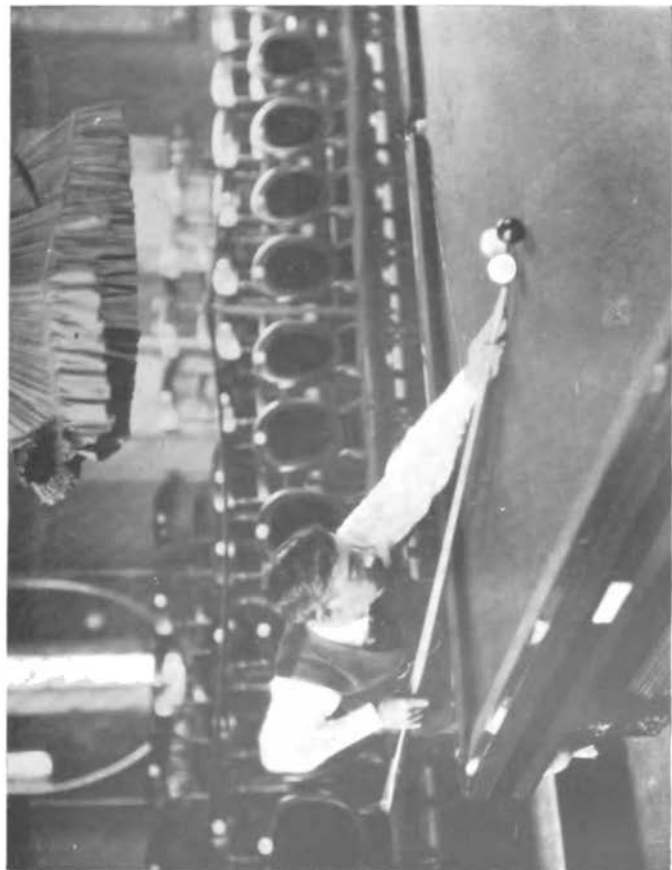
Plate IX.—DELICATE "SCREW" STROKE THROUGH THE BUCKLED "BRIDGE."

delicate manipulation of close "angle" screw shots is wrist work. The requisite strength is applied to the cue-ball by a series of "violin-bow" touches, wherein the hand wielding the cue takes a graceful æsthetic droop.

Another and little-known effect of rotary motion upon the cue-ball is the influence that "screw" retains after the ball has struck a cushion. Many a shot, which in plain straightaway fashion looks to be a veritable terror, can be brought to within a very reasonable prospect of a score by the conservative properties possessed by "screw." It works on the object-ball, or from a cushion on to an object-ball, as directly from one ball to the other in the commonly accepted form of "screw" shot. Also, its operations are not confined to a stroke played at the maximum degree of speed, as the bulk of amateurs seem to think. Its virtues, in fact, become more patent when a slow "strength" shot is played. Executed at full pressure, this "screw" is mainly the effect of force, and partly, only, of its own fine quality, instead of being the outcome of its own independent and all-sufficient power. If "screw" receives proper treatment, and a due meed of what it is capable of gaining for the player, then, indeed, it is a factor of much moment in his billiards.

On Fig. 22 will be seen some strokes conveying to the reader some idea of the possibilities of "screw" acting after a first contact with a cushion. They are quite simple strokes, no matter how difficult they may look on paper. Naturally, as in other "screw" strokes, everything depends upon the judgment of the player in gaining a desired impact with the first object-ball. A very few experiments at the strokes I show will give

an idea of the allowance that should be made from the cushion to the object-ball to ensure a correct contact with the latter. It simply amounts, however, to the same thing as the "screw" shot, of whatever degree of acuteness, being made by a ball lying on the cushion at the point to which the player should direct the cue-ball. As I said before, this requires a certain nicety of judgment, though by no means more than is necessary at the ordinary "screw-back" shot of everyday use. With regard to the "screwing" of the cue-ball, not the least fear need be entertained, nor will there be, I am certain, when once the stroke has been tried. I think the chief fault that will be found by those who practise these strokes is that they "over-screw" the cue-ball. In the positions I example, the "screw cushion" cannons are "the game," and they are not one whit more difficult than a recoil cannon of the ordinary type. There is one thing, though, that the player must guard against when attempting these cannons, and that is the use of "side." There is absolutely not the slightest need of its being brought into play. I have given reasons why "side" should not be employed in connection with "screw" strokes, when the latter commodity would in itself suffice. I then said that a combination of "side" and "screw" —exceedingly useful on occasion as they certainly are— were not conducive to the making of a desired shot, when either element, unaided, could effect the consummation. And, in explanation, I pointed out that the application of the one tended to materially weaken the strength of the other. This is, indeed, so. Therefore "screw," and "screw" alone, is the only thing required in these strokes.

There are two other strokes of the variety—"screw
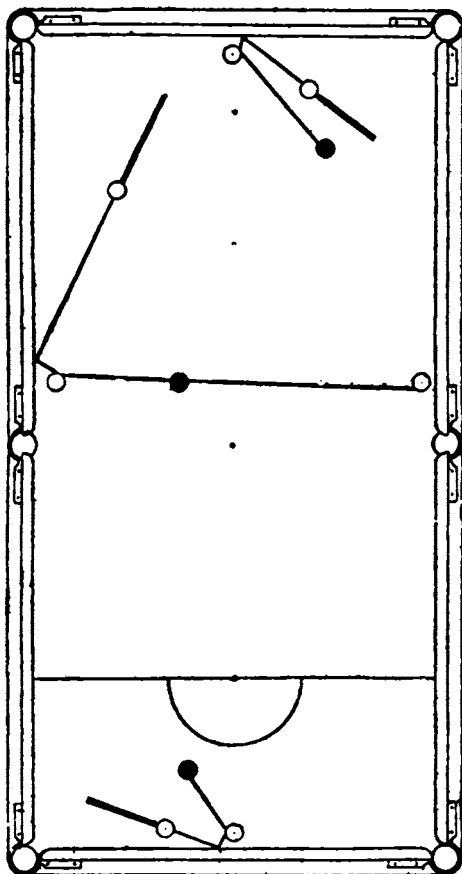
FIG. 22.—Screw cushion cannons.

cushion" strokes—that I have been commenting upon
to which I should like to make detailed reference.   All

these "screw cushion" cannons are, I take it, happy examples of what may be accomplished in this connection. The stroke in the centre of the figure is one which many a good player, who is cognisant of the influence of "screw" from a ball striking a cushion, would not be eager to try. It certainly is a difficult one. But it affords another opportunity of demonstrating how useful it is to have the knowledge that such a stroke is possible. How many a player has "forced an opening" for himself, and snatched a game out of the fire, through attempting some possible, if highly improbable, shot of this kind! I only cite the stroke here to give my readers a more comprehensive grasp of what "screw" will compass. This wide "screw cushion" cannon, wherein the two object-balls lie facing each other just above the two middle pockets, and the cue-ball somewhere near the top cushion, can be made on to a ball lying anywhere across the table, as the exampled cannon on to the red ball, and the line drawn through it to a white ball near the further side-cushion shows. I know it will appear on the plate to present a hopeless look for many who study it on paper. Let these only try it on the billiard-table, and I think they will hold different views forthwith and for ever. But do not forget to "screw" the cue-ball by hitting it well below its centre, and gripping the cue tightly as you feel it make contact.

"STUN" OR DRIVING STROKES.

Another and most useful stroke, which partakes of the character of "screw," is that technically known as the "stun" stroke. The Americans, however, term

it the "driving" stroke. This latter it certainly is, for it permits of an object-ball being driven around or up and down the length of the table, the while the cue-ball has barely motive power to travel more than a couple of feet after a very forcible contact with the object-ball. Its usual progress has been arrested and almost entirely destroyed by a low stroke of the cue, combined with a powerful, full impact on the object-ball. The cue-ball must not be struck quite so low down as in the "screw" shot. It should be hit at a point which constitutes the medium between the "screw" and a central "plain" ball. The chief point of all, however, is the thick contact with the object-ball. This is as nearly an approach to a full ball one as you can manage without quite making it. Grip your cue pretty tightly so as to accentuate its weight; for this is an important factor in "stun" or "driving" strokes. The more ponderously you strike your ball the more will you "stun" it, a principle which receives ample confirmation every day at the hands of beginners. These, as often as not, "stun" the cue-ball when trying a "run-through" or "screw" shot of some kind when the object-ball is close to them, and it is solely their heavy-handedness to which the listlessness of the cue-ball can be traced.

Well, now place the balls on the table in something like the position I show in Fig. 23. Here you have a "right-angle screw" stroke which every player, doubtless, cannot fail to make. But it is not the making of the cannon in itself which is the essential of the stroke, it is the manner in which it is made. The chief thing to be taken into consideration in cannon play is the leaving of the balls in close proximity after the shot. In

this instance the "stun" stroke is the only means by which this can safely be accomplished. It will do all
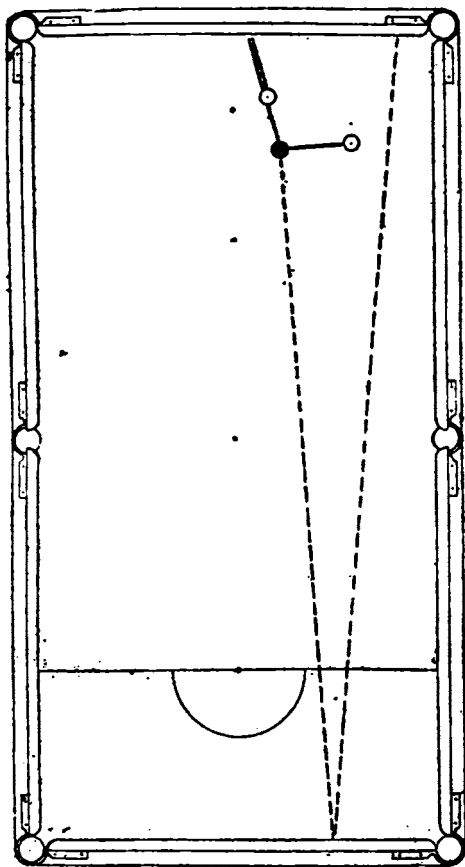
FIG. 23.—"Stun" position cannon.

that you require, and, moreover, even if the cannon from the after position is not particularly inviting, you will

hardly fail to leave a losing or winning hazard into the corner pocket close by.

Try the stroke. Do as I say—grip your cue pretty heavily, hit your ball below the centre, and gauge as best you can the amount of force you will have to use to enable the object-ball to go on to the baulk cushion and return up by the object-white. The dotted line extending from the red ball down and up the table shows what its correct course should be. Having taken aim so as to ensure the red ball striking the baulk cushion at the point required, deliver your cue as though you were half-heartedly "screwing" your ball. Do not forget, however, that the very essence of the stroke lies in a very thick or "full" contact with the object-ball, and a heavy-handed stroke with the cue. There will be little trouble in giving true direction to the cue-ball. A few attempts, and you will soon master this requisite. As the cue-ball strikes the first object-ball with the partial under stroke and the power you put into it, you will observe that its motive power has been almost extinguished. It will roll towards the second object-ball in a dull condition, as much resembling a stunning of the ball as any stroke but the "stab" stroke can give to it.

Another beautiful stroke of the same kind is the "stun" cannon shown on Fig. 24. This again represents a placing of the object-balls which necessitates a stroke very closely verging on a right-angle "screw." The ordinary shot of this latter kind would again easily dispose of the cannon, but once more at the expense of position, the old fault of the average amateur cueist. The remedy, however, lies in the use of the "stun"

stroke.   By employing it, the first object can be driven
—the appropriateness of the American term of "driving"
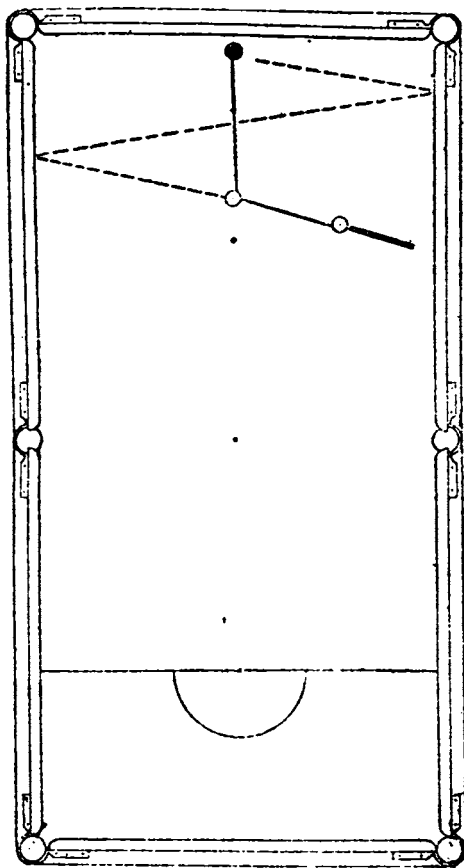
FIG. 24.—A pretty "stun" gathering cannon.

stroke now becomes apparent—across the table to finally
stop at about the centre of the top cushion close to the

second object-ball.   The path of the driven ball is shown by the dotted lines.   Not only is this a very valuable shot from a purely scoring point of view, but one that is exceedingly pretty to watch.

In these two examples of the power of "stun" strokes to "bring the balls together," for cannon play, no doubt there will be observed the facility with which the first object-ball is made to travel in a desired direction.   At first sight, no doubt, its course does not look so easy to be steered as it really is.   The width of each "screw" cannon is such that the player feels instinctively that he must strike the object-ball as in a half-ball shot.   This, as I have previously observed, produces as nearly as possible a right angle from the object-ball in "screw" strokes.   But a little courage will enable the player who tackles these "stun" cannons for the first time to strike the object-ball with the desired fulness of contact, both to gain the semi-screw effect and the desired path of the latter.   The workings of the cue-ball will not be so noticeable upon immediate contact as those of the object-ball.   The last mentioned will be seen travelling ahead at a fine pace, but the subtle effects of the partial "screw" and ponderous stroke on the cue-ball, when they act, will not be observable to the eye.   For they are lost in the depths of the object-ball, which throws no light upon the whirling cue-ball.   All that it appears to do is to exercise a similar effect to that of some missile which has met with some resistance, taking away almost the whole of its velocity ; it may travel a few yards further, but for all practical purposes its career is ended.   So it is with the cue-ball in these "stun" strokes.   It strikes the object-ball at a considerable rate of speed,

and passes through and against the whole weight of the object-ball.   If you note the point at which the cue-ball makes contact, and the point at which it commences to move towards its second object, you will see that the cue-ball circles around on the very spot where the first object-ball had rested.   Its natural inclination has been to make a forward movement, but the restraint enforced upon it by the partial "screw" and heavy stroke have crushed its normal rotation. And between the shock it has incurred by the thick contact, the struggle to move forward, and the arresting of its progress by the under-current, the cue-ball has barely strength left to it to travel a couple of feet.   This distance, however, may be increased or decreased as the player wishes, according to the power he puts into the stroke and the point of contact on the first object-ball. The chief merit, then, of "stun" strokes in cannon play is to guarantee the cue-ball and second object-ball being left in close proximity following a score. All then that is further required to complete the stroke is accurate direction and requisite pace on the first object-ball. Both these qualifications may easily be gained by the expenditure of a little time over the strokes in the manner that I describe.

Cannon play does not alone monopolize the good results to be obtained by "stun" or "driving" strokes. It is equally useful in the other branches of billiards— the losing and winning hazards. In losing hazards it gives tremendous assistance to the capable player. It often happens that he has the option of two strokes at, say, centre-pocket losing hazards of the kind shown on Fig. 25. On this I show the strokes as they should be

played, that is, by means of the "stun" stroke. You
will observe the career of the object-balls, and how they
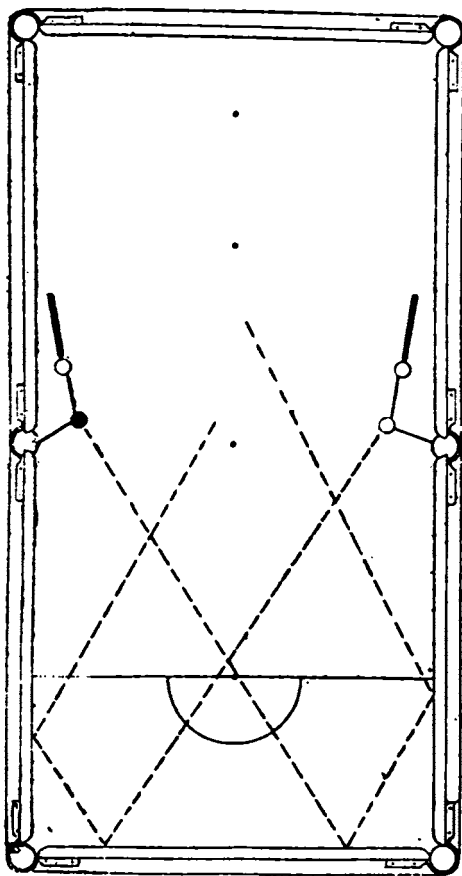
FIG. 25.—"Stun" middle-pocket losing hazards.

are driven around and out of the baulk enclosure up to
the centre of the table. As I say, this is the correct

way of making the shot. You make sure of bringing
the object-ball out of baulk. Even if you send it beyond
the stopping-point I illustrate, the ball must run up by
or between the top pockets. And if you have not an
easy score on, you will be perfectly justified in consider-
ing yourself unfortunate.

On Fig. 26 I give the same positions as in the
preceding one. But on this I show the losing hazards
as they are generally and incorrectly played. The fine
"screw" shot is the medium of this stroke. It possesses
two great disadvantages, however, as compared with the
"stun" stroke. Instead of the object-balls being granted
a certain outlet from the confines of the baulk line, as
in the latter stroke, this now becomes a very doubtful
matter indeed. They have such a great distance to
travel that tremendous pace must be put into the stroke
to get them into play again. This can easily be gleaned
by a tracing of the dotted lines extending from each ball.
Look at the extent of their journeys across to the side
cushion before they enter the baulk space. Then note,
again, how they have to go right across to the other side
of the table, and how they still have some two or three
feet to compass before they emerge into the open field
of play again. Compare it with the direct entrance, and
almost straightway quitting, of the prescribed space the
object-balls make when the "stun" shot is made. But
it is not only in this respect that this last-mentioned
stroke is superior to the plain thin "screw."

For, apart from the necessity of keeping good
position, it enables the losing hazard to be made with
greater ease. In the one—the "stun" stroke—you are
permitted to make the stroke with a slow ball—no

unimportant aid this in making losing hazards into what
is practically a "blind" middle pocket. But in the
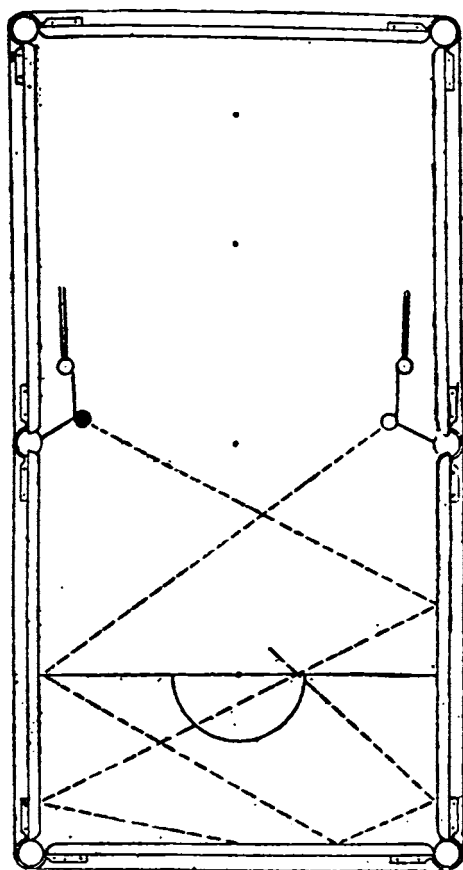
FIG. 26.—How the losing hazards are usually misplayed.

plain thin "screw" stroke shown on Fig. 26 the losing
hazard has to be made with tremendous force.   There

is no restraint to the pace of the cue-ball at all, and unless it goes straight into the pocket, the odds are that the " loser " will be missed. Any contact with the " shoulders " of the pocket will invariably effectually oppose it. But not so with the heavy slow ball which comes with the " stun " shot. There will not be enough force in it to cause a rebound from the guarding " shoulders," and it will worm its way insidiously into the pocket.

I will give further examples of the " stunned " ball's usefulness. On Fig. 27 is shown a not very unusual placing of the balls, which enforces upon the player a losing hazard into the adjacent baulk pocket. This should be made by a " stun " stroke, whereby the object-ball is sure to find an outlet from behind the baulk line. A very little judgment of "strength " is required to steer it to the centre of the table, for it is a normal-pace kind of stroke. There is no necessity whatever to make any use of " side."

If the stroke represented on Fig. 27 were not made by the medium of the " stun " or " driving " stroke, such a course of the object-ball as shown on Fig. 28 would most certainly ensue. This would be brought about by the playing of the stroke with ordinary " screw," and the thin contact with the object-ball which must happen. Look at the vast distance the latter has to traverse before it can release itself from the seclusion of the baulk line. It has to make its way across the table, where it is as likely as not to catch the projecting " shoulder " of the left baulk pocket, to assuredly remain out of play. But even if this danger is averted, there are others yet to be surmounted. The ball has to

travel a full six feet to successfully emerge from the circumscribed space after it has struck the left baulk
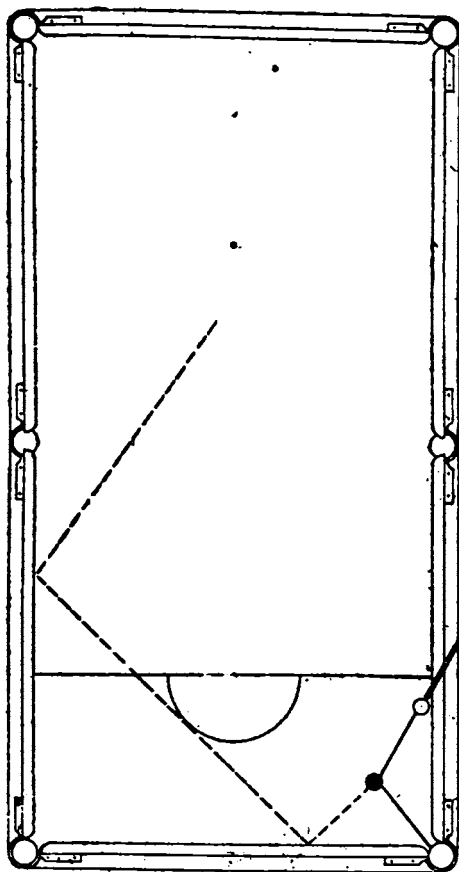
FIG. 27.—Showing how the "stun" stroke drives a ball out of baulk.

cushion. It will not do so without causing some un-easiness to the player, and as often as not it will stop

short when requiring but a few inches to consummate
its journey. Yet through this disaster to what may,
perhaps, have been a promising break, there will be
little of a very favourable character for the player to
continue with, even though the ball does leave the baulk
enclosure. Fig. 28 shows, or a slight extension of the
dotted line would show, the best position that could
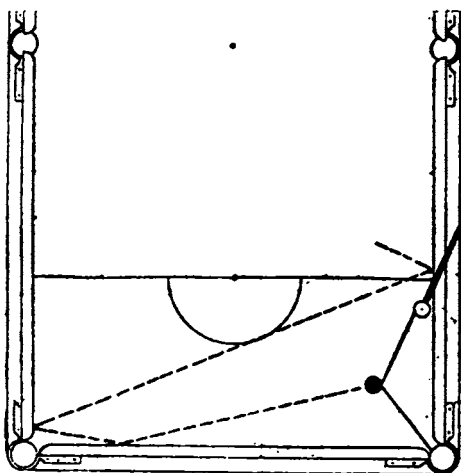
FIG. 28.—Showing the greater distance the object-ball has to travel
when hit thinly.

be hoped for—a " short jenny " in the adjacent centre
pocket. But if the ball should travel a foot further on,
it will find refuge and practically immunity from a score
under the protection of the side cushion.

Of great account though the " driving " of the object-
ball be in such description of losing hazards as I have
been commenting upon, I think that it becomes even
more evident, and certainly more attractive, when it is

applied to cannon play. In these strokes it virtually forms the basis of a retention of position. The second object-ball is, to all intents and purposes, held within the bounds of a two or three inch radius, which, however, may at will be almost indefinitely extended. Not only is this so, but, as in the losing-hazard examples of the virtues of the "stun" stroke, the first object-ball may be made to take up with comparative ease any adjacent location to its partner—the second object-ball. Further, the retaining of the latter within a short space of its placing on the table prior to the cannon being made also ensures the presence of the cue-ball in the vicinity of the other two. Therefore, a good rule may be constructed in the following terms, and one which always stands good : " *The closer the cue-ball lies with the two object ones, the more certainty is there of " leaving" an easy cannon to follow upon, and this in despite of the distance (short or long) that the first object-ball may have to travel.*" Having thus laid down a principle, I will proceed to demonstrate it in a practical sense.

I will ask my readers to take notice of Fig. 29, which illustrates very common positions on the table. Each and every one of them may, and occasionally do, occur several times during the course of a game between ordinary players. With better players, and their better methods of " bringing the balls together," they are liable to a very much more frequent recurrence. They are strokes that require rather nice handling, but which, nevertheless, are by no means difficult. I am not now speaking of the cannons, the " screw " cannons in themselves, but of the path that the first object-ball should take. Any average player should easily effect a score,

and, for the matter of that, the desired position too. Still, there are not too many who understand how
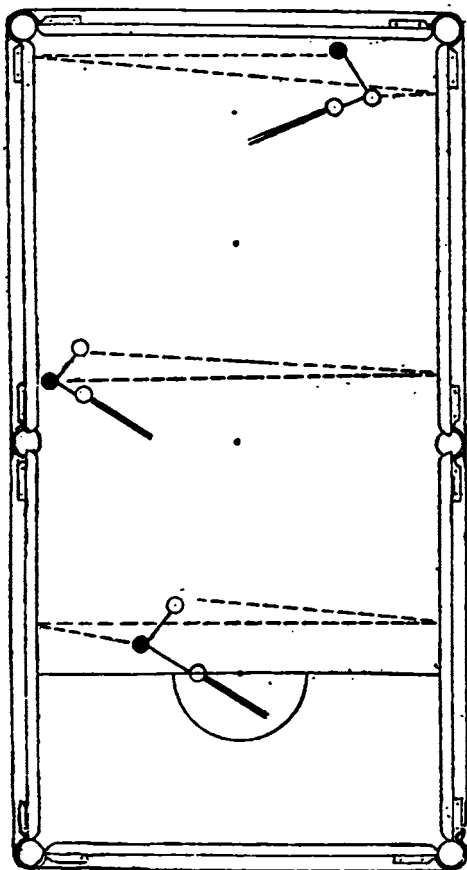
FIG. 29.—Examples of " stun " gathering cannons.

this latter can be accomplished. For the information and guidance of these players, I therefore show that

these different strokes are compassed by the "stun" stroke.

The first one (that at the head of the table) shows a very common "cannon" position.   The object-balls are so placed that a gentle stroke will not answer for the purpose of bringing them to a cluster.   Such a stroke may be made, but it will require playing with a remarkable delicacy of strength quite beyond the powers of any but very great billiardists.   The width of angle between the object-balls is very marked.   To bring the first object-ball back to its partner at single "strength" or gentle pace would require the most delicate of treatment.   However, fortunately, in billiards there are two alternatives in the majority of instances with regard to after-position.   And all the three strokes will, I think, tend to confirm this statement.   In neither case will single "strength" or a gentle return of the first object-ball from the immediate cushion answer the purpose of the player.   It will need a "doubling" across the table, and so back again, at an estimated pace which may be gained by a very little practice, dependent, of course, upon the vitality of the table it is played upon. But the primary feature in all these three strokes is the "stunning" of the cue-ball in the way I have described. It is the only means by which the second object-ball is "retained," or kept within reasonable limits of its original position.   The dearth of pace in the cue-ball, consequent upon its forcible impact with the first object-ball—for fairly forcible it needs to be—and its feeble contact with the ball it cannons upon, barely moves the latter an inch or two.   Thus the trouble of having to gauge the after location of both the object-balls is

practically removed, for you know that by the medium of the "stun" stroke you virtually "retain" the second of these in what is approximately its position before the cannon is made. And really, in so far as the "leaving" of the balls is concerned, you have little else to trouble you than the accurate "driving," at the proper "strength," of the first object-ball.

On Fig. 30 there will be seen another example of the "stun" cannon, in which is also a frequently occurring position of the balls. In this, the second object-ball has to be struck more forcibly than in the preceding three cannon strokes. This, however, is not actually necessary, for the usual "stun" stroke strength would "leave" an easy red winning hazard into the right top pocket. But to maintain the principle of leaving the object-balls as closely as possible together following the making of a cannon, I desire that the red ball should be driven across to the right top side cushion, where the first object-ball should find its way subsequent to its lengthy journey down to the baulk cushion and back again. The extra pace needed on the cue-ball will provide a little variety to the ordinary "stun" stroke. It will be of assistance, too, to the player in the gaining of a "touch," the great essential, after all, in this kind of strokes.

Winning hazards also, when the all-important consideration of a good after-position enters into account, derive much merit from an application of the "stun" stroke to the cue-ball. Examples of these I bring to notice on Fig. 31. The one shows a spot stroke, wherein the red ball is driven into a top pocket, and a most favourable alignment of the cue- and object-balls

left for a repetition of the shot. The other represents
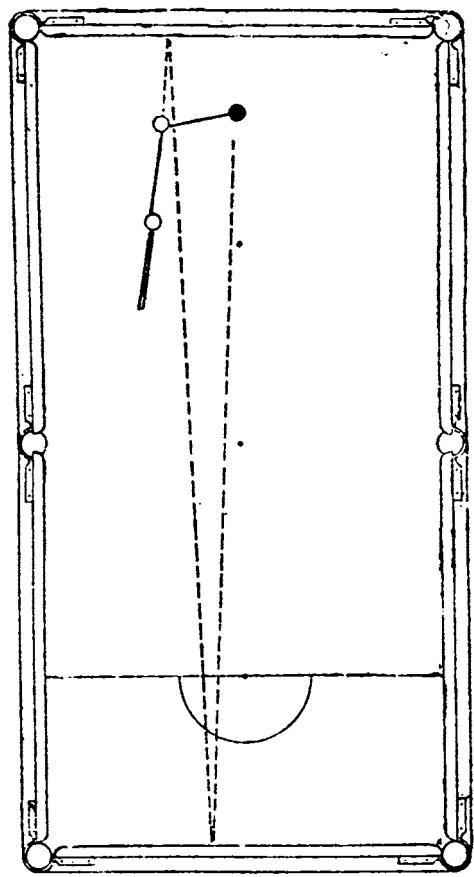
FIG. 30.—Another "stun" stroke, the object-ball doubling the length of the tables.

a middle-pocket winning hazard whereby the "stun" stroke keeps the cue-ball in the angle line from the

middle pocket to the spotted red ball, thus enabling the
player to follow on with a simple top-pocket losing hazard.
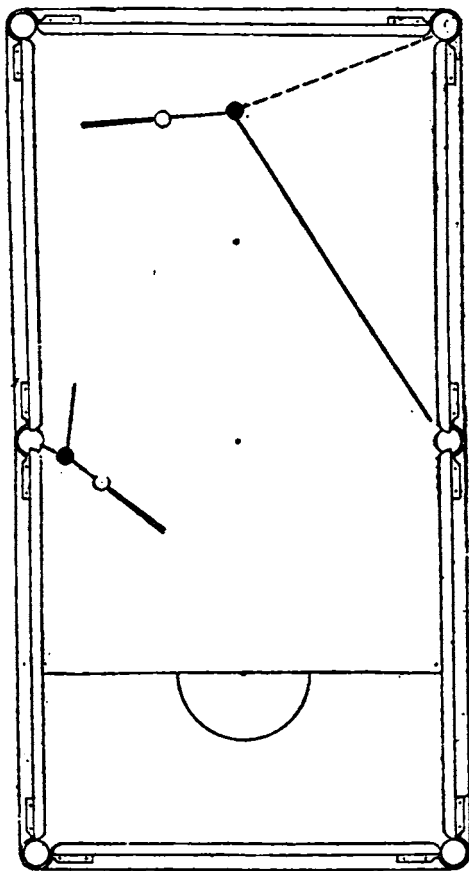
FIG. 31.—" Stun " winning hazards.

But that the "stun" stroke and its effects are not
always limited to a close proximity of all the three balls

the cannon shown on Fig. 32 bears eloquent testimony.
This is to all intents and purposes a "driving" stroke,
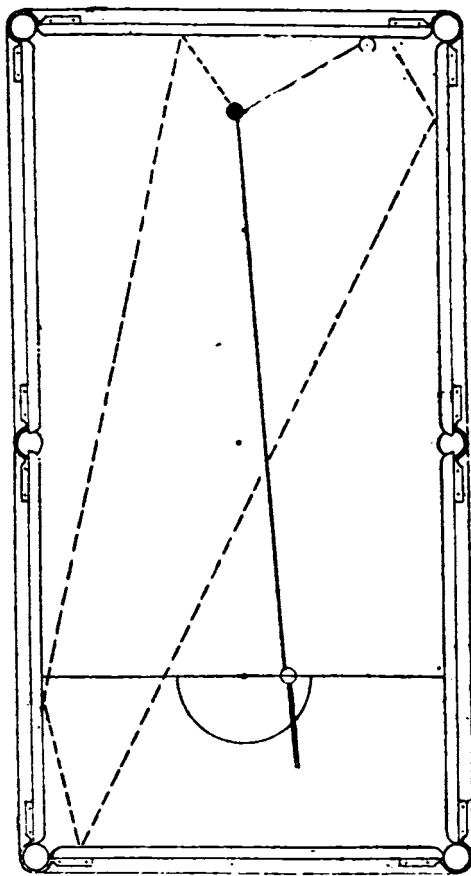
Fig. 32.—A forcing cannon of the "stun" order.

pure and simple. The object-ball is driven down the
table, whence it returns to locate itself close to the right

top pocket. Meanwhile the cue-ball has been violently "screwed," and after a full contact with the red ball, which takes nearly all the force from it, it drifts on to the second ball to make a gentle cannon. As a result, the two object-balls again foregather.

On Fig. 33 I present one of the most difficult fancy shots which can be placed upon the table. The red ball is placed upon the centre spot, with the cue-ball a foot behind it in a dead line with the red ball to the middle pocket openings. The object white is also a foot away from the red, but in the direction of the bottom cushion. The position of the balls thus forms a perfect pyramid. What the player has to do is to put the red ball into the facing middle pocket, and to make a cannon with the same stroke. This can only be effected by the aid of the "stun" stroke, which enables the cue-ball to pass right straight through the centre of the red ball, thus guaranteeing the winning hazard. But, of course, the chief difficulty lies in the making of the cannon. Tremendous force has to be used. It is possible to make the stroke, but I have seen very few amateurs who could. Even John Roberts spoke of it with some respect, although he included it in his *répertoire* of fancy shots. It is a very patent exposition of the powers of the "stun" or "driving" stroke.

The all-round utility of the "stun" or "driving" stroke is really remarkable. The more one analyzes the intrinsic value of the shot, the greater its possibilities are made apparent. There is not a more potent factor in building together link by link the chain of a prolonged series of simple strokes in the whole scale of the billiard gamut. In what may be termed optional

positions, that is, the adjusting of the player's "game"
as determined by the location of the second object-ball,
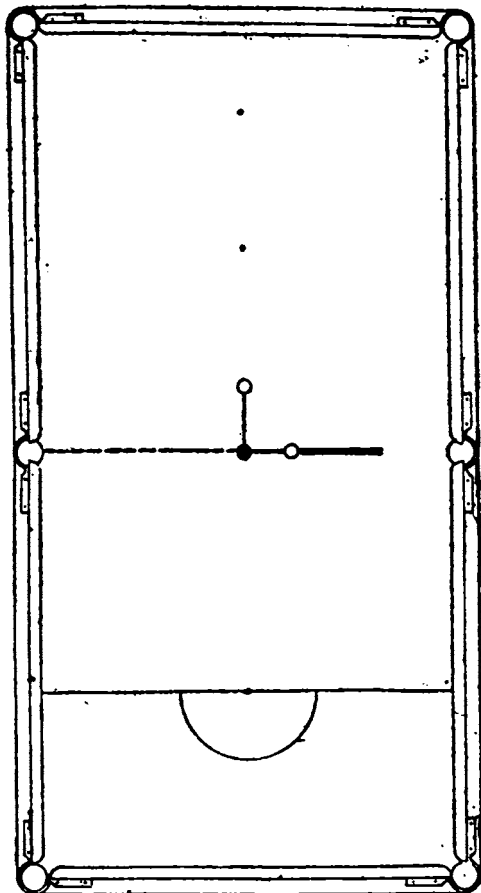
Fig. 33.—A "fancy" "stun" cannon.

the "stun" or "driving" stroke plays a most active
part. But only when the cue-ball and object-ball are

in close proximity does the full benefit of its application make itself most clearly felt.

Now, on Figs. 34 and 35 we have two positions of the balls which I venture to think will illustrate something of my foregoing remarks. Both placings show what is obviously a screw losing hazard into the right top pocket. This stroke in itself is, as even ordinary players must know, not a difficult one by any means. That, the accomplished billiardist will tell you, however, is quite a subordinate matter. You have your first object-ball practically at your disposal. And it is for you to determine to what part of the table it shall be driven following the making of the losing hazard.

The positions indicated on Figs. 34 and 35 are fair samples of the kind of position the player may encounter. Moreover, they serve to show what command the skilled player may exercise over the object-ball. Take Fig. 34, for instance. The very obvious fact must present itself to the intelligent cueist that, if he can cause the object-ball to be driven into a groove that will guarantee its presence on the same half of the table as the unattacked object-ball, which reposes slightly above the right middle pocket, he will gain an inestimable advantage. And to ensure this being brought about, the cue-ball must be "stunned" in the manner I have described. This can only be done, of course, by means of a thick contact with the object-ball. And it is just this thick contact which gains the player the desired end—the relegation of the object-ball into a groove which causes it on its return through "baulk" to come to a standstill at a point which permits of an easy "drop" cannon from the D. The stroke should be

played with such "strength" as will ensure the object-
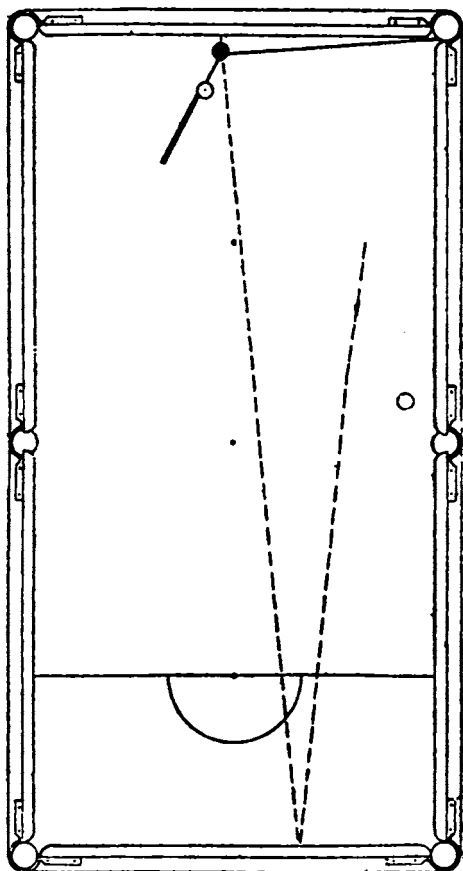
FIG. 34.—A screw losing hazard along a cushion, hitting the object-ball fully
to keep it on the same side of the table as the second object-ball.

ball following such a course as that exemplified by the
dotted lines on the diagram. The pace at which the

object-ball is struck, as necessitated by the longish
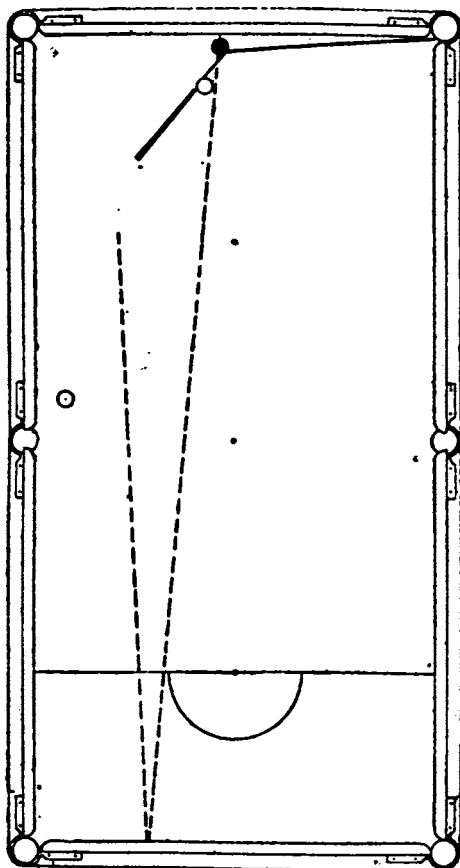
FIG. 35.—"Screw" losing hazard, hitting the object-ball thinly to keep it on
the same side of the table as the second object-ball.

journey of the cue-ball to the desired pocket, and also
the lengthy travel the object-ball has to make in its

passage to the desired angle line, compels the latter sphere to traverse the "baulk" enclosure. Played in any other way but with the "stun" stroke, the losing hazard shown on Fig. 34 will be fraught with extreme uncertainty as to the stopping place of the object-ball, The gentle "thin" screw stroke may be made, or it may not. It will, anyhow, require very delicate handling. The hazard attempted in this way will be found considerably more difficult than with the "stun" stroke. For the latter enables the player to be assisted by a much greater quantity of "pocket side" than when playing the gentle pace or high speed "thin" strokes. This reasoning must readily be apparent to my readers, who doubtless know the practically increased rotation or "spin" which comes to a cue-ball after a heavy and thick contact. Its motive power is so deadened that the bias upon it becomes almost the paramount element operating upon the ball.

On Fig. 35 it will be seen that the position of the unattacked object-ball has been reversed. It now stands slightly above the left middle pocket. But the two active participants in the stroke, the cue-ball and the first object-ball, remain in the same positions as before. The stroke undergoes considerable alteration simply and solely because of the altered position of the second object-ball. And this small matter—small from the unthinking player's point of view—completely changes the whole character of the losing hazard. Now, it is most desirable for a good after-leave that the red ball—the first object-ball—shall be again kept on the same side of the table as the passive object-ball, according to the elementary principles of "position" play.

That being so, it needs little telling that a much thinner contact of the cue and object-ball is needed than in the stroke represented on Fig. 35. And, as I said before, this thinner striking of the object-ball demands a better stroke from the player than when a thick contact is made. For "screw" is brought into play at the expense of " side," the great assistant in pocket strokes, in such "screws along the cushion." But this drawback to the actual stroke notwithstanding, the "thin" screw losing hazard must perforce stand as "the game" at such a position. As much "side" as is possible to be used without detriment to your "screw" or an uncertain striking of the cue-ball may be brought into action· The object-ball should be struck about a quarter-ball, or even less, to cause it to be thrown into the passage which will demand its travelling on similar lines to the dotted ones on Fig. 35. And this result achieved, a set "game" is left with which to continue.

It is my opinion that the examples I have furnished on Figs. 34 and 35 of the necessity of determining your course of action by the resting-place of the second object-ball in strokes akin to those I have shown, are not generally in the cognisance of the great amateur billiard community. It is sufficient for them to make the stroke —the losing hazard—and leave the stopping-point to sheer chance. They know that they must "screw" and put " side " on the cue-ball ; also they are aware that, if they put plenty of force into the stroke, they will keep the object-ball out of the confines of baulk. Sometimes a greater expenditure of power than usual will bring about this melancholy happening after the object-ball has traversed three lengths of the table. But, this

untoward result apart, the player who does not make his stroke in accord with the situation of the passive second object-ball, will more often than not fall into irremediable trouble.   If he does not try—even to try and fail is better than to make no such attempt at all—to control the direction of the first object-ball there are dangers lurking that he is not aware of.   The second object-ball may be somewhere in the centre of the table.   Who is to say that his stroke may not lead to a "kissing" of the two object-balls, and their consequent deportation behind the baulk line ?   Also, as it is the custom of the ordinary amateur player to make, at least, a half-ball contact (with its straight up-and-down passage), or, as is more often the case, a fuller one, what happens to their break if they have no consideration for the second object-ball's existence ?   There are infinite varieties of position for the latter, and also of the points at which the cue- and first object-balls may foregather for these "screw" losing hazards into the top pockets. But to make no use of the third ball at all (that is what a practical ignorance of its being on the table, in the way I have described, amounts to) simply means a kind of moral suicide to your break.   It does not require an inordinate amount of intelligence to tell the player that he must, as much as possible, direct his efforts towards combination in his execution.   And combination in the strokes shown on Figs. 34 and 35 (and all other positions on the board, whether your object is to subsequently attain a comfortable hazard or cannon) is the vital essence of both.   Recognition of the location of the second object-ball, and a directing of the first one to a point on the table

which will ensure a desired after-stroke, are absolutely imperative.

These two strokes are such interesting ones that just a few words as to the faults that amateur players manifest in their attempts at them, and similar strokes, may not be unacceptable. These are mainly comprised in a too great an application of "screw" and too little "side." Most amateur players "overscrew" this variety of losing hazard. And the quantity of "screw" is always gained at the expenditure of the very needful "pocket side." Thus, between the preponderance of the one and the lack of the other element, the player comes to the ground. It would be better for him to depend in equal portions upon either commodity—a medium of "side" and "screw." This would in a great measure prevent the common failing, the overscrewing. For the stroke pure and simple, without heed of position, a less than half-ball contact will meet the case.

But when a player has to make his own angle at "screw" losing hazards, the difficulty of the stroke is considerably enhanced. Fig. 36 will demonstrate what I mean by a player having "to make his own angle." Any kind of screw-back shot, cannon or losing hazard, when there is not a full direct recoil, comes under this category. It is easy enough to "screw back" from any angle, but not so easy to bring the cue-ball back to a second object-ball for a cannon, or to a pocket for a losing hazard. Judgment of the angle desired comes to the fore here. The player has to practically "make his own angle." With cannons it is as difficult to gain the true direction as with losing hazards. Yet the latter are considerably more difficult of accomplishment. This is

on account of the vast amount of "screw" that is
required in the operation of "screwing back."   It leaves
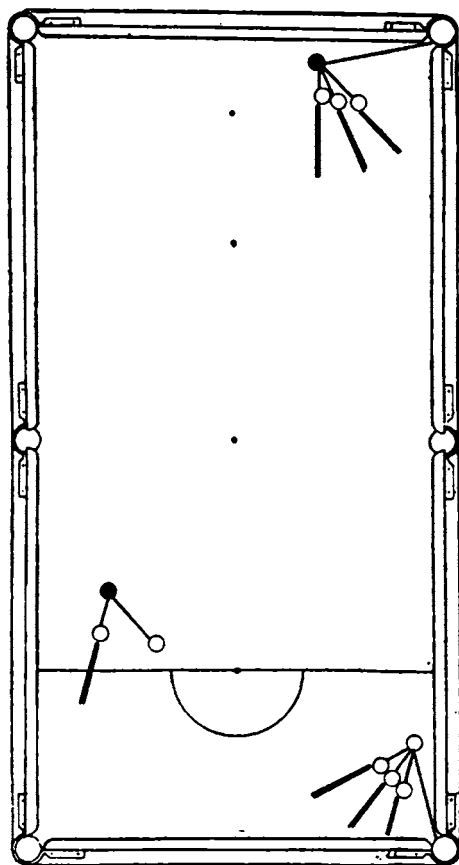
FIG. 36.—Difficult angles for screw strokes.

little room for the application of "side," and none who
are not aware of its helpful powers in such strokes can

realize how this loss fairly doubles the difficulties of these kind of losing hazards.

The list of "stun" or "driving" strokes is by no means exhausted in those specimens I have already brought to notice. There are others which belong to this most useful shot. Not the least notable among them is the cannon shown on Fig. 37. Here you have a stroke which throws a light on many obscure points.
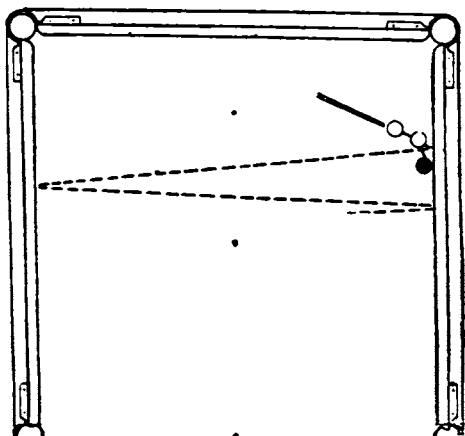
FIG. 37.—Forcing run-through cannon.

First and foremost, a glance at the position of the balls should show that with an ordinary run-through stroke the cannon is an impossibility. For the direction of the first object-ball would be such as to cause a "kiss" or contact with the second object-ball, and a consequent prevention of the player's design. But there is a means of overcoming the difficulty, and that is by the "stun," or what is practically a kindred stroke. The player

must bear in mind the fact that every cushion, no matter who is responsible for its manufacture, throws a ball from it at varying angles according to the pace which the ball encounters it.   The slower the ball the more time the cushion has to throw it off into a "truth-of-angle" path.   But with a fast ball the rubber bands lose their effectiveness.   The ball gets away so smartly that they have no time to accomplish any decided bearing on its course.   The rubber has no time to yield, and then eject the ball as in the medium-pace or slow strokes.   It cannot prevent the ball getting free instantaneously, and making what is in reality an angle of its own.   This, as no doubt the reader can realize, is no unimportant factor in cushion play.   To be enabled to either cause the first object-ball to come off a cushion at the most oblique angle, or the nearest approach to quitting it in a horizontal line, is thus brought about by the degree of pace transmitted to it.

In the case of the cannon shown on Fig. 37, a very forcible stroke must be used to permit of the red ball clearing the object-white.   The force of the impact will cause the cue-ball to take a very different course from that which the ordinary or slow-pace stroke would. This latter proceeding will in itself be instructive to the beginner, as it shows what great care the ordinary player should exercise in a "follow on" or run-through stroke. For as varying paces throw the object-ball out of the natural angle, or into it, after impact with the cushion, so is the same effect produced by thick contacts with the object-ball.   In "run-throughs" a hard shot will cause the cue-ball to take quite a different course than if it had been executed at a slow or medium pace.   The shock of

the meeting of the on-coming ball on the stationary one can be distinctly seen when the former is propelled with power. And the stroke, which would, with a medium pace, have certainly taken the desired groove, is deflected considerably from its second objective point. Therefore I think that, for two reasons—the exposition of how pace alone can effect a cushion or run-through ball angle —the "stun" cannon on Fig. 37 will be of service to my readers.

Another stroke which may be said to belong to the *genus* "stun" is that on Fig. 38. The placing of the balls represents an object-ball five inches above a bottom pocket; the cue-ball is some two inches out of the mouth of the pocket and an inch away from the bottom cushion. This stroke provides one of the exceptions to the rule anent "pocket side." But, given an object-ball close to a pocket, or what is practically an open pocket, the expert player generally uses that "side" which will suit his ideas of position. For the most part it will be found that in similar strokes to the one I am speaking of, he uses what is the reverse of "pocket side." And there is method in this proceeding. It enables him to get increased pace on the cue-ball with the most delicate touch one can give to it. It serves the added purpose, too, of keeping the object-ball in check. These kind of short "screw" losing hazards, when played with "pocket side"—*i.e.* reverse "side"—require a much harder stroke than when running "side" is used.

Running "side" imparts considerable vitality to the cue-ball. With a much more forcible stroke, it will, when carrying reverse or real pocket "side," find greater difficulty in reaching the pocket than when bearing running

" side."   This is the reason of the latter bias being used
by the professional players when the object-ball lies near
a pocket, and the stroke requires "screwing " or " forcing."
It helps so much in controlling the movements of the
object-ball.   Of course, such shots as I am speaking of
(*vide* Fig. 38), at short range, take the object-ball further
away from the pocket along the line of the cushion, and
reverse or pocket "side" becomes a necessity.
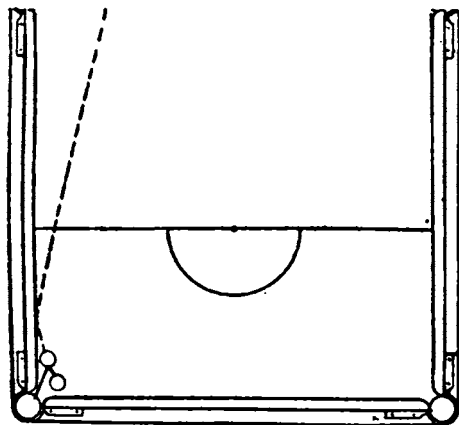
FIG. 38.—Slow heavy " screw-back."

For in driving the object-ball any distance, the use-
fulness of the "running side," the power to make the
losing hazard at the most gentle pace possible—dis-
appears.   I would like my readers to experiment upon
the stroke.   They will, I know, quickly perceive the
benefits of the use of the "running side."   When the cue-
ball is so struck, accompanied, of course, by the necessary
amount of "screw" to bring it back to the pocket, the
fluency with which it will enter the pocket contrasts very

strongly with the dull, dead-as-ditchwater effect that reverse or pocket "side" has upon it. Note, too, the running of the object-ball. If you play the stroke truly, and with a certain lightness of touch, you will find that, as I say, considerably less force need be expended over the "running side" stroke than when "pocket side" is tried. This theory holds good at either end of the table —spot end or baulk end.

FROM BALL 1
FROM BALL 2
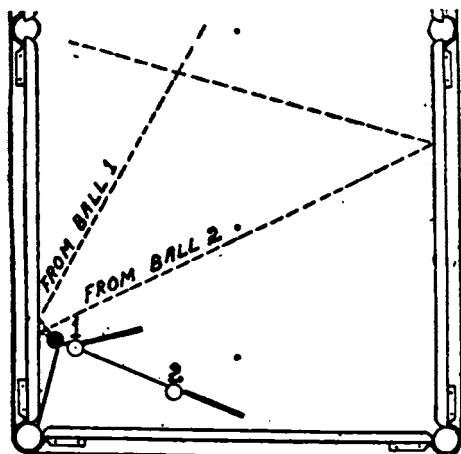
FIG. 39.—The different paths of the object-ball in " screw " strokes as caused by shots at different range, although from the same angle.

On Fig. 39 I show some losing hazards which will serve the purpose of demonstrating how the taking of the object-ball to a foot below the pocket will require a different course of procedure. Here "pocket side" is indispensable, for the cue-ball has no open pocket this time to which to find its way. It is a "blind" pocket, of which practically the only intimation of its existence

(from the line the cue-ball will have to take) is the shoulder of the opposing or top cushion. This being so, reverse or pocket side is an absolute necessity, which will enormously increase, so to speak, the dimensions of the receptacle. What is most interesting in these strokes, however, is not alone the "side" and "screw" the player must use, but how the position of the cue-ball, keeping a vertical line, alters the whole aspect of them. With the cue-ball close to the object-ball, as in No. 1 ball stroke, a nice smart little touch of the cue and a thin contact of the balls will suffice to make the losing hazard. How lightly the object-ball may be touched is proved by the point to which the latter may be sent, as illustrated on the figure by the dotted lines leading to the centre of the plate.   Then notice the widely different stroke which the transportation of the cue-ball to a couple of feet or so further away from it. Here a very powerful stroke is needed to "screw" the ball up to the pocket. The difficulty is increased by the amount of "screw" the player has to impart to the cue-ball at the expense of weakening the "pocket side."   There is also the further drawback of uncertainty as to where the object-ball may be left, for, crossing the table twice, as it is almost bound to do, it may catch the shoulder of a middle pocket and run safe ; or, if the object-ball be the white one, its disappearance in one or other of these pockets will mean the breaking up of the player's game. These "screw" losing hazards require a lot of thinking out, for a correct and intelligent manner of playing them lends tremendous assistance to the cueist.

Another form of losing hazard is that shown on Fig. 40. It is a "screw" into a top pocket from a ball which

lies some twelve or thirteen inches below it. I have
placed a succession of what I wish to be taken for five
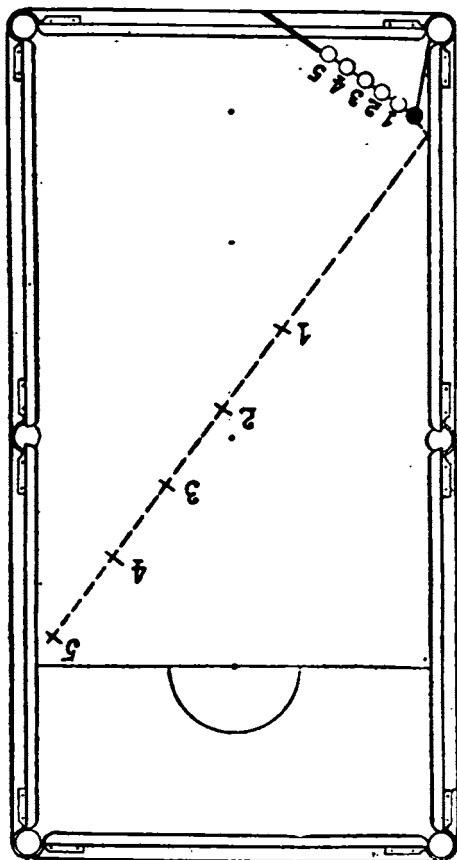
Fig. 40.—Screw losing hazards from the same angle, but at varying distances.

cue-balls, each one of which represents a different type
of losing hazard. No. 1 ball shows a very easy slow-

strength loser, the cue-ball being struck with right-hand
"side" and "screw." If you do not fail to impart the
latter element to the cue-ball, you need make but a
fairly "fine" contact with the object-ball. You simply
judge the direction the cue-ball should take as though
you were playing a cannon on to a ball located in the
jaws of the pocket. The more gently you play the
stroke the better direction you will find that you gain,
and also that the action of the "side" is considerably
strengthened. Most amateur players labour under the
delusion that in "screwing" pace is the great requisite.
So it is, to a certain degree. The pace which the cue-
ball is sent at the object-ball depends entirely on the
distance it lies apart from the object-ball. With ball 1
(Fig. 40) the stroke should be played with no more pace
than is needed to send the object-ball somewhere by the
middle spot. A really good player, however, would so
control it that it might reach no further down the table
than by the cross on the intersected line marked 1.
This stroke is infinitely the easiest of the four shown, for
by the slight distance separating cue-ball from object-
ball and the slight retrograde motion (as compared with
the three other strokes) it can be more effectively
handled. So little "screw" is required that almost the
full amount of pocket "side" may be used. The further
the cue-ball lies from the object-ball in "screw" strokes,
the greater power and quantity of "screw" is necessary.
This fact constitutes a decided drawback in such losing
hazards, by reason of so little "side" being then avail-
able to help the ball into the pocket. With balls 2, 3, 4,
and 5, there is a graduating increase of power required
to "screw" the cue-ball back to the pocket. Also, it is

no easy matter to retain any definite control over the object-ball. The points 2, 3, 4, and 5 marked along the intersected line are approximately those at which the object-ball should stop. Each, however, requires a very well-played stroke, No. 5 particularly.

PRACTICE STROKES.—RECOIL, ANGLE, AND SQUARE "SCREW" SHOTS.

As most, if not all, who take an interest in billiards know, "screw" is gained by giving an undercurrent to the cue-ball. It is struck below the centre, and, revolving against its line of travel, the effect is seen in those brilliant recoil and other "unnatural-angle" shots.

In playing "screw" shots, it must never be forgotten that there is no need to jump up, or twist the wielding arm about, when you are "screwing" your ball. Send the cue at the ball (below its centre, of course) as though you were going to drive it plainly ahead. As you feel the cue head touch the ball, grip your cue tightly. This action gives a snap and weight to the stroke, and, combined with the low stroke, generates the "screw." A very little practice should enable the beginner to make his ball recoil, or go off at right angles, according to his fancy.

The first practice stroke that I give in "screw" shots is a straight-away pull-back. Place the red ball on the middle spot, with the cue-ball some six or seven inches behind it in a direct line. The stroke is to "screw back" into the middle pocket. Aim dead full on the red, and use your cue as I have said. This practice is instructive to the novice, for it teaches him at once the

fact that every time you hit an object-ball full in the face, and you "screw" the ball, it comes straight back.

In this middle-pocket "screw" the average player will be liable to become anxious at the fact that the cue-ball has to pass over the ground where his "bridge" hand lies. It generally induces a jump in the delivery, or a snapping up of the hand and cue in the air, ugly to look at and often detrimental to the stroke. In any case, no matter how you avoid fouling your ball, do not move the body. Keep that as firm as a rock. A finished player will avoid the on-coming cue-ball by a neat shifting of hand and cue away to his left side, the arms only moving. There is another method, that of lifting up the arms and cue perpendicularly above the spot on the table where the "bridge" hand lay. This is passably good, but nothing like so polished as the side movement. Still, so long as one does not pull back the body, or flinch from the stroke, all should be well.

The second strokes in "screws" are angle ones in the baulk pockets. They represent the contacts between the full and half ball. A three-quarter-ball shot on the object-ball will find the pocket.

Stroke No. 3 is, however, the most valuable of all. It comes with the handy half-ball shot, the backbone of billiards. Remember a half-ball "screw" will send the cue-ball off at right angles—a square "screw" in point of fact. Often and often I see players trying to "screw in" off a ball close up by a cushion. The cue-ball is parallel to it. All that is wanted is a half-ball contact to make it run squarely down the cushion. But nine times out of ten the object-ball is hit much too fully.

This third and last of the plain-ball "screw" practices
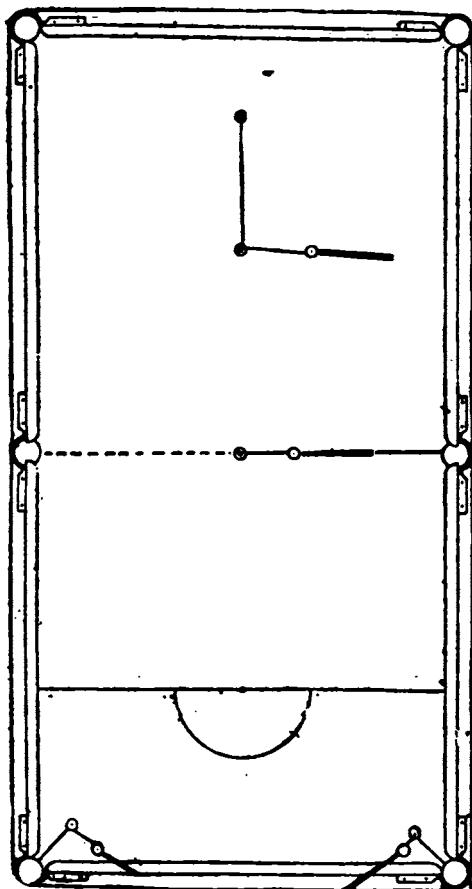
"Screw" practice strokes.

is best seen by placing the red on the billiard spot, the
object-white on the pyramid spot, and the cue-ball facing

the latter so as to form a right-angle triangle. "Screw" at half-ball off the white, and you should find the red every time. This is, as the billiard player knows, a nice example of the square "screw."

The different shots are illustrated upon the accompanying diagram.

IN PLAYING EVERY VARIETY OF "SCREW" STROKE, AND MORE ESPECIALLY WHEN THE FIRST OBJECT-BALL IS CLOSE TO THE CUE-BALL, A RAISING OF THE "BRIDGE" (GETTING THE FINGERS AS NEAR TO THE PERPENDICULAR AS POSSIBLE) HAND, AND A CONSEQUENT DOWNWARD ACTION OF THE CUE-BUTT, WILL BE FOUND AN ENORMOUS ASSISTANCE.

CHAPTER IV

"SIDE," AND ITS EFFECTS

THE application of what is commonly termed "side" is, of course, in common use to-day. But it is only in a hazy kind of way that its real properties are appreciated and treated with.

The question of "side" possesses the most interesting study for the lover of billiards. To my mind there is nothing in the whole of the game, despite its other intricacies, which can compare with the fascinations, wiles, and subtle influences of "side." It is the most complex of any. Even the beauties of the "screw" stroke pale before it. Its general effects are so striking, that to the novice there is a glamour about it which he cannot resist. To the advanced player, as he gains a better appreciation of its waywardness and autocratic powers, there comes a respect born of experience.

To impart "side" to the cue-ball is not in itself a great achievement. The matter does not rest there, though ; it is but the starting-point. Following that, there is the none too simple feat of giving true direction to the cue-ball while it is rotating with "side" upon it. In this connection, I advise that the player should take his aim through the cue-ball to the object-ball, as

though he were making a plain-ball stroke. Then, by moving the bridge "hand," take the cue to a point on the left or right of the cue-ball, moving it always in a parallel line with the plain-ball aim you have taken. The gaining of true line of aim is greatly assisted in this manner. As a matter of fact, I always play my "side" strokes on these lines. As no doubt may be understood from this, a true course for the cue-ball to its objective point can be found by *striking it in a parallel line with the aim you have taken from the centre of your ball*. Also it may be gleaned from the foregoing that I advocate striking the cue-ball about halfway up on its side to effect the desired result. That is so. For the greatest amount of "side" to be given to a ball is to be gained by striking it at the centre of its height.

The influence of "side" on the cloth of a billiard-table is still little known. To dwell upon it will, I think, be of service to my readers. For many a table, and many a set of balls absolutely beyond reproach in the all-important matter of spirit-level exactness and trueness of circumference and weight, have been blamed for what after all was merely the course of "side" acting upon the cloth. How often have I heard the expression, " Just look at the way that ball is running 1 Why, it's as foul as possible 1 " Truly enough, I have seen the ball taking what looked to be the most erratic of courses. But I could at once trace the cause. It was solely the working of "side," voluntarily or involuntarily imparted to the player's ball.

Now, this subject of "side" acting upon the cloth of a billiard-table will provide some most interesting exercises. To begin at the beginning of it all is to explain

that a billiard cloth has a "nap" upon it resembling that of a silk hat. It may not be very evident, but it is there, nevertheless. Run the back of your fingers on the cloth, first towards the spot end of the table, and then towards the baulk end. You will notice how smooth the cloth is in the first instance, and how rough it is in the other. You are simply doing what a billiard-ball has to do, viz. run with the flow of the nap of the cloth, or against it. And how strong an influence these opposite surfaces have on a ball I will presently show. Naturally a new cloth will possess more "nap" than an old one. Like a silk hat, the cloth should be brushed in one direction, viz. with the "nap." A properly laid cloth will have the flow of the "nap" running from the baulk end to the top of the table, or what is generally known as the spot end of it. Of course, it hardly needs saying the table is always brushed in this direction.

The ordinary player generally knows that when playing up the table, that is *with the "nap"* of the cloth, an application of running "side" to his ball will enable it to take a more acute, or wider, angle than any plain-ball stroke would permit of. It often presents the happy medium between the "half-ball" and the "screw" shots. He plays the stroke with running "side," and sees that his ball takes a wider angle (this is the common but incorrect term applied to positions where the second object-ball forms, or nearly approaches, a right-angle line from the other object-ball). He jumps at once to the conclusion that the "side" he has employed has given added power to the cue-ball from contact with the object-ball. The player may dismiss this thought from his mind once and for all. The influence of "side"

acting upon the cloth, is misinterpreted into a contact theory.

Also, never forget, for this is a point of the utmost consequence, *that " side" acts upon the cue-ball* BEFORE *it strikes the object-ball quite as well as in its subsequent running.* It does indeed, and often so strongly as to cause the player to miss the object-ball altogether. Never fail to bear the fact in mind.

Reverting to the effect running "side" has on the "nap" of the cloth, the action of reverse "side" upon its surface has an equally powerful, but exactly contrary one. Again it is solely the working of "side" on the cloth that brings it about, not the result of contact with the object in any way ; though, when I say this, I must hasten to point out that the more fully you strike the object-ball the more powerful agent will "side" become, for a heavy impact will take a lot of the forward momentum out of the cue-ball, and leave little else than the "side" you have emitted to it. Therefore, *the more slowly the cue-ball runs, the greater influence " side" will have upon its direction.* Figs. 41 and 42 show (in an exaggerated way, it is true) the contrary workings of "side" according to which end of the table the ball is travelling.

On Fig. 43 there will also be seen the effects of "side" operating with the "nap" of the cloth. I am aware that most players will already know what it presents to them, for playing the greater proportion of their strokes from the baulk half-circle, as they do, they manage to gain some idea of what is required of them. But I notice these same players, when sending their ball against the " nap " of the cloth—that is, towards the

baulk end of the table—use " side " in exactly the same
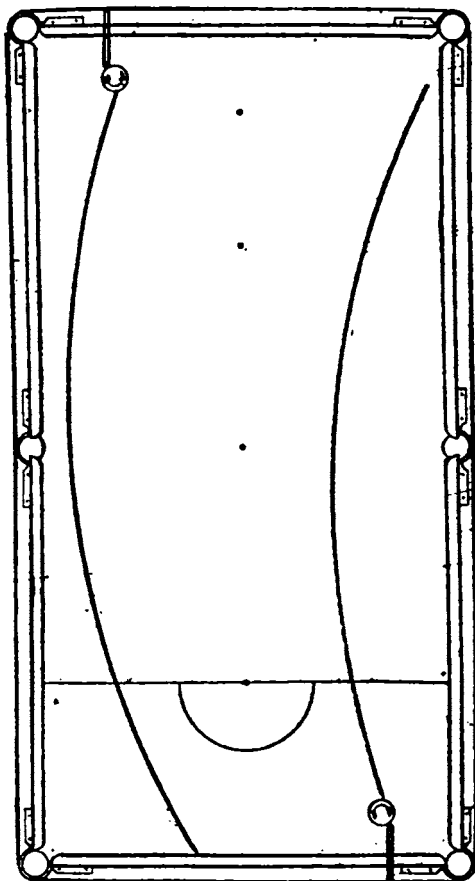
FIG. 41.—Action of right " side " with and against the " nap " of the cloth.

manner as though they were driving it with the " nap "
of the table. Now, for their information and of those

who would ingrain into their knowledge the properties
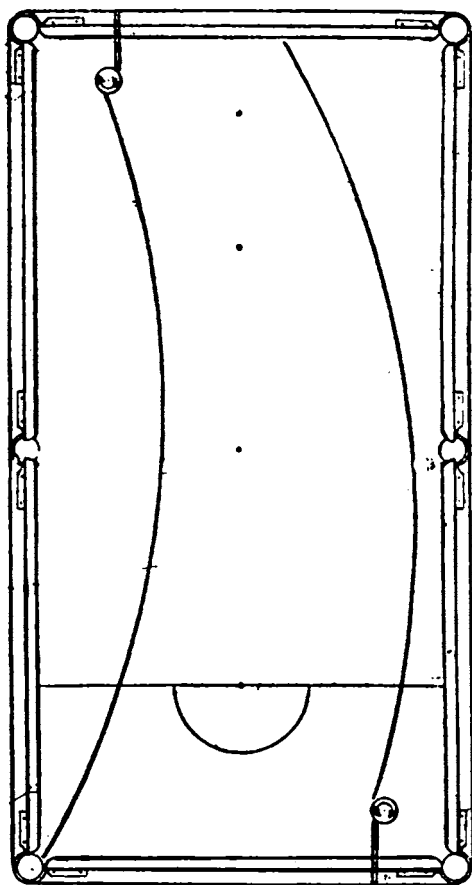
Fig. 42.—Action of left "side" with and against the "nap" of the cloth.

of "side," I state that *playing against the " nap " of the cloth exactly reverses the former procedure.*   Running

"side" against the "nap" lessens the angle line, and
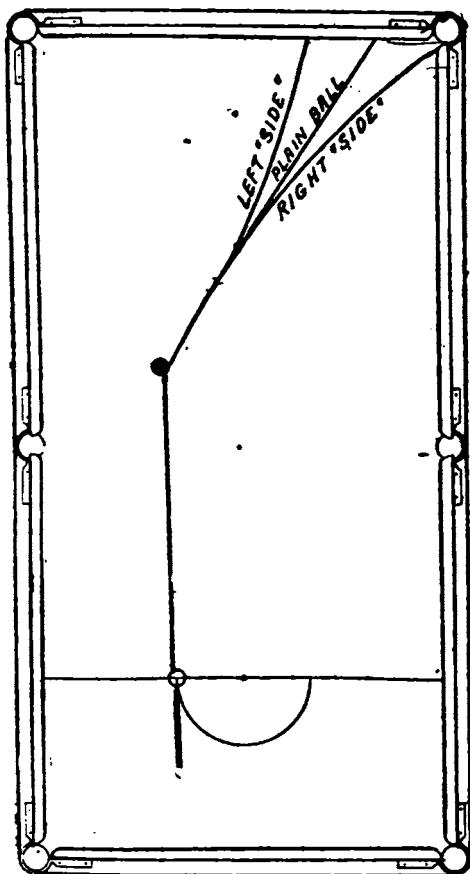
FIG. 43.—The effect of running and reverse "side" following the nap of the cloth.

reverse "side" increases it. Take Fig. 44. Both strokes present a "long jenny" into either baulk pocket, do they

not? Most amateurs, if they happened on either of these strokes in the course of a game, would play them with cushion "side," just as if they were trying the strokes into the top pockets. And when they saw their ball curling further and further away from the pocket, they would have set the fault upon the balls or the table, instead of blaming themselves for putting the wrong "side" on the cue-ball. In both instances running "side" and not cushion "side" must be used. Try a few strokes from the positions Fig. 44 shows, and judge for yourselves whether I am correct in what I assert. Play the strokes slowly, say, with just sufficient strength to take them into the pockets. The slower you play, the more palpable will be the working of the "side" on the cue-ball. With cushion "side" you will see the cue-ball, as it gradually loses pace, keep pulling and pulling away from its destination. With running "side," the opposite effect will be seen, for the player's ball will fall and fall away to the pocket. Of course, the "side" used in the latter instance is not that which will best carry the cue-ball into the pocket. Therein comes the difficulty of playing "long jennies" or such-like shots against the "nap" of the cloth. Playing to the top of the table with the run of the "nap," your "side," then, is a valuable factor in making the losing hazard. Therefore, whenever you get a sight of a "long jenny" successfully accomplished into the baulk pockets, if they are of reasonable dimensions, you may take it for granted that the performer is above the ordinary run of billiard-players.

Much, however, depends upon the condition of the cloth of the table wherever you put the strokes I show

into practice.   If a new, or fairly new one, it should
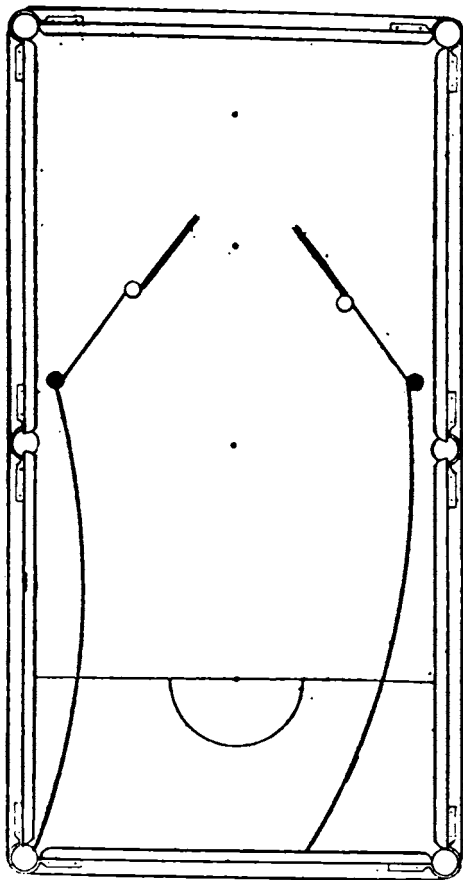
FIG. 44.—The remarkable action of "side" running against the nap of the cloth.   Both cue-balls have left-hand "side" conveyed to them.   Note how it causes an exact reversal of direction as compared with its influence when operating with the nap.

have more "nap" upon it than a cloth worn threadbare.

In the former case the "side" will act with great power, but in the latter very little, and in some extreme instances not at all.

Another "losing hazard" example is shown on Fig. 45. I am certain that many experienced players (to tell the truth, I have, with my own eyes, seen 70 and 80 break men do it) would use running "side" on the cue-
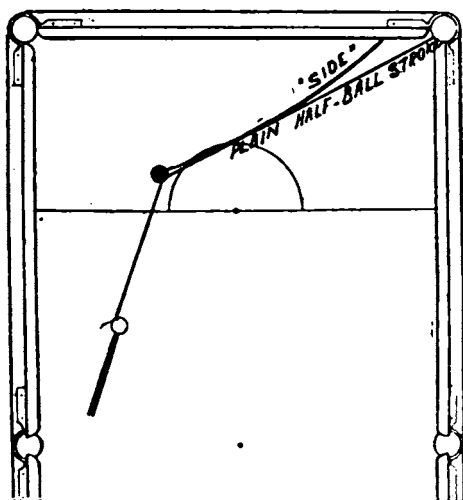
FIG. 45.—Another instance of the power of "side" against the nap of the cloth.

ball to aid them to make the losing hazard in the baulk pocket. But in so doing they would be utterly wrong. Played with plenty of pace, little deviation from the half-ball path would be seen, the slightest drop from it, if anything happened at all, for pace neutralizes the effect of "side." But if played slowly, as the purposes of position would often require (for "single strength" is,

or should be, the cult of such useful players as 70 or
80 break performers undoubtedly are), the cue-ball would
drop away an inch or two, and failure would ensue;
though had the reverse "side" been employed, then a
path above the "half-ball" line would have been ensured.

The influence of side has always had the greatest
charm for me.   And many are the four or five hours
on end that I have spent in trying to elucidate the
problems it so often gives.   While so occupied I thought
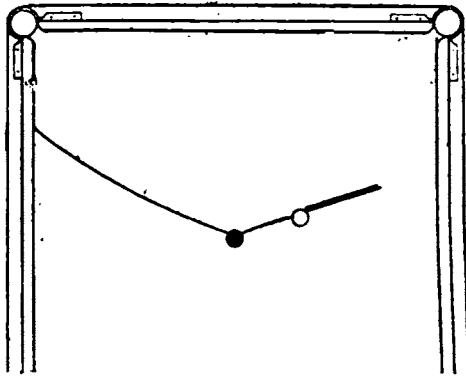
FIG. 46.—How "side" may act in two directions in a single stroke.

out a little stroke, which—if not particularly great in
itself—is, I think, a neat example of what "side" can
accomplish.   It shows *how the cue-ball may act in two
directions as the result of one single stroke.*   If played
with right-hand "side" very slowly, the cue-ball is
bound to take two distinct courses.   In the first place,
the "side" will act before the cue-ball strikes the object-
ball, thus causing a slight deviation in a direction more
towards the centre of the ball than you intend to strike.

That is the natural action of "side" against the "nap"
of the cloth. After contact you have the action of the
same "side" (right-hand "side") upon the "nap."
Playing the stroke as slowly as you have to, to note the
workings of the "side," does not allow of your putting
on very much of this powerful agent, though just enough
of it can be given to confirm what I say. The figure
may show the lines of progress in a rather exaggerated
fashion, but that is merely done to cause the divergences
to be better appreciated.

Another peculiarity possessed by "side" is that it
does not act across the bed of the table. For the "nap"
here has no effect, and "side" on a ball travelling in a
direct line from side cushion to side cushion will not
cause any divergence one way or the other. That
always stands good so long as the table is true. I can
give you a good example to bear me out : Play a ball
slowly with pocket "side" (which is, of course, cushion
"side") from top pocket to top pocket, or from baulk
pocket to baulk pocket. If the cloth has been improperly
brushed, by which means a gutter, or groove, is often
formed close to a cushion as the result of the sharp
edge of the woodwork of the brush continually coming
in contact with the cloth, then you will waste your time,
for the cue-ball will drop into the groove and follow its
trail. But if the table is perfectly level along the top
and baulk cushions, just play the shot slowly along to
the other pocket. You will find then that "*side*" *does not
act across* when a ball is travelling in a direct line from
side cushion to side cushion. The least deviation from
that course, however, will cause the "side" to sway its
running to some degree.

Side, acting on the bed of the table, either with or against the "nap" of the cloth, can produce what to the average player are astonishing results. Fig. 47 shows the prettiest illustration of its workings of any that I have given. Here you see the balls almost in a line. There is about a quarter-ball "cover" sighting straight away from the cue-ball through the red on to the object. That is to say, there would be a quarter-ball contact between the two object-balls were the player to attempt a run-through cannon in the ordinary way. By the ordinary way, I mean a plain-ball stroke, which I know the great majority of amateur players would make use of under the circumstances. This contact of the object-balls would of necessity destroy all chance of the cannon being made. I know the position of the balls does not give much promise of a score being effected. Nor would one be a probable outcome of any shot but for the remarkable properties "side" possesses, acting on the cloth of the table. Carefully note the position of the balls. You may make the "cover" of the balls even more pronounced than it is in the figure. Say you increase it so far as to bring about a half-ball contact between the object-balls. Even the stroke for the run-through cannon will not be a very difficult one if played as I direct.

First of all, it is very apparent, when attempting the cannon direct, a contact or "kissing" of the object-balls must be avoided. That is very obvious, is it not? Well, allow for a clear passage of the red ball down the table to the baulk end. At the same time direct your ball as nearly as you possibly can for a follow-through on the object-white. Then, having taken aim through

the centre of the cue-ball, transfer your cue in a parallel
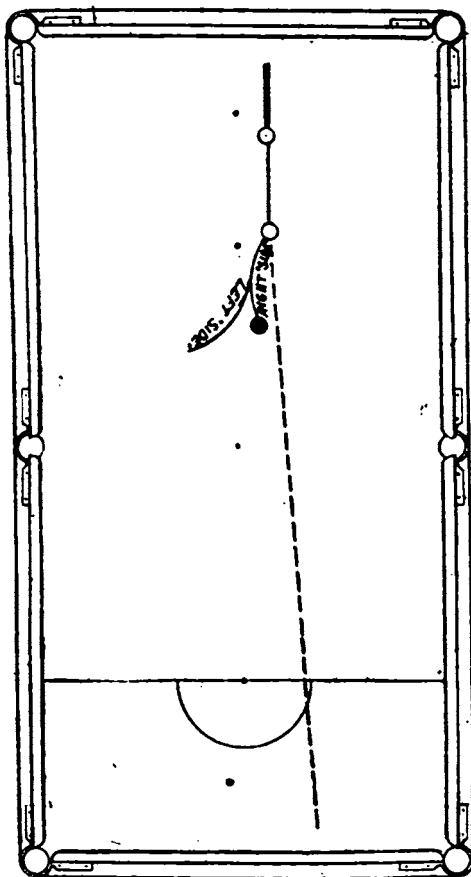
FIG. 47.—The remarkable effect of "side": it enables the player to make a
run-through cannon from this position.

line to the side of the ball you desire to hit. In this
case it will be right-hand "side." Play the stroke

gently, so as to give the "side" every opportunity of
working.   Put on as much of it as you possibly can.
You will have the pleasure of seeing the cue-ball posi-
tively curl round to the object-white.   It is a pretty
stroke, and one well worthy of practice.   Having noted
the effect of the right-hand "side," how it carries the
cue-ball on to its second objective point, try the stroke
with left-hand " side."   It will produce a complete
reversal of the cue-ball's progress, for it will gradually
curl away from the object-white.   I show on the figure
the course the cue-ball pursues according to the bias
it carries, and also the path the object-ball should take.
This latter is represented by the dotted line.   Remem-
ber that in this stroke you are playing against the
"nap" of the cloth.   Were it otherwise—say that you
tried the cannon with what had been the object-white
ball—then an exactly opposite state of affairs would
prevail.   Left " side" would in this case bring about the
cannon, and right "side" would take the playing-ball
very wide of its mark.

The utmost amount of "side" is conveyed to the
cue-ball by striking it at the centre of its height, which
would naturally be on its broadest part.   You get a
firmer grip of the ball, and give to it what is really
"side," and not a heterogenous combination of other
influences, as a great many players do.   Some develop
a tendency to strike the cue-ball fairly low down—a
kind of minimized "drag" stroke—and others affect a
striking of the ball midway between its summit and
centre.   Both are equally detrimental to what the
player endeavours to obtain—"side."   This commodity,
if not altogether extinguished, is greatly weakened by

these improper methods. *To get the maximum force of "side," strike the cue-ball at, or as nearly as is possible at, the centre of its height.*

The amateur billiard-player, speaking generally, frequently gets confused as to what is and what is not the correct "side" when the cue-ball's destination is a pocket. Yet it is one of the most simple points to determine in connection with a game of billiards. Yet many players—really good players, as the bulk of amateurs go—who come to me for advice and instruction do not grasp the standing rule of the thing. They have played the stroke for years, and almost intuitively, it would seem to me, have fallen into the correct path. They do put on the correct "pocket side" when trying, say, a run-through or a "screw" losing hazard along a cushion, both forms of stroke which are tremendously assisted by this invaluable ally, for it practically enlarges the pocket to twice its actual dimensions. But what has astonished me is the general want of knowledge shown by them as to why they put one or the other "side" on the cue-ball in such cases. Sometimes, by way of lending additional force to what I wish them to understand on this point of the correct "side" to give to the cue-ball in other than plain-ball pocket strokes, I place a ball against a cushion, and about a foot away from a pocket. Then I ask "What 'side' would you put on if you were making a losing hazard into this" (I point to one) "pocket?" Ninety-nine times out of a hundred instances of this kind, the answer comes to me, "But where is the cue-ball?" or "Where do I play from?" To which I say, "That does not matter in the least; you can only send the cue-ball in one direction—

that is towards the pocket." At this they look along the line from the ball I have placed on the table (which, of course, stands as an object-ball) to the pocket, and after due deliberation they hesitatingly answer, "Left," or " Right-hand side," just as the occasion demands. Then I ask, "And why do you put on this 'side'?" More hesitation follows, generally succeeded by the explana- nation, " I put on the 'side' to make the cue-ball hug the cushion, which makes it go into the pocket." At this I have to repeat my lesson with regard to the *non-influence of " side" across the bed of the table.*

I show them this in a practical way by sending a ball along the top or bottom cushions with the maximum of "side" upon it. To obtain this, I spin the ball with my fingers, by which means the amount of bias conveyed to the ball is greatly in excess of what a stroke of the cue can accomplish. Having demonstrated that it is not the " side" they employ that causes their theory of the reason it is used, I further emphasize my practical illustrations by spinning a ball along the cushion with " pocket side " upon it. I purposely try to make it strike the cushion, along which it is running, two or three inches from the pocket. Then, as the ball strikes the further shoulder of the pocket, it momentarily wriggles thence to disappear into the aperture with a charming fluency of motion. I say to the person I am giving the instruction, " Well, I put 'pocket side' on that time. It did not make my ball hug the cushion, did it ? It struck the cushion fully three inches before reaching the pocket, and then went high up on the further shoulder, did it not ? " The reply comes in this strain : " That is so." So I go on : " Now, then, I will

tell you the reason why you put 'side' on your ball.   It
is to widen the side of the pocket.   And to bring this
about, you make use always of the 'shoulder' of the
pocket which is furthest away from you.   The 'side'
acts upon this in every instance.   *Therefore 'pocket side'
is determined by the opposing cushion,* and thus even the
greatest novice should experience no difficulty in ascer-
taining which 'side' should be brought into play.   It is
a golden rule, if ever there was one in connection with
billiards."   It is, too, a rule without an exception.   Say
that I wish to send my ball into any pocket with
"pocket side" on the cue-ball.   To put on the proper
"side" I simply look for the further cushion.   That
tells me all I want to know.   All I have to do is to
use the "side" from that point inwards to the pocket.

The whole theory of "pocket side" is shown on Fig.
48.   Here we have two red balls placed on the opposite
side cushions some distance below the two top pockets.
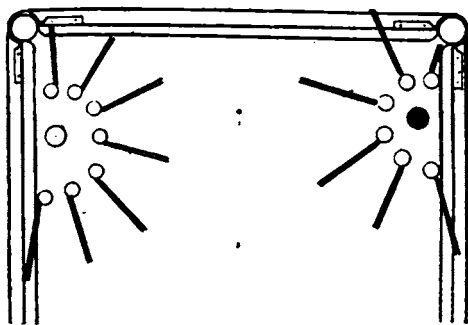
FIG. 48.—The theory of " pocket side."

Around both of them I have placed seven balls in
various losing-hazard positions, ranging from the almost

straight run-through to the direct screw back into the
pocket.   On the left side of the figure I have purposely
seen that the cues are placed as though transmitting
left-hand "side" to all the balls.   This, of course, is
pocket side, as gauged by the shoulder of the opposing
cushion—the top one.   On the other side of the table,
the opposite bias—right-hand "side"—is being figura-
tively applied to the cue-balls there.   This also is
"pocket side."   Thus I think that this illustration con-
veys the fact upon which I have been dilating at various
times—that to enter a pocket by means of "side" only,
one form of this commodity will suffice, according to the
player's judgment of which is the opposing cushion.

I give what I consider to be an excellent practice
position on Fig. 49.   The object-ball is "tight-up"
against the top cushion.   The balls are about two feet
apart and the cue-ball is some five inches from the top
cushion.   It is obvious that the proper stroke to be
played is a run-through losing hazard into the left top
pocket, with the red ball so well placed.   It is one of
my test strokes.   By this means I find out the quality
of a player much more quickly than if I saw him play a
"hundred up."   I invariably start questioning in this
strain, when I have placed the balls in the positions
shown on the large-sized plate : "Where would you
strike the object-ball to make the run-through losing
hazard?"   The usual reply is, "I don't know exactly
where to hit it, but I can make the shot."   I ask him
to make it.   This he does, but not according to my idea
of what is requisite to leave a "good game on."   Nine
times out of ten, I see the object-ball hit with great
force, which sends it ultimately resting behind the

baulk-line.   The run-through losing hazard is certainly
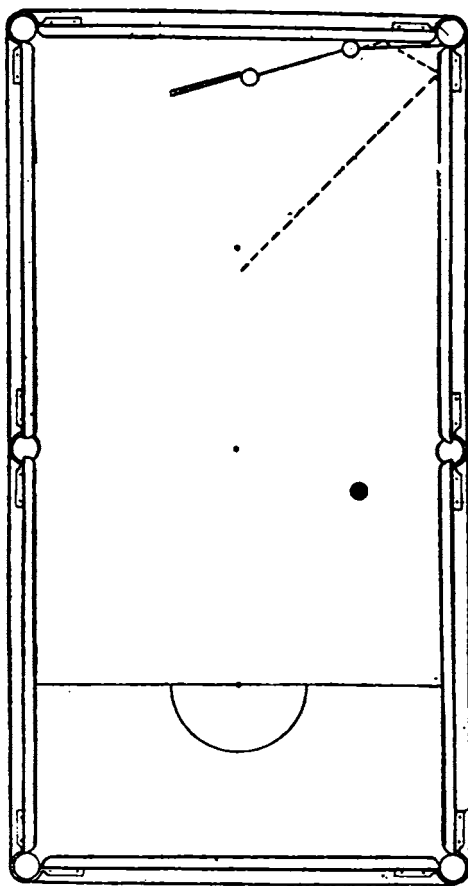
FIG. 49.—A slow " run-through " losing hazard, using " pocket side."

made, but in the crudest possible fashion.   It is not
"pocket side," which guarantees a graduating scale of

pace, that is used, but that useful, though of necessity one pace—high pace—stroke, the "top-side" one.   It is "top side" alone which makes a ball cling to a cushion, and which produces that attractive serpentine motion of the cue-ball as it clings and parts, and clings and parts again, to and from the cushion.   It cannot, however, be employed in other than forcing strokes of this kind, for without great pace its action is entirely nullified.   On the other hand, with "pocket side" you may play the stroke at the most gentle strength.   See how useful it is in the instance I illustrate.   The object-ball should follow the course of the dotted line, and be left in the centre of the table.

I have somewhat digressed, however, in explaining the beauties and uses of "pocket side" and "top side," from the original purport of this lesson.   As I said before, I ask of my pupil at what part of the object-ball should he obtain an impact?   He does not know, though he can make the stroke—not satisfactorily, it is true, but still he can score.   Now, whenever an object-ball is "tight" against a cushion, it conveys a "kiss" or jar to the cue-ball.   In the present case it is almost imperceptible, but it is there, nevertheless.   The further the cue-ball is removed away from the cushion, the more manifest does the "kiss" or jar become.   Of course, when the cue-ball is taken to a point down the table— that is in the direction of the baulk end—in a perfect horizontal line with the object-ball, then will the workings of this "kiss" or jar be at its greatest pitch.   There is only one part of the table where this contingency can be avoided by the cue-ball, and that is when it is similarly placed—"tight up" against the same cushion.

The stroke I show is made by striking the object-ball full in its centre, and it is just that "kiss" or jar which gives the cue-ball its direction along the cushion. Then the "pocket side," which, of course, here is left-hand "side," does the rest as it strikes the opposing cushion.

After all, however, despite the great importance of "side" in the matter of its effect upon the bed of the table, and its advantageous influence to the player in the making of losing hazards, it is chiefly and pre-eminently serviceable in producing the most eccentric angles from a cushion. "Side" acts upon the latter, destroying the truth of angle taken by the cue-ball when thrown on to it after contact with another ball, or when projected straight-away on to the cushion. It acts the most upon the cushion when meeting it at right angles. The more the player's ball faces the cushion—that is to say, the more fully it strikes the latter—then will "side" make its power felt the more strongly, but at the same time it will suffer greater exhaustion. Fig. 50 gives examples of these different actions.

A good instance in point would be when the player has to face a double-baulk. Say that he tries a cannon from the side cushion. To cause the cue-ball to come within the baulk-line, almost a parallel line with the cushion is crossed by the cue-ball, which carries a degree of "side" in proportion to the placings of the object-balls. As the cue-ball strikes the cushion, the working of the "side" conveyed to it will be very apparent, but fully one-half of its power will have left it by the time it reaches the facing cushion or the bottom cushion. As most may know, the more slowly the cue-ball travels

with " side " acting upon it as it makes its impact with
the cushion, the more elastic can the angle be made
from the latter.
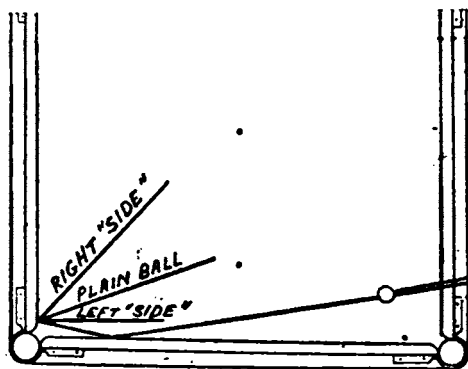
Fig. 50.—"Side' acting on the second cushion.

"SIDE" PRACTICE STROKES.

By striking a ball to the left or to the right the cue
gives it a bias in the one direction or the other. This,
however, is always subject to the texture of the cloth,
with its "nap" or against it. Nothing neutralizes the
use of "side" more than strong pace on a ball. The
slower its run the more pronounced will the effects of
the "side" be. To gain the greatest possible power in
this direction, the ball must be struck at the centre of
its height. Hitting the ball high up, or very low down,
merely induces an infusion of two forces, each battling
against the other, and always at the expense of both.
Thus, to impart the maximum of "side" to the cue-
ball, it has to be hit on its central side, and not above

nor below it. "Side" is of the scientific or high-water-mark possibilities of billiards. The greater the player the more respectfully he deals with it. For average billiardists it is little short of a snare and a delusion.

They always seem to lose sight of the very important fact that "side" acts on the run of a ball before it reaches the object ball as well as on its after-path. It may not be so obvious, but, all the same, "side," unless allowed for (you are getting on to a rather high flight
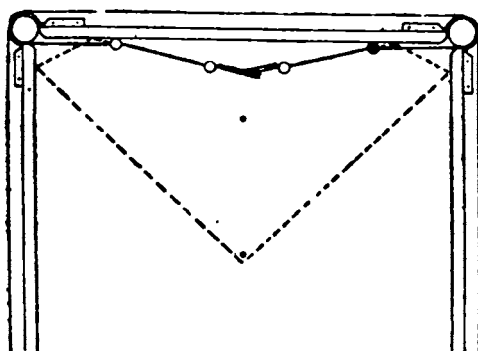
"Side" practice strokes.—Run-through losing hazard, object-ball tight up against a cushion.

of the game when you are able to practically appreciate the line of divergence), deflects the aim. The longer its run to the object-ball the more will this be made apparent. So much by way of preface to the practice strokes of "side." The first one that I counsel taking up with is the run-through losing hazard from a ball tight up against a cushion. Here you have a ball touching the top cushion a little over a foot away from the corner pocket. The cue-ball is the same distance

away, but in the direction of the billiard spot, some four
or five inches out from the cushion. You have thus
presented to you the most simple kind of run-through
losing hazard with "side," a stroke that the poorest of
players should be able to make. All that you have to
do is to aim *dead full* on the object-ball, using pocket
" side "—left " side "—to the right pocket, and right
" side " to the left pocket. Hitting the object-ball full
in the face, the cue-ball will hug the cushion and run
along it to the pocket opening. With or without " side "
it will do the same thing. But the "side" is an insur-
ance towards causing it to fall into the bag. Catching
the further or side cushion angle, the "side" curls the
ball into the pocket with a celerity that pleases the eye,
and shows the influence it may exercise in this and like
strokes.

This run-through " loser" affords a useful lesson to
the beginner. It teaches him that every time the object-
ball is up against a cushion—each and all of them—
and he can approach it obliquely (and, incidentally, hit
the object ball full in the face), he has a run-through
losing hazard ready made. The further "shoulder" of
the pocket determines the " side " that he uses—that
which induces the ball to twist inwards to the pocket.
There is a reason for everything in billiards, just as in
our everyday work. The reason why a ball placed on a
cushion affords a certain mark for a run-through losing
hazard is quite a simple one. A second " kiss " or a
" jar " arises to the cue-ball from the object-ball (when
it is struck full in the face), pinning it to the cushion,
which ever afterwards possesses a sort of magnetic
attraction.

The way to play this run-through is not to use a great amount of pace. Any one can hit the object-ball with a tear-away, slapdash kind of "top-side" stroke that will cause the cue-ball to cling to the cushion and make the losing hazard, but send the object-ball into "baulk." What I want you to do is to play a nice slow stroke, bringing the object-ball out to the middle of the table somewhere by the pyramid spot. Work away at this stroke, and appreciate its usefulness. It is
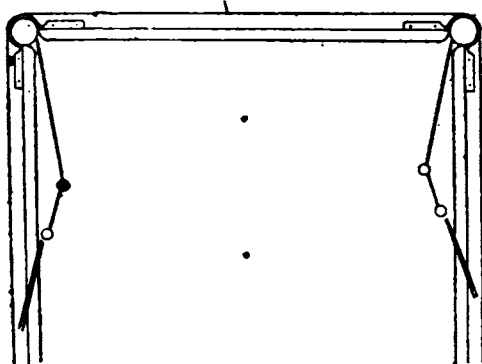
"Side" practice strokes—Run-through losing hazard.

like the half-ball stroke, for it affords the player a given mark to aim at—not this time the edge, but the centre, of the object-ball. Therefore it gives the most simple of targets. Having taken the run-through "kiss" along the cushion into your consideration, the next practice is to try and make a similar stroke with the object-ball out on the bed of the table. This, or an idea of it, can be seen in the two strokes running through a ball situated a little way off the side cushion. Now, the player has a much more difficult task set him than in

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the stroke along the top cushions.   He has no defined point of the object-ball to aim at.   It requires a fullish contact with the object-ball, somewhere between a full-ball and a three-quarter ball.   Use plenty of "side," so that it may drag the ball into the pocket if it gets anywhere on to the further "shoulder."   It is by no means an easy matter for the moderate player to use correct judgment in aiming at the object-ball.   The "side" used turns the cue-ball away over to the direction it is revolving in.   Thus your three-quarter or so aim is lessened into little more than half-ball by the time the object-ball is reached, and the stroke easily missed. Using plentiful "side" in these run-through strokes, allow a little for the natural turn that the hand takes on bringing it into play.   Therefore, for a three-quarter-ball stroke, aim nearly full at the object.   This advice applies to all strokes of the kind.

TOP SIDE.

"Top side" depends almost entirely upon the extent of the power one puts into the stroke, and also on the thickness of contact with the object-ball.   The greater the force you hit the upper part of the ball with, and the more fully you strike the object-ball, the more will "top side" act.   Having hit the object-ball as fully as is possible without causing the balls to "kiss," you take a lot of the momentum out of the cue-ball.   But you will observe by watching a "top side" stroke closely after such a contact, that the cue-ball is rotating forward at a great rate, though, perhaps, remaining stationary in

other respects. This rotation of the ball is the outcome
of the "top side" that has been imparted to it. Given
that it had met a cushion, you would have seen the ball
fairly clinging to this, as though for protection. For if
ever there was an eccentric ball, it is a ball carrying
"top side." It seems unable to take a line of its own.
It makes for a cushion and fairly hugs it at any and
every opportunity. Once on a cushion, a ball carrying
little else but "top side"—I mean one which has had
nearly all other motive force taken from it by a full
contact with another ball—will never leave it. For long
run-through cannons or losing hazards from a ball which
is "frozen" to, or very close to a cushion, there is
nothing in all billiards to compare with "top side." But
it has the drawback of only doing its work when a high
rate of speed is given to the cue-ball.

"Top side" is, as its title would suggest, gained by
hitting the cue-ball as high up as possible. This gives
the ball a forward rotary motion, causing it to revolve
in the ratio of something like four revolutions to the
one which a normal plain ball (that is, one struck in the
centre) would take. A light-headed ball is the one
which carries "top side." Its vagaries are many, and it
has a personality distinctly its own. What other ball
could make the graceful arc-like curves that are shown
on the "top-side" figures? There is that awkward-
looking position when the player, with his ball in hand,
has to face the two object-balls lying some two or three
feet apart along the top cushion, and uncomfortably
close to the latter. A losing hazard into either of the
top pockets is all but an impossibility. You cannot
leave the balls alone and give a safety miss, for the

chances are in favour of your opponent putting the red
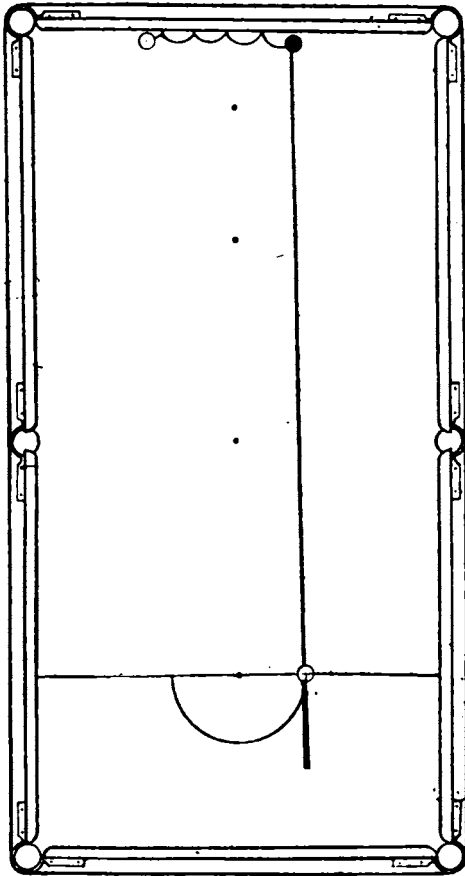
FIG. 51.—A dashing "top-side" cannon.

ball in, or running through it, or doing something that
will in some measure prejudice your prospects of winning

the game.   So with a powerful stroke you hit your ball
high up, sent it "bang!" three-quarter full on to the
first object, and wriggling along the top cushion to
ultimately cannon on to the second object as on Fig. 51.

Another magnificent specimen in this direction is
the "top-side" run-through losing hazard, illustrated on
Fig. 52.   This stroke can be made by the sole use of
"top side," without "pocket side" being in any way
brought into consideration.   For the most part the cue-
ball will not follow along the cushion, much as it will
try to do so.   But its action will be made even more
manifest by the graceful semicircular sweep with which
the cue-ball follows its forcible impact with the object-
ball, and by which means it takes the pocket at a seem-
ingly impossible angle.   The eccentric curve taken by
the cue-ball is plainly denoted on the figure.   Mean-
while, the object-ball takes a path to the head of the
table by striking three cushions.   This is a stroke of
much beauty and usefulness, and one which is easily
within the compass of the most ordinary of players.

It is really "top side" which is the sole factor
in causing the cue-ball to cling to the cushion in the
singular manner which I have pointed out.   Most
players confound a "kiss" or jar made when the object-
ball is lying upon a cushion, and absolutely touching
it, or when it all but does so, with the quite distinct
properties of the invaluable "top side."   To disabuse
their minds of any such thought, and to aid me in so
doing, I place before those who are sceptical upon the
point two shots which embody both varieties of stroke—
the "top side" and the "kiss," or jar (see Fig. 53).   In
the former case I show a "top-side" cannon, which to

the ordinary player will, I have not the slightest doubt,
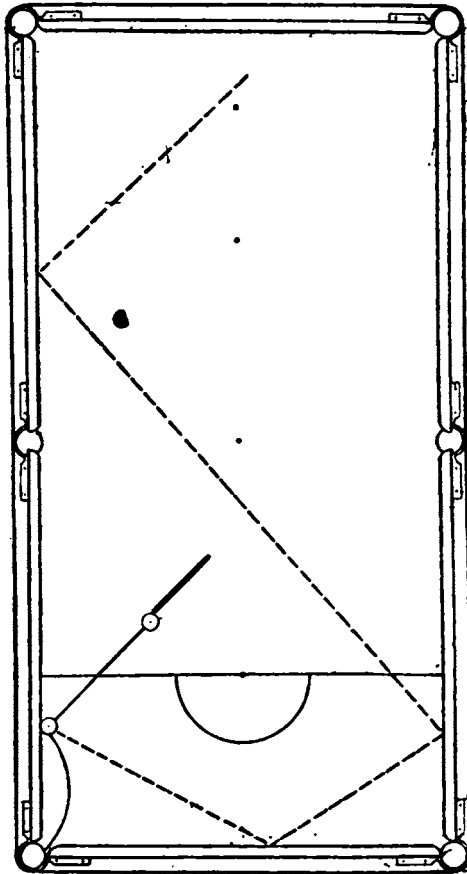
FIG. 52.—Strong "top-side" losing hazard.

look an alarmingly difficult one. But it is nothing of
the kind, for any one who can hit his ball at all correctly,

and gain something like an accurate impact with the
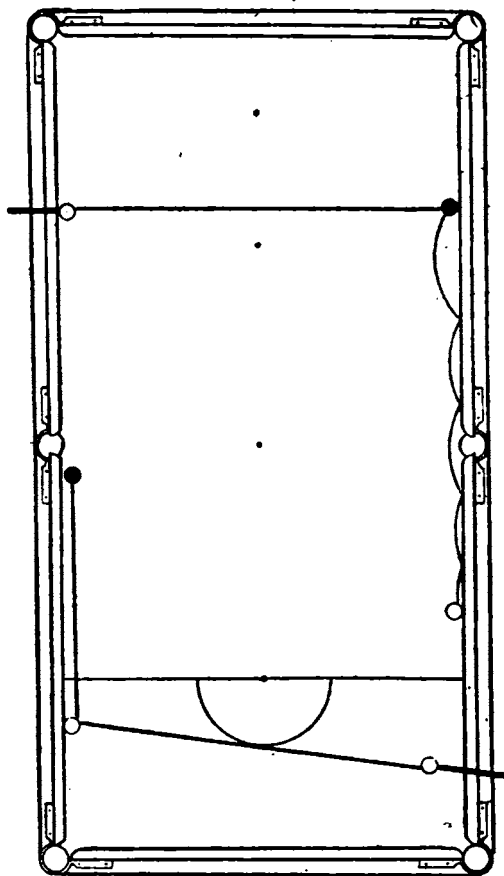
FIG. 53.—Showing the difference existing between a purely
" top-side " and a " kiss " stroke.

object-ball, should not fail to score once out of every two
attempts, and perhaps more often, when he realizes what

is required of him. You will see the two object-balls
are placed midway along the right top cushion and the
right baulk cushion. They both stand out some two
inches from their respective cushions. The cue-ball
is close to the left top cushion, almost facing its first
object. I have placed the cue-ball close to the cushion
to assist me in my exposition of "top side." As it
lies between two and three inches from the cushion, it
almost forces the player to hit the ball high up, where-
as were it further on the table he might (and many, I am
sure, would), by an inadvertent striking of the cue-ball,
fail to transmit the great essential to the successful
accomplishment of the cannon—"top side"—to it.
Having thus explained the location of the balls, I come
to the making of the stroke itself.

Take care to hit the cue-ball as near the top as
possible, and above all, for reasons which have been
explained, put plenty of power into the stroke. Without
this accompaniment, "top side" has no virtue. See,
too, that you hit the object-ball very fully, just as fully
as will enable you to avoid the "kiss." If so played,
this cannon is by no means a difficult one.

To demonstrate that the "top side" and "kiss" or
jar strokes bear no relationship to each other, I provide
a shot of the latter description on the opposite cushion.
The balls are similarly located, saving that the first
object-ball now touches the cushion. "Top side" will
not count for much now, nor anything like so thick a
contact. Hit the first object-ball about quarter-ball,
using some running "side" and medium force, and the
cannon can be made. It is of an altogether different
nature to the "top-side" stroke.

PRACTICE STROKES. TOP SIDE.

Another very serviceable factor among the various rotatory actions it is possible to impart to the cue-ball is "top side." "Top side" is a bit of a misnomer, in my opinion, although it has always been the recognized term. The word "top" should, as in golf, be comprehensive enough. The top and the bottom of a ball must be distinct from its sides ; so I shall describe the motion as top only.

Applying top to a ball effects the very opposite action, as may be imagined, of a stroke at its base. It accelerates its forward progress. To get the greatest run on a ball, you have to strike it above its centre. This, I believe, the very ordinary player is aware of. The run-through strokes prove the value of top on a ball more than any other. Striking the object-ball as thickly as the run-through shot demands, the resistance offered to the cue-ball is very great. Carrying top, however, the latter will follow on at a speed that would be unobtainable by any lower striking of it.

The reason of the greater progress made by the cue-ball when acting under the influence of top in all thick contact strokes is not difficult to understand. Just as the screw or low stroke takes pace from a ball by reason of its turning over towards the player (that is, with a backward rotation), so does top increase it. For now it rotates, or rolls over and over, in the direction that it is travelling. The ordinary plain-ball stroke also sends it rolling forward ; but top adds considerably to the number of its revolutions. One may say, in a rough kind of

way, that top practically doubles the turn-over of the cue-
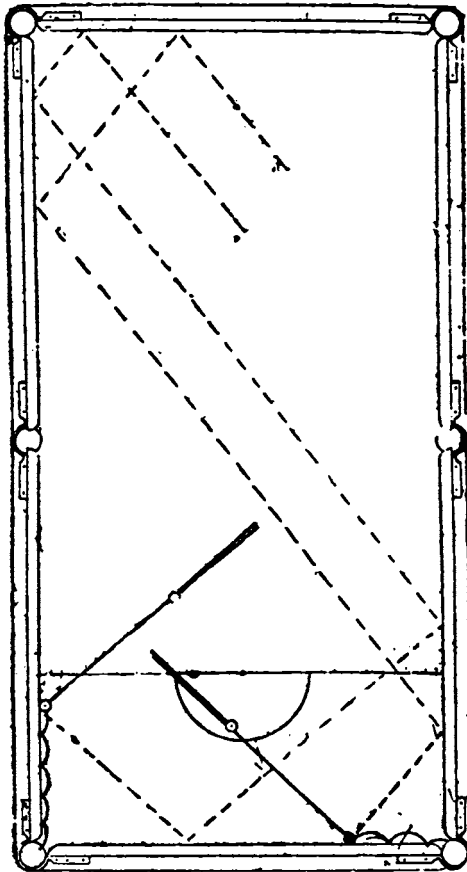
Top-side strokes—No. 1.

ball. Thus it carries a much added forward momentum, and a most telling one. To get the full effect of top,

plenty of pace must be used, and the object-ball hit as fully as the stroke will allow.

A ball loaded with top will inevitably curve and swerve about after it has made contact with an object-ball or a cushion. Thus it is a difficult matter to gauge its path after contact. Where one may use it with impunity, and with the best results, is from an object-ball lying close by a cushion. No. 2 strokes are a couple of ugly-looking cannons at long range, which top puts within the reach of all. They will present the value of top in all its most glowing detail. Make the cue-ball hit its first object-ball as fully as you can, giving it the direction of the second object-ball. Hit your ball high up and hard. Getting well hold of the ball aimed at, you should have the gratification of seeing the cue-ball go over to the second object-ball in a series of small bounds and rebounds from the cushion. It is most interesting to note the working of the top as it makes the ball move along the cushion in semi-circular stages. This peculiar progress is caused solely by the extra forward revolutions that top gives. The ball, having hit the first object-ball almost full, has little life in it except the top. Like lateral side, the right or left side strokes, it holds a much greater sway after the shock of meeting an object-ball very fully. Thus the top compels the cue-ball to go forward, and it keeps on rushing at the cushion to return to the attack each time it is repelled by the cushion. Thus arise the eccentric bounds and rebounds, and wriggling along a cushion-rail, one so frequently witnesses. They may be compared to a moth trying to penetrate a closed window. It keeps trying to force its way through the glass, and, though beaten back at each attempt, it straightway

renews the impossible task.   A ball carrying top will, so
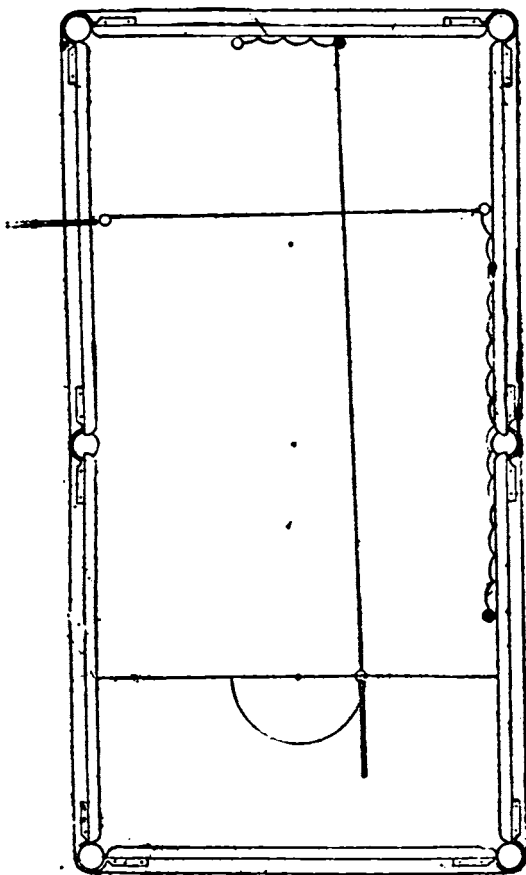
Top-side strokes—No. 2.

long as it retains any of its influence, keep bumping into
a cushion and never leave it.   But the top must be given

full play as the outcome of a thick contact on a ball
stationed very close to a cushion. Both strokes (cannon
from the D on to two balls lying upon the top cushion,
and from one side of the table to balls situated on the
other side) are quite simple, if played as directed.

Top is a very useful commodity, too, in making losing
hazards of a run-through kind into the baulk pockets.
The fast pace required drives the object-ball up to the
other end of the table. Frozen to a cushion, or very
near to it, top will exercise the same effect on the cue-
ball that it did in the cannon strokes. Smacked right
full in the face, the object-ball will set the top in full
swing. Now, the cushion does not oppose the ball as it
did in the cannons. Hit the object-ball truly, and you
will see your ball fairly slide down the cushion to the
pocket. This is playing the stroke perfectly. But, if
you do not get hold of the object-ball quite at its centre,
the top on your ball will show its strength by a swinging
curve out from the cushion and round again to the
pocket. It will make you stare, if you do not know that
this arc-like swerve is in the category of top strokes.
Once more the fullest stroke has acted so on your ball
that it feels empowered to make for the cushion again.
In the two losing hazards it is necessary to add "pocket
side" to the top. That is to say, you have, in either
case, to strike your ball high up on its right side.

THE "SWERVING-BALL" STROKE.

Have you observed how difficult it is to accurately
gain contact with the object-ball when the cue-ball is
lying close by or on a cushion, and "side" is being

used ?   Surely on many occasions you have found the
balls in the position I show on Fig. 54.   On this I
show the red ball on the spot, and two cue-balls left and
right of it, facing each other on the two top side cushions.
Both of them are well inside the "half-ball" natural
angle line as regards a losing hazard from the coloured
ball into the two top pockets.   To make the losing
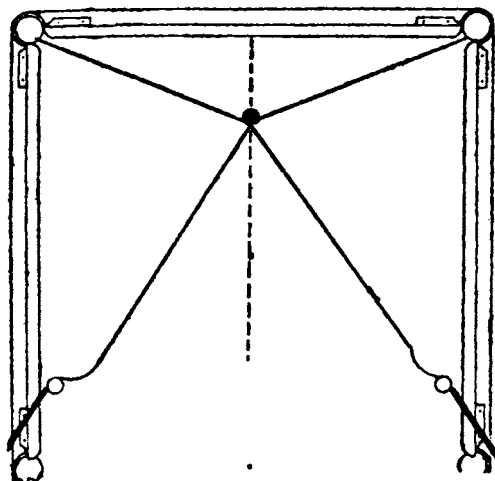
FIG. 54.—"Swerving-ball" top-pocket losing hazards.

hazard, therefore, a considerable amount of "side" will
have to be used in the playing of them.   But, as the
cue-ball is close to a cushion, the player will be unable to
convey the "side" without raising the butt end of the cue,
thus causing the cue-point to be depressed at an angle of
about 30°.   Doubtless you have tried this kind of stroke
times out of number, and have wondered why you have
invariably failed to hit the red ball as you aimed to do.

It you think back for a moment or two, I have no doubt you will recall an eccentric "curling" of the cue-ball, and also a very "full" contact with the object-ball, and one which quickly dispelled any hopes of making the hazard. The reason of it is perfectly simple. In raising the butt of the cue, and giving the whole length of the cue a vertical alignment, a kind of half *massé* shot is brought into play. Like the *massé* shot, the more delicately the stroke is played the more will the cue-ball swerve, or curve, when it is struck. And, as a consequence of this swerving or curving of the cue-ball, it takes an entirely different course to that which the player aims for. Nor can this swerving of the cue-ball be prevented, for it is bound to occur every time "side" is put on to the ball with a descending point of the cue. But though it cannot be avoided, there is a means (and it is the only one) by which the "curve" may be neutralized, and that is making due allowance for it. To effect this the player must alter his aim. It is for all the world over like a rifle-shot allowing for a current of wind which, if he aimed direct at the target, would carry the projectile away. On the other hand, the wind would transport it on to the target if a given spot to left or right of the latter were taken. To make the losing hazard you have in each case to aim at a point nearly, if not quite, a full inch away from the red ball, and in each case it will be on the further side of the latter from where you are striking. Therefore for the losing hazard from the left top cushion—which is, of course, played with left-hand "side"—you aim to strike a point well to the right of the red ball ; and for the right-hand "side" losing hazard, to the left of it.

It will, I know, require a certain strength of mind particularly in the cases of players of long standing, to aim away from the object-ball. I have seen it so often. The player trying the stroke in this way, the proper way, for the first time, will shape up to aim as I indicate (that is away from the object-ball), but at the last moment he weakens, and aiming in the old way (half-ball) at it, he does the old, old thing, hitting it full in the face, or even on the wrong side. Practice, however, will give him the necessary confidence, and also so accustom his eye to the stroke that he will soon gain the judgment required to hit the object-ball accurately. After all, the exact point to be aimed at is more a matter of judgment than anything else.

Two more strokes of this variety are given in Figs. 55 and 56. They are losing hazards from the red ball, which is again on the spot. Both positions constantly crop up during the course of a game. Generally they are the outcome of a misjudgment of "strength," when the amateur player tries to get position for the " standard," or cross-losing hazard from top pocket to top pocket, when the red ball is placed upon the spot. One of these shows the cue-ball some three or four inches along the top cushion, and placed most awkwardly to make the losing hazard from the red ball into the further top pocket. Most of you, I have no doubt, know this shot, and look upon it with no favourable eye. And also, when it does cross your path, you endeavour to make the losing hazard by means of a tremendous forcing stroke. Sometimes it comes off, I know, but I am also aware that much more often it does not. Then, too, the amateur who has seen the professional cueist making

the stroke with a raised cue-butt, a gentle stroke, an
obvious abundance of right-hand "side," and a remark-
able measure of success, tries to do likewise.   He raises
the butt of the cue to about the same height as he saw
the professional player do, puts all the right-hand
"side" he can muster up on to his ball, and strikes
it gently, aiming at the same time to hit the red with a
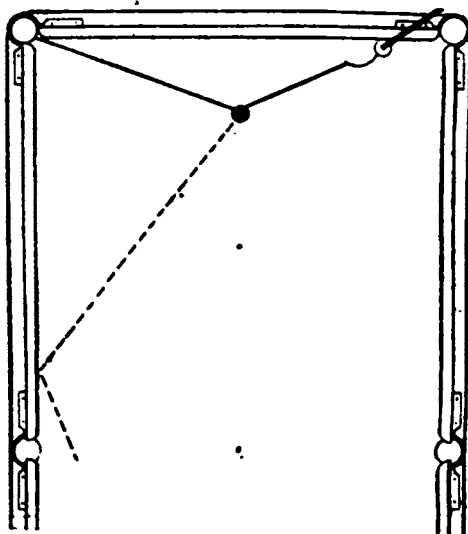
FIG. 55.—" Cross " losing hazards with "swerving-ball"—running " side."

"half-ball" contact.   What is the result?   Why, instead
of hitting the red ball on the point which will throw the
cue-ball into the line required to take it into the pocket,
it barely grazes the coloured ball.   The player says to
himself, " I did not aim truly at the object-ball.   I will try
the stroke again."   With the greatest care he tries again,
but with just the same result.   And if he continued

trying till the crack of doom, he would never get any nearer than he has done—that is, so long as he aimed direct at the desired point of contact whilst putting on "side" with an uplifted cue; the more so, too, as the stroke is played slowly, for played with speed the cue-ball will not "swerve" or deviate from its ordinary path nearly so much as at a gentle pace. As in the two previous instances which I have presented, *the* secret of it all is the deflection of aim to a point which will counteract the influence of the "swerving" or "curving" of the cue-ball. To bring this about in the stroke I am now commenting upon, the player will have to *aim with right-hand "side" at a point on the other side of the red ball to that on which he desires to make contact.* I consider that the allowance of a full-ball will meet the case. Thus, aiming about an inch on the further side of the red ball (the curve will be a pronounced one) will pretty well guarantee his getting the desired half-ball contact, which will give the cue-ball a true passage to the top pocket. The beauty of the stroke—and there really is something beautiful in it—lies in the fact that the "swerve" or "curve" throws the cue-ball into the line that it would have taken had the player been making the ordinary half-ball losing hazard from top pocket to top pocket.

Intricate as is the stroke of which I have just been speaking, it in no way compares with a companion "cross-loser," which has to be played with left-hand "side." Here we have the cue-ball some three or four inches below the top cushion, close by the right top-side cushion, a position which frequently recurs as the result of an ill-judged attempt to get into position for the

"cross-loser," or a feeble try to "get behind the red."
The losing hazard from the red ball into the further top
pocket looks awfully difficult, does it not? But it is
not nearly so hard as it looks when played upon the
principles I set forward. Again the deflection of aim
has to be made, but this time the effect of imparting
left-hand "side" to the cue-ball is such that its "curve"
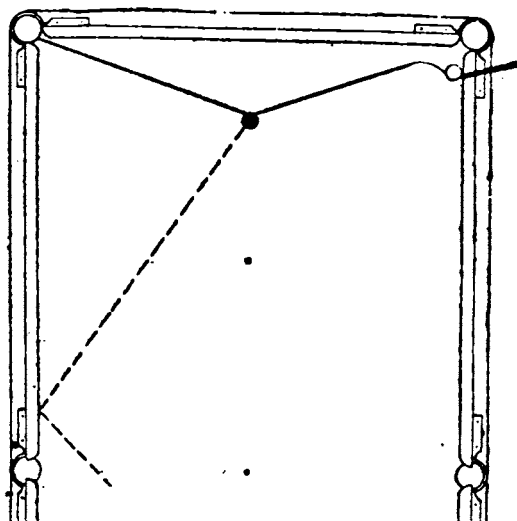
FIG. 56.—"Cross" losing hazard with "swerving ball"—reverse "side."

takes an opposite direction to that given when right-
hand "side" is used. And to neutralize the effect of
the "curve" it makes, the player will, in this stroke,
have to aim at a point nearer to the top cushion than
the direct "half-ball" line from ball to ball would
necessitate. The due allowance for the "curving" of
the cue-ball will take the point to be aimed at to nearly

two inches away from the red in the direction of the top cushion. When struck with left-hand "side" slowly and with the uplifted cue, the cue-ball in the first ten inches or so of its course will swerve towards the top cushion. Then, as it ceases swerving, it runs straight up to the red ball, just as though it had been sent from the direct "half-ball angle" line from top pocket to top pocket. It makes a true contact, and runs on towards its destination—the left top pocket. But before it safely disappears within the depths of this aperture, the player will experience sundry qualms, for the cue-ball will appear, and in reality does do so, to be shaping its course for a point six inches along the cushion in front of the pocket. It looks as though the losing hazard will be badly missed. But at the critical moment he will see the ball fairly pulling its way out of the direct line ; the left-hand "side," acting with the "nap" of the cloth, fairly drags the ball into the pocket.

As I said before, I am now dealing with very high-class billiards. Nevertheless, the strokes I have dilated upon are each and all easily within the compass of the very ordinary player. Also, they tend to show how very essential it is that the cue should be made to keep as horizontal a plane as possible whenever "side" is being used. Of course, in the strokes that I have shown, the cue-balls lie under or close to a cushion, and an uplifting of the butt of the cue is absolutely imperative to cope with the position, and, of course, in increased ratio as "side" is required. This, as I pointed out in an earlier lesson, to gain its maximum strength requires that the cue-ball shall be struck midway up on the side required.

In using the " spider-rest," too, when " side " is being given to the cue-ball, there follows a lesser, but still at the same time decided, " swerving." This arises from the fact that the cue is vertically aligned, and that its point partially descends upon the cue-ball, thus creating another half *massé* shot. In this connection I show a stroke (the cannon in the left-hand corner of the table on Fig. 57) which, by the aid of a "spider-rest," can be turned into a very simple one, but which without the assistance of that implement would be an awkward one indeed. The " curve " from the object-ball given by the "spider-rest" will be noticed on the diagram.

To pool and pyramid players this abnormal effect of the "spider-rest," which so frequently is requisitioned in these games, is one of moment. Often when using it the player will, for the purposes of position, put on "side;" but as often as not he will miss the object-ball altogether, and wonder how such a thing could happen. By making allowance, however, for the "swerve" of his ball in the manner I show, he will have obviated such an unwelcome happening in those most expensive luxuries a billiard-table provides.

The "swerving" or "curving" stroke is a very valuable one, apart from its usefulness in enabling a player to overcome awkward positions. It gives so much latitude to the player to make a delicate stroke, whereby the object-ball is barely moved, as in those deft touches when the cue-ball and object-ball are close together near a pocket. In such a case—as all players, of course, know—a slight contact of the balls opens up or retains the object-ball in position to resume upon the most simple of losing hazards. But the ordinary amateur

player, so far as my experience goes, has no conception
that this can be accomplished by any other stroke than
a plain-ball. Take, for example, the positions I show
on Fig. 57 by the two middle pockets. Here, in the
ordinary way, are two nasty delicate screw shots—that
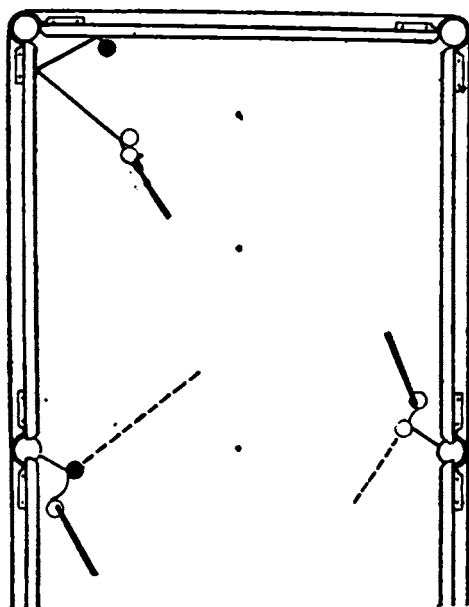
FIG. 57.—"Swerving-ball" cannon, using the "spider-rest," and two gentle
"swerving-ball" losing hazards, leaving the object-ball in position.

is, judged in the light of what they would appear to the
average amateur. Played as such, they would require
much good handling to ensure a favourable after-position
of the object-ball ; the more so, as in both cases the
latter will have a fairly long distance to travel to work
around to a desired location. But, to obviate such a

needless expenditure of power, there is the "swerving" or "curving" stroke ready at hand. In both the positions illustrated it is of the greatest utility. The "swerving" of the cue-ball permits of the stroke being made most delicately, with little beyond the needed disturbance of the object-ball. Do not forget, however, to elevate the butt-end of the cue so as to cause the point to partially descend upon the cue-ball. Of course, the " side " in each instance will be running " side," and, moreover, it will possess the additional merit of being "pocket side," as gauged by the "shoulder" of the opposing cushion. These two strokes are worthy of more than passing notice and desultory practice.

"DRAG."

Another and not too well-known form of rotary motion produced by striking a ball below its playable centre is that known as "drag." Its value is great, for by means of "drag" it is possible to, in a measure, neutralize the running of a ball that is not true, and the surface of a table which is slightly out of the level. It enables the skilful player to make what are really delicate "strength" strokes at very long ranges. Professional players make great use of the "drag" strokes, and this fact in itself should bear eloquent testimony to its merits. "Drag" is given to the cue-ball by a smart low stroke, such as is used for a "screw" shot. There is, however, this difference between them ; instead of a tight gripping of the cue as it gains contact with the cue-ball, as in the "screw" shot, there should simply be a smart, free stroke, and no final grip at all. Thus

struck, the ball will glide—not roll over, but fairly skid —along the table for some three or four feet. Then as the effect of the "drag" or undercurrent dies away, the ball will assume a forward rotation. The motive power, however, is very weak, and quickly becomes exhausted ; it has suffered such a decrease in the time that the "drag" fought against the natural rolling over and over.

To gain a practical knowledge of the effect which "drag" has upon a ball, it would be as well to try some strokes of this kind, and carefully note the action of the cue-ball. Strike it low down, say with medium strength. Keep your eyes on the ball immediately you have struck it, and you will observe that it glides or slides along the cloth for from three to four feet along the table. Then it suddenly commences to rotate forward in the usual way. Different paces will exercise different results on the cue-ball. The more gently you strike it, the less will be the distances of the ball's gliding or sliding action ; and the more powerful the stroke, the greater its prolongation. I think that some four to four and a half feet will fairly represent the maximum distance of the gliding or sliding action, whilst three feet, approximately, is the minimum. The chief thing which this "drag" stroke brings to the player is the more accurate running of the cue-ball than an ordinary plain-ball stroke would produce, the diminishing pace of the ball, and the greater retention of "side" upon it. The importance of "drag" cannot be over-estimated in high-class billiards. It enables the player to get the same accuracy of stroke as with a rapid shot, which, as all players must know, gives the cue-ball with a plain-ball stroke little or no chance of getting out of its course ; for "drag" permits

of the player striking the cue-ball with all the force of a
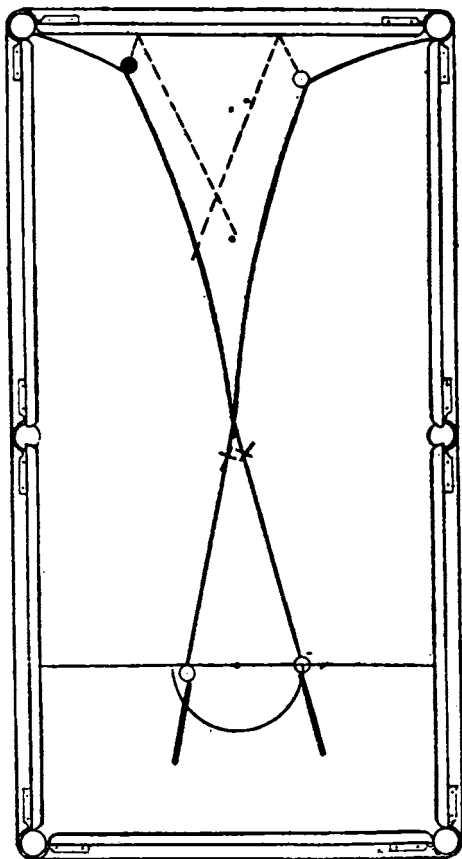
FIG. 58.—Long "drag" losing hazards played with running "side," which, with an ordinary stroke, would require forcing. The object-ball only travels to the centre of the upper part of the table.   X is about the point where the gliding or sliding action changes to ordinary rotation.

fast shot and its truer direction, but with the added

benefit of greatly reducing the pace used. Then, too, it retains "side" ever so much more than does the ordinary "side" stroke. This latter causes it to become absorbed during the running of the ball in a very marked degree, but "side" and "drag" combined keep it in reserve for emergencies when a cushion is reached. This retaining quality which "drag" has in regard to "side" is accounted for by the fact that during the gliding or sliding action of the cue-ball the "side" is completely nullified ; it comes into being, however, as soon as the ball commences its normal rotation. Thus, as most "drag" strokes are played from the D, it should not be a matter of difficulty to understand that with "drag" you retain nearly fifty per cent. of "side," which would otherwise depart from the cue-ball by absorption in rolling, when making a stroke which requires that element on the top cushion. The expenditure of the "side" is so much less, for it has not made its presence felt until the cue-ball is nearly, if not quite, halfway upon its journey. An ordinary "side" stroke, as I say, loses a great deal of the bias during its revolutions upon the table. A test of the two strokes will promptly prove that what I say is correct. Take a ball, put all the "side" that you can to it (which is to be attained by striking it halfway up, left or right as you desire), and send it on to a cushion near at hand. Say that you are playing in the D, and striking one of the near side cushions. Strike your ball gently, for the "side" will tell more. Note the strength of the "side" and the angle at which the ball is thrown off the cushion. Then play the same stroke at the same strength and with the same amount of "side," as nearly as you can gauge, on to the

top cushion, and note the little power that the "side"
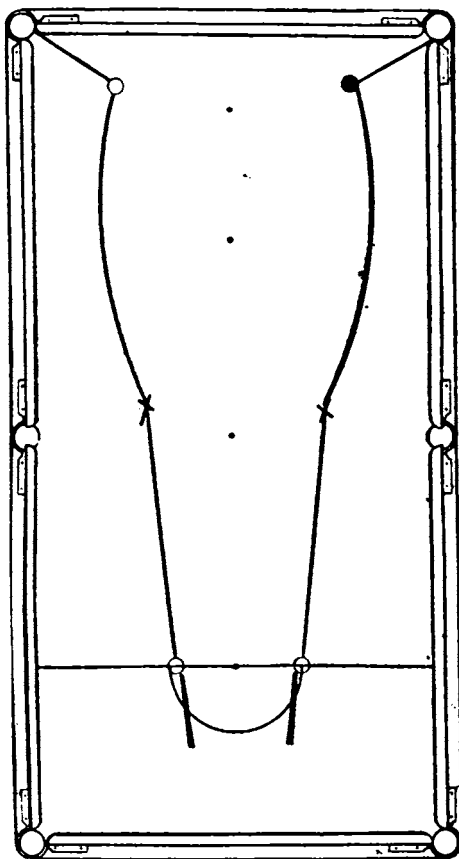
FIG. 59.—Long "drag" losing hazards played with reverse "side," which, with an ordinary stroke, would be an awkward run-through, that would probably take the red ball behind the baulk-line. Instead it only travels to the centre of the upper part of the table. X is about the point where the gliding or sliding action changes to ordinary rotation.

has on the ball after its rather lengthy travel over the

table. If you play the stroke very slowly, which will enable you to impart the greatest amount of " side," just enough to allow of a gentle rebound, you will find that very often the " side " has disappeared altogether. But in thus experimenting, I must again state that the cue-ball must be struck midway up or at the centre of its height, the proper means of getting the full amount of " side." Many players have acquired the habit of striking their ball very low when putting on " side " at any and every form of stroke. They thus unknowingly give "drag" to it. Thus, to form a true comparison, my remarks must be rigidly adhered to. After the test has been made with ordinary "side," and you have been satisfied that " side " does suffer great exhaustion as a consequence of a ball running some distance on the table, then test the properties of the " drag " stroke. The side-cushion stroke will show you little beyond, perhaps, the fact that you can get more " side " on a ball at short range by striking it halfway up than lower down. But the lengthier stroke to the top cushion will unfold the superlative quality of " drag " in relation to long-range "side" shots. You will find, if you strike your ball well under the centre, and with as much "side " as you can give to it, that it will have spent little of the bias even when the cushion is reached.

Most players instinctively strike their ball low when playing long-distance strokes. They are perfectly correct in so doing. In fact, a golden rule can be applied, and that is, *The further an object is away from the player, the lower the cue-ball must be struck in all slow strokes.* Every kind of low stroke is, after all, a more or less accentuated form of " drag."

The under-current given to the cue-ball by the low
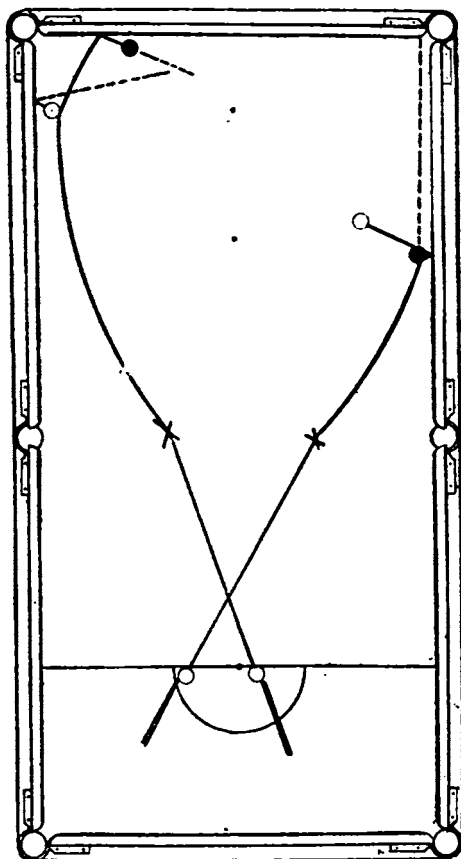
FIG. 60.—Long " drag " cannons showing the retention of the "side"
whereby position is secured for the succeeding stroke.

stroke acts very similarly upon it as does a brake upon
an engine-wheel, an application of which, as every one

knows, speedily extinguishes the locomotive power. It has the effect, too, of fairly holding the ball bearing its influence in a groove, much as though it were guided right and left. This peculiar property possessed by " drag " is the one which counteracts the running of an untrue ball, aided by the fact that the administration of "side" in co-operation with it does not tell as long as " drag " exists on the bed of the table. For, as often as not, it is the bad striking of the cue-ball which leads to a player missing those easy long cannons or hazards, particularly when the latter are played at a slow pace. Instead of striking the cue-ball in the centre, as they intend, the cue has slithered away to a point on one side or the other of it. Therefore, an incorrect striking of the cue-ball (that is in the way of an involuntary applica- tion of " side ") does not tell so much as in plain-ball strokes, for the " drag," as long as it exists, will nullify its presence. Then, like a folded flag which has been run up to the masthead, and which unfolds itself when it reaches the summit, the " side " will make its presence felt.

The very frequent use of " drag " strokes, and the low aim taken by the professional players, is a subject of much comment, I know, by spectators of their exhi- bitions. It tends to convey the impression that the players strike their ball very low down. Only, however, in " screw " or " drag " shots does this happen. The low aim they take, the swift uprising of the point of the cue in all other strokes, and its descent to the table again as the ball is struck and the cue passes beyond the point of impact, causes this optical illusion. The low aim taken by the great players has the advantage of defining for

them which is the centre of the cue-ball better than if they were to aim fully on its centre. The greater quantity of ivory there causes this. Let any one place a ball upon the table and see which way is the easiest—aiming low or aiming halfway up—to find the centre. I venture to say that it will not take long to discover that the low stroke with the lesser amount of ball to strike will soon force itself upon those who take the trouble. There is less latitude for a mistake. And the incorrect striking of the cue-ball, with its often involuntary transmission of "side" to it, is the chief cause of the poverty of amateur billiard form. A useful hint may be found in the simple but all-effective test of discovering whether you have aimed exactly at the centre of the ball, and that is by dropping your cue on to the table at its base. You will then have a practical illustration of the value of a low aim, for it will often show you what you could not see, its true centre when aiming at the staring bulk of the ivory in the middle of the balls.

The rule I lay down of the cue-ball having to be struck lower down in proportion to the distance that the object-ball is away from it, is not better exemplified than in those delightful strokes—"jennies"—into the top pockets. When the object-ball lies below the centre pockets—that is, between the baulk line and the centre pockets—the cue-ball should be struck at the centre of its height on the "side," of course, that you require to use for the stroke. The reason for this central striking of the cue-ball is the slight distance it has to travel before coming into contact with its object, and consequently the less chance of the "side" deflecting it from the line of aim. In a lengthier journey before making

contact there is the effect of the bias of the cloth to be taken into consideration. This cannot be easily gauged ; nor is there any necessity to make the attempt, for " drag " in all its omnipotence here steps in and demonstrates its value. Say that you are attempting a top-pocket "jenny" with the object-ball lying above the centre pockets. In this case there is a lengthy journey for the cue-ball to make prior to striking the object-ball ; and a ball carrying " side " is not a trustworthy subject, nor is an estimated allowance of its effect worthy of placing much dependence upon, the more so as in " drag " you have a very reliable agent which will hold the cue-ball in check, and practically steer it to its objective point when it is carrying " side." Then, as the " drag " releases its grasp of the ball, the " side," which has hitherto been in embryo, bursts forth with all its strength, thus giving to the player the whole assistance this element, so beneficial in long "jennies," can accomplish. Therefore, a noteworthy and not too well recognized rule in connection with these strokes is : " *Strike the cue-ball at the centre of its height when the object-ball is* BELOW *the middle pockets, and strike it low down to retain the " side" when the object-ball is* ABOVE *the middle pockets.*"

A great point in connection with "long jennies " (in fact, it applies to all long-range strokes) is the greater ease with which the angle can be found when there is an equalization of distance between the cue-ball and its first and second objective point. Every billiard-player must be aware of the difficulty of finding the correct angle at, say, a cannon, when the first object-ball is close to and the second three times the distance away.

There is an old billiard saying, that a " short leg and a
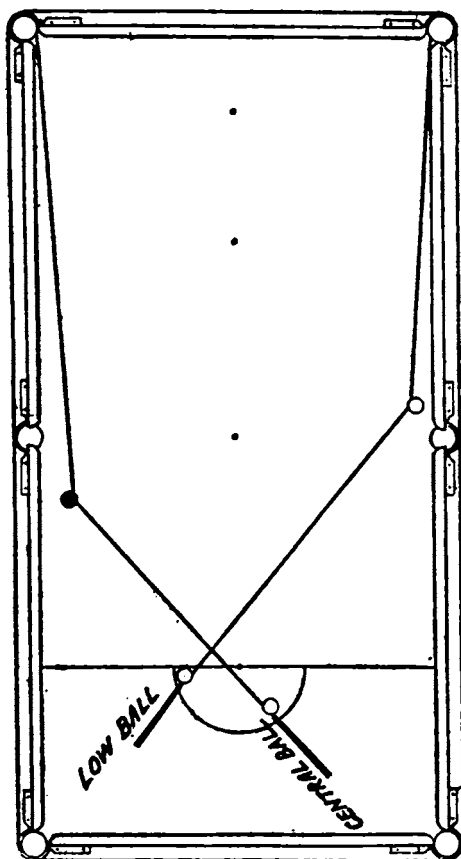
FIG. 61.—Long "jenny" strokes, showing how the position of the object-ball, below or above the centre pockets, affects the striking of the cue-ball.

long leg do not work in unison," and I consider it to be very applicable to my present remarks.   They certainly

do not. And, as I say, the equalization of the distances as nearly as you can between the positions of all three balls lessens the difficulty of finding the truth of angle in a surprising degree. It throws up the second objective point, whether this be a ball or a pocket, in very bold relief. Therefore, I venture to lay down another
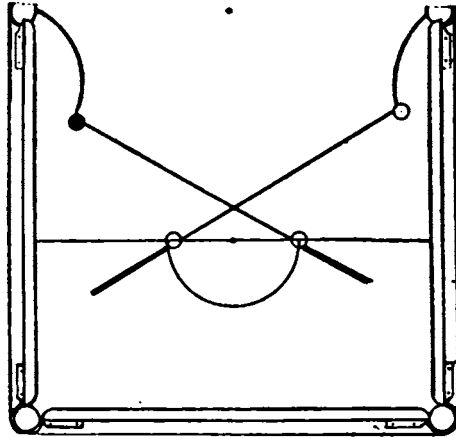
FIG. 61A.—Centre-pocket "jennies."

and invariable rule, which takes the shape of *an equalization of distance between all three balls, as nearly as you can approach it, in all long-range strokes from hand.*

"Drag" plays a most important part in those very tantalizing strokes to amateur players—middle-pocket or short "jennies;" it is one of the absolute essentials of the stroke. Here again its great property of retention of "side" on the cue-ball becomes pre-eminently serviceable. Also its prevention of the action of the bias on the cloth, and the resultant inaccurate course of

the cue-ball, is a matter of vital import. For in "short" or middle-pocket "jennies" the "side" is of supreme consequence when the pocket is reached. To have its full powers at the psychological moment—that is, when the impact with the opposing cushion occurs—must readily demonstrate the helpful quality of "drag." Without it, any attempts at short "jennies" on a table of the "tight-pocket" type is a veritable "ploughing of the sands," neither conducive to good results nor to the player's peace of mind. Another standing rule, then, is—*play middle-pocket "jennies" at delicate strength, with "drag" as an important assistant to the "side."*

A losing hazard of almost the same species as the long and short "jennies" is the one into the baulk pockets, when the object-ball is just above the baulk line between the extreme spots of the D and the side cushion. This stroke is for the most part grossly mishandled by the great bulk of amateur players. They will insist on "screwing" the cue-ball with immense power and all the reverse "side" they can impart to it, no matter what the position of the object-ball. For instance, let us imagine that this is within an inch or two of one or other of the extreme spots of the D. What need is there to hit the cue-ball with all your might, and send the object-ball some half-dozen times across the table ? It may fall into one of the middle pockets—very often it does—whether it be the white or the red ball; or it may catch the angle of the pocket and run into the seclusion of baulk ; or may run under a cushion, and how will you fare then ? And you will have to hold yourself and your method of making, or rather trying to make, the shot wholly and solely to

blame for the failure to leave a break. I have seen players of long standing, men who are intelligent in other things, always play the stroke in the way I have described. They "screw" and hit their ball with all their power, and nine times out of ten they overscrew the shot. This overscrewing of the shot is also assisted by the reserve "side" that is used.
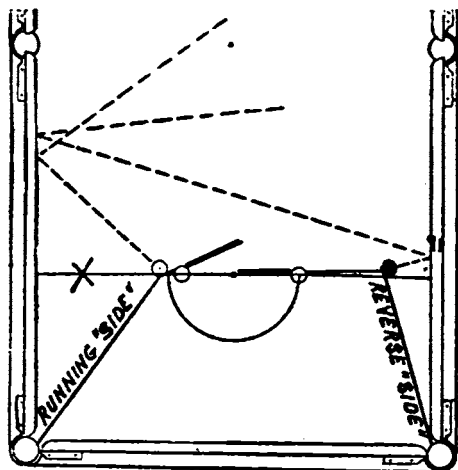
FIG. 62.—Screw losing hazards from "hand" into the baulk pockets. The point X to the side cushion is about the part where running "side" ceases to be effective, and reverse "side" should be used.

Now, instead of attempting the shot in this way (I am still speaking of a stroke from a ball an inch or two above the baulk line, and about the same distance from the corner of the D), were a gentle, almost fine, stroke on the object-ball made, what a vastly different, and sensibly superior, result is seen! You certainly use "screw," and the full amount that you are capable of

giving, to your ball. "Side," too, is a valuable factor in the stroke—not reverse "side," but running "side," however. In the matter of the "screw," you will find that this acts as much proportionately with a fine as with a full contact of the object-ball. A few tries, and you will soon gauge the angle of the various "thin" contacts that the object-ball throws in "screw" shots. The "side," the running or flowing "side,".acts so against the nap of the cloth at the gentle strength the stroke requires, that it has the tendency to pull the cue-ball towards the pocket, should it be slightly overscrewed, and the touching of either "shoulder" will almost guarantee the safe accomplishment of the stroke. Then there is the matter of the course of the object-ball to be considered—one of the greatest things in billiards. By playing the stroke in the way I have just described, you hold command over the object-ball. This should be struck with just sufficient strength to send it into the middle of the table, leaving a losing hazard "from hand" into either of the centre pockets. It is really an easy stroke, but, nevertheless, as I say, it is one that is usually very badly handled by amateurs of the average stamp of ability. I do not know of any stroke that is more useful to have at your fingers' ends as a helpmate towards break-making.

This method of playing "screw" losing hazards into the baulk corner pockets holds good so long as the object-ball is not nearer than about five inches to the side cushion. Up to this point, all along the line of the eighteen or nineteen inches from the end spot of the D towards the side cushion, you have had an open pocket staring you in the face. But now, when the

object-ball retires to within five inches or less of the cushion, the mode of procedure undergoes a distinct alteration at baulk-pocket losing hazards. In place of the running "side" and fine contact as in the former case, a transmission of reverse "side," a thick contact with the object-ball, and a slight increase of power into the stroke are needed. Of course, the main element needed is still "screw," which transports the cue-ball to its destination—the pocket. There is now no gaping pocket to aim at, and you have the "shoulder" alone of the opposing cushion—the baulk one—for the negotiation of the "side." The object-ball again finds its way, or should do so, to the centre of the table for losing-hazard play in the middle pockets.

The action of "drag" in run-through losing hazards is of the greatest importance, by causing the cue-ball to retain "side" in a very much greater degree than if it had been struck at the centre of its height on one side or the other. "Side" is the great factor in run-through losing hazards along a cushion; it is the sheet-anchor of such strokes; without it, the making of them would be a matter of absolute impossibility. Take such positions as Fig. 63 shows. Here we have the red ball "tight" against the top cushion and some six inches from a pocket. In a line extending to the further side cushion are six balls, each of which is placed to represent a different run-through losing hazard from the red ball. With ball No. 1 all that is required is an ordinary central left "side" stroke, and a full contact with the object-ball. Ball No. 2 requires much the same sort of stroke ; but from this point up to ball No. 5, the general principle I laid down, of a lower striking of the cue-ball

as the distance between it and the object-ball increases, again comes into play. With ball No. 3 a slightly lower striking of the cue-ball will be found of advantage to the player. More "side" will be left on the ball when it reaches the pocket than with an ordinary half-way-up "side" stroke. With balls 4 and 5 "drag" is an essential; it must be used in these instances. Of course, the shot is possible without it, but it does not
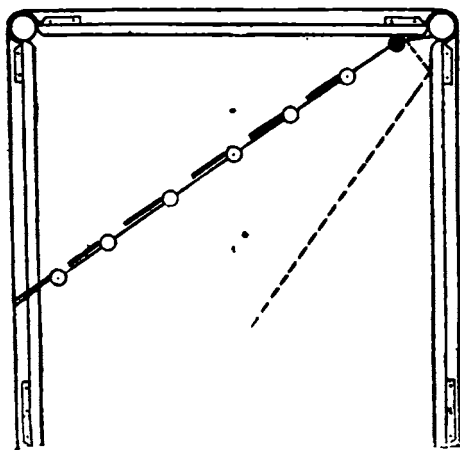
FIG. 63.—The same "run-through" losing hazard at varying distances, showing how "drag" comes into play the further the two balls are apart.

possess one tithe of the certainty that a combination of "side" and "drag" will ensure to the player. An experiment from the positions shown will prove that an ordinary "side" stroke will cause a great exhaustion of the bias originally imparted to the ball. Mind, I am not saying that you can put more "side" on your ball with one stroke or the other—not by any means; but what I do assert is that with "drag" the "side" adheres

much longer to the cue-ball than if the under-current was not there. The way the "side" is absorbed by the revolutions of the ball when "drag" is not used is, I think, beautifully exemplified by the two losing hazards with balls 4 and 5. A trial in each of the two ways— an ordinary "side" stroke and a combined "drag" and "side" stroke—will quickly substantiate this view of mine. With the ordinary "side" stroke you will find that not only do you strike the object-ball much more powerfully than is consistent with the needs of its after-position, but that the contact with the red ball appears to take all the "side" out of the cue-ball. The latter runs up to the pocket and the "shoulder" of the opposing cushion with an almost utter absence of the much-desired "side." This element is practically dead by the time that the pocket is reached ; and it is not because you have failed to impart your usual quantity of "side" to the cue-ball, but simply because the natural order of things, the exhaustion of the "side" whilst the ball was revolving, has occurred. But in "drag" you have the remedy to overcome the exhaustion which overtakes "side" during a lengthy travel of a ball. Therefore, if you will try the stroke from the positions of balls 4 and 5 in the way I ask— with "drag" in addition to "side"—you will quickly perceive the superiority of my method. Do not be afraid to strike the cue-ball a gentle, but crisp stroke, thus giving the "drag" an opportunity of performing its express functions. You will then see the cue-ball go nicely "through" the red with an obvious abundance of "side" still upon it, and go wriggling and curling along to the pocket. And you will say to yourself:

"It really is remarkable how 'drag' retains the 'side' on a ball!" You will not be so impressed with the enduring powers of "side" in conjunction with "drag," however, if in the low striking of your ball you have transmitted "screw" to it instead of "drag." To avoid this you must be careful to play a nice free cue, and abstain altogether from the tightened hold you have on your cue when "screwing" your ball.

In the losing hazards which are shown on Fig. 63, a gentle stroke is a necessity. Without it the making of the stroke loses half of its effectiveness. I show by the dotted line the course the red ball should take, and also its approximate resting-place—the termination of the dotted line. This position that the red ball takes up is only following the general principle of all losing-hazard strokes, and that is to leave the object-ball in the middle of the table. I might add that any point which gives the player, when "in hand," a half-ball stroke into either top pocket is considered to be technically "the middle of the table."

On Fig. 64 there will be seen a stroke of the same character as the preceding one. This is a losing hazard of the "run-through" description into a top pocket, but instead of the object-ball being upon the top cushion, in this instance I place it on the top-side cushion. Again I have illustrated a series of positions in which the cue-ball may find itself located. They extend from a point about a foot below the object-ball to a ball played from the D. As in the other stroke, in the case of some of the balls—say those numbered 1 and 2—an ordinary "run-through" with plain "side" is all that is required. But, once more, with balls 3, 4, 5 and 6, owing

to their distance from the object-ball, plain "side" will
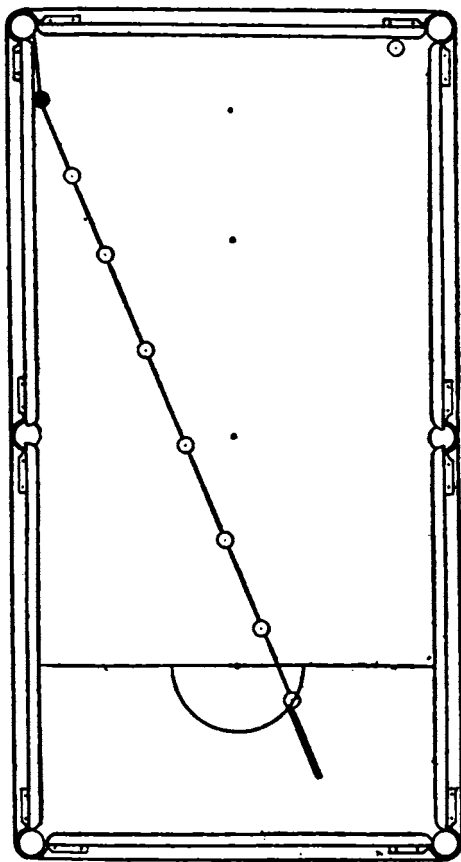
FIG. 64.—Gradual lower striking of the cue-ball as the distance between
cue-ball and object-ball increases.

not effect the desired consummation—the "run-through"
losing hazard.   "Drag" again has to be used to make

the stroke in a way which will provide a nice placing of the red ball for the succeeding stroke. This can only be gained with accuracy by a nice steady "drag" stroke; which, however, is not so easy as the usual way the average amateur plays the stroke. He hits the cue-ball high and hard with some little amount of "side," and as often as not makes the losing hazard. But where does the object-ball travel to? Why, five times out of six it goes into baulk, and stops there. He has simply made a good individual stroke instead of a methodical combined one. He has to be content with the making of the losing hazard; whereas, had he played the losing hazard in the correct way—gently, with "drag" and "side"—the object-ball would have travelled along from the top cushion to the middle of the table, leaving a nice game on from "hand." This is not so simple as the semi-"top side" stroke now so generally in use, but if it is not, it possesses the merit of being the only reliable medium of obtaining a desired position. In addition, it is not nearly such a difficult stroke as it would seem to be at the first blush—a very little practice should bring it within the scope of any 20-break player; and its usefulness is, I think, self-evident.

Most of the strokes in the latter part of this chapter partake of a combined character in so far as the action of the cue-ball goes. "Drag" and "side," "screw" and "side," and "top" and "side" may be imparted, as in the given examples, by one stroke of the cue. The unison of the two elements is one of the greatest aids in billiards; and in this connection I present a pretty arrangement of the balls, showing the workings and

twofold impulse of the cue-ball as it bears "top" and
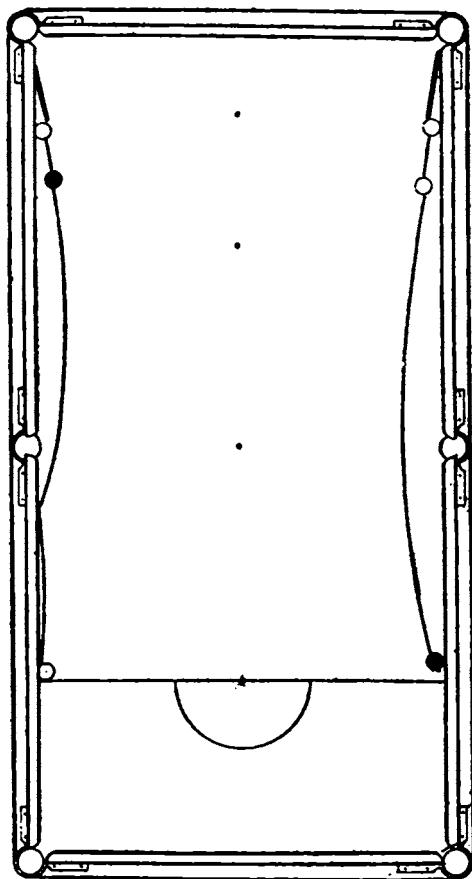
FIG. 65.—Combined "top" and "side" strokes against the "nap" of the cloth.

"side" working along by a cushion against the "nap" of the cloth. Strokes of this nature may be seen on

Fig. 65. One of the cannons—that on the left side of the table—proves how the cue-ball is helped on its mission first by "top," which gives it the necessary momentum, and then by "side," acting on the cloth and on the cushion. Thrown into the cushion in the manner that its passage is depicted on the diagram, the left "side" used helps it onwards by accelerating its pace as it touches the rubber band. The other cannon, made along the right side of the table, and played with right "side," demonstrates the power of the bias. For a time after contact with the object-ball, the velocity it carries causes it to follow a line very wide of the direction of the ball it is to cannon upon ; but as the pace of its running decreases, the influence of the right "side" becomes more and more apparent. In a desultory kind of way, the ball will be observed breaking away from the straight line. It works gradually back to the cushion, till ultimately it finds it again in the manner shown. To make both cannons is to hit the cue-ball high up on the required side, and with plenty of power.

PRACTICE STROKES. THE COMBINATION OF "SIDE" AND "SCREW."

Following up the plain "screw" and the plain "side" strokes, the next practice is a combination of these two qualities. I know of no better example in their use than the square losing hazard down the cushion to a corner pocket, as shown on the No. 1 "side" and "screw" strokes figure. Having already learnt that a screwed ball catching the object-ball a

half-ball contact will travel in the right road, the player
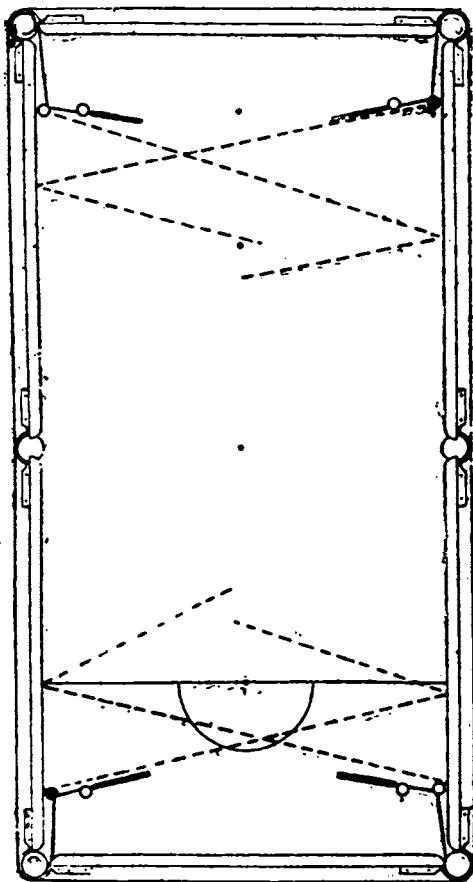
No. 1 "side" and "screw" strokes.

knows how to direct his ball to the pocket. The "screw" takes it there, and the "side" carries it into

the hole. One conveys the messenger to a given point, so to speak, and the other opens the door for him. Thus the two rotary motions the ball carries—the undercurrent or " screw" and the " side "—effect that which neither could do singly.

This combination of the two most powerful elements which can be brought to bear upon a billiard-ball, are never of more service than in these same square losing hazards. There is no difficulty in determining the correct " side" to use when the object-ball lies close to the cushion-rail. Pocket, or what is commonly called reverse, " side" is the strict rule. When, however, it stands well away from the cushion, it is a different matter altogether; but this latter point will be dealt with in the next lesson.

To commence the " screw " and " side " stroke practice, you take the most elementary stroke of the kind, the square " screw " losing hazard shown on the No. 1 " side " and " screw " stroke figure. Place the object-ball about eighteen inches from any of the corner pockets, with the cue-ball in a parallel line a foot or so away. Try to get in the pocket, using " side" and " screw." It is, as most must know, a half-ball contact stroke. There is no need to play it at a violent pace at all ; a nice medium-pace shot, sufficiently strong enough to double the object-ball across, and out to the middle of, the table (as the dotted lines show), is the perfect one from all points of view. It has just that freedom in it that goes to carry the cue-ball nicely and freely to the pocket, while permitting of the " side" to do the full measure, or most, of its work when it arrives there, and to drive the object-ball out to its allotted

position.   In baulk, or at the top end of the table,
the stroke is played in the same manner.   It is almost
superfluous to mention that the stroke is made by
hitting the cue-ball smartly beneath its centre (see
screw-practice strokes) on the "side" that you wish to
bring into action.

So much for the square half-ball "screw" and
"side" shot.   When it comes readily to you, turn to
another form of the losing hazard, which again de-
mands their mutual application.   Drop the cue-ball to
a point below the object-ball, working it around in a
half-circle, until you get it directly behind the latter
in this way :—
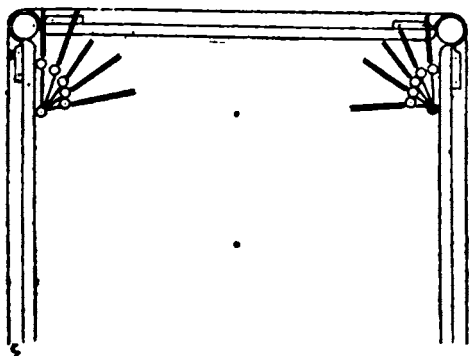
No. 2 "side" and "screw" strokes, showing pocket "side."

Put up about five or six positions of the kind.   Each
time as the cue-ball comes further away from its original
parallel placing with the object-ball, you have to make a
fuller contact than the half-ball one.   By degrees this
comes up to three-quarter ball, and then to a dead full
ball, when the cue-ball comes round to be placed on the

cushion. "Screw" and "side" are applied just as in the case of the square half-ball shot.   The only variations from it in all instances is the difference that exists in the gradually widening angle you shape up.   The "side " is always pocket, or reverse, "side" to all the four corner pockets.

When you get away from the square shot, whereat you have your angle mechanically measured for you by the half-ball contact, you will find the exact spot in the object-ball to be aimed at not too easy to define.   But, by working up from the half-ball, through the intermediate stages of contacts to the full-ball straight screw back, you will accustom the eye to it.   Unless you misjudge this hopelessly, the "side" will so tell on the further "shoulder" (the end cushion "shoulder") of the pocket as to practically double its size. Get anywhere on to that "shoulder" with pocket "side" (the "side" that turns the ball inwards to the pocket) and the stroke should be yours.

These different "screw strokes" are most valuable to have at your call.   About the limit which they can be played into the top pockets to keep short of baulk is the halfway stroke between the square "screw" and the straight screw back ; that is, from the position I have placed the object-ball in.   The limit stroke will require good handling, but this should soon be gained by practice.

PRACTICE STROKES. LOSING HAZARDS WITH "SCREW" AND "RUNNING SIDE."

The preceding practice strokes cover some of the most useful of the "screw" losing hazards along a

cushion into corner pockets, using "reverse" or "pocket side." That way of playing "losers," short of the half-ball or plain forcing-stroke angle, holds good so long as the object-ball is close to the cushion. You are playing at what is known as a "blind pocket." The cue-ball approaches the pocket opening from the worst possible line. To compensate for this disadvantage you use the "reverse" or "pocket side" to influence the turning inwards of the ball to the pocket as it strikes the further "shoulder" there. That much you know from the last lesson. I merely repeat what I then said so as to bring out the strong contrast that exists between "screw" strokes from balls close to the cushion-rail and those well away from it.

In place of using "reverse" or "pocket side," it is the set and easiest way to score from balls giving you the full front of the corner pockets to play at, by screwing with running "side" on the cue-ball. Running "side" is, I need hardly mention, identical to the direction the ball is travelling—to the right or to the left. Most amateurs try these strokes with "reverse side." To put it shortly, they play all "screw" losing hazards as though the object-ball was lying close by a cushion—a big mistake. So I think a few examples of the most frequently recurring positions in which "running side" and "screw" are allied will be useful to practise on.

Quite the most common are those when the cue-ball is "in hand" with the object-ball lying somewhere between a corner spot of the D and the side cushion. Among the many frequently recurring positions, there are none more grossly mishandled by the average player than these. A forcible stroke with reverse "side," which

finds the pocket on an average once in a dozen times, and which sets the red doubling across the table at express speed to do all sorts of eccentric things—maybe to finally lodge in one of the centre pockets, maybe to catch the "shoulders" and run back into baulk, or, in fact, to stop anywhere but where it would be expected to. That is how the average amateur plays these kind of shots. All the time he is doing everything but play billiards, and he is making hard work of what should be a lightly-handled, delicate stroke. If, instead of screwing his ball at top speed with "reverse side," he went gently—quite gently—and thinly off the red object-ball, loading the cue-ball with "running side," he would quickly appreciate the benefits to be derived from this manner of playing the "loser." Most people seem to be unaware that angle "screws" tell as effectively when the cue-ball is near the object-ball, and the stroke a short-range one, as though you put all the weight of your elbow into it. The cue-ball can be made to "screw" if it only catches the object-ball as finely as a pin's point. In my "screw-stroke" lessons I showed that the angle for all of them should be made by different degrees of contact, from the thinnest to the perfectly full one, on the object-ball, just according to the location of the second objective point, ball or pocket. Use one standard of "screw" power in them all; it is the safest and surest means.

Getting back to the "losers" in the baulk corner pockets, playing from the D, I must point out that in sending the cue-ball there it runs counter to the "nap" of the cloth. The running "side" carries it more over to the side cushion than its true course without "side" would

do, so one has to make an allowance for this by aim-
ing a bit short, say on the point of the end cushion
" shoulder," of the pocket ; the " side " will pull it in.
To fully appreciate this working of the cue-ball, it is
instructive to get some one to play the stroke while you
stand behind the pocket and note its curving course
against the " nap." It will show the whole thing very
plainly. Both the baulk-pocket " screw " losers present
practically the full face of the pocket to the run of the
cue-ball. So the " running-side " argument for these
losing hazards is nicely expressed in them. The idea of
the stroke is to play the object-ball so thinly and gently
as to guide it out to the centre-spot by the medium of
the side cushion. The further the object-ball is away
from you, the more fully must it be hit. But in the two
examples shown on the annexed figure, a quarter-ball
is the fullest contact needed. This would be from the
white into the right baulk pocket. The stroke off the
red to the left baulk pocket should be taken much more
thinly, barely grazing it, in fact. Do not be afraid of
playing the strokes too slowly. Even on the fastest
tables the object-ball should not go beyond the centre
pocket, thus leaving an optional top-pocket " loser " to
follow on with.

At the other end of the table, and this time playing
with the " nap," and not against it as before, the " run-
ning side " and " screw " losers are most helpful. They
permit of the cue-ball having so much more life in it
than when carrying " pocket side." Take the stroke
into the left top pocket for instance. Here you are right
up with the object-ball, and by a gentle touch you may
send the object-ball down by the pyramids spot (that is

the correct game), or short of that if you need to.
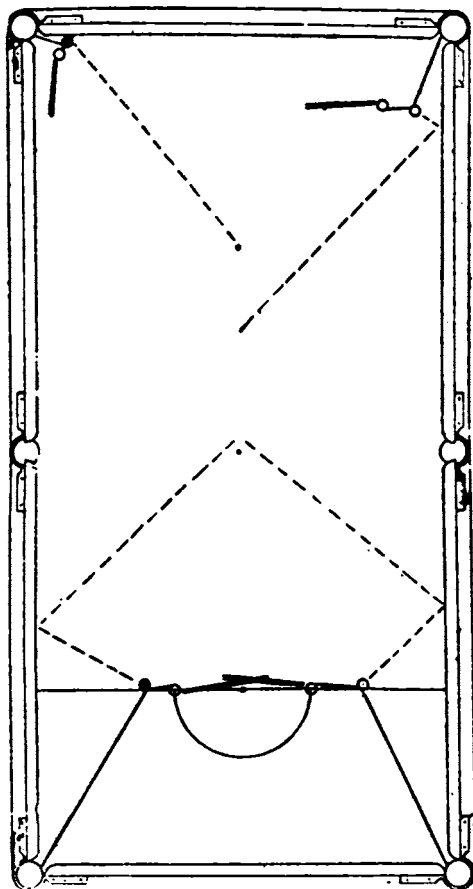
Running " side" and " screw " strokes.

" Running side " with your thin " screw " allows this
command over the object-ball. Using " reverse side "

you would require to put twice as much force into your stroke. Try both ways of playing it, and note how much more sluggishly your ball runs when it carries " reverse" or "pocket side." This stroke is one of the exceptions that go to prove an otherwise set rule—that of screwing-in off all balls lying close to the cushion with " reverse " or " pocket side." It applies to all four corner pockets.

The remaining stroke, the "screw" in the right top pocket, merely shows the "square-screw " in there, using " running side " in place of the " pocket side " used when the object-ball lies nearer in to the cushion. Another comparatively gentle stroke will take your ball to the pocket, with the run of the object-ball as indicated by the intersected line.

CHAPTER V

WINNING HAZARDS

UNQUESTIONABLY the winning hazard is a stumbling-block to the very great bulk of amateur players. The cannons and losing hazards are readily, if not very scientifically, made by them. But the winning hazard baffles them altogether. The reason of this wholesale failure is quite simple. Of all strokes played on a billiard-table, none require such deadly precision in the aim and the delivery of the cue. Unlike the cannons and losing hazards, in which one may hit the first object-ball in numerous places, and yet make the desired shot (*vide* the Half-Ball Practice Strokes, and the Losing Hazard Play chapters), the winning hazards demand that the cue-ball keeps perfect faith with the aim that is taken. In the losing hazards and cannons one may readily see how a false contact between cue-ball and object-ball (so long as the latter is hit somewhere near the desired spot) does not always put the cue-ball out of the angle line you want it to take. You will hit the object-ball fuller and also more thinly than you tried to do, yet you will, often enough, to your own surprise, score the cannon or losing hazard. The object-ball will prove to you, by running feet, almost

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yards, out of what should have been its proper course, how badly hit it is. Still, you have made your cannon or losing hazard. But had the stroke been a winning hazard, your failure to hit the object-ball as you had intended would mean, shortly, that you had missed your stroke ; for to knock an object-ball into a pocket allows next to no latitude for error of contact. There is only one point on the object-ball for the cue-ball to get in touch with. True as a die it has to hit this spot. If it does not, the object-ball will not fall into the pocket.

. Now, the said *point of the object-ball to be played at in winning hazards is to be found by drawing an imaginary line from the centre of a pocket through the centre of the ball.* Hit this point, and the ball must go in the pocket. It is as though you were playing in a direct, straightaway line on to it. In such a shot you aim to strike the object-ball right in the centre. Move the cue-ball around to every conceivable angle from which you can get on to this central point, and you still have to hit this same spot. The right angle shows the limit of the angles that allow the cue-ball to get at the central point of the object-ball.

Illustrations of this may be seen on Fig. 66 in the examples of winning hazard from varying angles. From the left top pocket there is a representation of the winning hazard theory, an imaginary line being drawn out from the pocket through the centre of a ball. The point at which this line strikes the playable face of the ball is the point of contact for the winning hazard. This rule applies to every pocket on the table, and every possible disposition of an object-ball providing the cue-ball can reach its central point.

[Plate X.
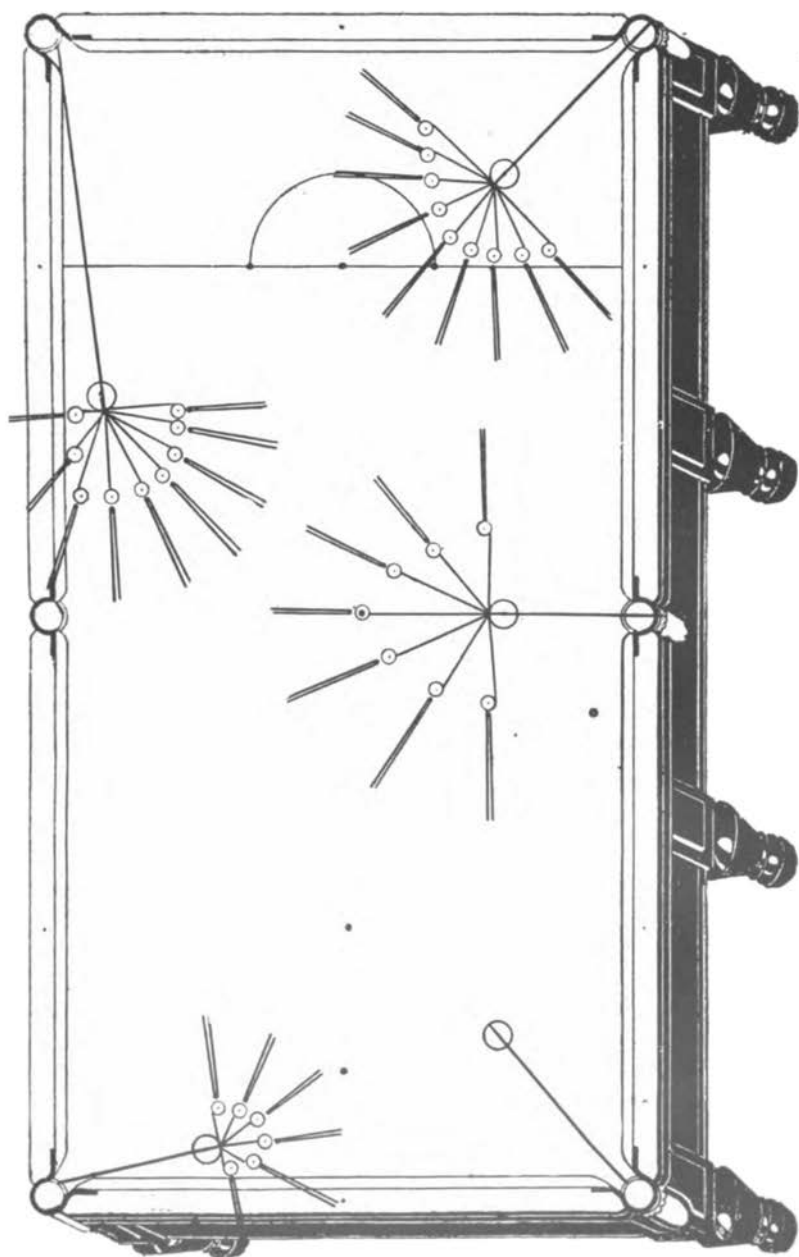
Fig. 66.—THE PRINCIPLE OF WINNING-HAZARD STRIKING.

One important matter in winning-hazard play must not be forgotten; I refer to aiming at the object-ball. In my remarks in the chapter devoted to Aiming and Striking, on the first of these subjects I showed that, except in the quite full contacts, *the object-ball is always hit halfway nearer to its centre than the line of the cue aims for.* Therefore, unless this rule is observed, you will simply be wasting your time in aiming directly at that part of the object-ball you wish to hit (except, as I have said, in the dead full stroke). You know by means of earlier examples of the kind, that to get a "half-ball" contact you aim at the edge of the object-ball. For the thin stroke, you aim wide of it; and for the fuller contacts, more to the edge than the point lies that you want the cue-ball to meet. So it is in this playing on the central part of the object-ball for winning hazards. If you are directly behind the ball and the pocket, well and good. No allowance in the aim is needed; you just aim plumb through the centre of your ball on to the centre of the ball you are pocketing. That is why the direct winning hazard is the easiest of them all, as it requires *no judgment.* Out of this line, however, an allowance has always to be made in the aim to find the exact spot on the object-ball. You can see the spot plainly enough, but it is not so easy to hit. The closer the cue-ball lies to the straight line, the less the allowance in the aim must be. The greater the angle set up—that is, the nearer the cue-ball comes to taking up a right-angle position—the more the allowance. These strokes will require very attentive practice, and, obviously, the greatest attention to every detail I have given in the matter of standing firmly at the table, and a nice flowing delivery of the cue to keep

the aim true; for the truth of aim is the beginning and ending of winning-hazard playing. If you cannot get the cue-ball to follow the aim of your eye, you know that you are standing badly, and moving about on the stroke. Knowing how exact you must be in your delivery of the cue, you should try and hold yourself rigid and taut, with the exception of the movement of the wielding arm, on the stroke. Do not consider this finished until you have seen the ball go in the pocket. If possible, every winning hazard should be played without "side." It is difficult enough to play them at all accurately with a plain ball. Bringing "side" into play, unless the cue-ball is lying right beside the object-ball, fairly doubles the task of hitting the latter on the required spot. In saying so I must again call attention to the fact that the use of "side" is calculated to spoil one's aim, for it acts before, if not so strongly, as well as after meeting the object-ball. The bias pulls the ball out of the true line of its course. Fig. 67 shows the true method of aiming at the central point on the object-ball. The dotted lines show the aim, and the continuous lines from ball to ball show the point of contact.

The winning hazard, like all pocket-play, is a very strong factor in English billiards. It is the backbone of the "top-of-the-table" game, as a reference to that portion of this book will easily reveal. The most clouded positions may, as if by magic, be turned into favourable ones with an insertion of the red (and sometimes the object-white) ball. For the all-round kind of game, necessitated in the losing-hazard style of break-making, there are landmarks on the table to which the cue-ball must be persistently directed as it puts down the red ball.

[Plate XI.
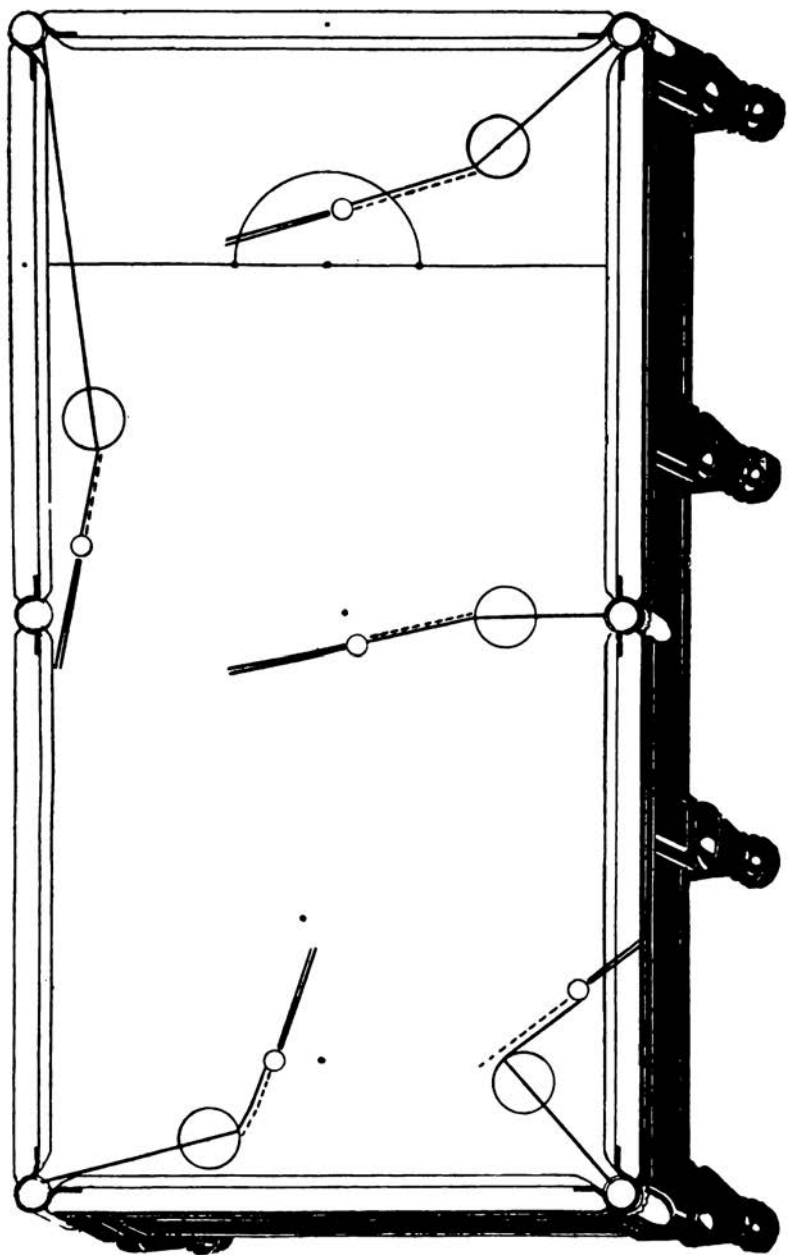
Fig. 67.—AIMING TO HIT THE OBJECT-BALL'S CENTRE.

These landmarks for the cue-ball are the middle and
top pockets with a set, and quite continuous, idea of
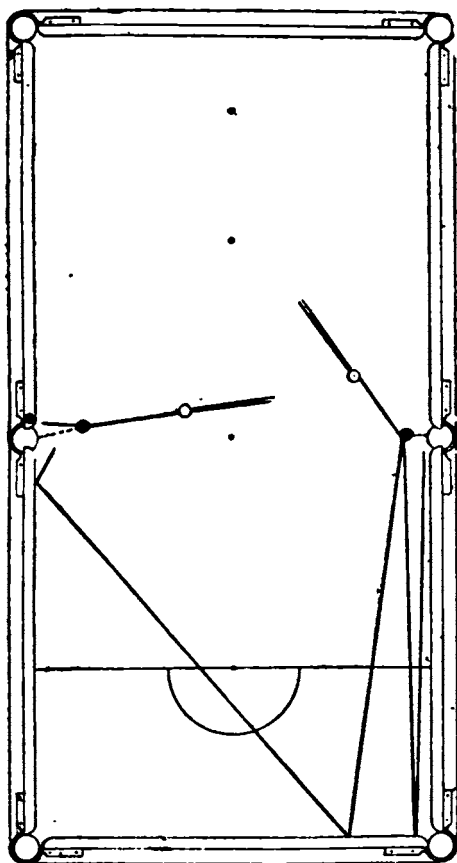
FIG. 68.

leaving a losing hazard into a top pocket from the
red ball as it comes up on the spot.   The middle-pockets

area for these strokes is much more extensively used than the top-pockets area. Their central position, and the greater latitude they give to the cue-ball for a losing-hazard position off the spotted red ball, is the reason. Except in very exceptional cases, the top-pockets area for the "cross" losing hazard should only be selected when the cue-ball is standing in that part of the table. All around, and at the greatest possible distances, the player's aim when he puts down the red ball (unless, of course, he can get placed for a simple cannon, or a more paying stroke according to the needs of his game) should be to direct the cue-ball by one or other of the middle pockets to leave the losing hazard.

Some figures of such winning hazards, and cue-ball position strokes, will readily explain the system. Fig. 68 shows, by the right middle-pocket stroke, the cue-ball being directed to both sides of the table. With left "side" it returns from the baulk-end cushion, after putting in the red ball to stop near the centre pocket, leaving a fairly easy losing hazard off the coloured ball, which is removed on to the spot. The use of right "side" will guide the cue-ball over to the other side of the table as it strikes the end cushion. Again from there a losing hazard into the opposite top-corner pocket may be played off the red. The left middle-pocket stroke shows a gentle dropping in of the red, the cue-ball following slowly on by the pocket for the losing-hazard position.

Fig. 69 provides examples of winning hazards in the corner pockets. In each instance the guidance of the cue-ball to the two middle-pocket areas is shown.

Fig. 70 gives a valuable hint in connection with the

two top-pocket strokes.   It must soon be plain that if
one can get the cue-ball anywhere in the angle-line,
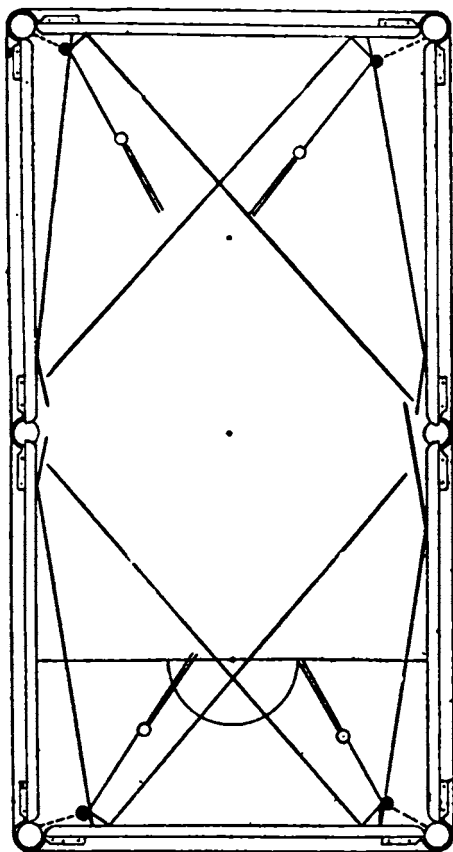
FIG. 69.

from the middle pocket to the spotted red ball, he
has a losing hazard on.   This is so, of course.   The

knowledge of this fact often leads to trouble. It is
perfectly sound play if you drop the red ball in with a
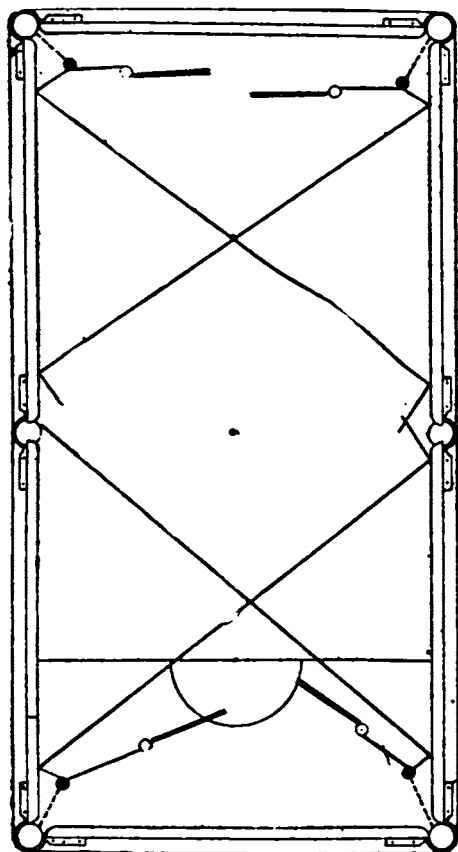
FIG. 70.

"stab" shot (*i.e.* stop the cue-ball dead as it strikes the
object-ball), or if you let it follow gently on into the

angle-line. Then you are playing out in the middle of
the table. When the cue-ball has to encounter a cushion,
another method must be employed. To guide the cue-
ball into the angle-line from middle pocket to red ball
by a gentle stroke off the side cushion is exceedingly
dangerous for any but the most finished players. By
far the safer and sounder game is to make the cue-ball
cross the table, as in the four strokes shown on Fig. 70.
You are given such a greater chance of finding some
sort of angle for a half-ball stroke. Crossing the table
the cue-ball has a radius of something like six inches
around the centre pocket to get in position for the losing
hazard ; on the other hand, stopping on the same side of
the table that it puts in the red ball, the cue is allowed
precious little margin for miscalculation of pace. The
crossing the table stroke is undoubtedly the correct
game to play, unless one causes the cue-ball to follow
direct on to the middle, in which it inserts the red ball.

Further examples of leaving the cue-ball by the
middle pockets are to be seen in the right middle-
pocket strokes on Fig. 71. The left middle-pocket
stroke on the same diagram illustrates a frequently
used stroke by the professional players. Using strong
"side," they make the cue-ball follow on after the red,
not into the pocket, but on to the protruding lower
shoulder. Meeting this, it is thrown up the table towards
the spot, as the line of its course shows. When the
object-white is near the spot, a top-of-the-table position
is at once gained.

The top-corner-pockets area for the cue-ball is more
restricted than that round and about the middle pockets ;
it is, too, as I have said, less easy to gain access to.

The invariable rule is never to try to place your ball for
the "cross" losing hazard unless the cue-ball and object-
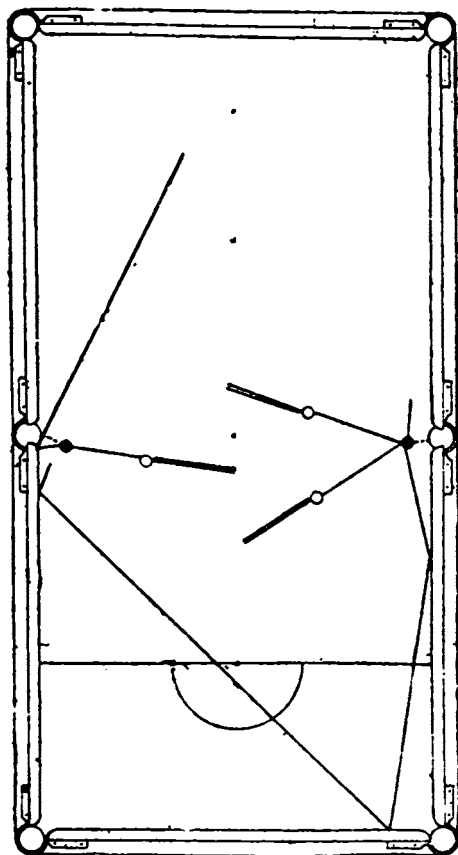
FIG. 71.

ball are very near to the top pocket, into which the latter
is knocked.

Fig. 72 shows a plain-ball stroke dropping the cue-ball by the top cushion, as it puts the red in the left pocket, to leave it in the losing-hazard angle-line. A stroke that requires very delicate handling is the reverse (in this case right) "side" ball, which drops the red in the right pocket. The contact being about a half-ball one, and the red having to be moved about a foot or so to reach the pocket, the player has to use strong right "side" on his ball. This reverse "side" checks the run of the cue-ball as it touches the top cushion, and,
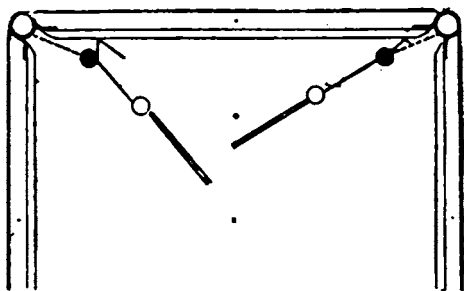
Fig. 72.

properly gauged, should leave the cue-ball nicely in line for the losing hazard.

On Fig. 73 the cue-ball is forced to take a very different course to find the angle for the "cross" losing hazard. This is necessitated by the change of the ball's position as illustrated. Strong running "side" and a half-following through the red ball causes the cue-ball to take the two corner cushions, and thence run a few inches along to gain the desired angle-line. These strokes must be played very gently, making due allowance for the extra pace that the running "side" induces

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to the cue-ball as it meets the cushions.   They are safer, though, than the reverse "side" strokes, which make a ball come straight back off a cushion (for example, see the right-pocket stroke on Fig. 72).   For the running "side" make the cue-ball run obliquely towards the spot after it has encountered the top cushion.   All the way up to the red ball's landmark it is kept somewhere close to the required angle-line, if not actually in it.
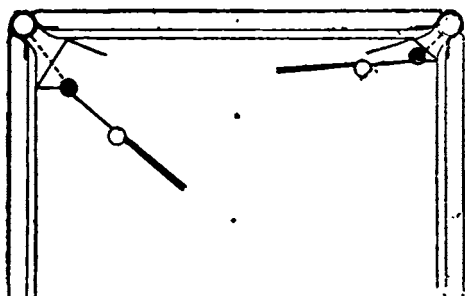
Fig. 73.

Fig. 74 contains specimens of "kiss" or "squeeze" winning hazards.   With the red ball frozen to, or very close to, a pocket "shoulder," a full-ball contact with it will bring about a "double kiss" and fairly "squeeze" it in the pocket.   The slower the stroke the more certain the insertion of the red.   The cue-ball dropping fully on to it, pinches it against the "shoulder."   The red ball returns the pressure as best it can by the natural rebound from the cushion.   But the cue-ball, by reason of the heavy concussion, is partially stunned.   It stands momentarily still.   The red ball is "squeezed" between it and the "shoulder," and in its efforts to escape finds the only outlet to be the inside of the pocket.   These

"squeezing" strokes are also safest at short range.   The
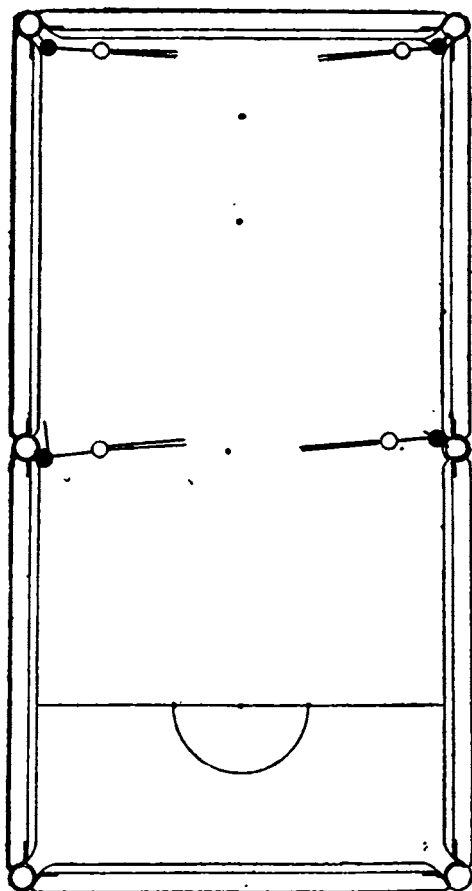
FIG. 74.

object-ball has to be hit very accurately and very slowly.
In the middle and top-pocket strokes shown on the

figure a losing hazard can in each instance be left from the spotted red ball.

Fig. 75 treats of steering the cue-ball into position for a losing hazard from the object-white in conjunction with a winning hazard in the middle pockets. This is the usual means of getting both balls into play when the object-white is behind the baulk-line or is awkwardly situated in the open field of play, where a cannon does not appeal to the player. Nine times out of ten one plays these kinds of strokes from the D. A losing hazard or two to get the red nicely placed for a middle-pocket winning hazard. Then you are in the way of getting both object-balls into play again. In such cases it is always advisable to walk round to that part of the table where you are sending the cue-ball after it has made contact with the red. Make a note of the line you want it to take to give you easy command of the losing hazard. Take the stroke marked 1 on Fig. 75. The object-white is, in this case, behind the baulk-line near the bottom cushion. The cue-ball is "in hand" with the red ball, presenting a straightaway winning hazard into the right middle pocket. You walk round to this point, and judge the line that your eye tells you will give a half-ball, natural-angle stroke off the imprisoned white. In playing the winning hazard, you have to arrange the cue-ball so as to follow this line. Stopping anywhere along that line, the cue-ball commands the object-white. Stroke 1 shows by the continuous line from the moment the cue-ball struck the red that right the way to the point where it strikes the side-cushion it is in the line for a half-ball losing hazard from the object-white into the left baulk pocket.

Stroke 2 gives an example of the cue-ball operating from
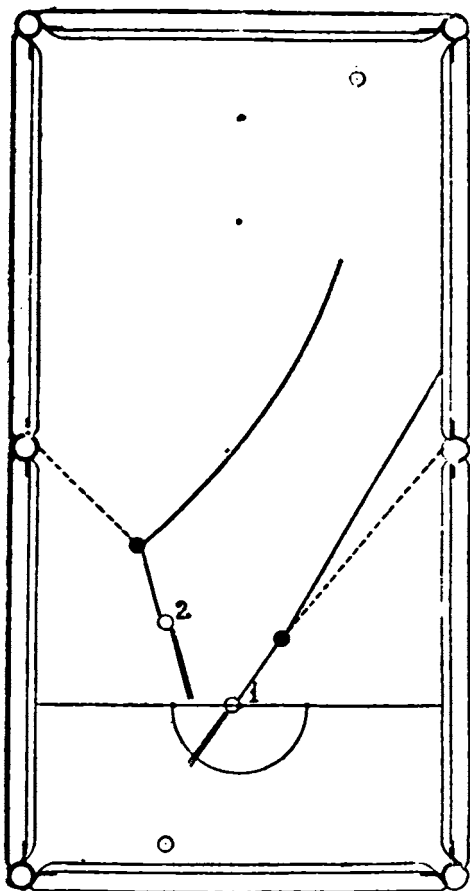
FIG. 75.

a set position.   It is working to get placed for a losing
hazard off the white ball near the right top pocket.   The

angle is very awkward, being wider than the natural one.
A plain ball would only succeed in placing the cue-ball
awkwardly behind the white, or force on a cannon with,
perhaps, the worst of results as far as after-position is
concerned.   So, to keep the game open and easy (the
acme of the billiard-playing art), a slow ball carrying a
lot of right "side" has to be used.   The "side" pulls
it well over to the right, and leaves the losing hazard.

Middle-pocket winning hazards from the D are ever
cropping up in the course of a game.   They want play-
ing by method, like all other strokes.   It is not the
correct game to place the cue-ball straight in a line
behind the red ball and the pocket, and make the cue-
ball run on directly behind the potted ball.   That is the
poorest kind of billiards.   You want to keep the cue-ball,
as much as you safely can afford to do, away from the
pocket and the pocket "shoulders," at the same time
guiding it somewhere in the very elastic groove that
permits of a losing hazard from the spotted red ball.
By sending the cue-ball to follow straight behind the
red you put all sorts of difficulties in the way of gaining
this position.   It may boggle in the jaws, or run into
the pocket, or lie tied up under the cushion.   The left
middle-pocket stroke on Fig. 76 conveys an idea of these
undesirable things.   You really do not know where the
cue-ball will stop, for the pocket "shoulders" throw
some most curious angles.   It may even get as far out
on the table as the line running from the upper "shoulder"
would suggest.   Instead of placing the cue-ball directly
behind the red ball, and the centre of the pocket, form
a slightly more acute angle.   That is to say, if you have
a left middle-pocket winning hazard from the D, put

the cue-ball slightly to the left of the direct line, and
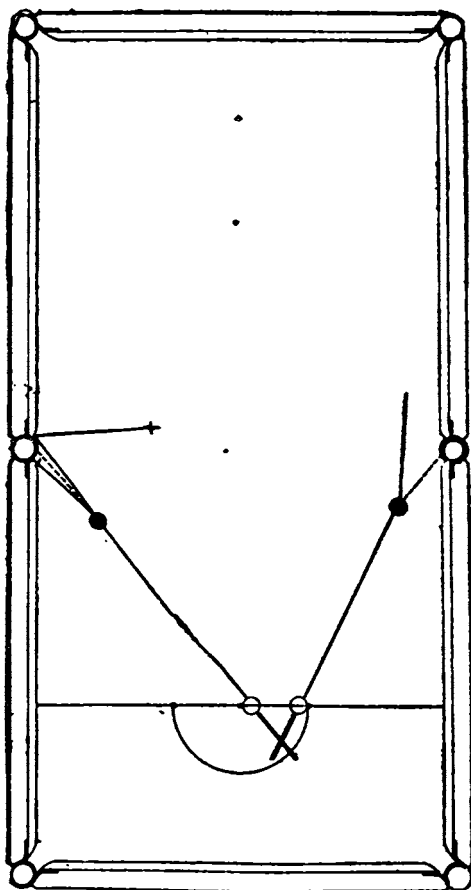
FIG. 76.

for the right middle pocket slightly more to the right.
By doing so you will make the stroke a trifle more

difficult, but you will be more than compensated for this by the avoidance of the entanglements which lurk in the "shoulders" of the centre pockets; for each time you now put in the red ball the cue-ball will keep out some inches from the side cushion.   It will enable you to hit it with ease, without the effort that is caused by a ball lying under a cushion.   In all respects the losing hazards must be more simple.   Remember, in playing these middle-pocket winning hazards, that they are the chief cause of failure to the professional players.   Be doubly careful over them, hold yourself as taut as you can, and keep your eye glued on to the middle of the red ball, as your eye sees it from the angle that you are playing it into the pocket.

Very thin cutting strokes play an important part among the winning hazards.   They are very much to be seen in the "top-of-the-table" arrangements of the balls. One great feature of them which must soon force itself upon the player is the slight loss of speed they cause to the cue-ball, and the small force they impart to the object-ball.   The impact between the balls is so trifling that the cue-ball continues to practically carry all the impulse the cue has given to it, whereas the object-ball, having been merely brushed by the fleeting cue-ball, carries little or no pace at all.   Many a thin cutting stroke has been misjudged by ignorance of these facts. The cue-ball has been hit pretty hard, but has quite failed to convey the necessary impetus to the object-ball, although the latter stood but a few inches away from the pocket.   One can hardly overdo the pace on the cue-ball in these thin cutting strokes.   It is quite surprising to any one who has not studied the matter.

Fig. 77 shows a couple of examples in which the cue-ball is placed almost at right angles with the red. In
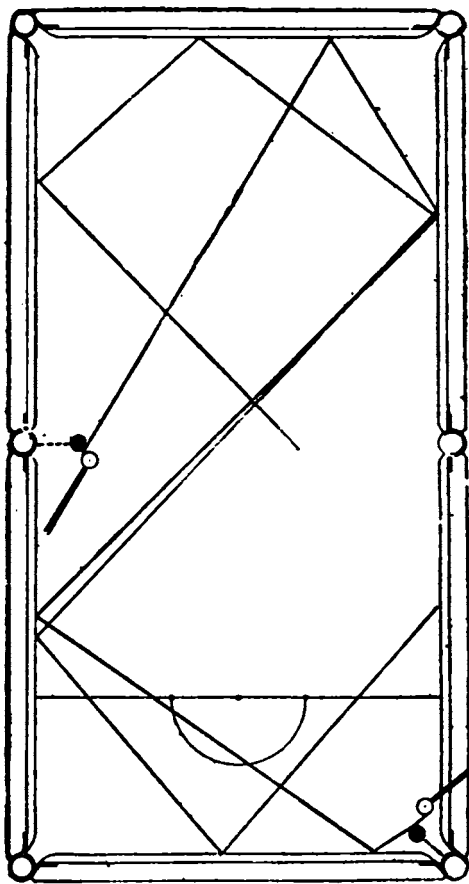
FIG. 77.

either case the red ball has to be cut so very thinly that a lot of pace must be put into the stroke.

In playing middle-pocket winning hazards very
gently and in an oblique line, such as strokes from the
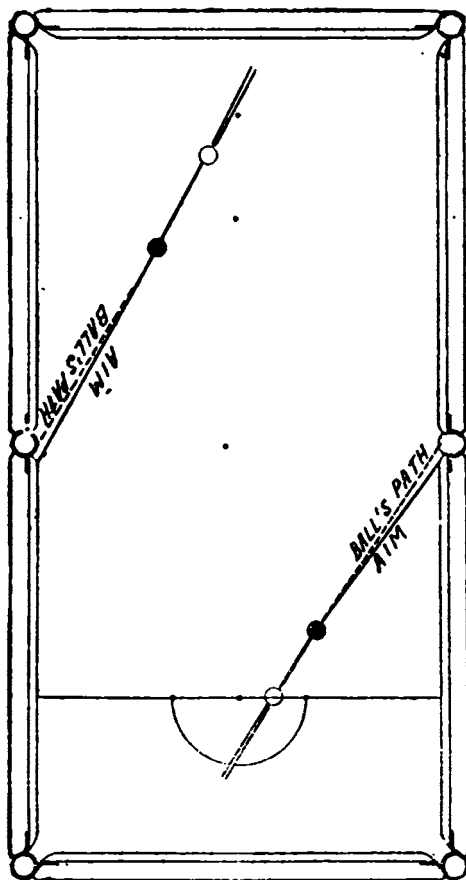
FIG. 78.

D, allowance has to be made for the effect that the
" nap " of the cloth has upon a ball running slowly with

it or against it. When it carries a medium or high rate of speed the divergence is of no consequence; but with a slow-running ball it is considerable, and plainly to be seen. In playing from baulk at a middle-pocket winning hazard, in the making of which the object-ball has to travel two or three feet, it has to be directed at the nearest "shoulder" of the pocket. The run of the "nap" causes the ball to pull out somewhat when it is running slowly, as a few experiments will go to prove. Playing against the "nap" of the cloth, the order is changed. Now, a slow ball running obliquely to the pocket drops away somewhat. The aim for these strokes has thus to be made at the further "shoulder" of the pocket. Fig. 78 illustrates the two cases.

The most awkward winning hazards that shape up to the eye are those which have to be played with a ball situated close to a cushion. They ask for an entrance into what is practically a half-closed pocket. With the cue-ball well behind the object-ball they are not anything like so difficult as when it has to approach the latter from an angle. The point on the object-ball to be hit is somewhat obscured. This is a great drawback, for now this should be struck more precisely than ever. An object-ball has to travel very truly to the pocket's mouth when approaching it along the line of, or very closely parallel to, a cushion. It is in a different position to the losing-hazard stroke, which permits of "side" being used, a factor which may be said to double the size of a pocket. Very accurate aim and cue-delivery is required in such strokes as are shown on Fig. 79.

Whenever a ball is " frozen " on to—that is, tight
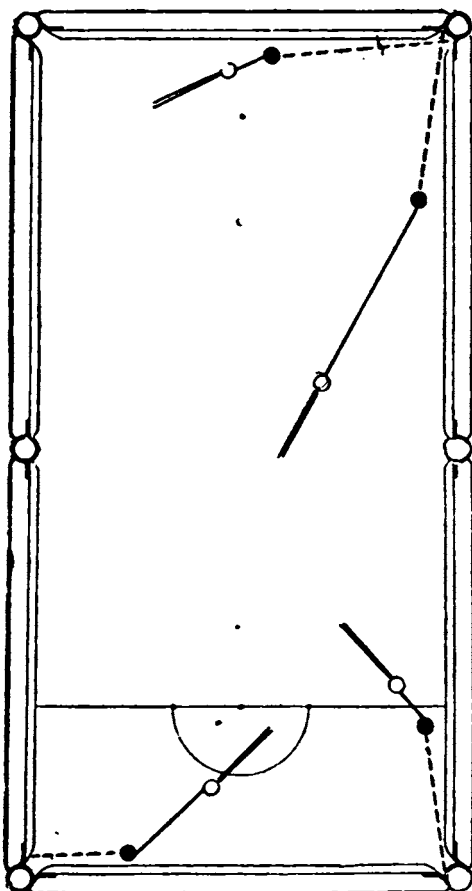
FIG. 79.

up against—a cushion, and within reasonable distance
of a pocket, it is an easy ball to pot. The cushion

holds it in whenever it is sent truly down its line. "Side"—always running "side"—has been found to be of great assistance in these strokes. It seems to impart some of its influence to the cushioned object-ball. Place a ball tight up against a cushion, near a corner pocket, at either end of the table. Put the cue-ball within easy distance of it to make a winning hazard; not straight behind it, but at some sort of an angle, such as the two strokes shown by the baulk pockets on Fig. 80. Use plenty of running "side"—side in the direction that the cue-ball travels. Play to just miss the red ball, nicking in on the cushion the barest possible distance before contact is made. You will then observe the object-ball hug the cushion closely and run down into the pocket. Then try the same stroke with reverse "side," and notice how much more difficult it becomes. This method of playing on to the cushion with running "side" slightly in advance of a cushioned ball applies to all such winning hazards. It assists greatly in the making of them. Away from the cushion, ever so little though it may happen to be, the object-ball, and not the cushion, must first be hit.

The theory of making the cue-ball just miss a cushioned object-ball in winning hazard play is quite easy of explanation. The running "side," acting on the cushion, causes the cue-ball to attack the object-ball from a more favourable angle. It is, practically, as though it lay straight behind it; for the "side" turns the cue-ball on to the cushioned ball just as if it had been played directly on to it at the shortest of ranges. The object-ball has little or no option but to follow a straight course down to the corner pocket.

"Plant" or "kiss" winning hazards, such as those
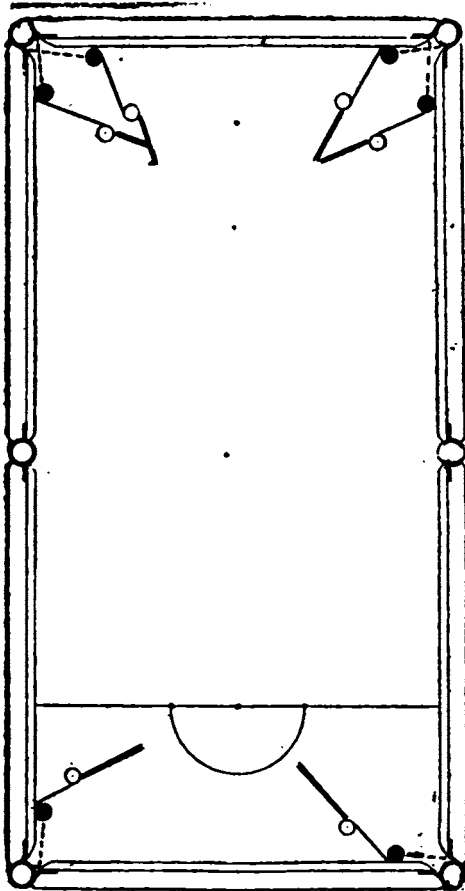
FIG. 80.

depicted on Fig. 81, are often most helpful. They will
get one out of an awkward situation when other ways

of scoring are apparently shut out.   Whenever one finds
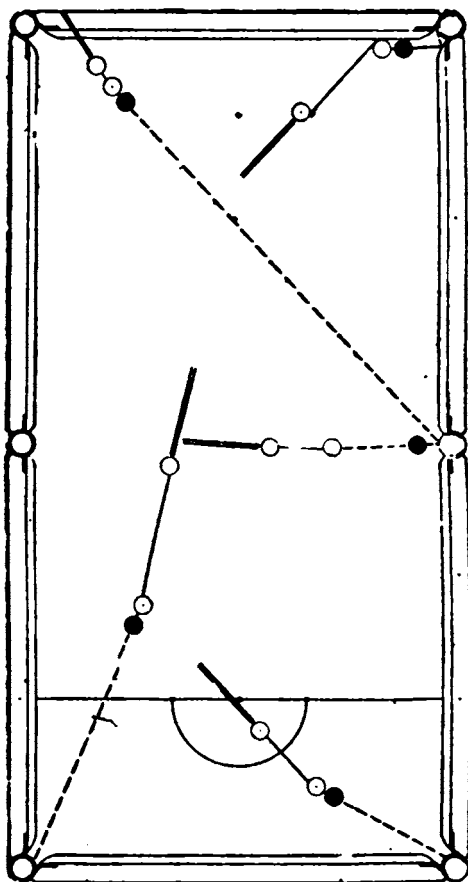
FIG. 81.

the object-balls in line and close together, with the
second ball showing a direct run to a pocket through

the centres of both balls, then a "plant" or "kiss" winning hazard is playable.   An inch or two apart, little mistake can be made in getting the second ball to follow the desired line to the pocket.   The further the object-balls are apart, the greater difficulty, naturally, is experienced in bringing this about.   Often enough one has to try and make a "plant" winning hazard with the object-balls lying well apart.   Unless they are in a straight line, or the ball that is to be pocketed is right over the hole, such strokes are exceedingly difficult. The accompanying figure gives representations of several "plant" or "kiss" running hazards.

The winning hazards known as "doubles" occasionally force themselves to the notice of a player.   They are so palpably in one's favour, under certain conditions, that it is quite good policy to try them.   Take, for instance, the position of the balls shown on Fig. 82. With the object-white lying close beside the billiard-spot as it does, the fine after-position that may be gained by an insertion of the red ball must be very obvious. It is infinitely preferable to try to "double" the red across the table into the middle pocket, than to try the no less difficult cannon.   For, if analysed, this "double" will be found to be something in the nature of a defensive stroke.   The object-white is in rather safe quarters if the "double" is not successfully played. The cue-ball and red should be left on opposite sides of the table to present no particularly easy "leave." Many positions of a similar character to this "double" stroke are constantly occurring.   Every time you should try and get the red in.   Look at the grand position it brings.

"Doubles" are uncertain things in winning hazard
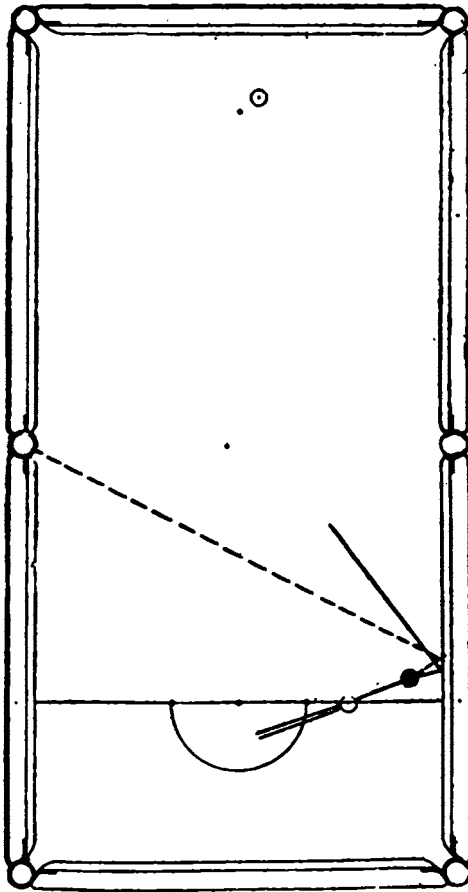
FIG. 82.

play, mainly because of the differences that exist in the angle thrown by the cushions. Continually playing on

one table will, naturally, familiarize one with the reflected angle that its cushions throw.   But go on to another table and note how differently the ball is thrown off. The faster, however, these "doubles" are played, the less variation in the angle will there be.   In the slower strokes, though, the disparity is sometimes quite remarkable.

Playing a very fast stroke, an object-ball may be made to come almost straight off a' cushion, although it may have attacked it at a considerable angle.   The great force used drives the ball deeply into the cushion-rubber, and thus destroys the true angle of reflection. Such strokes can be tested by placing a ball by a cushion, and playing on to it at various angles and various paces.   Pace will be found to exercise a wonderful influence on the ball, in so far as the angle that it is thrown across the table goes.   An example of a very straight "doubling" across to a middle pocket is shown on Fig. 83.   Played with a very fast ball, and not quite so fully as the ordinary angle of the object-ball's rebound from the cushion indicates itself to your eye, the red ball may be sent over to the opposite middle. Unless played with a very fast stroke, the object-ball will "kiss" the cue-ball as it comes back off the cushion.   Try the stroke fast and slow, and notice the difference.

A "double" which may at some time or another be useful in a game of billiards, and which is well known to, and much used by, pyramids and pool players, is that shown on Fig. 84.   Lying some eight or nine inches below a middle pocket, close to or on the cushion, an object-ball may be "doubled" into a top-corner pocket,

The cue-ball is spotted on the merest baulk-spot, the
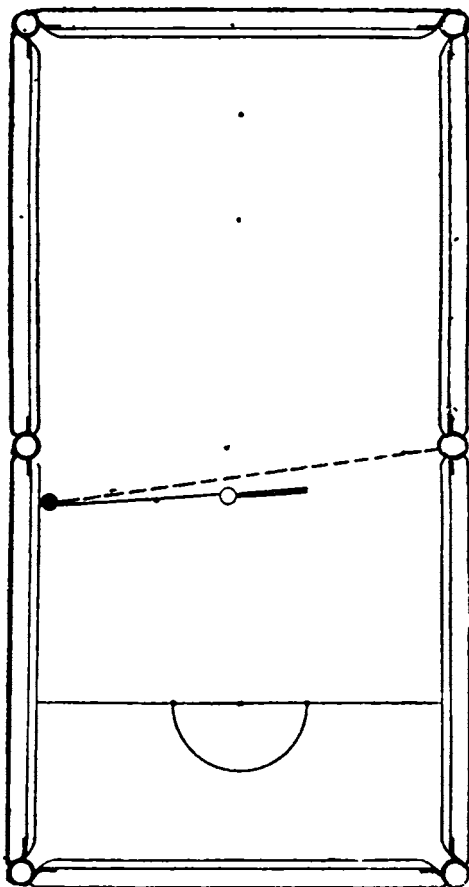
FIG. 83.

object-ball is hit full in the face with a fairly fast ball.
In winning hazard play, one must always beware of
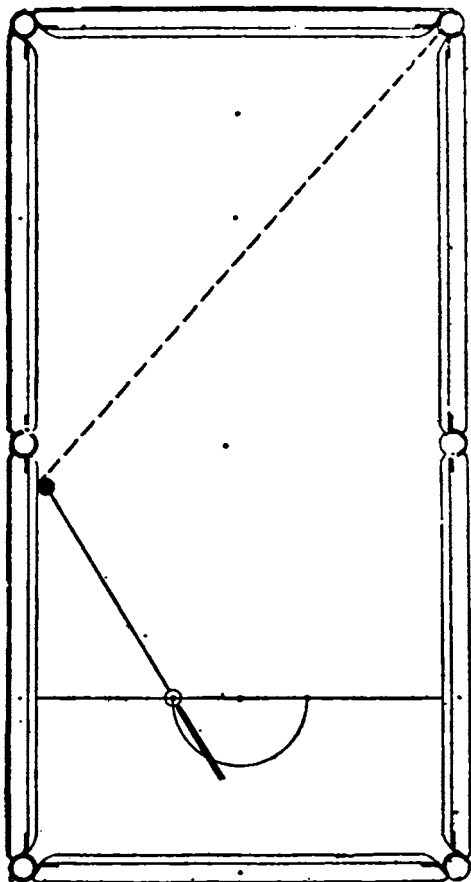
cloth when it travels any distance at a slowish pace. Therefore, play the longer range winning hazard with as fast a ball as the sequence of the play will allow you to do.

As in other strokes, "side" on the cue-ball, unless it is lying right alongside the ball to be pocketed, spoils the aim. Seeing how accurate the impact must be in the making of winning hazards, and how "side" distorts the taken aim, it is the best policy to abstain as much as possible from its use.

The plain, central ball is the one which pays best in potting an object-ball.

WINNING-HAZARD PRACTICE STROKES.

As in the other departments of the game, I provide some practice strokes at the winning hazard. In the old days these would have taken the shape of a continuous run of spot-strokes. As that stroke is now obsolete, I propose a variation of it; for let it be remembered that the billiard spot is still the pivot of the scoring part of the game of billiards, and the red ball the most lucrative one to play upon. It is, too, the red "winner" off the spot that usually brings the ordinary amateur to grief. And when he makes it he is all uncertain as to what direction the cue-ball shall take. Therefore I consider that a set of strokes at varying angles on the spotted red ball, each demanding a different movement of the cue-ball, will serve the double purpose of keeping the winning-hazard play, and also the valuable after-position for the losing hazard, well in the eye; for please recollect that nowadays the rules only allow two

consecutive spot hazards, unless a combination stroke is used, after which the red ball goes up on the centre spot. Therefore it is the general policy to put down the red when you are in the vicinity of the spot (and, of course, no other stroke appeals to you), and try to leave the cue-ball in position for the losing hazard from it as it is replaced on the billiard spot.

No. 1 practice stroke shows the cue-ball almost in a direct line behind the spotted red. It is a mere fraction of an inch lower down the table. This is a very easy " winner," the red having to be hit nearly full in the
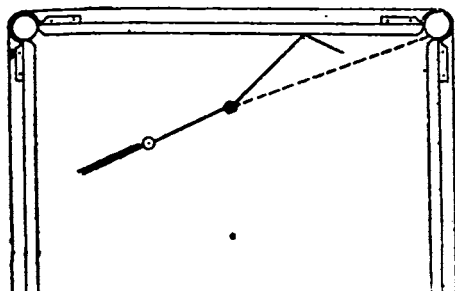
No. 1 practice stroke.

face. The position for the cue-ball is not so simple ; in fact, to place it in the angle of the " cross " losing hazard asks for a very nice stroke. Half following through the red, the cue-ball takes the top cushion, to run a few inches onwards, as the line of its course on the figure shows. This stroke must be played quite slowly, for the usual mistake is to put too much pace into it, and thus send your ball too far from the cushion to leave the losing hazard. Hit your ball low down.

Stroke 2 presents a more difficult winning hazard, as

the cue-ball is placed at an awkward angle. Still, the centre of the red ball, as it appeals to you by the imaginary line drawn to it from the middle of the pocket, shows you the place to hit. This makes something like a half-ball stroke on the red. The cue-ball must again be played slowly over to the side cushion, from which it should run out into the angle line for the
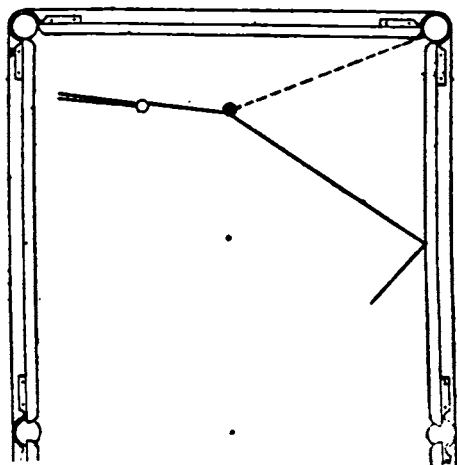
No. 2 practice stroke.

losing hazard, as shown. As before, beware of too great pace on the cue-ball. Again hit your ball low down.

Stroke 3 is of the "stun," or half "screw," variety. The cue-ball is well behind the red, but about an inch nearer the top cushion than the exact dead full ball. Hitting the red ball very thickly, as it has to do, the correct after-position of the cue-ball is by the facing middle pocket. The heavy-handed "stun" stroke, explained in the elementary chapters, will bring about

this result. It is surprising with what ease one can guide the cue-ball into the required area when, by a little practice, you grasp the idea of the stroke.
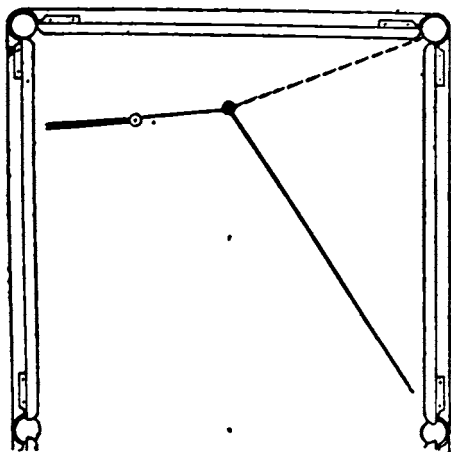
No. 3 practice stroke.

Stroke 4 again demands the sending of the cue-ball under a middle pocket. The red is hit about half-ball, and the cue-ball, carrying a little right "side," runs up to its appointed position off the top and side cushions.

No definite measurements have been given in these strokes, as the change of location by the cue-ball around and about the spot does not always necessarily mean a change of stroke. The whole of the given winning-hazard practice strokes come within the scope of very little more than a couple of feet. Commencing with a ball about ten inches from the top cushion, No. 2 stroke stands until the cue-ball is taken another three to four inches down the table. Then the " stun " stroke comes

into play. This holds good for about another four inches, leading to the ground from which No. 1 stroke is the game. For little more than two inches No. 1 stroke
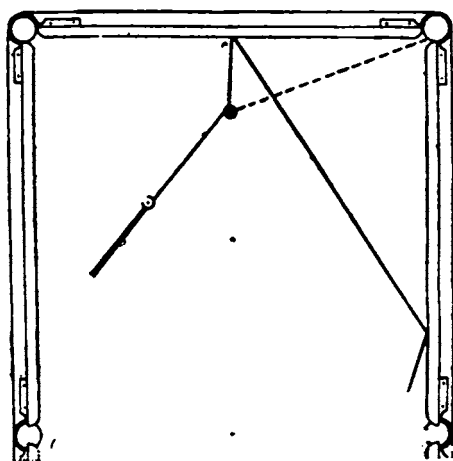
No. 4 practice stroke.

holds sway. Stroke 4 ends the line by adding another five inches or so to it. Of course, these strokes may be played from both sides of the table.

CHAPTER VI

CANNONS

THE PRINCIPLES OF THE PLAY

CANNON play is an art in itself. The English style—far and away the most varied and complex —of billiards, does not demand the application of such a proportionate quantity of this controlling power as the pocket-work ; for the essence of the scoring on a 12 feet by 6 feet six-pocket table arises from losing and winning hazards. The cannons merely serve to place the player in position for the less exacting, but more remunerative, pocket strokes. Now and again some of the leading lights of the professional world dispense a sequence—or, as it is called, a " nursery "—of the " close cannons," with which the Continental and American pocketless form of billiards is replete. The refinement of this play is picturesque and pleasing, but it asks for a wonderful delicacy of " touch." With the smaller balls used in our game, the faster cloths, and the extremely "lively" cushions, " nurseries " of close cannons are rendered most difficult on English match tables. Up to date, the pocket play has been found to outmatch it in the production of points. What may happen in the future it is not easy to foretell. There may arise a player who will

devote his sole attention to cannon play, and in the fulness of time he may revolutionize our best known scoring methods. To me, this is more than doubtful. If such masters of cannon play as Vignaux, Slosson, Schaefer, and Ives could not adapt their game to the English table, one may well be allowed to ask—Who, then, can?

Our "top-of-the-table" game most nearly approaches to the "nurseries" of cannons seen on the pocketless tables; for in it the recurring cannons open the way to the all-important winning hazards. Often, too, a series of close cannons is seen, and, occasionally, a consecutive run of them which would not discredit some of the Continental and American artists. Nevertheless, taken in their individual aspect, they create nothing like the same form as their intermingling with the winning hazards does. Do not forget that in the cannon play one has to exercise *a control over all three balls*. In the winning and the losing hazards, the player has to practically give direction to one ball only. Putting the red ball in a pocket, he knows that it comes up on a defined part of the table—the billiard-spot; therefore his only care is for the proper location of the cue-ball. Playing losing hazards, he knows that his ball comes back to the D. In this case, then, he is merely asked to attend to the direction of the played object-ball. For ease and security, as may be understood, the hazards overshadow the cannons, whose chief *rôle* in the intricacies of English billiards is to enable the player to put the cue-ball in touch, or to regain a lost position, for pocket play. As often as not, the first cannon will not do this for him. He may have to play a second, a third, and a fourth before being placed to take up with, or

renew, an attack upon the pockets.   Then, when in the
throes of these cannons, his knowledge and his powers
of execution will be put to their highest test.

A very old axiom of billiards has it that it is possible
to score a cannon at any placing of the balls.   On the
same grounds, naturally, it must be possible to make
any hazard stroke.   But experience has proved that the
cannon is the most elusive side of the game as played on
a six-pocket table.   It is only when the English player
gets out of touch with his pocket-play that he turns to
the cannon.   Thus it may be said that the cannons
exercise a homeopathic tendency in billiard-playing—a
kind of like curing like ; for the cannon play is not, or
generally should not be, brought into action until a
difficulty occurs in the sequence of the " break," or by
reason of an opponent's " leave."   It is, then, a case of
difficulty being met with a remedy of its own kind—the
cannon, uncertain to the best of players in its scoring
and positional aspects.   Of course, there are easy
cannons, but even the simplest of them demand nice
handling to give desirable after-position.

The chief point in making a cannon is to find a
favourable impact with the second object-ball.   Not
once in twenty, or perhaps fifty times, have you to fall
fully upon it.   The after-position of the balls (the begin-
ning and end of good playing) in cannon play, asks that
you have to find the second object-ball on some par-
ticular point—half full, thin, very thin, fullish, and so
on.   It is easy enough to make use of the whole body
of it for a target when you cannon, but horribly pre-
judicial to a sequence of scoring strokes.   Every cannon,
when it is properly played, may be said to require a

different impact between the cue-ball and second object-ball, as much as the contact on the first object-ball varies in every class of stroke.

The theory of correct cannon play is to KEEP BOTH OBJECT-BALLS IN FRONT OF THE CUE-BALL. That is to guard against the latter getting in between them, but to be so placed as to command them for a second cannon. This is the principle of the close or "nursery" cannons. Every cannon should be so played as to hold the object-balls in easy position for another. In open, as in close, cannon work the idea is to keep the object-balls together with the cue-ball in close attendance after each stroke. The cushions are the great factors in this. They return, or throw around the corner angles, the first object-ball, to make it re-unite with its partner, according, of course, to the judgment and handling of the stroke.

Of all possible strokes which cause the "gathering" of the balls after a cannon has been made, none possess the certainty and ease of the "stun" or "driving" stroke, of which several examples have been given in connection with "screw" strokes. You know that you have only to make the first object-ball return by the second object-ball, which is hardly moved from its place. Further, you know that the cue-ball will be left by the second object-ball, for most of its motive power ceases when it makes its first contact, as the "stun" or "driving" stroke insists. Thus, in a sense, you have but one ball's—the first object-ball's—direction to take count of. Fig. 85 presents some strokes of the kind, with the lengthy run of the first object-ball, and the slight movement of the second object-ball. In each instance the cue-ball stops almost stationary as it cannons.

Second to the "stun" or "driving" strokes comes
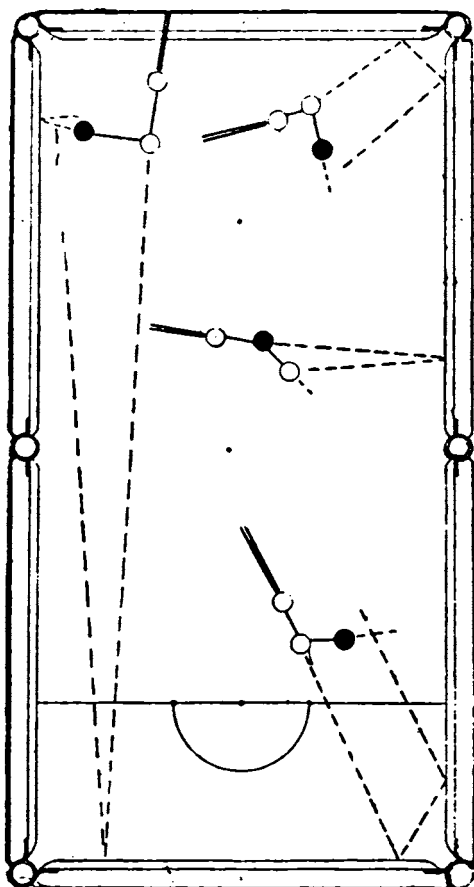
FIG. 85.—" Stun" and " driving" stroke cannons.

the half-run-through shot; it is peculiarly applicable
to positions of the object-balls which lend themselves

to an optional thin or half-run-through. With the
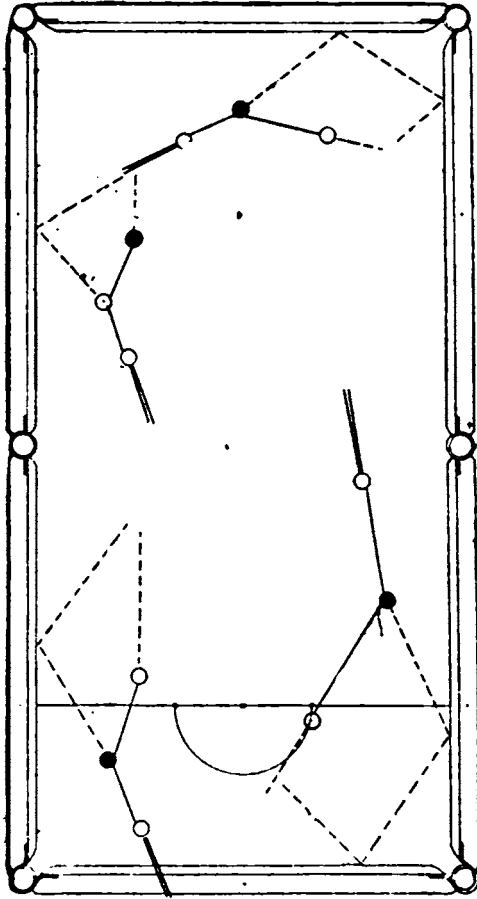
FIG. 86.—Half-run-through cannon strokes.

balls at all apart, the thin stroke leaves the first object-
ball behind the cue-ball, instead of sending it on ahead

—a big drawback when you are operating out of the comfortable reach of the pockets.   The half-run-through appeals for cushion work quite as much as the "stun" or "driving" strokes do.   And wherever, and whenever, the thin direct cannon can be played, do not forget that you generally have a more favourable means in the half-run-through to keep the object-balls in front of the cue-ball, and at the same time keep them in close company.   Fig. 86 shows a selection of optional "thin" or half-run-through strokes.

From a positional point of view, the ordinary fine or thin contact with the first object-ball, unless the cue-ball can pass directly across the face of the object-ball in this way (Fig. 87), is not conducive to the
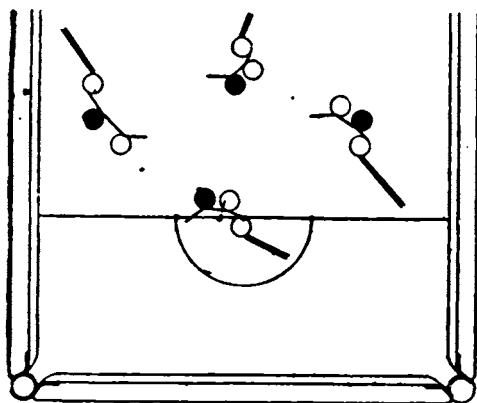
FIG. 87.—Passing across the face of the object-balls with a thin shot.

retention, nor to the gaining, of position for cannon play.   The thin cannon stroke is generally employed to place one or the other of the object-balls in position

for pocket play, such as strokes 4, 7, and 8 on Fig. 88.
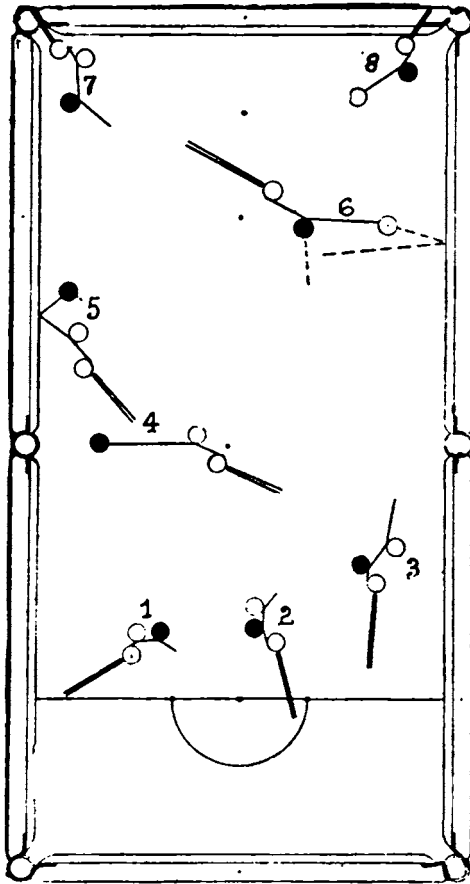
FIG. 88.—Thin cannons for position.

The first of these shows a simple thin cannon on to
the red, keeping it by the left middle pocket. No. 7

shot gives an optional cannon or losing hazard position, following a gentle thin stroke on both balls, which retains the object-white ball by the left top pocket, and still leaves all three balls close together. No. 8 shot is a thin cannon, leaving the red ball almost in its original position for either a winning or losing hazard into the right top pocket. Nos. 1 and 2 shots show the ordinary thin stroke across the face of the balls, using running "side." No. 3 is the "squeeze-through" shot, in which, with just enough room to make its way through the two object-balls and lightly cannon on them, the cue-ball passes out to the other side. No. 5 shot is a third cushion cannon sending the object-white on by the red. No. 6 shot presents a very neat "gathering" cannon. The cue-ball has to take the first object-ball thinly to get at the second one direct. If it can drop nearly full on to the latter, the object-balls can be left together, as the stroke on the figure shows. The second object-ball, however, requires hitting very truly to get it to join the other.

There is to be found the exception to the rule of leaving the object-balls in front of the cue-ball while it is engaged in cannon play, in the strokes shown on Fig. 89. Each of these gives the object-balls awkwardly placed for a subsequent cannon "leave," as the cue-ball practically lies between them. The gentlest of strokes, plain ball or "screw," will only cause them to split further apart. Position may certainly be regained by a most accurately played shot, driving the first object-ball around the corner cushions, to make it rejoin the other two balls from the other side of the table. Such play, though, only makes the game doubly difficult.

The great idea is to keep it as easy as possible. On
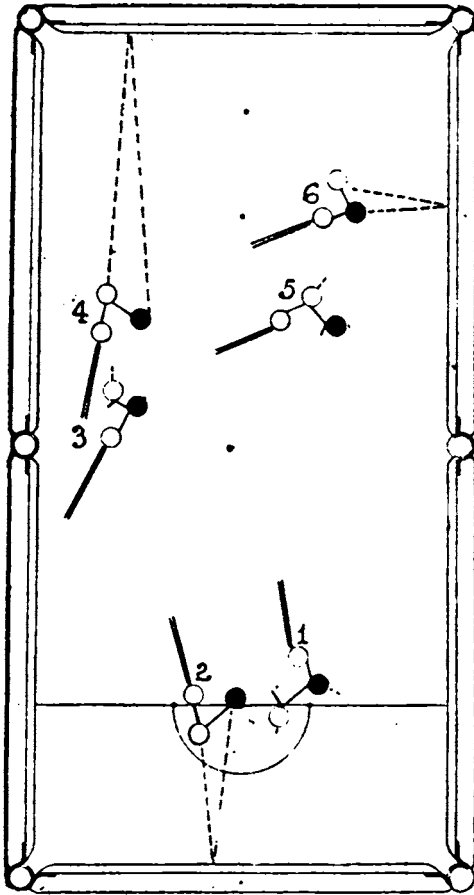
FIG. 89.—Getting placed on the second object-ball to acquire good position
again for cannon play.

Fig. 89 those positions numbered 1, 3, and 5 give some

specimens of the exception to the usual cannon rule to which I have pointed. The cue-ball, being already between the two object-balls, cannot work so as to still leave them close together and in front—at any rate, by no gentle touch can this be done. Therefore, with the end in view of regaining good cannon position, you shape out a stroke so that it may get one of the object-balls almost in a line for a direct return from the end or side cushion. You try to still keep it between the object-balls, using a bit of running " side " to make it come as widely off the second ball as the gentle pace will allow. Nos. 2, 4, and 6 shots, respectively, show the succeeding strokes to Nos. 1, 3, and 5. In each instance a similar stroke could have been played from either object-ball.

The great factor in the making of cannons is, unquestionably, the scope of the play on the first object-ball. When the stroke is at shortish range, with the two object-balls presenting an easy angle formation, the varied contacts it is possible to make on the first object-ball permit of the latter being driven to almost any point that the player wishes. The first object-ball can be hit very thinly (using " screw " if required), at quarter-ball (with " side " or extra pace), at the pinnacle point, the half-ball contact (gently or with some force), at three-quarter-ball and beyond (using the " stun " stroke). Each contact will drive the first object-ball away at different angles, and, naturally, different paces. They also permit of the cue-ball taking the second object-ball on the point that is best suited to the stroke. Of these things Fig. 90 gives a rough outline. It shows how the first object-ball may be practically hit from the

thinnest possible contact of the balls to the merest
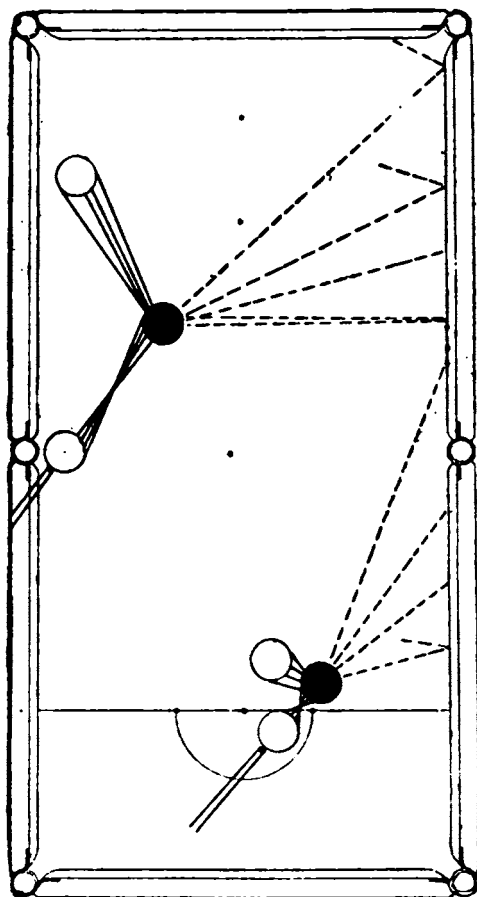
FIG. 90.—Instancing the different contacts that may be made on the
object-balls in cannon play.

shade short of a dead central impact without losing

touch with the cannon. The lines from first object-ball to second object-ball indicate the various parts on which the latter may thus be encountered.

These various theoretical examples may be said to exercise the governing influence in cannon play. They undoubtedly constitute the essence of it, whether applied to open or close continuous play. With the addition of " kiss " and *massé* cannons (of which a selection is furnished further on), the whole field is covered. The area of the strokes undergoes expansion and contraction, though the principles of each are embodied on the lines I have shown.

Coming to the more practical side of cannon play, the two strokes illustrated on Fig. 91 furnish a pretty illustration of the idea of keeping the object-balls in front of the cue-ball. No. 1 shot provides the easiest of cushion cannons. Any one who can hit a ball should make sure of getting it. But the whole idea of the cannon does not stop with the hitting of the second object-ball. It practically only begins there. For your aim should be to manoeuvre the cue-ball into position to command the object-balls for a second cannon. Using left " side," the stroke should be played gently off the object-white on to the side cushion, trying to make the cue-ball almost miss the red. If it touched the latter quite thinly the cue-ball will run along towards the middle pocket, leaving the two object-balls nicely in front of it—as on the figure. On the other hand, if the red is hit at all full, it will be knocked away, and the cue-ball will be badly placed between the two object-balls—the very thing that one, unless in exceptional circumstances, tries to avoid.

No. 2 shot on Fig. 91 is in the same nature as No. 1 shot, although in a higher class. With just enough room to allow the cue-ball to pass through the two object-balls, cannoning as it goes, strong right "side" causes it to take an acute sweep to the right as it strikes the cushion. The stroke is most delicately played, and only the strong "side" acting on the cushion makes
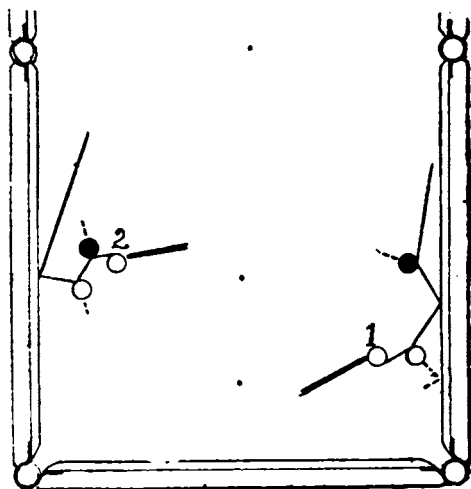
FIG. 91.—Keeping the two object-balls in front of the cue-ball—two nice examples.

the cue-ball travel more than an inch or two when it comes into contact there. The result, however, is that again the object-balls are left nicely in front of the cue-ball for a succeeding cannon. So it is through all the intricacies, the delicate touches, the strong "driving" strokes of the cannon play. The player's aim is to keep the two object-balls close together and in front of

the cue-ball, which should be lying handily by. To gain these positions, though, he has to take risks, such as playing on to a fourth, an eighth, or even a sixteenth part of the second object-ball. For, as I have already said, the importance of making a favourable contact with the second object-ball is almost as great as that made on the first ball. A cannon on the full bulk of the second object-ball, unless one is trying to gain position for pocket play, is seldom the correct thing to do.

"GATHERING" CANNONS.

I will now show a variety of the most commonly occurring and most useful cannon strokes. Fig. 92 exemplifies a couple of such from the D. On the left side of the table a strong long-range "stun" shot causes the two objects to come closely together again, although the first played one has been doubled up and down twice the length of the table. The red ball is hit almost full in the face. By reason of the heavy impact, practically all the pace goes out of the cue-ball, and is communicated to the red. On the right side of the table a similar stroke is shown. In this case, however, as an easy plain ball angle is to be gained by the lower position of the first object-ball, "single-strength" only is needed in the stroke. The first object-ball returns direct to its partner from the contact with the top cushion—a very simple gathering stroke, and one which repeatedly comes on the scene.

Fig. 93 gives variations of the two preceding strokes, These may be taken to provide examples of a valuable

rule in common play on English tables: WHEN YOU
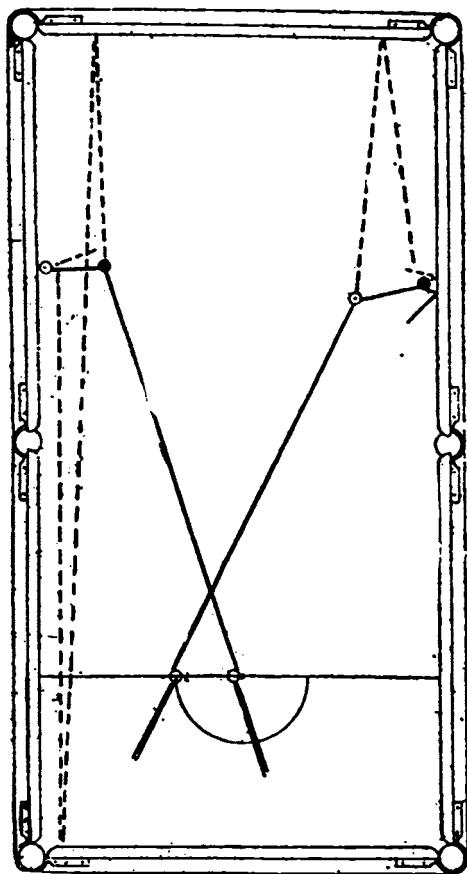
FIG. 92.—"Bringing the balls together" again by slow and fast strokes from the D.

HAVE TO DRIVE AN OBJECT-BALL THROUGH BAULK, ALWAYS MAKE THE LOWER BALL—THAT IS, THE ONE

FURTHEST AWAY FROM YOU—YOUR FIRST OBJECT-
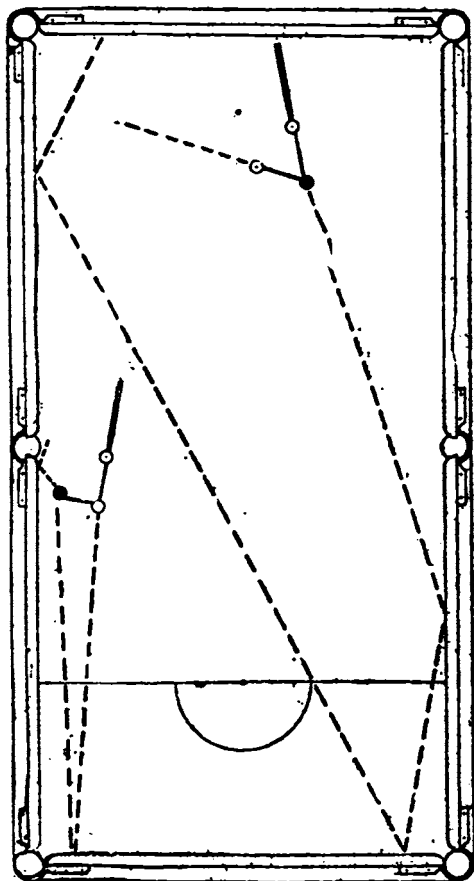
FIG. 93.—"Screw" cannons instancing the value of playing from the furthest ball when the first object-ball has to be driven through baulk.

BALL. Of course, I don't mean that you should go out for impossible strokes. But whenever you feel that you

can make the cannon from the lower ball in strokes that demand the sending through baulk of the first played object-ball, do not hesitate to play it, for it is "the game." Having to bring the cue-ball back on to the second object-ball from the lower placed first object-ball, the stroke practically guarantees that you hold the first-named between the cue-ball and one of the top pockets—scoring position at once, especially if the second object-ball is the red. Provided you make a mistake in bringing the first object-ball back in a favourable place, you still command the situation by reason of the stroke you have played on the second object-ball. The two cannons on Fig. 93 are in the nature of this kind of play. The slowish "screw" cannon, which drops the red ball over the left middle pocket and brings the object-white back to it, is a nice specimen of the kind. But the stroke near the head of the table is a better one. It is from that area that these cannons are generally played. The cue-ball is "screwed" back at a little fuller than a half-ball contact with the red, which is driven through baulk to run down by the left top pocket. The object-white is knocked over in the same direction, leaving the cue-ball master of the situation.

Two very pretty gathering strokes are to be seen on Fig. 94. At the top of the table a "screw back," or recoil, shot causes the two object-balls to come together as they stop running. The first played of them—the object-white—is attractively doubled from one side cushion to the other after taking the top-cushion *en route*, after which it runs out to the red. Inside baulk a strong "stun," more than a "screw" shot brings about a similar result. Again the first object-ball is rather forcibly

doubled across the table (this time, though, with no
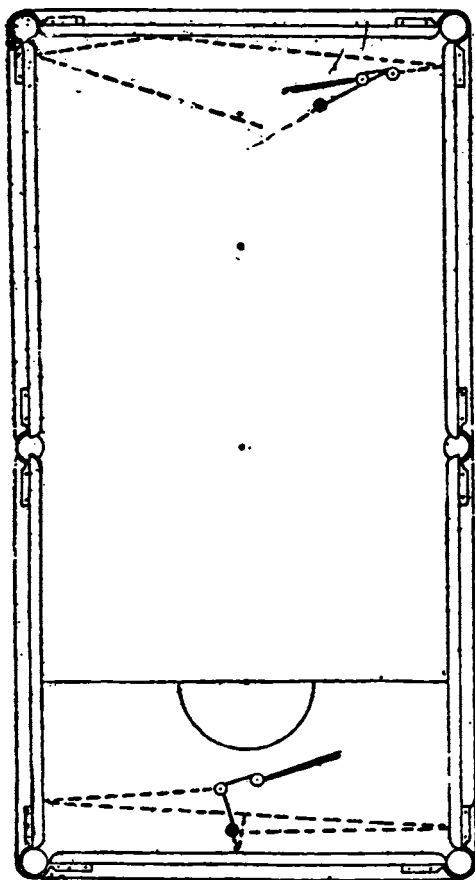
FIG. 94.—"Screw-back" and "stun" "gathering" cannons.

interference from the end cushion) the while the cue-ball
falls dully on the red.   The balls join company as before.

A most valuable form of cushion cannon stroke is
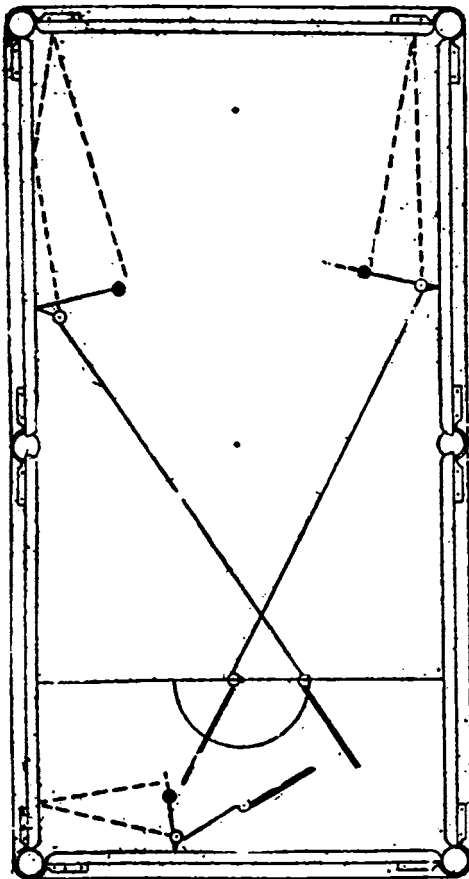
FIG. 95.—Valuable cannon play on the object-white by keeping it away from the corners of the table.

given on Fig. 95. The stroke on the left top-side cushion illustrates the usual and incorrect manner in which they

are played. There the first object-ball is driven on to the side cushion. It can certainly be made to return by the second object-ball as is shown. But it is running risks to play your first object-ball so obliquely down the side cushion ; for it may run into the corner-pocket, or "boggle" in the jaws there and run out of play, instead of leaving you an easy second cannon by coming back by the red as you try to make it do. The safer and better way to play this stroke is to be seen by the cannon along the right top-side cushion. Here the first object-ball, INSTEAD OF BEING DRIVEN ON TO THE SIDE CUSHION, IS STEERED AWAY FROM IT. The object-white is taken about half-ball, right "side" being used to bring the cue-ball nearly straight off the cushion. The effect of the stroke is to place the first object-ball on the top cushion wide of the threatened danger (the corner-pocket), whence it runs down by the red—at once a very pretty, easy, and telling cannon. By the baulk-end cushion a stroke of the same variety at much closer range is shown.

Further examples of these cushion cannons are supplied on Figs. 96 and 97. On the first of these the stroke near the baulk-line is a plain-ball one on the principles stated—the first object-ball being guided away from the corner pocket to come back in company with the second. At the top of the table the cannon there differs from the others, supplying the seemingly inevitable exception to the general rule of billiard strokes. In this case the cue-ball lies so near to the object-white that the player can make pretty certain of the latter's direction. He can, or should be able to, make it strike the end cushion almost on the point he desires it to do ; at any rate, to avoid any

complications with the corner pocket.   And as the thin
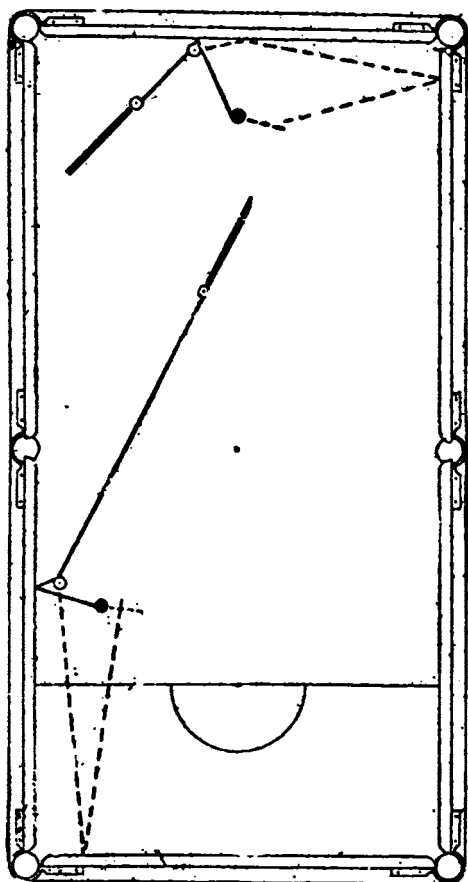
FIG. 96.—Similar cushion cannons—a run-through and half-ball strokes.

cannon will lead to a "double kiss"—the cue-ball comes
so fast off a cushion when carrying "side" after a thin

contact that the object-ball would not be able to get out
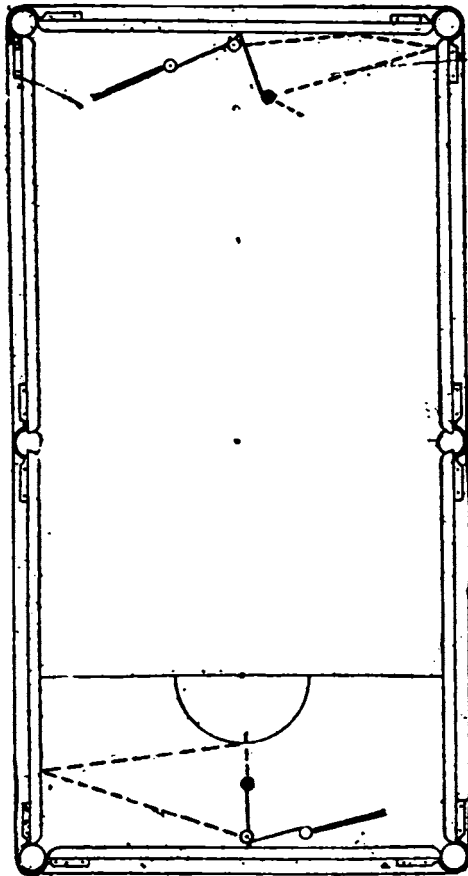
FIG. 97.—A thin "screw," and half run-through cushion cannons, "bringing the balls together."

of its way—the game is to play a run-through off the object-white, making the cue-ball cannon from the top

cushion. Little or no "side" is required in the stroke, which, again, should result in the object-balls being left together in the way their different courses are depicted.

Another stroke of the last-mentioned order is that near the billiard-spot on Fig. 97. The first object-ball is again driven on to the top cushion. On the same figure a very "touchy" cannon is shown. This is a very thin "screw" off the cushion side of the white object-ball, which is cut away over to the left side cushion to meet and join company with the red as it rebounds from there. As mentioned in the "screw" chapter, the undercurrent on the cue-ball acts very strongly on a cushion. Its influence may be noticed in this stroke.

Two neat run-through cannons are illustrated on Fig. 98. In both instances the object-balls are brought together again. The first-played of them is driven on to the top cushion to return near the second object-ball in the vicinity of the middle pocket. A medium-pace, fairly high stroke on the cue-ball is necessary. Apart from its good "gathering" results this run-through cannon is always "the game" to play when the balls are similarly situated.

Slow and very fast run-through cannons are given on Fig. 99. The slow stroke is shown by the left top-side-cushion. It is just a plain run-through helped by a little "top" on the cue-ball. The first object-ball comes back to the two others from the top cushion. On the right side of the table the fast run-through may be seen. Here the cue-ball has to be hit high and with no little freedom. It tests the player's cue-delivery pretty highly. The red ball, smacked almost full in the face, "doubles"

in and out of baulk to finally join the others near the
right top pocket.
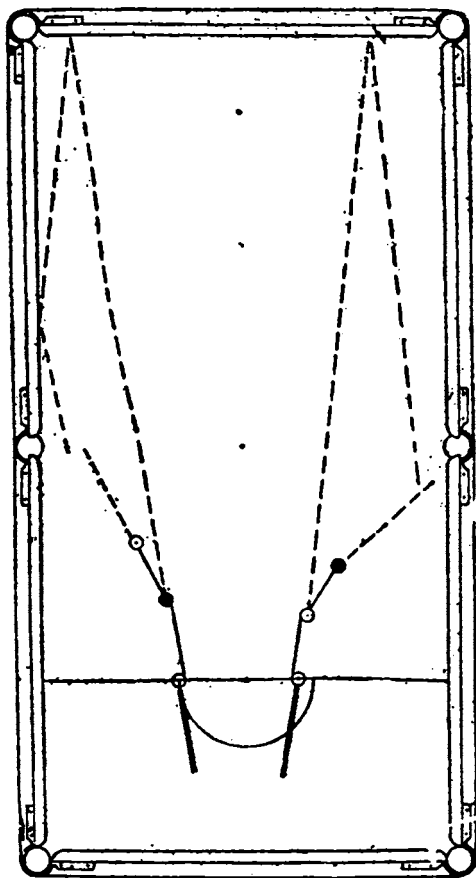
FIG. 98.—Useful run-through cannons "bringing the balls together."

A run-through cannon of a like character is that

drawn at the top of the table on Fig. 100. The first
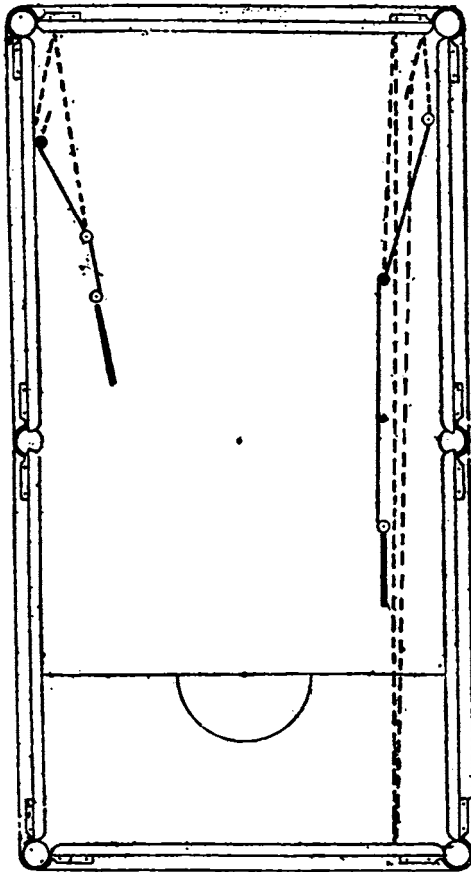
FIG. 99.—Run-through " gathering " cannons, slow and fast paces.

object-ball is " doubled " across the table, and at the end
of the journey it unites with the cue-ball and second

object-ball by the left top pocket.   A "screw" gathering
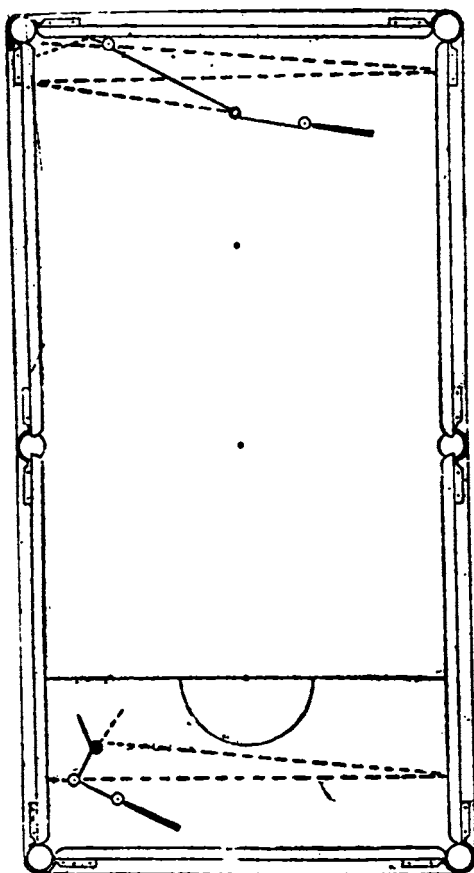
FIG. 100.—" Run-through " and " screw " " gathering " cannons.

cannon in the same nature as some others I have given
appears inside the baulk area on the same figure.

"Screw-back" or recoil shots form the cannon
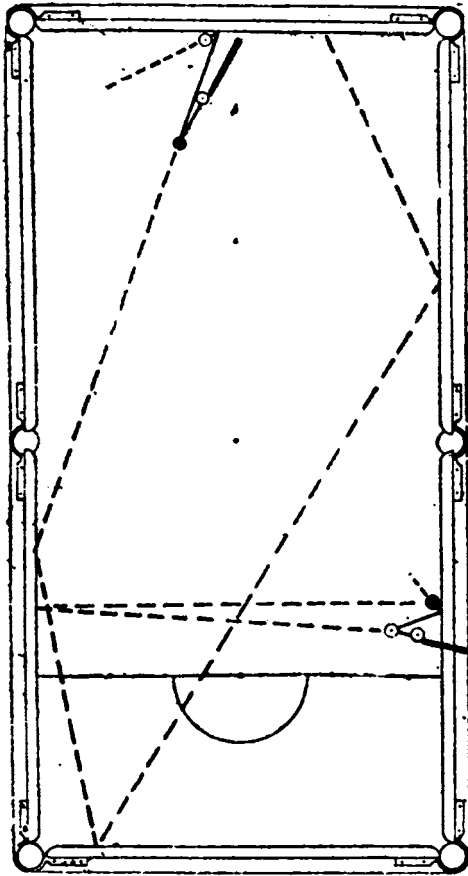
FIG. 101.—Cushion "screw-backs" for position.

specimens of Fig. 101. They show striking the cushion
before making contact with the second object-ball. The

"screw" brings the cue-ball back to the cushion, and
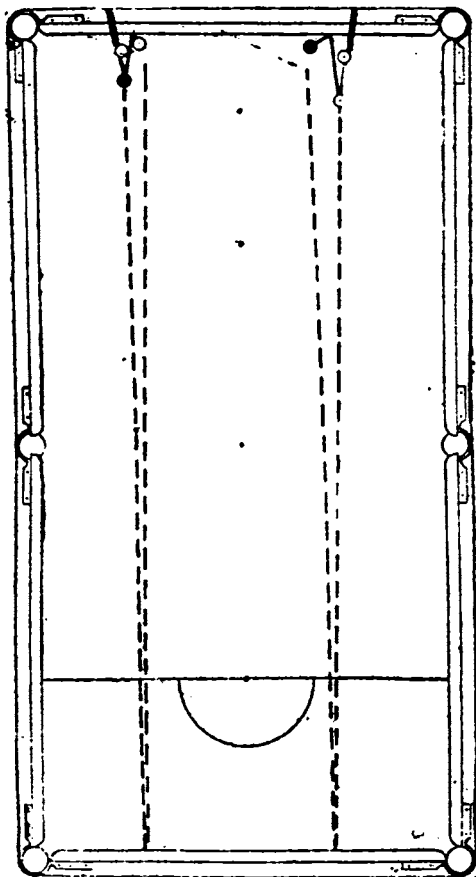
FIG. 102.—Showing how the cushions may be utilized to give the first object-bal the desired direction to "leave the balls together."

left "side" sends it on to make the cannon as it touches there. The stroke wherein the first object-ball is

"doubled" across the table is purely a "gathering"
one ; but the other does not pave the way for a second
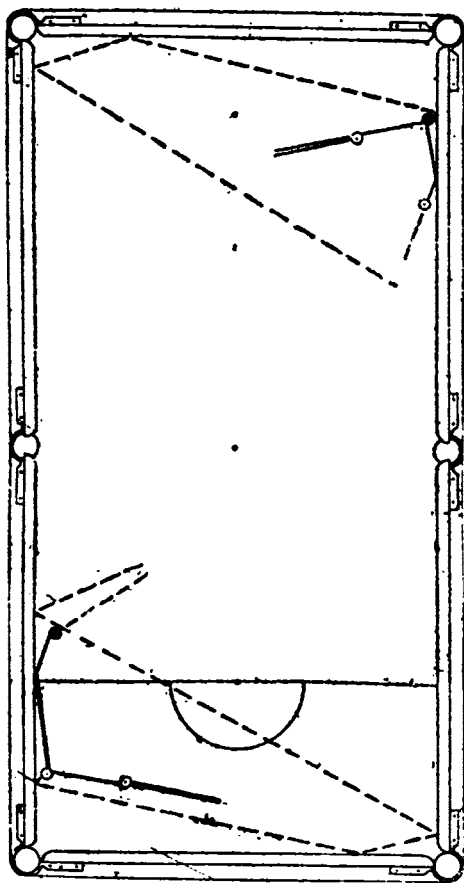
FIG. 103.—Pretty " gathering " cannons.

cannon position, although leaving the two object-balls
nicely in touch with the corner pockets.

Two good "screw-back" cannons, each bringing the first object-ball back to the second object-ball, and thus leaving a second cannon "on," are shown on Fig. 102. Again the cushion is struck by the cue-ball before it cannons. The stroke on the left side of the table (as viewed from the baulk end) asks for the use of right "side." The other cannon is gained by right "side" acting on the cushion. Of course, both these cannons can be made by a direct ball-to-ball run of the cue-ball. The reason, however, that the latter is made to strike the cushion between its two contacts must be explained. Had the stroke been made by a straight run-back on to the second object-ball, the first-played object-ball would have, of necessity, been driven very far away from the desired return line back to the red. Therefore, by utilizing the cushion as shown, one may give such direction to the first object-ball as will cause it to come back to the second one.

"Gathering" cannons steering the first object-ball around the corner angles of the table are shown on Fig. 103. With the two object-balls lying well apart on a side cushion, and you are enabled to make your cannon from the one nearest the corner pocket, the balls may easily be left together after the stroke. The cue-ball is "screwed" up to the second object-ball, and the first object-ball joins the two by the medium of the end cushion and facing side cushion, as the diagram illustrates.

AVOIDING "KISSES," AND "SAVING THE OBJECT-WHITE BALL."

A most important point in making cannons from a ball placed near the side cushions is the avoiding of the "kiss" which so often spoils such strokes. The half-ball stroke is peculiarly instrumental in causing this. Say that you are playing cannons from the D similar to those shown on Fig. 104. As surely as you place the cue-ball for a half-ball natural angle on to the top cushion (and so down the table to your second object-ball) and hit the first object-ball as you intend—*i.e.* half-ball—so surely will a "kiss" occur. The half-ball contact creates a very similar rate of speed in the object-ball as in the cue-ball, and the angle at which the former is thrown off the side cushion causes it to cross the path of the cue-ball as it rebounds from the end cushion, with the result that it more often than not bars the way, or "kisses," as the technical term has it. Fig. 104 gives two examples of such happenings. The cue-ball is placed for a half-ball angle stroke to get to the baulk corners of the table for a cannon. The "kiss" occurs where the dotted and continuous lines come together as marked by an X.

It is quite a simple matter to avoid the "kissing" of the balls in these cannons. The half-ball contact and angle breed the "kiss" as I have said. A thinner or fuller contact on the first object-ball (in fact, any but a half-ball contact) will, however, enable the cue-ball to escape it. On Fig. 104 the "kiss" is shown. On Fig. 105 the correct way of playing the cannons and avoiding

the "kiss" may be seen.   In stroke 1 the cannon is
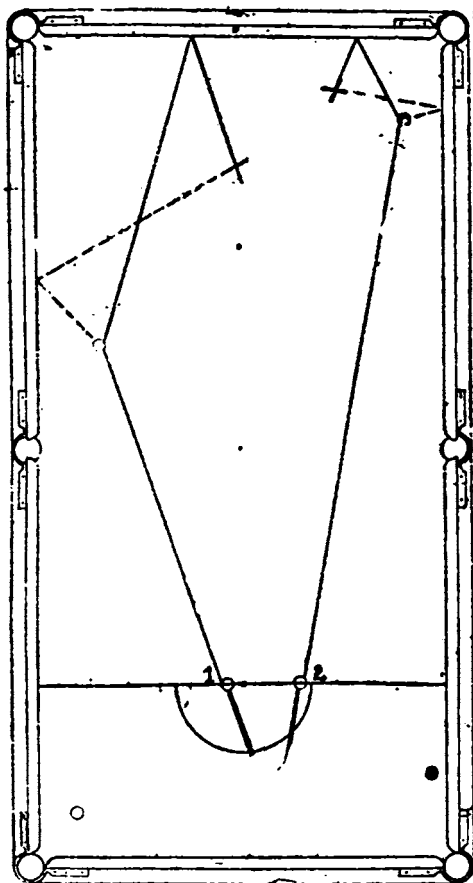
FIG. 104.—Showing how the natural-angle stroke induces to a "kiss" with the
first object-ball when it lies close to the side cushions.

made by hitting the first object-ball more fully than

half-ball, and the use of some check, or left "side." Being driven into the corner of the table, the first object-ball does not come out to the centre of the table until long after the cue-ball has passed there on its journey to the second object-ball, the "kiss" being thus easily avoided. As may be noticed from a comparison of the placings of ball 1 on Figs. 104 and 105, the cue-ball is played from a point much nearer to the corner of baulk than the half-ball angle would permit. It makes the stroke almost a half run-through one. The cannon with ball 2 is, however, gained by a very thin contact with the first object-ball (the red). It is dangerous to hit it in any other way, for the cue-ball takes the top cushion so quickly after striking the first object-ball that a "kiss" can only be averted by reason of the extra speed that it carries. Catching the red very thinly, the cue-ball practically retains all its pace while imparting very little to the object-ball. In this way it escapes the "kiss," as it is well on its journey down the table before the slow running red crosses the path that it has taken. To allow for the thin contact, ball 2 carries fairly strong left "side" to give it the necessary angle from the cushion, and is placed by the centre spot in the D—a very different position to its half-ball angle placing on Fig. 104.

On Fig. 106 another instance is furnished of a common cushion cannon, which usually ends in disaster owing to a "kiss." Ball 2 shows the half-ball natural-angle stroke to the top cushion, a stroke that most amateurs would play. This will lead to a "kiss" nine times out of ten, for just as the cue-ball, as it is thrown off the top cushion, is about to make contact with the second

object-ball (the red), the first object-ball, coming across
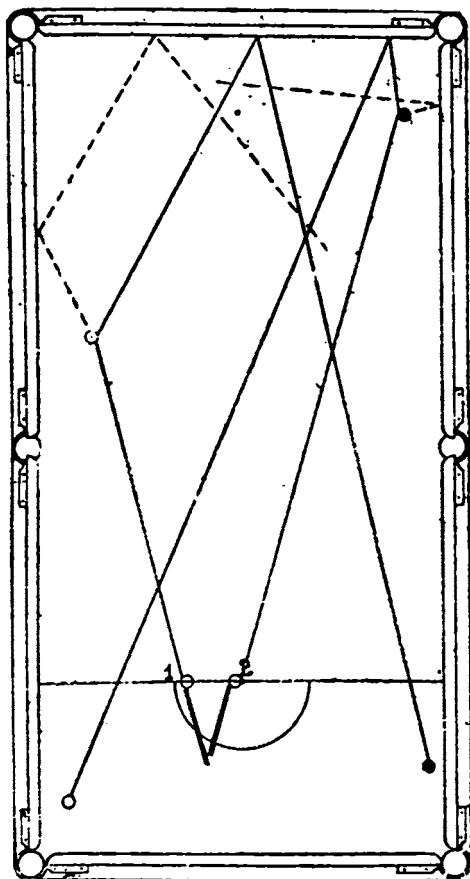
FIG. 105.—The correct manner of playing the strokes shown on Fig. 104.

from the side cushion, either intercepts it or knocks the
red ball away.   Try the stroke, and notice how frequently

this happens.   The means of avoiding this "kiss" is as
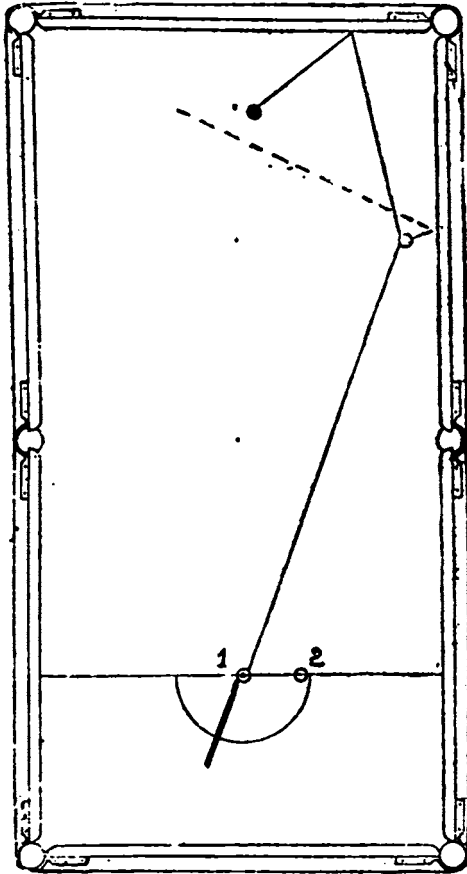
FIG. 106.—The means of avoiding the usual "kiss."

before.   Instead of placing the cue-ball at the half-ball natural angle (as marked by ball 2), it should be played

from the middle spot of the D, using strongish left
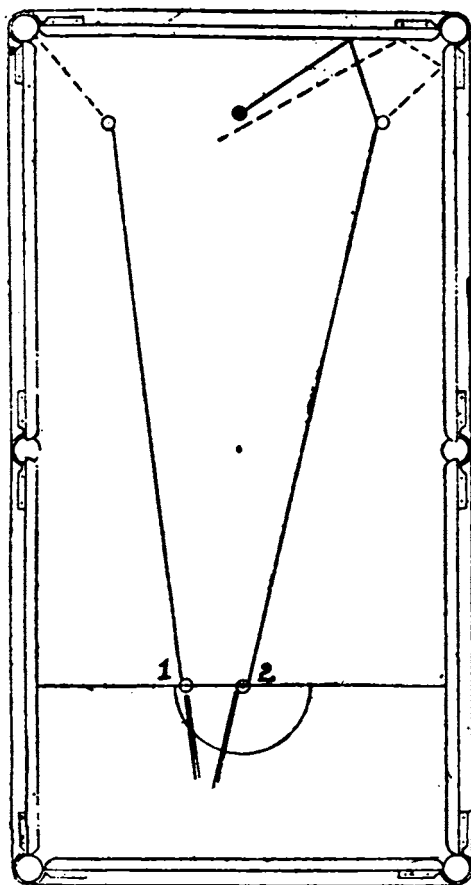
FIG. 107.—"Saving the object-white," and placing it in good position.

"side" to compensate for the much more acute angle it
will have to make from the top cushion to get at the

red ball for the cannon. By making the angle so much wider, and playing about quarter-ball on the first object-ball, the latter's passage from the side cushion now takes it wide of the red and cue-ball, as the dotted lines on the diagram indicate. All such cushion cannons must be played in this way.

In the same strain are the shots shown on Fig. 107. Here, though, the idea is to avoid "losing the white," by inserting it in a corner pocket when cannoning on to the spotted red. The given position of the object-white ball is one that constantly arises. The half-ball natural-angle placing of the cue-ball to make the cannon from the top cushion without using "side" will infallibly cause the loss of the object-white (as per ball 1). Again it is "the proper game" to make the angle a wider one by playing the cue-ball from the centre of the D, using strongish left "side" to get the cannon. By this means you not only save the object-white from falling into the corner pocket, but also leave the two object-balls together after the stroke. The object-white runs out to the red after circling around the corner cushions—a pretty and safe shot.

Another cannon that plays an important part in break-making is that given on Fig. 108. This, too, is generally quite incorrectly played. It must be the player's aim to make the object-balls come into close company when the cannon is made. No half-ball stroke will bring this about. The ball marked 2 on the diagram shows the half-ball angle placing of the cue-ball. By playing the cannon from that point one runs the risk of a "kiss," and, moreover, the balls are bound to be left widely apart. "The game" is to place the

cue-ball at the corner of the D (as per ball 1), and get
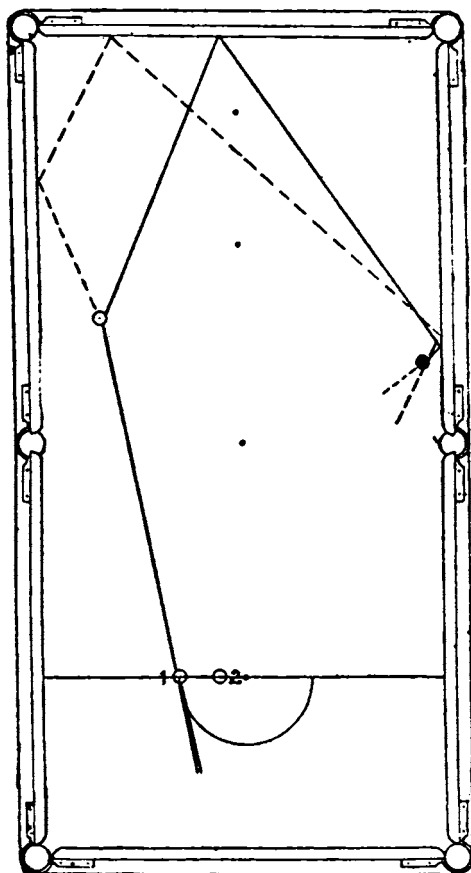
FIG. 108. —Method of making the object-balls unite in such top-cushion cannons, and the proper placing of the cue-ball.

well hold of the first object-ball—between half-ball and three-quarter-ball.　By so doing you drive it well along

the side cushion, instead of across the table as the half-ball contact and angle would do. Striking the top cushion little more than a foot from the corner pocket, it runs down and over to the red in the way the diagram conveys.

The correct manner of playing an all-round cannon is shown on Fig. 109. Many players strike the first object-ball on the other side—that is, the side nearest the cushion. This is wrong, difficult, and attended with great danger of a "kiss." Play from the other side of the object-ball (as shown on the diagram), using running "side" to compensate for a rather wide placing of the cue-ball.

If there is one part of the table more than another in which the first object-ball lies, and at the same time appeals to the player for an all-round cannon, it is by the top cushion, and five times out of six with the red ball on the billiard-spot. Quite the first thing to take note of is the course of the red ball, which may easily be taken down to join the object-ball. But this proceeding in all-round cannon play is risky ; it induces a "kiss." Fig. 110 will give an idea of this. Take the stroke made by ball 1 and the path it gives to the red. The latter runs right down into the left baulk corner by the object-white. Taking a direct course there, the red ball arrives in advance of the cue-ball, which has had to make a roundabout progress. The reason of the red ball's interference with the cannon is quite simple. As before, it arises from a wrong placing of the cue-ball. Ball 1 (the usual angle made for the stroke) must bring the red ball into the same corner of the table as the object-white if it is hit at all fully. To cut the red more

thinly means missing the cannon. Now, if the stroke
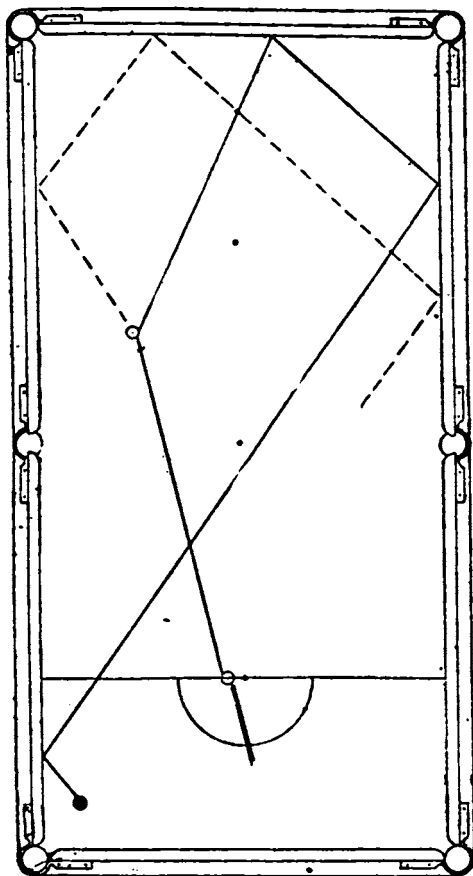
FIG. 109.—The correct way of playing this kind of all-round cannon.

had been played from the position of ball 2 a very
different state of things would have existed. Playing

half-ball at the red, the latter would have been steered
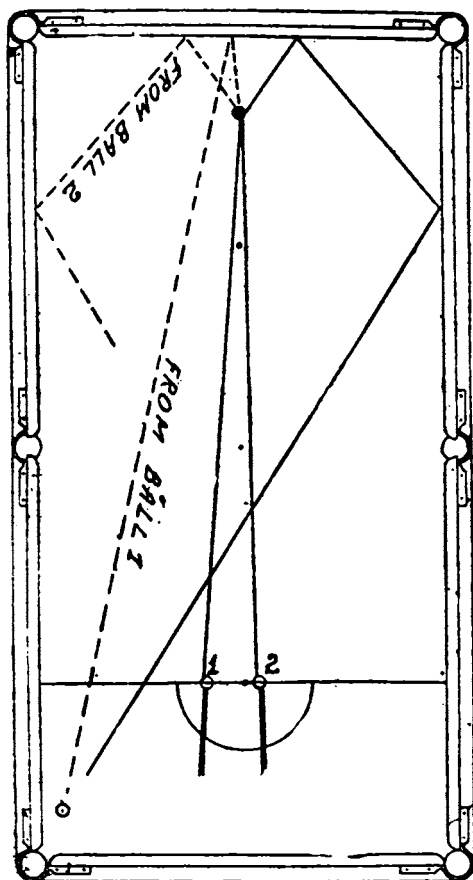
FIG. 110.—Playing all round the table from the spotted red ball : correct, and incorrect, strokes.

away to the side cushion (as its run denotes), and all

chances of a "kiss" rendered impossible. Using some running "side," the cue-ball would work around from the right side of the table, and make its way to the object-white.

CUSHION CANNONS.

Cannons which ask for a contact with the cushions before the cue-ball collides with the first object-ball are, naturally, more conducive to errors than those permitting of a straightaway stroke upon it. A reference to the "Cushion Contacts" chapter will explain why they are so. Suffice it to say here that the cue-ball never strikes a cushion at the point aimed at except in the case of a point-blank, dead straight aim. Then the centre of the ball meets the cushion. In all cushion strokes of an oblique character the same allowance has to be made as in the contact between cue-ball and object-ball. Aiming through the centre of the cue-ball, as you do, the sides of the ball strike the cushion in advance of that point to which you have directed its centre. Often enough in playing on a cushion you have to aim a complete half-ball ahead of the place you want the cue-ball to meet. Another matter that tells tremendously in playing on a cushion is pace. The slower the ball, the nearest approach to the "natural angle" rebound will it take. The faster its run, the straighter it comes off the cushion. So between the two things cushion-play is not at all easy, necessary though it be.

The first examples of cushion cannons are as on Fig. 111. They may be taken as supplying the whole system

of playing behind an object-ball from the cushion.   In
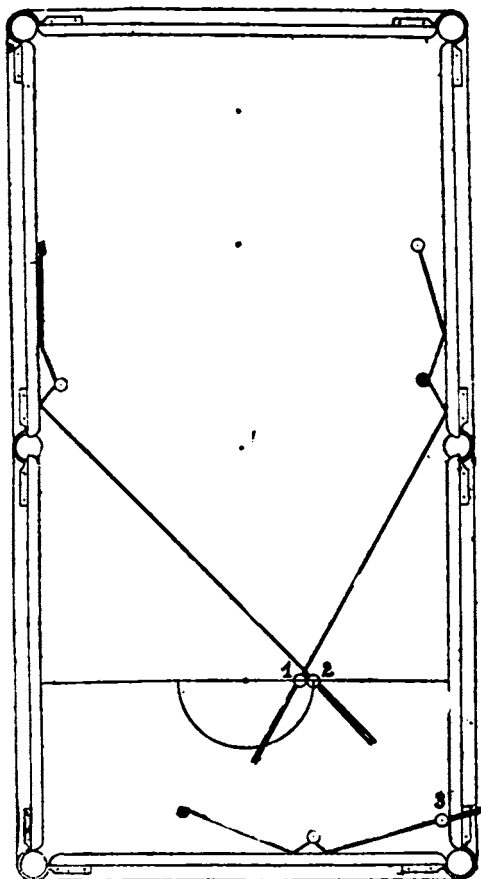
FIG. 111.—The theory of playing behind a ball from the cushion.

all three strokes a decided allowance has to be made for
the ball striking the cushion earlier than one aims for.

Ball 1 plays a cannon from the first object-ball on to a ball well away from the cushion. To get at the latter the cue-ball is placed at a very oblique angle. It has to be thrown back on to the cushion after contact with the first object-ball, to then come off and find the second object-ball. As may not be generally known, the more slantingly the cue-ball approaches the cushion when playing a ball (as in the strokes on Fig. 111), the more will it be thrown away from the cushion at the second contact there. Ball 3 stroke exemplifies this statement. It approaches the cushion at a more oblique angle than ball 1, with the consequence that it is thrown much more widely off the cushion. Just as the very oblique angle ensures the cue-ball ultimately leaving the cushion in these kind of strokes, a wider placing of it causes it to run along the cushion. Ball 2 stroke shows this. As long as the cue-ball can find its way behind the first object-ball, you cannot place it too widely to keep it by the cushion in its after-run. Running "side" is a very helpful factor in the stroke, often enabling the cue-ball to work in behind the first object-ball from very awkward angles. I think a comparison of 1 and 2 strokes should be useful. In either instance the first object-ball is the same distance out from the side cushion. Ball 1's oblique approach shows how it is ultimately thrown away from the cushion, and ball 2's much wider placing illustrates its retention of the cushion-line after contact.

Fig. 112 contains a selection of very ordinary cushion strokes. The first object-ball masks or covers the second object-ball, and renders the cushion stroke imperative. A plain ball makes these cannons quite

simple.   The use of "side," however, is not helpful, and
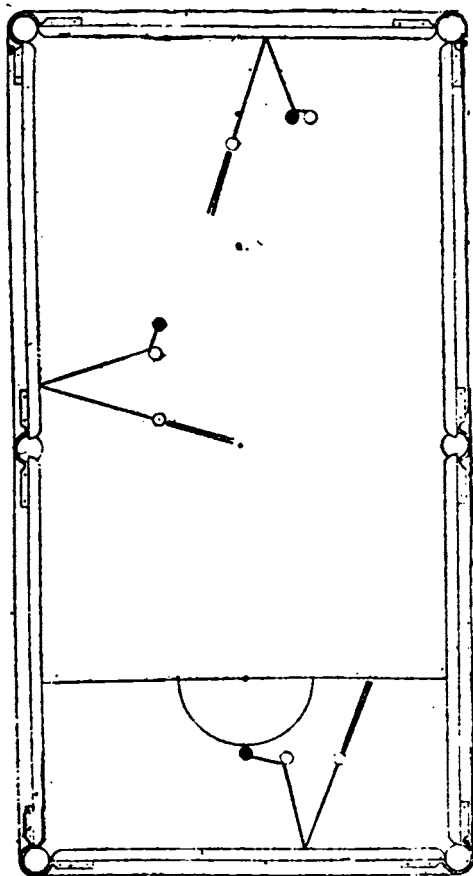
FIG. 112.—Overcoming a "covered" position by cannoning from the cushion.

is mainly unnecessary.   Play as gently as the nature of
the stroke will permit.   By doing so the angle thrown

from the cushion is more clearly to be judged. Incident-
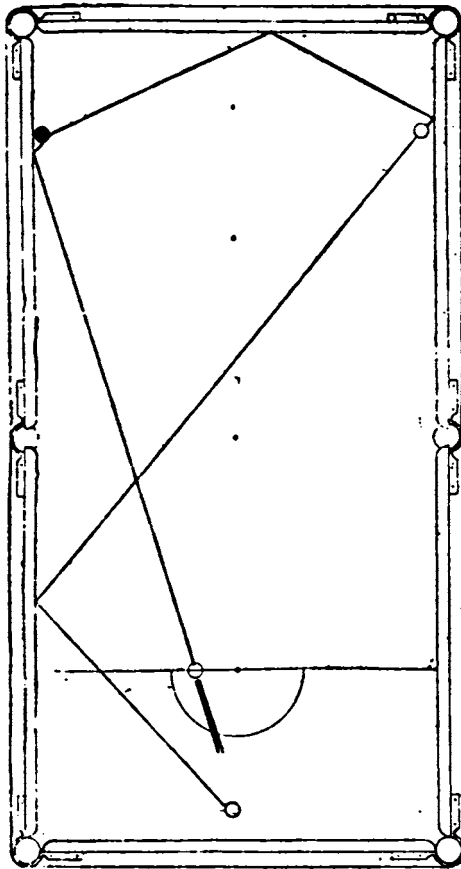
FIG. 113.—Cushioning in front of an object-ball.

ally, though, I must mention no cushion throws a ball away at the same angle that it comes to it. The throw-off

will always be sharper and straighter according to the pace used in the stroke. The faster the ball, the straighter it comes off the cushion. Therefore in all such cushion cannons as those shown on Fig. 27, play slowly, and *aim midway on the cushion between cue-ball and the further side of the first object-ball.* The slight difference in the " angle of reflection "—that is, the throw-off from the cushion—will gain you a half-ball contact with the first object-ball, and the resultant cannon.

On Fig. 113 one of the most useful class of cushion cannons is shown. Whenever the object-balls are lying touching or very close to the top-side cushions in anything like the positions given, a cushion cannon can be made. Play in front of your selected first object-ball at that point of the cushion which will send the cue-ball off for a half-ball contact. Running on to the top cushion, it will take its angle for the second object from there. Thus everything will depend on the judgment of the player in placing the cue-ball at the proper angle for that part of the end cushion he wishes it to strike. An all-round cannon can be made by this stroke or anywhere along the line from the point that it touches the first object-ball. " Screw," force, and " side " will each be found to be useful factors in these cushion cannons, as they will be found to widen the path of the cue-ball's action to a quite astonishing degree—the " screw " stroke in particular.

Variations of the cushion cannon are presented on Fig. 114. For purposes of after-position no shot is more valuable. Taking the cushion first a lot of pace goes out of the cue-ball, which also obtains an easy angle for what are otherwise awkward strokes. It is as though

the cannon was played from the point at which the cue-

FIG. 114.—Further examples of cushioning in front of the first object-ball.

ball finds the cushion in advance of the first object-ball.
All these cannons certainly require a pretty intimate

acquaintance with the cushion one is playing on to, and the required angle which will provide the proper contact with the object-ball. It is surprising, however, what a very little practice, assisted by knowledge of what is required in the stroke, will do. Once some sort of proficiency is attained, none is more certain of giving good "pocket" position.

Quite another form of cannon figures on Fig. 115. It is a run through the first object-ball on to a cushion, using running "side" to find the second object-ball—a very common, and at the same time exceedingly useful shot. The leading feature of this cannon is its ease. Attacking the first object-ball from a slanting direction, the cue-ball can hit it full in the face, and thus permit of the "side" used getting its full play. For, as I have explained in an earlier chapter, the more fully the cue-ball strikes the first object-ball the greater influence will the "side" it carries have. As a means of clearing a baulk, or from under a cushion the while the second object-ball is held by or steered to a pocket, the run-through cushion cannon under notice is worthy of special mention. It can turn an unpromising position into a most favourable one in quite a remarkable and almost assured fashion.

Of the same strain, but less certain in both their scoring and after-position aspects, are the run-through semi-cushion cannons shown on Fig. 116. High speed is the great factor in each of the three lower-end-of-the-table strokes. They dispense a very nice lesson in the effect that pace has on a cushion. Played slowly, a "kiss" must inevitably occur between the cue-ball and the first object-ball, which will meet it as it is thrown back from

the cushion. High speed, however, will result in the
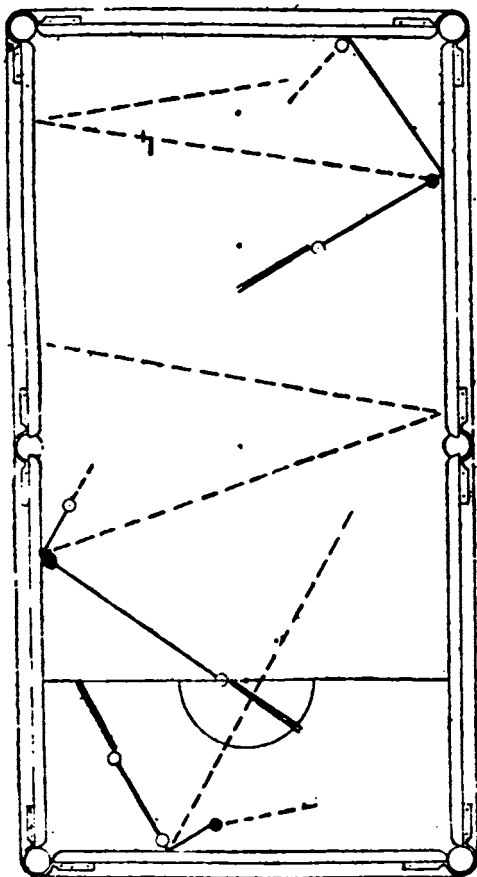
FIG. 115.—Run-through cushion cannons, using strong running "side."

avoidance of the "kiss" and the making of the cannon.
Hit the cue-ball high and hard full on to the middle of

the object-ball.   The first object-ball may be so placed
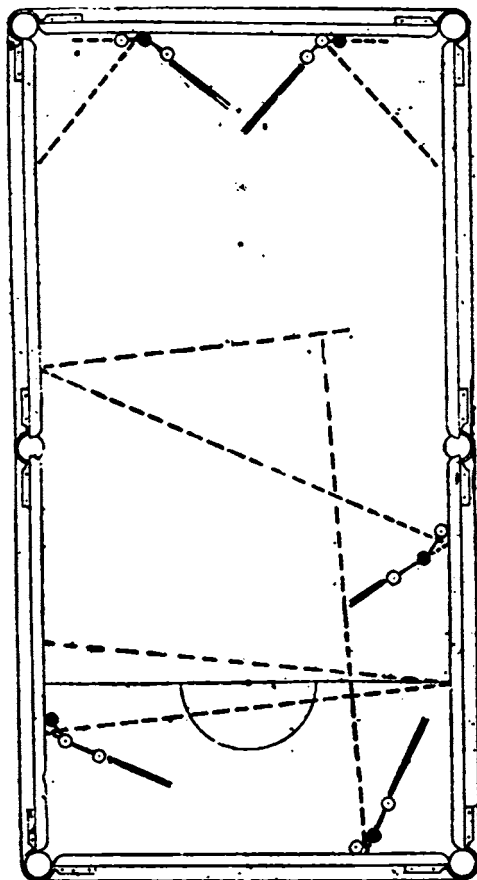
FIG. 116.—Avoiding a " kiss " by the use of force and the assistance that
running " side " lends in these cannons.

in front of the second that the barest fraction of an inch
intervenes to allow of its taking to the cushion, and not

touching the latter.   The clearing of the first object-ball
is the beginning and end of these cannons.   Running
"side" will always be found very helpful in guiding the
cue-ball on to the second object-ball.   The two cannon
positions on the top cushion in Fig. 116 are also to be
made in this way.   The two object-balls are much further
apart than in the other three instances.   A slow stroke,
with running "side" running through the first object-
ball, must give the cannon.

"KISS" CANNONS.

A decidedly leading branch of cannon play is the
"kiss" cannon.   The common varieties, such as the
"kiss" back from a ball tight up against a cushion, or
the contact of the first object-ball with the second object-
ball to place the latter on to a cushion, and thus in the
path of the cue-ball, are pretty generally known.   They
blossom in the throes of close-cannon work, as dispensed
by the professors of the game.   On Fig. 117, in the variety
of "kiss" cannons there set out, will be found several
of the commoner kind and a few of the higher class.
Strokes 1, 2, 3, 4, and 5 give the best understood "kiss"
cannon at varying ranges and angles.   If the first object-
ball so covers the second that anything like a full contact
must drive it on to the ball behind it, and the latter is
near to a cushion, a "kiss" cannon is invariably to be
made.   Very little judgment is needed to gauge the line
at which the second object-ball will be thrown off the
cushion.   At long range, and at short range, the cannon
is always "on."   No "side" is needed—just a plain ball

stroke that will knock the first object-ball on to the
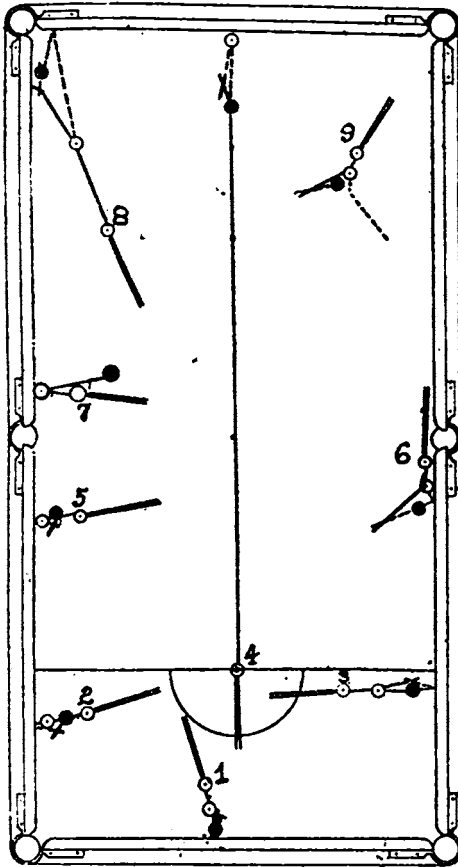
FIG. 117.—Some " kiss" cannon selections.

second, and thus bring the latter out to meet the cue-
ball.

Stroke 6 on Fig. 117 illustrates a very pretty "kiss" cannon. All three balls are lying beside the cushion almost in a straight line. The red ball, however, is slightly further out from the cushion than the other two. There is, however, not sufficient room to steer the object-white between it and the cushion. The experienced player has another stroke at his hand, though. By playing the first object-ball on to the cushion, so as to catch the red fully as it comes off, a "kiss" cannon is quite an easy stroke. The cue-ball, hit slowly, though high up, runs through and catches the red at the point where the lines cross. Stroke 9 is of the same nature, although there is now no cushion-play. In all strokes where the covering of the second object-ball will nearly, but not quite, allow of a direct run-through cannon off the first object-ball, there is again a "kiss" cannon to be made. Play slowly on to the first object-ball to make it just touch, and turn the second object-ball. The cue-ball, running through the first object-ball, will catch the second object-ball.

Stroke 8 shows another covering position. This is to be overcome by guiding the first object-ball on to the end cushion behind the second object-ball, with the idea of pushing the latter on towards the cue-ball, which has followed on. The use of running "side" will assist considerably in taking the cue-ball to the second ball.

Stroke 7, and the last of Fig. 117, is a plain "kiss" cannon off a ball tight up against, or frozen to, a cushion. Being securely planked up against the cushion band, the first object-ball offers a double resistance to the cue-ball, for it has the weight of the cushion's throw-off added to its own. Thus the cue-ball, running up

against a much heavier body than itself, has a natural tendency to recoil. This and the elasticity of the cushion result in a considerable transmission of force to the cue-ball, which is "kissed" back in the direction that it strikes the cushioned ball. By hitting the cue-ball low and with power, a "kiss" cannon can be made at a great distance from a frozen object-ball. In all cases it is safer and surer billiards to hit the cue-ball below its centre when playing these "kiss" cannons. The ball travels in a truer line, and is more easy of control.

Fig. 118 contains other "kiss" cannons. A very useful stroke can often be made from a "safety-miss," such as the two cannons played from the D, which find the object-white ball, as the first object-ball, in different positions on the right baulk and left top cushions. In the first instance it is frozen to the cushion, and in the second slightly away from it. The red ball is on the billiard spot. Very easy access can be found to it by the means of a "kiss" cannon from the two whites. The ball under the right middle pocket will throw the cue-ball straighter off it than if it were not quite touching the cushion, like the ball lying by the left top cushion. It is easier, too, to obtain the "kiss," and, as a consequence, the cannon. You have to judge the angle of the throw-off and the impact point. This a little practice will soon give you a good idea of. From the cushion-ball you know that you have the "kiss" ready-made. But this is not so from the ball which does not touch the cushion. You have now to make the balls "kiss" by striking the object-ball about a three-quarter-ball contact, aiming well inside the edge of it. Coming

back from the cushion, it forces the cue-ball over in the
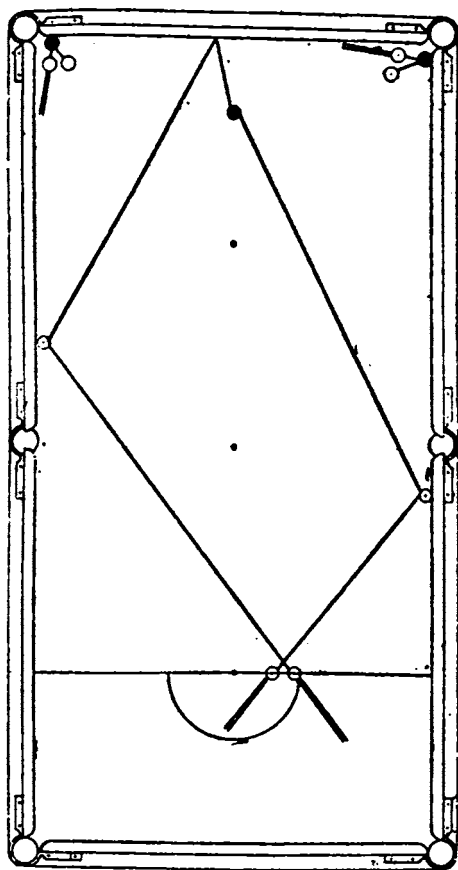
FIG. 118.—" Kiss" cannons.

direction of the billiard spot. The two strokes by the
top corner pockets on the same diagram show a very

favourite "kiss" cannon stroke used by the great players in the course of their "top-of-the-table" play. It allows them to cannon easily, and yet retains the red ball by the pocket, for these "kisses" at slow pace barely disturb the first object-ball.

"SAVING THE WHITE" BALL IN CANNON PLAY.

One of the most frequently recurring mishaps in connection with the amateur side of billiards is the loss of the services of the white object-ball whenever a cannon is played on to it as it stands in the vicinity of a pocket. The hole seems to possess quite a magnetic attraction to the unfortunate object-white. "Bad luck!" is the usual remark that accompanies its disappearance, instead of which nine times out of ten it is caused by downright bad play. No man can drop the cue-ball on to the second object-ball just as he wishes to do at long range, or even short range, for the matter of that. So he must give himself the widest margin for any errors of the kind that he can possibly do.

Fig. 119 presents a trio of cannons each made on the object-white, which, in either stroke, lies within handy distance of a pocket. There is little danger of losing the ball that stands under the right middle pocket, but unless properly played there is a wholesome danger of getting it out of touch with the pocket. To try and guide it straight up the cushion to the middle pocket is a mistake. It might stay right in the jaws, or run by, or stop short, as easily as give the desired after-position for the middle pocket. The correct way to play the

stroke is to drop full on the object-white for the cannon
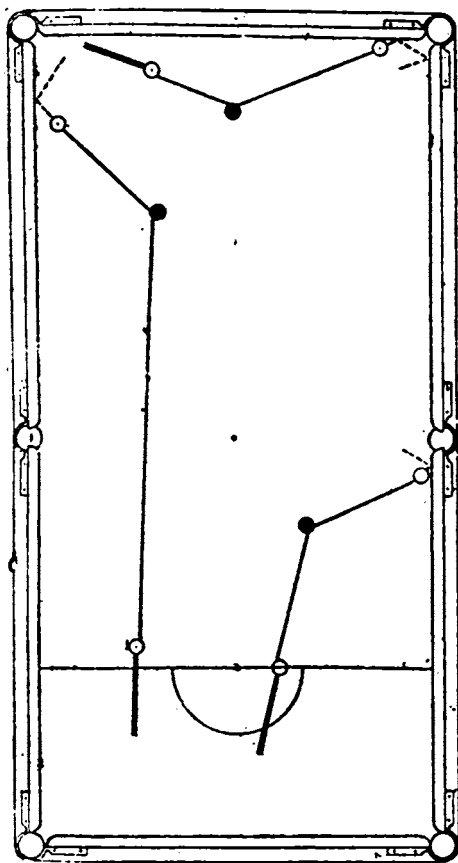
FIG. 119.—Cannoning on to the object-white when it stands close to a pocket and the cushion.

with a very slow ball. The object-white will come off the cushion and at once give an opening to the pocket.

This stroke allows of a margin of an inch or two for the object-ball's after-position.
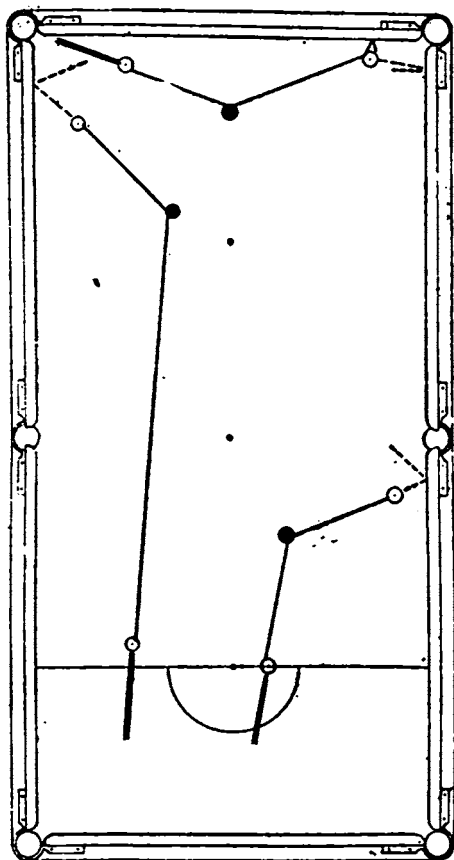
FIG. 120.—Cannoning on to the object-white when further away from the cushion.

The two remaining strokes on Fig. 119 are played in the same way. The second object-ball is not driven

directly by the pocket that the player wishes it to stand near to for his succeeding stroke. Instead, he sends it gently on to the cushion well in advance of the pocket, thus neutralizing all danger of pocketing the ball, and yet giving it a favourable position. Of course, a nicety of "strength" is required in the stroke to so control the force of the contact the cue-ball makes on cannoning. Like other things in billiards, this can only come by constant practice.

Fig. 120 gives the object-white standing further away from the cushion. As may be seen, the middle pocket connection is gained in precisely the same fashion as when the object-white was lying on, or very close to, the cushion. So it is in the long-range cannon to hold the object-white near the left top pocket. But the cannon in between the spotted red and the top cushion differs. The object-white is now so well out from the cushion that to drop fully on to it, as before, would be driving it on, if not into, the corner pocket. The game, therefore, is to push it out on to the side cushion by a half-ball contact, by which means the connection with the pocket may easily and safely be made.

CROSS CANNONS.

An extremely serviceable entrance to a "break," or the picking up of the threads of one, is often to be found from the agency of a "cross cannon," a stroke that is depicted on Fig. 121. With the object-balls lying on opposite sides of the table in the style shown, a judgment of the angle, and the amount of

" side " (" reverse " or " running " as the case may be), or
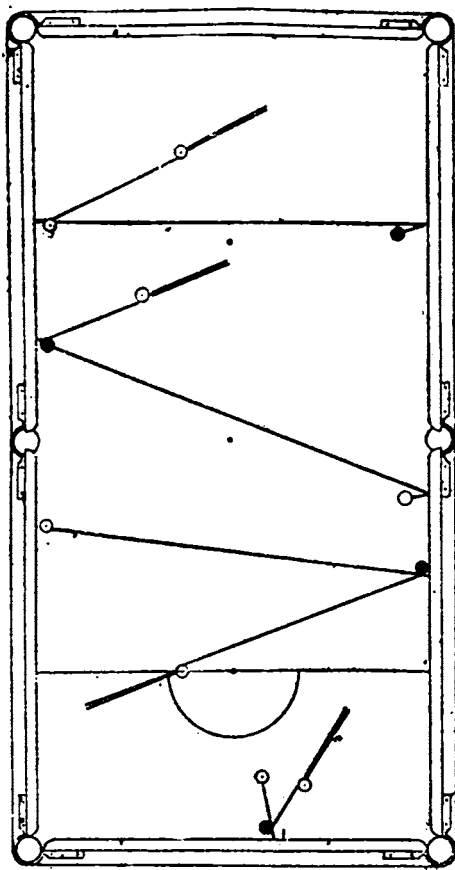
FIG. 121.—Cross cannons,

the use of a plain ball may be turned to solid account.
The after-position will usually be obscure, as in many,

or most, of the cannon strokes. The chief thing in these "cross cannons" is to take the first object-ball as cleanly and thinly as is consistent with the direction of the cue-ball. The latter should never be hit above the centre, for the top-side enforces a swerving action which spoils the angle. The central or slightly lower ball is best in these straight, or almost straight, across the table cannons.

Fig. 122 shows two "double cross cannons." The first object-ball completely covers up the second object-ball. Using strong running "side" and plenty of pace (the cue-ball must now be struck above the centre) the cannon is made by a movement of the cue-ball from the played object-ball to the side cushion, over to the facing one, and so on to the second object-ball— a big stroke.

CANNONS FROM THE D.

Quite the most valuable of intermittent cannon play are the strokes from "hand" following a losing hazard. They are the passports to a renewal of connection with the pockets, mainly the top ones. Their general mission is to place the red ball over a pocket, and the object-white by the billiard spot. Fig. 123 gives an idea of a couple of shots which are frequently to be met with. The position of the red ball is altered in each case to allow of its being played on as both first and second object-ball. On the left side of the table there is a half-ball cannon off the red. It is played with the intention of making the latter cross the table from the side cushion to stop near the right top pocket,

whilst guiding the object-white by the billiard spot. A
nice half-ball contact using some right "side" to drop
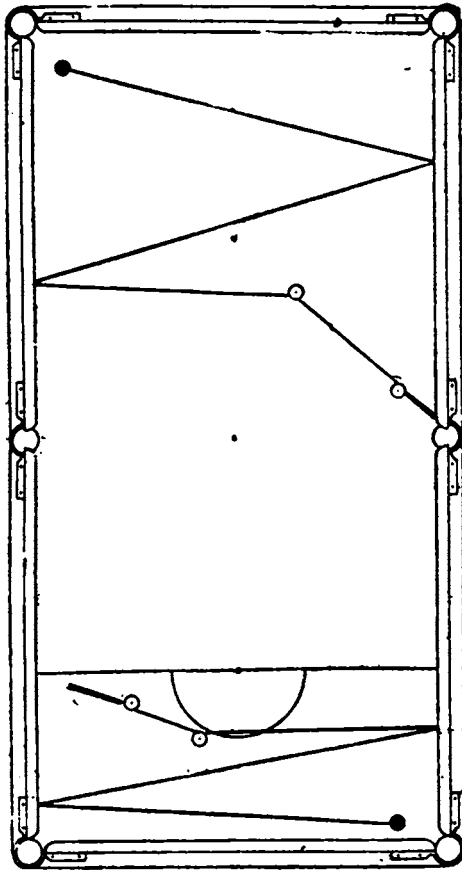
FIG. 122.—Double cross cannons.

flush on the object-white will do what is required. The
stroke on the right side of the table provides a nice

object-lesson in the alteration of tactics when the
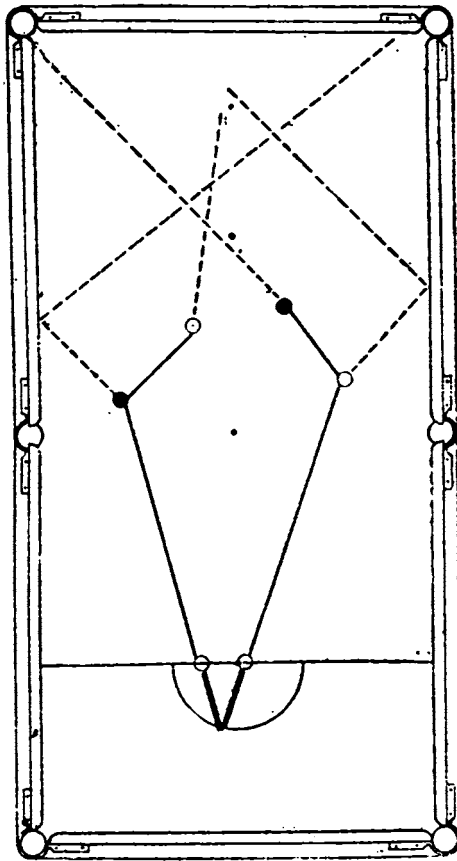
FIG. 123.—The different style of game enforced by the nature of the first object-ball.

object-white happens to be the first object-ball. The play now is to steer it on to the side cushion, thence

over by the billiard spot, while driving the red up near
the left top pocket.
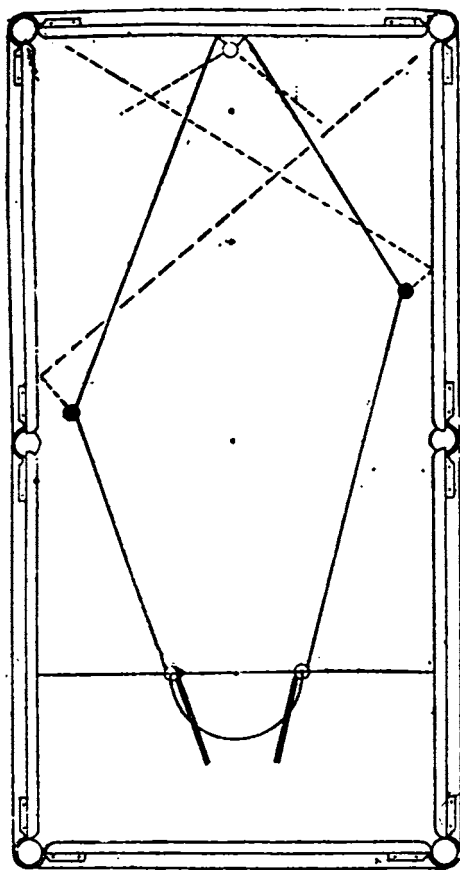
FIG. 124.—Drop cannons from the D, using "side" to work from the cushion.
(Red first object-ball.)

On Fig. 124 there are two representations of cannon

strokes, in which the red ball is made to cross the table (*viâ* the side cushion) to the vicinity of the opposite corner pocket. One of the cannons (the longer one on the left side of the table) may be made direct ; but the other demands strongish left " side," so as to take it on to the object-white from the top cushion. A half-ball contact is required in both strokes.

Fig. 125 merely transposes the position of the object red and white balls, as seen in the preceding figure. The object-white is now the first ball attacked. Instead of hitting it a clean half-ball, and thus guiding it over to the corner pockets (as before), " the game " is to hit it more fully, using very strong " side " to enable the cue-ball to reach the red from the top cushion. By making a fuller contact on the object-white it will of necessity run somewhere down by the middle of the top cushion. Meanwhile, the red should have been knocked over towards the corner pocket. The slower the pace used in these strokes, the greater the certainty of the " after-position."

Fig. 126 presents two cannon positions which, easy though the actual score is, often perplex the average player. These positions, however, afford an opportunity of placing both object-balls in playable quarters when the cannon is made. The idea is to double the red across the table by the opposite middle pocket from the side cushion, and at the same time to get the object-white on to the top cushion, at the proper pace to leave a losing hazard into the corner pocket. " Between two stools one often falls to the ground " is an old-established adage, but one which does not apply too well to this particular stroke, much as it does to others. For, played

carefully, one can hardly fail to leave one, if not both, of
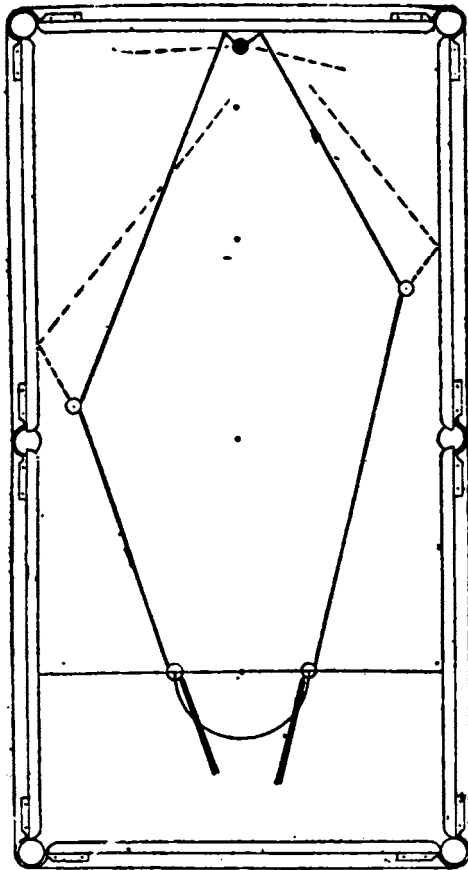
FIG. 125.—"Drop cannons" from the D. (Object-white first ball.)

the balls well. Take the cannon on the left side of the D.
To get the red ball to run over to the middle pocket

a three-quarter-ball contact on the red is wanted.   It
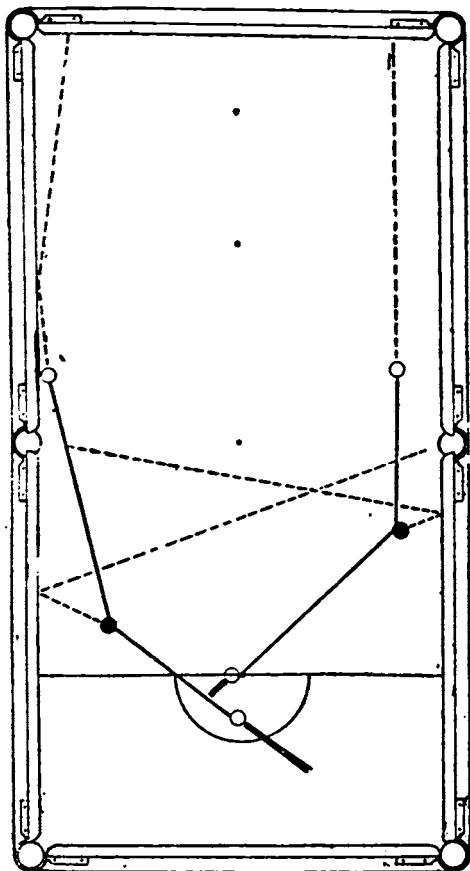
FIG. 126.—Cannon doubling the red over a middle pocket, and object-white
by a top pocket—two examples.

makes the cannon slightly more difficult, but it surely
places the red somewhere near its destined stopping-

place. The cannon on the right side of the D is
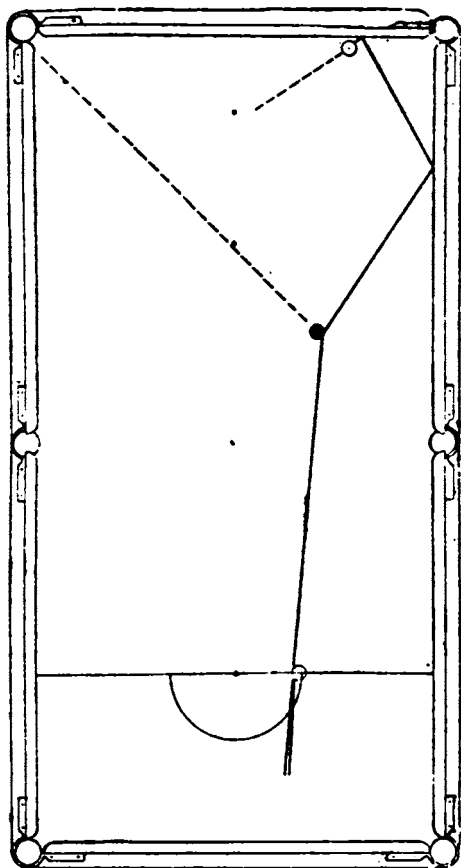
FIG. 127.—Cannoning *viâ* the side cushion, placing the red by a top pocket,
and the object-white near the billiard spot.

played on the same lines, though the presence of the
red ball so much further down the table asks that it

shall be hit no more than quarter-ball to put it over
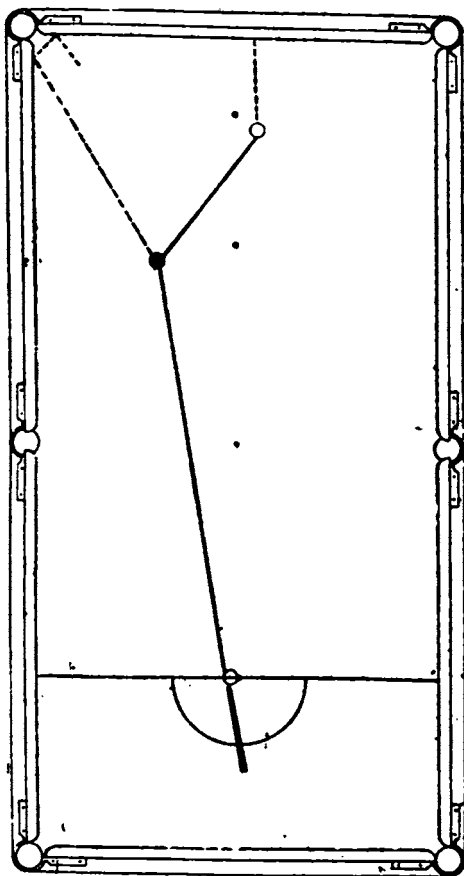
FIG. 128.—Cannon leaving red by left top pocket, and cue and object-white balls by the billiard spot.

to the line for the left middle pocket. The contact with the object-white must be so judged as to prevent

its being sent into the corner pocket, or on to the "shoulders" there, though keeping within easy distance. When it happens that the white ball is the first played at in such and similar cannons, it is more than risky to double it across the table to a middle pocket as in the case of the red. It is far safer then to just get it out to the middle of the table somewhere, and concentrate all your attention on to the red to drive it by one of the top corner pockets.

A useful cannon is that shown on Fig. 127. The cue-ball passes from the first object-ball to the side cushion, on to the top cushion, and then makes the cannon. The way to play the stroke is to cut the first object very thinly (if it be the red) so as to guide it over by the further corner pocket. To assist in this placing of the first object-ball into good after-position, the angle for the stroke off the red on to the side cushion should be made somewhat narrow. Play slowly, using running "side." Remember that the great aim of the stroke is to place the first object-ball (if it is the red one) over the opposite corner pocket, preferably striking the side-cushion first.

When the red ball stands well out from the side cushion, as in Fig. 128, it can be driven straight down to the corner pocket, as shown. Aim to place it on the side cushion just in advance of the pocket, a proceeding which goes far to nullify any misjudgment in the pace of your stroke. A half-ball aim with some reverse "side" will be found suitable to this class of stroke.

Fig. 129 furnishes some specimens of up-and-down cannons, a class of stroke which is often employed to the utmost advantage. Playing off the red ball stationed

on the left side of the table, a nice half-ball contact will
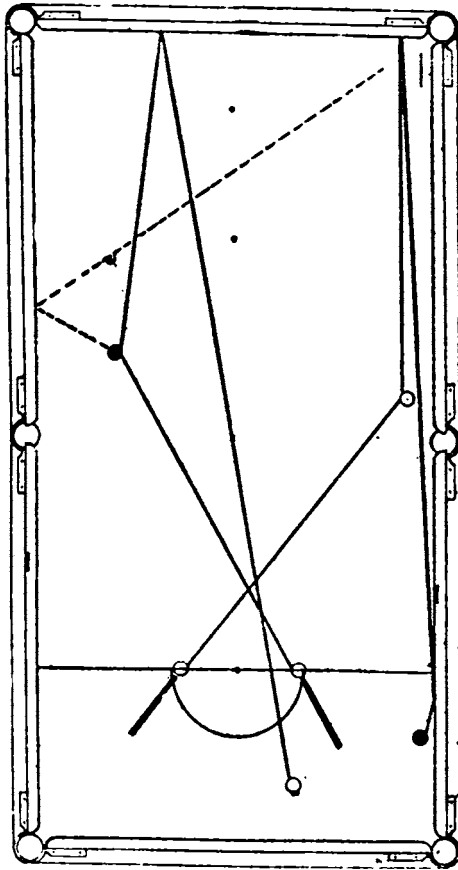
FIG. 129.—Two examples of serviceable cannons on a ball lying behind
the baulk line.

bring the cue-ball back on to the object-white to
cannon. No "side" is required. The red may be

"doubled" across into the right top pocket in playing this cannon.

With the first object-ball a foot and more nearer to the top cushion there is a distinct possibility of a "kiss" to be taken into consideration. A thinner or fuller contact than the half-ball one will then keep the red out of the cue-ball's return path. The second stroke on Fig. 129, that along by the right-side cushion, is also made by a plain half-ball stroke. With the object-ball further out from the cushion, or further up the table, some "side" is then required.

A strong "side" stroke is shown on Fig. 130. The second object-ball lies in the middle of the baulk enclosure. It can be approached by the given *route*. Carrying a lot of right "side," a thinnish half-ball contact is made with the first object-ball. Meeting the top cushion, the "side" carried by the cue-ball throws it over on to the near side cushion, whence it runs down to make the cannon—a pretty, and fairly easy, shot.

The method of making round-the-table cannons into baulk is, of course, familiar to even the poorest players. They occur more often than not when the red ball is on the billiard spot and the cue-ball "in hand." With the second object-ball lying around a pocket (see the object-white on the left side of Fig. 131), "the game" is to make the cue-ball come as directly across and down to the corner of the table as possible. Place the cue-ball near the middle of the D, hitting the cue-ball above the centre and using some running "side." But with the second object-ball on the side cushion well on the way towards the baulk line an alteration of tactics is needed. Play now to make the cue-ball first strike the baulk end

cushion before cannoning.   To do so, put the cue-ball
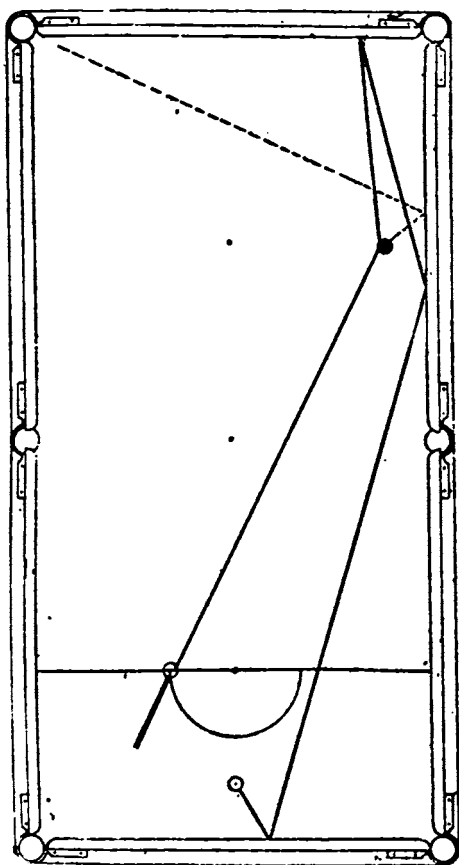
FIG. 130.—Cannoning from the D on to a ball behind the baulk-line—
a strong running " side " stroke.

near the end of the D on the same side that you are
playing on the red, and use some running " side," striking

the cue-ball above the centre. The effect should be
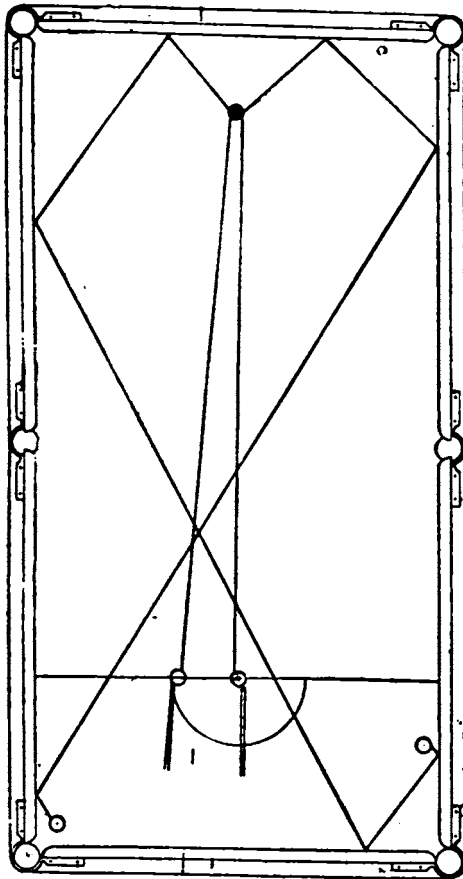
FIG. 131.—Cannoning around the table—the different placings of the cue-ball.

as shown in the stroke on to the object-white by the
right baulk cushion in Fig. 131.

The run of the cue-ball is so frequently checked in
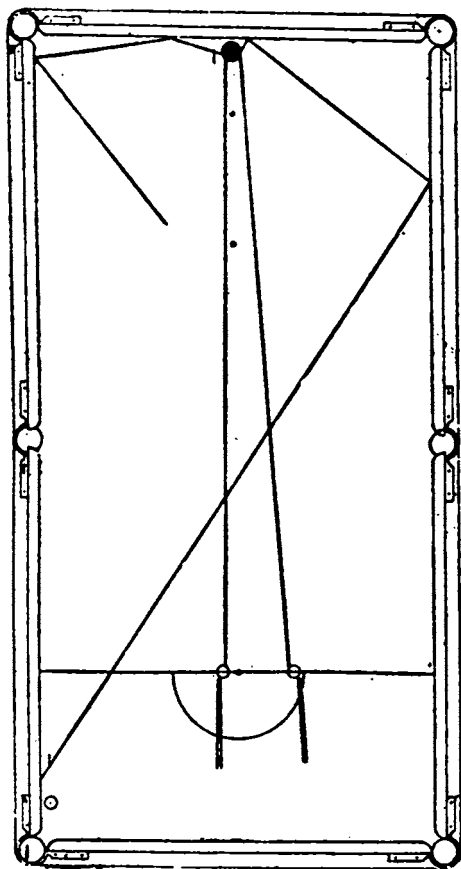
FIG. 132.—The correct way of playing round-the-table cannons off a ball very close to a cushion.

playing round the table from a ball lying very close to the top cushion that a few words on the subject may

not be wasted. If the object-ball is hit anything inside a half-ball contact, the pace of the cue-ball suffers to an enormous extent. It will seldom come much more than halfway around the table, no matter how hard and how high the cue-ball has been struck. The reason of the loss of pace is to be had in the fact that the ball cannot outlive two heavy contacts, one immediately following upon the other. Having struck the object-ball more or less fully, it transmits a lot of its force to that ball. Then almost instantaneously meeting the cushion, another, and a decisive, decrease in its pace occurs, with the result that it sluggishly ends its career somewhere in the middle of the table. This fullish contact is shown on the left side of the red ball on Fig. 132. The thinner contact on the right " side " of the red gives an idea of the correct manner of playing on to an object-ball lying near a cushion at long range. Place the cue-ball pretty widely, and play to hit the object-ball *quite thinly*. Use running " side " to gain an angle to the side cushion. If it hits the object-ball anywhere outside a half-ball contact the cue-ball will come flying around the table as you wanted it to do. The thin contact with the red practically makes no effect on the pace of the ball. Its only resistance is from the cushion. But this single contact is not sufficiently powerful to take the run out of it as the two contacts inevitably do in the fuller stroke on the object-ball.

A stroke which may often be applied when one is in danger of " losing the white " is to be seen on Fig. 133. The cannon directly from the white to the top cushion, and so on to the red, is too risky, and the cannon, in the same way, from red to white does not give hopes of

a good after-position ; so it is better to take the
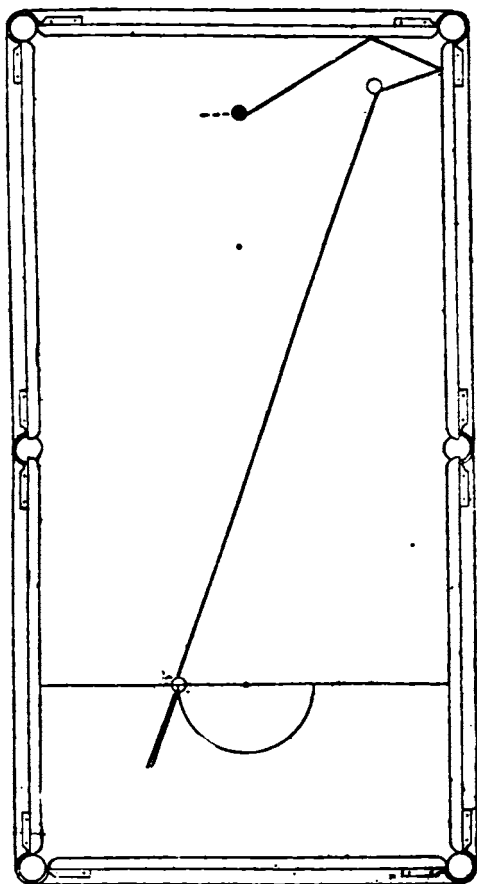
FIG. 133.—Position cannon from the D "saving" the object-white.

medium course, as shown.   Play on to the cushion side
off the object-white with a plain, slow ball from the

further end of the D.   The cue-ball should take the
side and end cushions, and then run gently on to
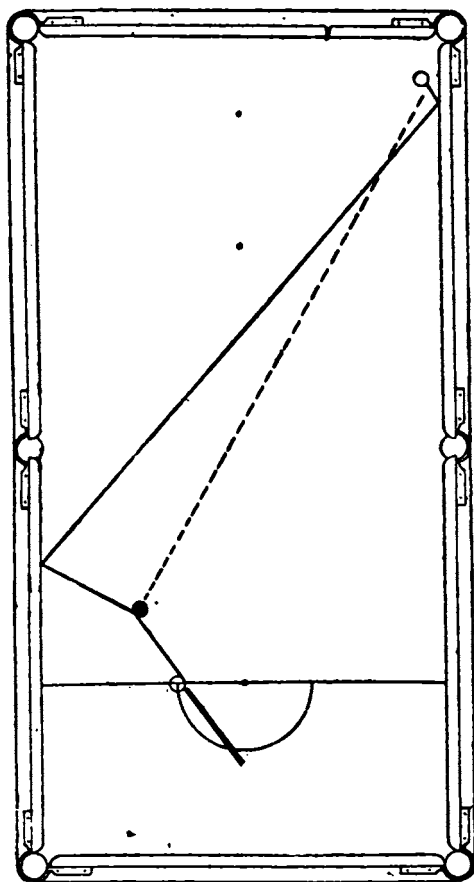
FIG. 134.—A neat " gathering" cannon.

the red, placing it for a winning or losing hazard in the
left top pocket.

Fig. 134 gives a pretty "gathering" cannon. The red ball is out of the direct plain ball to ball cannon line of fire. To get at the object-white from the right side of the red asks for the use of "screw" or "side," and an assured splitting-up of the balls. Playing thinly on its left side, using strong running "side," the cannon may be made by the cue-ball crossing over from the side cushion, and, finally, "bringing the balls together" in the manner shown.

"AROUND-THE-ANGLES" CANNONS.

The most attractive form of cannon play comes with the movements of the cue-ball, as dictated by the use of "side," when made to cross the table in eccentric fashion, or be employed in fantastic play on the side cushions.

A very neat stroke is that illustrated on Fig. 135. By the means of strong running "side" the cue-ball takes three cushions, and works around, across, and up the table to find the second object-ball for the cannon. Moreover, the first object-ball can be steered somewhere by that part of the table where the stroke is effected.

On similar lines are the two cannons on Fig. 136 to be made. The only difference now is that the passage of the cue-ball is not such a lengthy one. It comes directly over from the opposite corner of the table fo the cannon by a thinnish, strong "side" stroke. In either instance the stroke can be made a "gathering"

one, leaving all three balls in close proximity after the
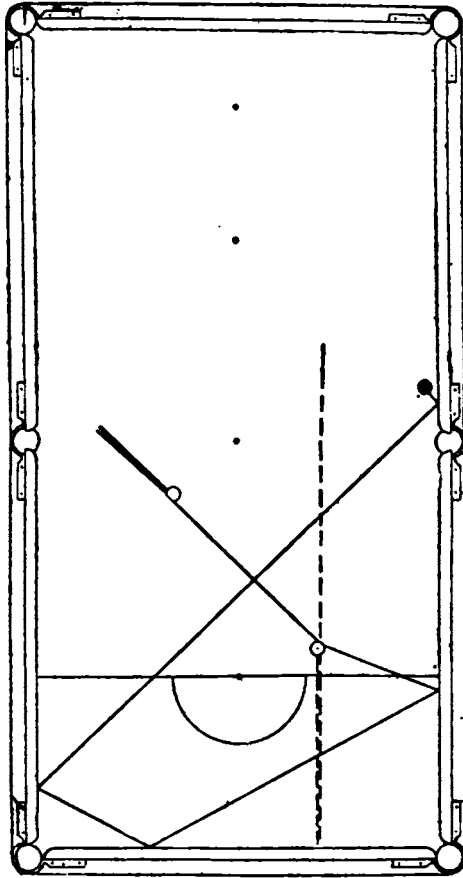
FIG. 135.—A three-cushion cannon, to make which the cue-ball crosses and recrosses the table.

cannon. A useful lesson may be gained of the very

strong influence that the corners of the table exercise upon a ball carrying "side" in these shots.
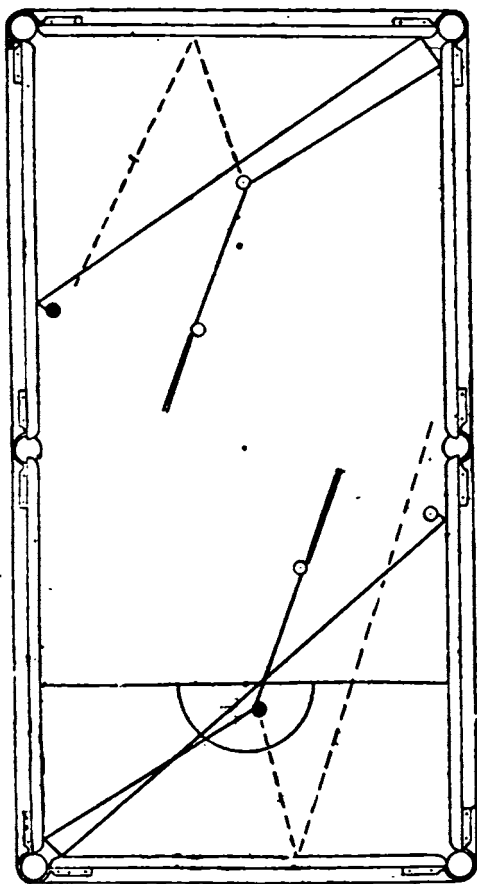
FIG 136.—Utilizing the corner cushions for cannon play at long range.

Fig. 137 shows the action of the cue-ball when

working around the opposite way of the corner "angles."
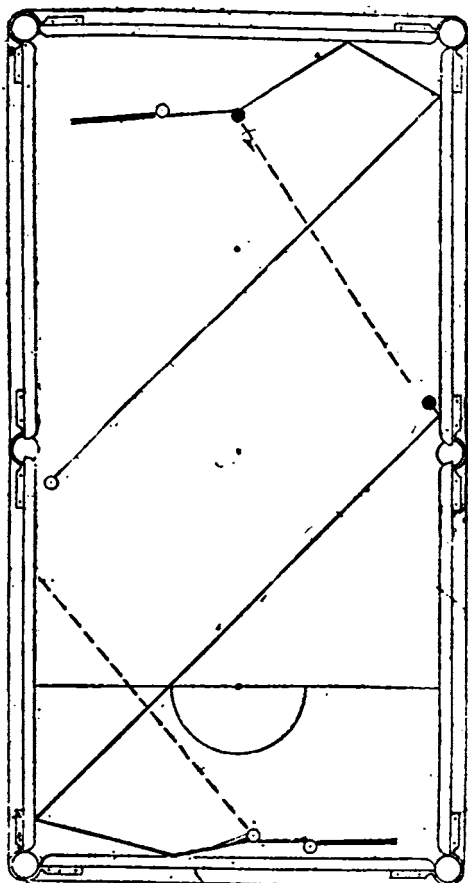
FIG. 137.—Cannons made by using strong running "side" from the corner cushions.

Again running "side" is the great factor in the stroke. It is barely perceptible until the facing side cushion is

met, when it bursts into full blast, throwing the cue-ball off at a most acute angle.
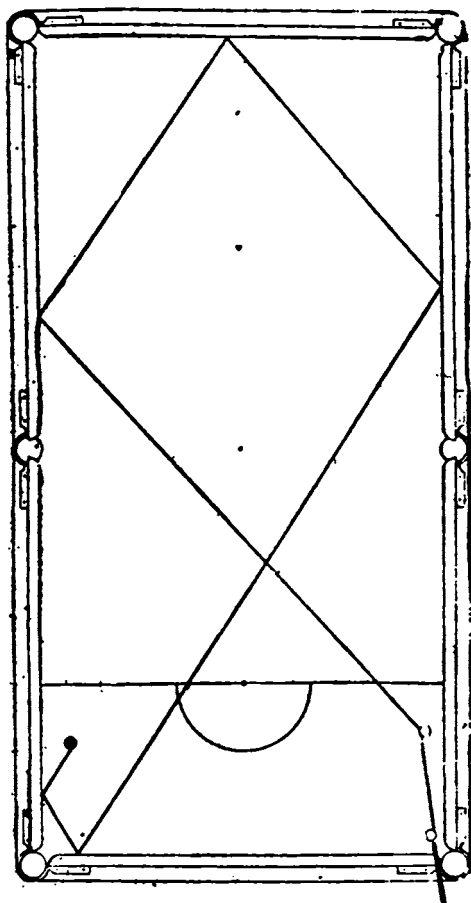
FIG. 138.—Five-cushion cannon.

On Fig. 138 is a representation of a gorgeous five-

cushion cannon. The object-ball is struck about
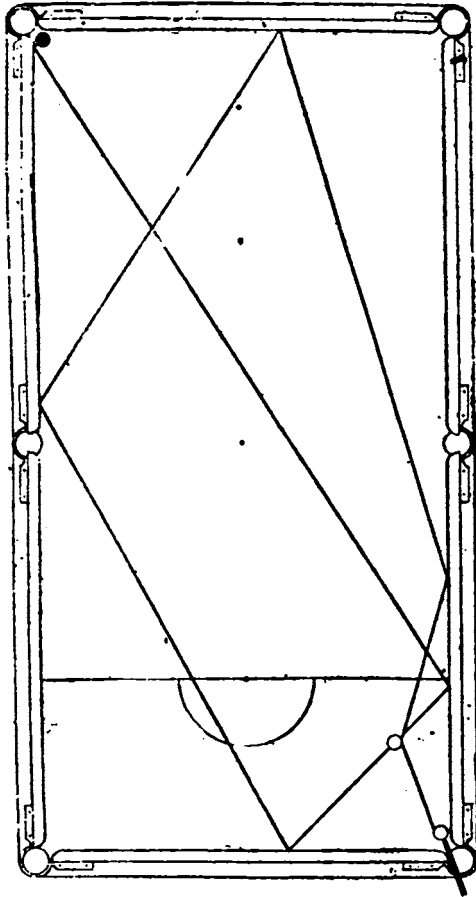
FIG. 139.—Cannon by sending the cue-ball twice round the table.

quarter-ball, the cue-ball above the centre, and with
some running " side."

Fig. 139 goes one better. It shows the cue-ball travelling twice around the table to find the second object-ball. Hit the first object-ball quarter-ball or more thinly, using left "side," and a very free cue. The cue-ball must have all possible power put into it.

"DROP" CANNONS.

The correct way of playing the "drop cannon" is, as in other stroke details of billiards, a most important point. There is a guiding rule to it just as much as there are a hundred and more others relating to good "position." The failures in most cases arise from the contact made with the second object-ball. The first one is accurately driven to the head of the table, only, however, to find the cue-ball awkwardly and unfavourably placed between it and the ball that has been cannoned upon. Want of method, in the average player, and what would have been a bad stroke for a professional player have caused the poor "position" the balls have assumed. Now, in all cannon play—in all scientific cannon play that is, and not a mere "banging up" of the balls—it is a first principle that the cue-ball should still command the two object ones after the stroke. Knowledge will show you the means of asserting this control over the balls, and practice will help you to gain it.

I intend laying down the basis upon which the "drop cannon"—the plain "drop cannon" which is employed to gather the balls between the two top pockets—should be played. There are many variations

of it, including the one-ball control. With the two object-balls presenting you with the cannon from the D, *you must play to hit the second object-ball on the side that the cue-ball approaches it.* Whenever the " drop cannon "
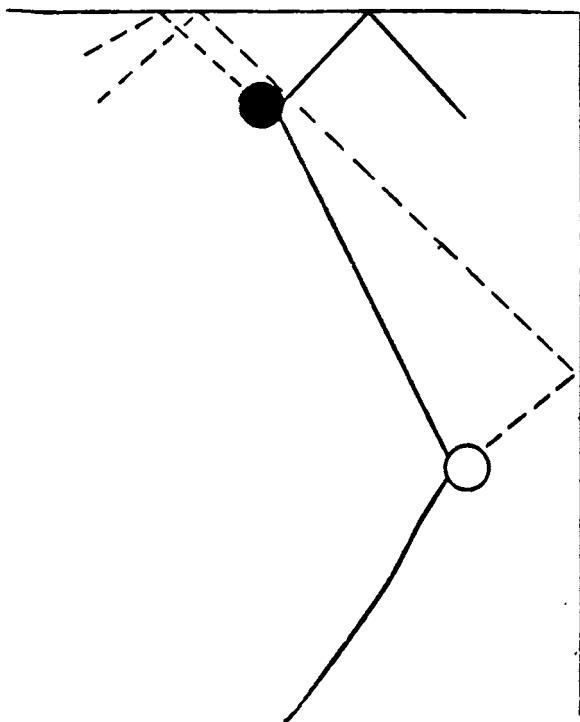
FIG. 140.—The correct way of playing the " drop " cannon.

is so framed that the first object-ball must join the second object-ball, there is no exception to this rule. In fact, in all this cannon play to drive the balls, or one of them and retain the other, at the head of the table, it is

seldom necessary to follow any other course. Nine
times out of ten a half-ball contact on both of the
object-balls will serve to *keep them in front of you*—the
best position for cannon play.   On Fig. 140 there is a
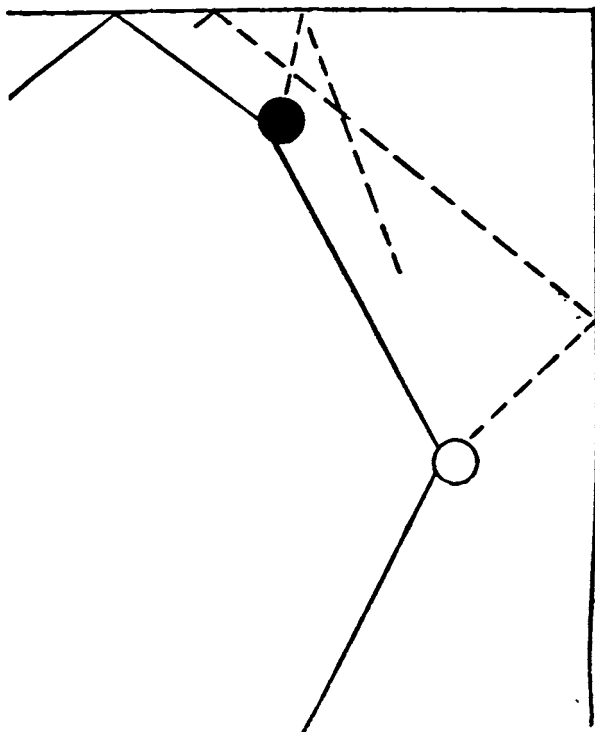
FIG. 141.—Taking the second ball on the wrong side.

representation of the "drop cannon," played according
to the rule given.   Of course, these cannons vary with
every stroke.   The slightest alteration in the pace of
the cue-ball, the least change in the degree of contact

with one—let alone both—of the object-balls, and the resting-place of all three balls is altered. One might play this " drop cannon" one hundred times, or one thousand times, and find that on each occasion the balls have taken up a different standpoint. Even the best of the professors of the art—the Roberts, Stevensons and Dawsons—would seldom, or never, no matter how long they tried, regain the exact positions that they have given to the balls in any single manipulation of the "drop cannon." In this notorious fact lies the beauty of billiards, with its ever-fleeting and ever-varying arrangements.

On Fig. 140, showing the "drop cannon" played as advised by the experience of the greatest students of the game, it will be seen that the cue-ball makes a proper contact with both of the object-balls. The first of these is taken nicely about half-ball and it crosses over from the side cushion to the neighbourhood of the red ball. When the cue-ball finds the latter, it is thrown away on to the top cushion to come about a foot away from it. Meanwhile the object-white is running to its destination, and is enabled to get there without the hindrance of a "kiss," which is one of the chief things to be avoided in the playing of the " drop cannon." By taking the red on its right side the cue-ball has opened up a passage for the oncoming white one. It has got out of the way, so to speak. This stroke (when understood) presents a very pretty movement of the balls. The crossing over of the first played object-ball, and the "open door" policy which the contact with the second one on its near side by the cue-ball creates, is attractive to a degree. You are bound to leave the balls in front

of you, and not get in between them, as so often happens, or tied up behind one of them, and so giving yourself no scope to make your next stroke.   The cue-ball is sure to be free and unfettered, commanding the two object ones, and only in the event of the latter covering dead in line on the cushion will you have a really bad "leave" to negotiate.   The importance of playing the "drop cannon" on the lines I have laid down cannot be over-accentuated, as most of the best positions are gained by *medium pace strokes*.   Too much force is the worst of errors.   To play them too weakly is to court entanglements.   The medium-pace stroke is here the happy medium, indeed.

Having shown the proper method of dealing with the "drop cannons," I will now reproduce some of the, perhaps, not unfamiliar effects that may, and inevitably do, arise from their being badly handled.   First and foremost, there is the contact with the second object-ball on its wrong side—the further side from the line of the cue-ball's approach.   This is the most prolific medium of the dreaded "covering" of the balls—that is, getting them in a line to need a skilfully played *massé* shot to extricate you from the entanglement.   You may be fortunate enough to get a good "leave" by striking the wrong side of the second object-ball.   By doing so, however, you are simply courting disaster.   The odds are that the object-balls will "kiss" and spread away in very unpleasant fashion.   I give an illustration (Fig. 142) of one of the many undesirable positions emanating from this wrong-side-of-the-second-object-ball cannon.

Then there is, too, the taking of the second object-ball too thinly—an almost certain generator of the

damaging " kiss."   The cue-ball cuts the red somewhere
over by the further corner pocket, or on to the top or
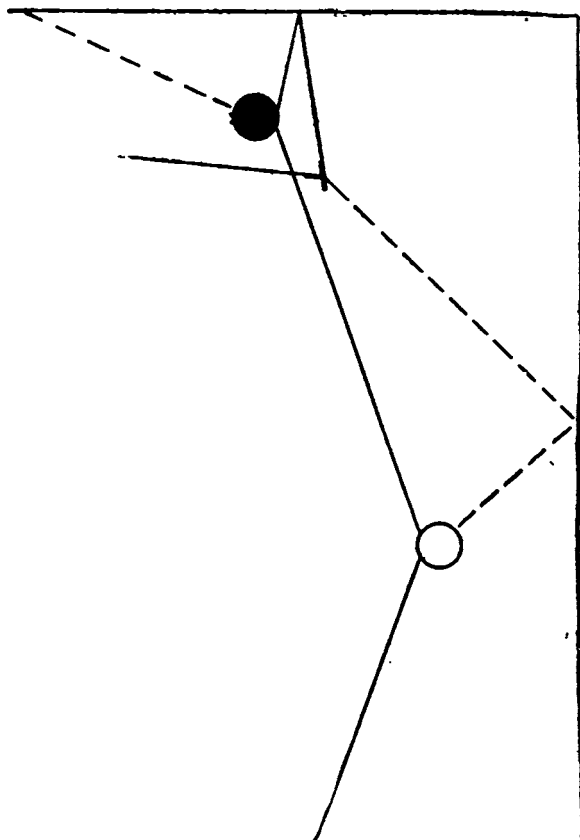
FIG. 142.—Taking the second object-ball thinly.

top side cushion—the way on the cue-ball naturally
decides its resting-place.   Coming nearly straight

back off the top cushion the cue-ball can hardly avoid
an impact with the oncoming object-white. The result
of their meeting is precarious to good after-position.
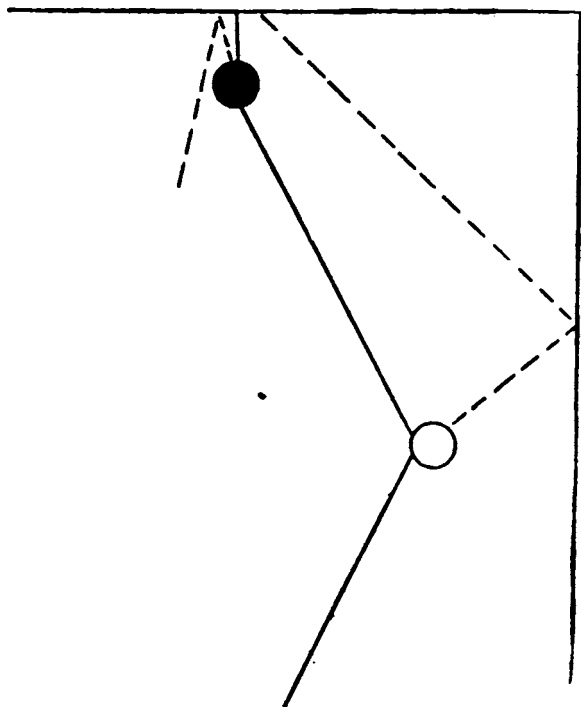This may be good, bad, or indifferent, according to the

FIG. 143.—Dropping full on the second ball.

vagaries of the balls. But leaving that all-important
matter to the "elusive spheres" is the worst of faults.
Your aim is to guide them into desirable locations, not
to trust to them to do so for you. Do all in your power

to avoid that " kiss," and try and take the second object as nearly as possible half-ball.

Worse, however, than either of the two errors I have pointed out, is the dropping full on to the second object-ball. There are no half measures about this being a grievous blunder, as you may find out for yourselves if you watch and note what comes in its train. Right on the second ball goes the cue-ball. The full impact takes all the life out of it, and under the cushion it heavily rolls. Nearly all the pace it carried has been transmitted to the second object-ball, which is thrown on to the top cushion, to rebound from it below the billiard spot. With the cue-ball on the cushion, and one object-ball a foot and a half nearly straight down the table, the outlook is hazy, is it not ? All now depends on the behaviour of the first object-ball. You will be inordinately lucky if it does enable you to open up a connection with a cannon or pocket. The odds are tremendously against anything happening to permit of either stroke coming easily to hand.

These illustrations may be taken as trite examples of the dangers that lurk in the making of that invaluable link—the " drop cannon "—in the chain of break-making.

CUSHION CONTACTS

The fringe of the table—its cushions—are the pillars of cannon play. By the cushions those beautiful gatherings of the balls after circuitous movements, and the delicate close-cannons, are enabled to be brought into the game. They embody within their folds practically

the whole of the scientific or mechanical side of billiards. For the cushions are really the most vital part of the whole fabric of a billiard-table. The pace they throw off the balls, their formation at the mouth-piece of the pockets, and the rebounding angle of the cue-ball from them, are the first points that a cultured player studies as he goes into action on a table which is strange to him. For billiard-tables differ more in these respects than all others combined. I once heard a great player say : " Billiard-tables are like men. They all have the same appearance, but I never yet came across two that were exact counterparts the one of the other." He was right, too. Indeed, one might have two tables made by the same mechanics, and even go so far as to have the cushions moulded in one set block (the old style of cushion manufacture), the slates of similar lengths and thicknesses, the cloth cut from the same length, but the outcome would be just the same—you could not get exactly the same type of table any more than you can two individuals of like thoughts, inclinations, and looks. There would be a difference in some essential or another, and in nearly every case this would arise from the disparity in the actions of the cushions.

In playing at a cushion, just as in playing at a ball, the point of aim is seldom the point of contact. Only one class of stroke, the straightaway, horizontal one, which causes the centre of the cue-ball to meet the cushion, allows the point of contact there to coincide with the given aim. This is a matter which will bear investigation. To that end a diagram (Fig. 144), will explain the disparity between the point of aim and point of contact. The cue-ball always hits the cushion sooner

than the point at which the aim is taken. The more
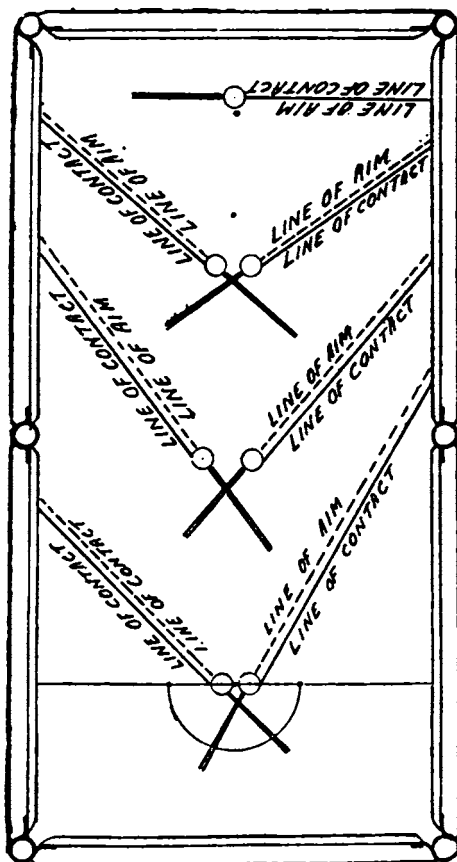
FIG. 144.—Playing on to the cushions.

oblique the stroke, the more will this be noticeable. It
is, then, the side of the ball that first hits the cushion,

and not its centre, as in the dead straight ball-to-cushion stroke. Often and often in shots which are first played by
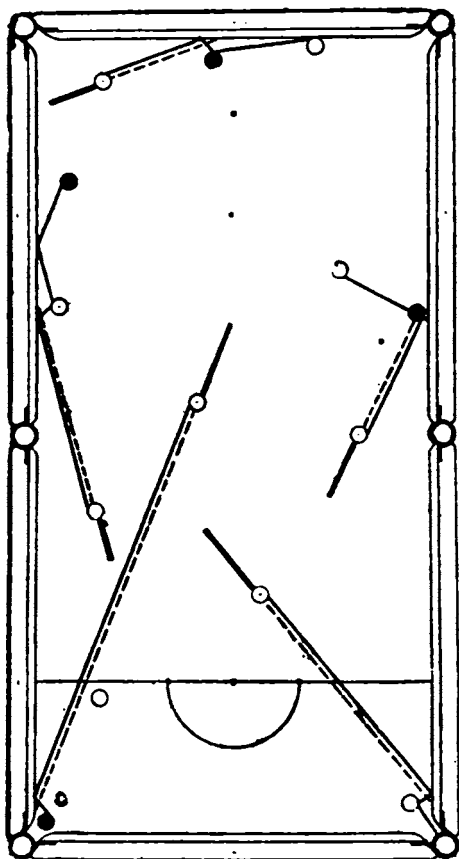
FIG. 145.—Various strokes played from the cushions.

a contact with a cushion, the latter is hit too quickly, and the object-ball missed from it, or hit on the wrong side.

These mistakes arise from ignorance of the very solid fact that, except in the straightaway stroke, a ball inevitably hits the cushion in advance of the place the player aims the cue at. This applies equally to an object-ball, which also, save and except in the straightaway run on to a cushion, takes a cushion sooner (that is, somewhere on its side) than it appears to do. Whenever cushioning the cue-ball, either directly at, or playing there from another ball, do not forget that unless the middle of the ball can be made to meet the cushion, it will hit the latter in advance of the point aimed for. The more slanting the ball's approach, the greater allowance has to be made to hit the cushion correctly. The limit of the divergence of the aim from the point of contact, is half a ball's circumference, just as in the ball-to-ball contacts.

Fig. 145 shows the various strokes which are most affected by the cushioning of a ball—cushion losing-hazards, cushion winning-hazards, and cushion cannons. In each of these the divergence from the point of aim on the cushion to the point of contact is very marked.

One of the most prominent effects to be noticed in cushion contacts lies in the pace the cue-ball carries. A fast-running ball will come ever so much more straight from the cushion than a slow-running one. This can easily be experienced by playing into baulk from the side cushion, as on Fig. 146. The slower the ball the more obliquely will it run, according to the angle it is played from. In these angle communications from the cushions by means of pace—fast, medium, or slow—one of the greatest features of billiard playing is compressed. This is saying nothing of the wonderful influence that

"side" exercises in accelerating or checking the force of
a ball, sending it acutely and briskly forward, or causing
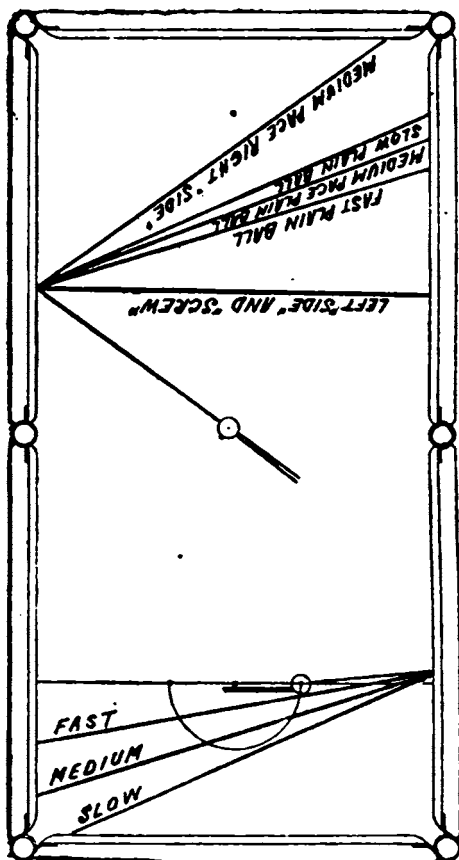
FIG. 146.—The action of "side" and pace on the cushions.

it to come dully and obtusely away from the cushions.
"Screw," too, and "top," tell very prominently there.

As delineated at the baulk end, on Fig. 147, the
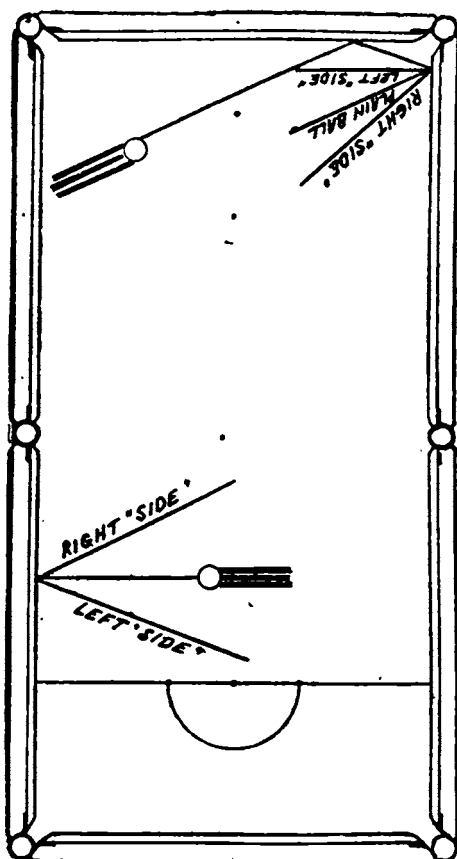cue-ball runs from three different paces, carrying right

FIG. 147.—The action of "side," direct and from the second cushion.

" side " in each stroke. In the upper portion of the table
a variety of shots on the cushion in which "side," "screw,"

and changes of pace are to be seen. The reason why a
fast ball is thrown off so much nearer to the straight line
than a slow ball, is to be explained by the fact that it
gives the cushion no time to throw it in the correct
angle. The slower a ball runs, the more it buries itself
into the cushion rubber, and the more acute is its throw-
off. Of course, everything depends upon the formation
of the "cushion-cap"—that part of the cushion rubber
which the ball meets. The sharper the point of the
cushion, the less truth of angle will the ball be thrown
away to. The greater the bulk of the rubber of the
cushion, the nearer will the throw-off be to the correct
angle of rebound. A cushion that causes the ball to
jump as it comes against it, completely spoils the
reflected angle of the stroke. It is, in fact, the worst
fault that a cushion can possess.

Fig. 147 shows in the strokes just above the baulk-
line, a ball carrying "side" making a full impact on a
cushion. The plain-ball stroke returns it straight back
to the player, but the right and left "side" throw it
strongly away in corresponding directions. "Side" tells
most when the ball is sent directly at the cushion, as
thus exampled, and it suffers more exhaustion than if it
had been played in a slanting line. For the more
obliquely a ball approaches a cushion, the less alteration
in the angle of rebound will there be. Running "side"
will, however, increase, and reverse "side" decrease, its
pace. But the real effect of the "side" will not be seen
until the ball takes a second cushion. Of these effects,
the strokes in the right top corner of the table on
Fig. 147, provide specimens.

The action of "screw" on a cushion, and cushioning

behind a ball for cannons or pockets, are respectively given in the chapters appertaining to these strokes.
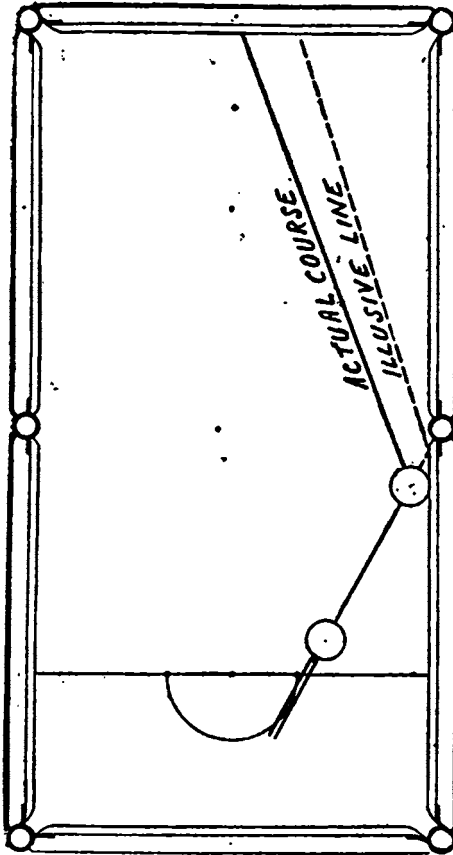
FIG. 148.—The object-ball's run from a cushion in a slanting direction.

An object-ball meets a cushion in just the same way that the cue-ball does. If it is driven in a straight line,

it will meet the cushion with its centre. Immediately, however, it comes from an oblique direction, its sides touch the cushion, and not its centre. As an example, Fig. 148 shows a stroke on to a "frozen" ball. The eye tells you that the natural angle of rebound through the centre of the object-ball is according to the intersected "illusive line." But the actual path proves to be much wider than that, owing to the simple fact that the cushioned ball has been forced off from its side and not its centre. In winning-hazard games, such as pyramids, pool, etc., this has to be taken into account when "doubling" a ball.

CHAPTER VII

THE DOUBLE BAULK

THERE is no class of stroke so little understood, or its great essentials so overlooked, as the double baulk. Players of all standards, amateur and professional alike, seem to rest content with a deportation of the cue-ball and the red ball into the baulk regions as soon as opportunity permits, when the object-white ball is off the table.

This procedure, in itself, is in accordance with the true principles of the game. Close up the game for your adversary as often as it pays you to do so, but see to it that in attempting to do so you are not closing up the game for yourself.

Now, just hark back to the innumerable occasions wherein you have securely found double baulk, and yet have not left yourself a 5 to 1 chance of scoring from the positions that the cue-ball and red ball have taken up. What benefit do you think you have then derived by making a double baulk at all? Little or none, you may take it from me, even if you have not given your opponent—that is, if he be a player of your own level—the better of the argument! If he finds that you cannot score, he simply safety misses out to the middle of the table, or in some snug corner whence

he can score. Like a good general, he "gets on" the red ball—places himself for a score from it, you know —and then what is your position? Why, that you have to open up the game for him! To open it up at a placing of the balls that he has figured out is to all intents and purposes "safe" to you, that is what has come in the train of your poorly-played double baulk. You cannot give a safety miss, for your opponent is in touch with the red. Therefore you try to make some difficult shot, or to steer clear of your entanglement by endeavouring to send your own and the red ball into safe quarters. And nine times out of ten you come to grief.

On the annexed figure (149), I give an example of the sort of thing I mean. The object-white has been sent into, or has fallen into, a pocket. So, with the red ball lying close to the baulk-end cushion, the player drops the cue-ball gently on to it. He hits it too full, with the result that the cue-ball stops close to the cushion and the red goes up near the baulk line. Now, how often have you seen this happen? It is only one specimen out of hundreds that I could give, yet it will suffice to describe my meaning, and go to prove my argument. What has often amused me, too, has been the complaint of the player whose ball "is in hand" that "I've only got a double baulk to go at!" He does not see that, by leaving himself no reasonably possible score from the red, the manipulator of the double baulk has fairly put himself out of court. When the latter was aiming at the red to make his double baulk, he held the key of the situation firmly in his grasp. But as soon as he made the ill-judged

stroke on the red, he handed it over to the other player.
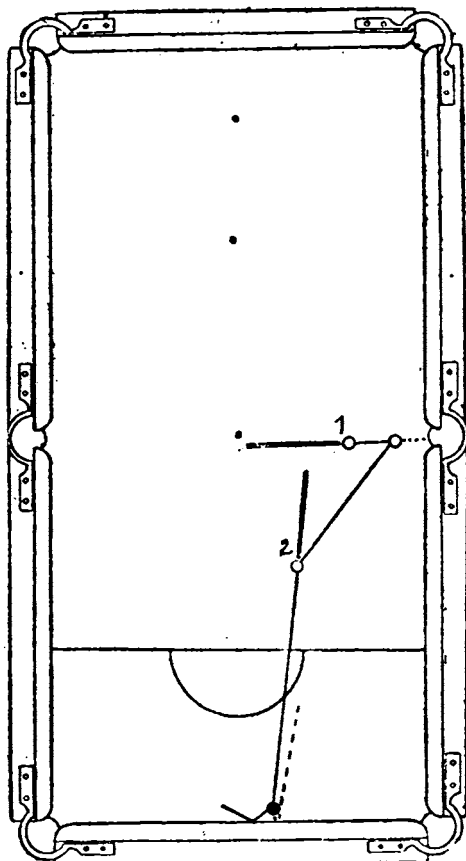
FIG. 149.—Putting the object-white down and double baulking—a bad
stroke on the red.

If possessed of any generalship at all, the last-named
would indubitably have safety missed to the middle of the

table, planting himself for a hazard off the red (Fig. 150). In such and similar cases the double baulk is a snare and a delusion. You must leave yourself a score " on " of some degree of simplicity, or you are simply playing into your opponent's hands. If it is important to leave the balls in good scoring position stroke after stroke in compiling a "break," it is at least equally necessary in the formation of your double baulk. Else of what use is it to you ? The very great majority of players are merely content to get the balls within the seclusion of baulk. Whether they stop there does not seem to concern them in the slightest. And, to tell the truth, it really should not ; for the opponent, whoever he may chance to be, seldom or never has the *nous* to reap the benefit that he could from a badly-played double baulk. He will more often than not try to make a cannon or to shift the balls, although the odds may be 50 to 1 against his scoring. There may be no earthly reason in trying to stir an object-ball, nor in providing the double baulker with a prospect of getting out of his uncomfortable quarters by the medium of the played white ball stopping in a favourable spot. He does it all the same, though. Result : the one never gets the lesson his careless or sadly misjudged double baulk might have induced, and the other would laugh to scorn any statement that very frequently a double baulk may turn out advantageously to the player who has it administered to him.

Then there is the other side of the question—the leaving of a ball or balls too close to the pockets in making the double baulk. Naturally it is not nearly so grave an error as leaving yourself no score, but it is bad

enough. For there is no easier ball protected by the intervening baulk line, unless it be those close up to its
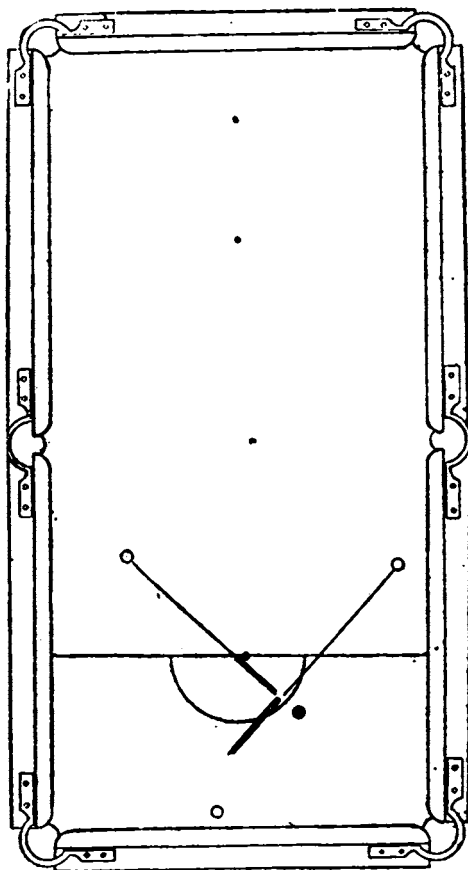
FIG. 150.—Neutralizing the double baulk by giving an optional safety miss.

border and out towards the side cushions, than that which lies near a pocket. There are so many passages

to it. Even the player in his novitiate can steer his ball pretty accurately to and from these points. There is the stroke from the side cushions, the up to and back from the top cushion, and the all-round-the-table stroke, each and all effective in the shifting of a ball or balls lying handily by a baulk pocket.

What one has to avoid in the placing of the balls for a double baulk are the two extremes—leaving them quite unfavourably for a score, or too easily by reason of a ball being almost in the jaws of a pocket.

Quite the customary plan of the everyday player is a frantic desire to stir up the object-ball when the latter is behind the baulk-line and he happens to be playing into baulk. Having either put down the object-white, or by some chance it has fallen into a pocket, he finds the cue-ball out in the middle of the table—in mid-ocean, as I have heard it described—and the red ball lying in the baulk as on Fig. 151.

Nine times out of ten you will see him gaily play on to the red ball. He is not satisfied to have it placed as nicely as he could wish for, and is so afraid also of giving a point away by making a position miss, that he as often as not bungles the thing up dreadfully. Perhaps he plays too hard, or perhaps he sends the red ball right in front of the pocket opening, to give his opponent a nice opportunity of clearing it from there, if not to drop it in. Instead, had he given a miss into baulk, he would in all probability have retained the red ball's favourable location, while being almost certain to direct the cue-ball to a comfortable standpoint.

Once you have the red ball well placed at anything like a scoring angle with a corner pocket, when it lies

inside the baulk line, and you intend leaving a double baulk, there is really no need to play upon it. Your game then is very plainly to direct the cue-ball to a position which shall command the services of the coloured ball. To disturb the latter is to double the difficulty of obtaining a desirable position, a risk no good player will take. You must use your judgment
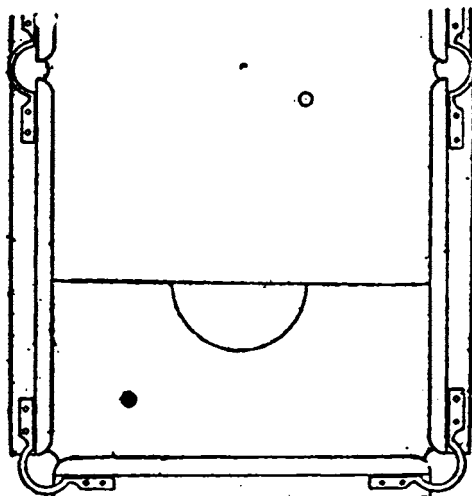
FIG. 151.—The object-white is pocketed. What is now the best policy to adopt?

and powers of direction upon the cue-ball to put you in scoring touch with the already nicely placed red ball. For it is a much more simple matter to control one ball than two, as I need hardly tell.

Say, now, for instance, that the object-white is off the table, and the balls are left as on Fig. 151. What need is there to play upon the red? It lies within easy

scoring distance and latitude of a pocket, and any decent sort of stroke on the cue-ball ought to provide such a certain after score that the non-player must perforce try and remove the red ball. The odds are always against his doing anything of the kind, for very much more often than not he will only put another ball upon the table for you to perform upon.

To try and improve an already likely-looking standpoint of the red ball is not good policy. You have it in good position, and the game is to keep it so. According to the skill you possess, make the cue-ball assume the best position that you think will enable you to score from the red ball in the way that you most favour.

Fig. 152 shows a miss into baulk. It is not an ordinary miss, though infinitely safer than is the usual method of sending the cue-ball directly into the baulk sphere. Playing around the red on to two cushions gives you a much better chance of keeping in touch with the red ball for the losing hazard—a more certain way of opening up the game for the average player than the winning hazard is—than a straightaway stroke on to the bottom cushion would. The line the cue-ball takes in this two-cushion stroke guarantees you a more prolonged angle line than the straightaway miss into baulk illustrated on Fig. 153.

This two-cushion miss around the red is sound, and is the game in every respect. There is less chance of the cue-ball coming out of baulk, for one thing, and for another the fact that you are granted the latitude of a foot or two in which the losing-hazard is all the while left "on" after it has struck the second cushion—the baulk-end one. To play straight into baulk is attended

with some danger, with a decided drawback in the shape
of the small margin you get if you only slightly mis-
judge the strength of your stroke.

In your eagerness and over-anxiety not to send
your ball right under the baulk cushion, you can easily
touch it so gently as to leave it short of the baulk line.
At the same time you can play it too hard, and going
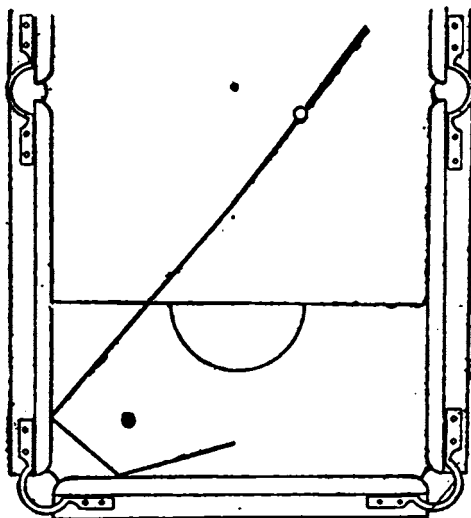
FIG. 152.—A " position miss " around the red ball.

straight into baulk, the ball comes straight out again,
thus making the shortest possible journey to the open
field of play again.   With the two-cushion miss shot,
however, your ball has to travel several feet further
before even reaching baulk line.   It would have to go
right across baulk before getting clear of it, an advantage
that it does not require me to dilate upon.   Just to test

the value of these two ways of double baulking from the position given, play the mentioned strokes, and see which you would take as the most advantageous of them!

I endeavour to show on Fig. 153 the limited area that the straightaway stroke into baulk—the wrong way of
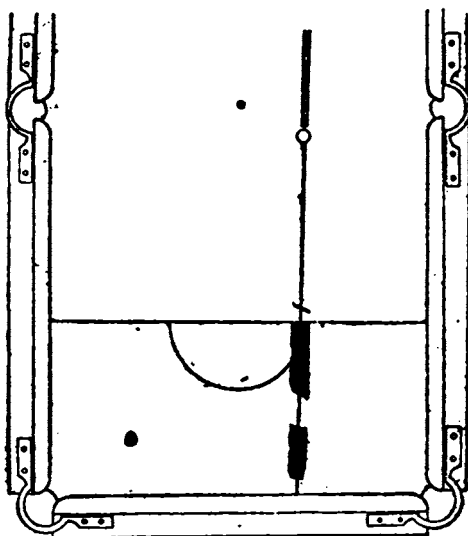
FIG. 153.—Showing the defects of the straightaway run into baulk.

giving the kiss, as I have said—provides for the cue-ball to get placed for the losing hazard you wish to "leave." The two gaps in the widened black line which stretches from the baulk line to the baulk cushion approximately represent the best standpoints that the cue-ball may hope to secure.   And the odds are that neither you nor

the best player in the land will find either of them at
the first time of asking, nor the second, for the matter
of that. Circling the red ball by the two-cushion miss,
the odds are unquestionably largely in favour of your
disposing of the cue-ball as you would wish to do.
Even if you are playing on to the other side of the
table, as in Fig. 154, it is the better policy. You can play
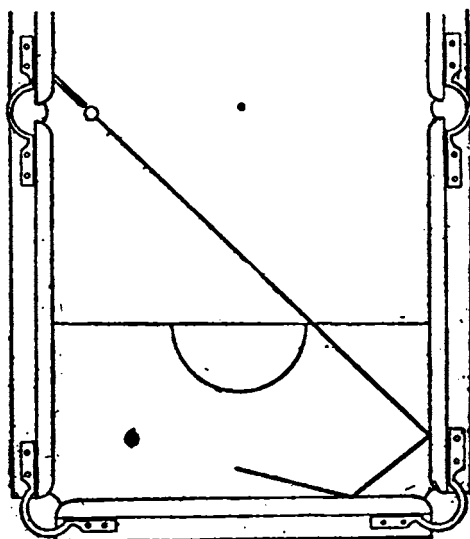
FIG. 154.—Playing the cue-ball around the further corner of baulk.

into baulk without bothering too much—in reason, of
course—as to what pace your ball is carrying.

An excellent rule, and one that should be borne in
mind, is, *when playing into baulk always try to make
your ball hit a cushion before it reaches the baulk-end
one.*

The ideal position that one should try to work up to in all double-baulk "leaves" is like this:—
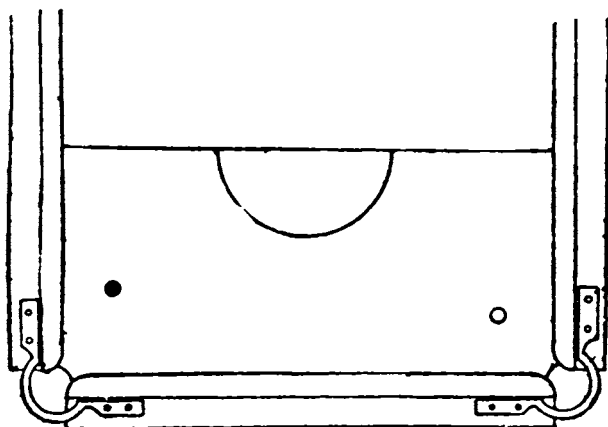
FIG. 155.—The ideal double-baulk "leave."

Here you see the two double-baulked balls on the extreme sides of the baulk space, one in the right-hand corner and the other in the left-hand corner, almost as far apart, in fact, as they can possibly be. From every point of view, such a position is favourable to the player who obtains it. First, he is bound to leave himself an easy stroke to follow on with ; and secondly, he forces his opponent to play out at the red ball. Thus, unless the latter ball be pocketed, against which proceeding the chances are very far from being propitious, the double-baulker has the third placed on the table for him somewhere (as must be the case) adjacent to his own or the red ball.

Crowding the two balls you make your double baulk with, to stop inside baulk, one by the other, is not good

billiards. Your idea all the time should be to keep a
wideish space between them, yet leaving yourself some-
thing of a scoring nature "on," which, I may at once
say, you are considerably more likely to do than if you
restrict the gap to small proportions. Then, too, there
is a great deal less likelihood of your opponent scoring
by the medium of a cannon. Disposing them in the
opposite corner of baulk, as nearly as you are able to,
limits your opponents scoring prospects to the small
dimensions of pocket. Every time you will see him
work on the red ball where you stationed it nicely for
your next stroke—that is if he is any sort of a player at
all. And he will run that risk we all know so well of
"running a coup" when endeavouring to remove a ball
protected by baulk that looms threateningly by a pocket.
In this regard one is often forced to the conclusion that
those baulk pockets possess some degree of magnetic
attraction when one plays towards them from the side
cushion. Playing on to a ball that hovers by these
quicksands is a procedure fraught with considerable
danger. Therefore it must be pretty obvious that the
player who practically compels his adversary to do so
has placed him at a considerable disadvantage. He
cannot afford to leave the red ball where it is, yet the
odds are that he will hardly better his position even
should he move it. If he misses it he gives to the
double-baulker the use of the object-white, which must,
according to a sensible reading of what will tend to
minimize the error, remain in company with the other
balls behind the baulk line. For if the object-white
quits the baulk region, it leaves the double-baulker
more in command than ever. Thus, however the point

is threshed out, the argument as to the desirability of leaving the two balls in the opposite corners of the baulk sphere only becomes strengthened.

Now, supposing that, in making his attempt to shift the red ball from its favourable position by a pocket, the player "runs a coup." Should this happen, as is quite probable, it is then that the tactics of the double-baulker to alter the disposition of his double baulk. In the course of running the "coup" his opponent has been granted what is equivalent to a sighting shot in rifle-firing, an advantage of great importance. He has failed to gain contact with the red ball at the first time of asking, but in so doing has probably found the correct focus. At any rate, you are entitled to the assumption that he will not miss it at his second essay. Try the thing yourself, and observe how your initial failure reads you a lesson for your next attempt. You have put on a trifle too much "side," or you have erred in the matter of pace (more likely the latter than not). Anyhow, whatever the reason, you can hardly fail to appreciate it, and endeavour to remedy it.

With this to consider, it is only exercising common caution to vary the shape of your double baulk. Shifting both balls and making them cross the board to each take what has been the other's ground, as shown on Fig. 156, is a high-class form of such play, but still by no means difficult. You only require to drop a slowish ball on to the red, guiding the latter to somewhere near the centre of the end cushion, to prevent such a calamity as its dropping into the further pocket. Through the red your own ball goes, taking the side cushion and coming out towards the D, to stop overlooking the red and the right

baulk pocket.   Thus the whole aspect of the double
baulk is changed.   Instead of playing in a right-handed
direction, as before, your opponent has to steer his ball
a left-handed course, which will go far to mar the
experience he gained at his first try.

If he should happen to "run a coup," as is quite
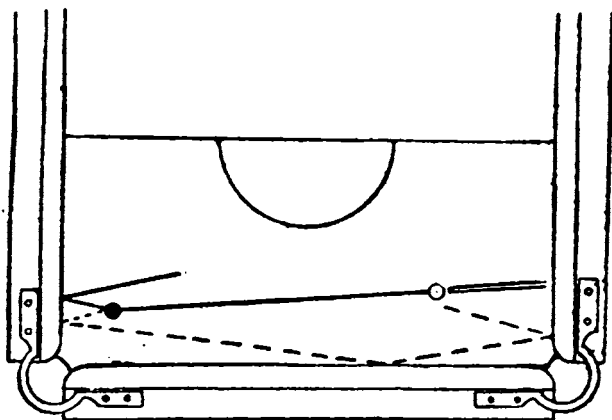likely, at his second attempt to stir up the red ball, then

FIG. 156.—Making the baulked balls change over after the other player has
" run a coup " in trying to break up the position.

again it is your best policy to alter the form of your
double baulk.   This is pretty plain, and of the soundest.
You are trying to baffle him at every turn, and he to
frustrate your well-laid schemes.   If once more you see
your way to shift both the balls, by all means do so,
but it is advisable to run no risks in doing it ; for you
can accomplish much by a judicious placing of your
cue-ball.   It can be used as a shield to the red ball—
the ball that, as I have said, your opponent will ever be

trying to knock away from, or into, the pocket it stands nearest to. Here is an example of such a stroke :—
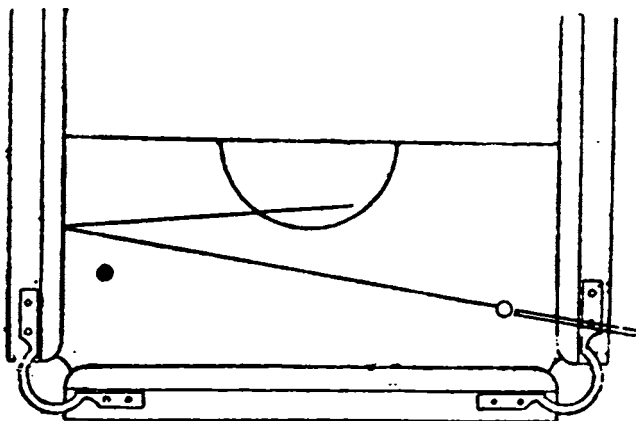
Fig. 157.—Shielding the red ball by covering up the line of your adversary's attack with the cue-ball.

The double change of position does not appeal to you, owing to the fact that the cue-ball is lying some-what below the line of the red ball. It means a danger to both balls, the cue-ball of leaving baulk, and the red ball of going into the opposite corner pocket. So you make your white ball fulfil a mission of protection to your red ball. Your aim is to place it right in the line of the path that your opponent's ball must take from the right side cushion, in the manner that the diagram will go far to explain.

A stroke of the same nature as the last one is that when you may have happened to play a four-shot when the red has been behind baulk. The red ball is handily situated by one of the baulk pockets. You play from

"hand" off the side cushion into baulk in the customary fashion. But there are two things that you have to take notice of in the stroke. The first is that you do not play into baulk off the same cushion as your opponent will do when he makes his attempt to remove the red ball. You will not have to study hard or long to divine that he will play from the *right side cushion*, if he can get a clear course to the red ball from it. So
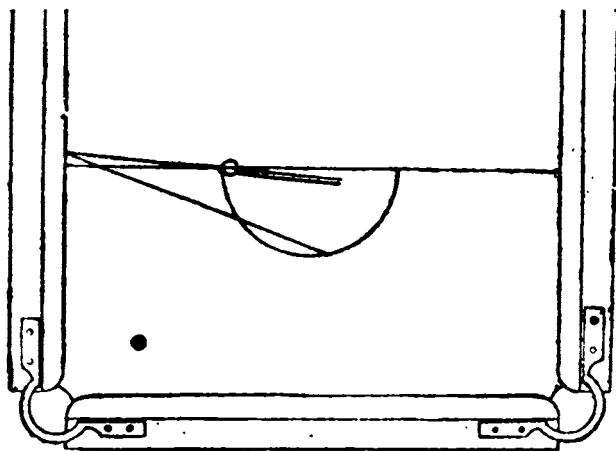
FIG. 158.—Playing into baulk from the opposite cushion to that which your adversary will attack the red ball.

you turn your own ball into baulk *viâ* the *left side cushion.*

I recommend this playing into baulk from the *opposite side cushion* to that which your opponent will operate upon in his inevitable attempt to remove the red ball, as a prevention of the *guiding line that your shot from the same side cushion gives him.* It may not

be very apparent to most, but I can vouch for the fact
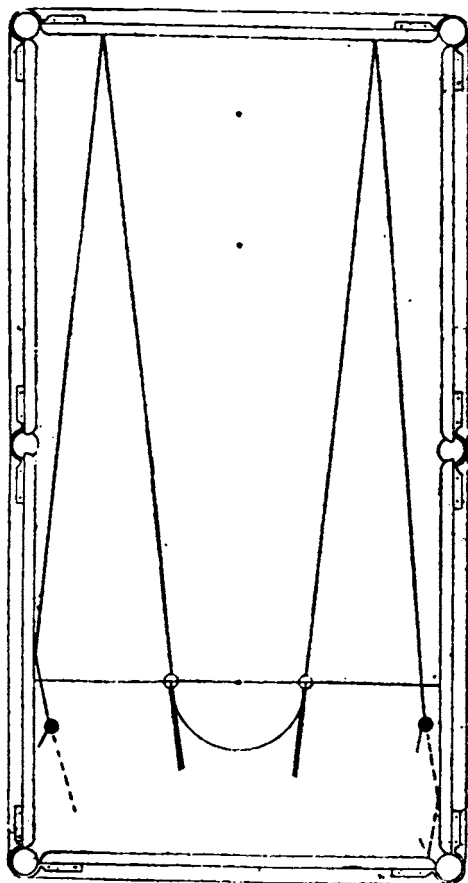
FIG. 159.—Playing back into baulk from the top cushion when the cue-ball is in hand and the red badly placed behind the line.

that a stroke into baulk from the same cushion that he will play from himself is decidedly helpful to an

observant player. He has the advantage as card-players say of "following suit."

Further than giving him no inkling of the angle the side cushion he will play from is throwing, you have a second consideration to study when playing into baulk as in the last figure. This second consideration is the closing up of the red ball from your opponent's attack from the side cushion. Shelter it by a stroke into the middle of baulk, forcing your adversary to either go out for an improbable cannon, or to send his ball on to the top cushion, and so back to the vicinity of the elusive coloured ball.

There is a trifle more in double-baulk play than occasionally meets the eye.

Very frequently a player finds himself "in hand" with the red ball inside the baulk line, but so awkwardly placed that it is impossible to "leave" anything approaching a desirable position by playing into baulk from the side cushion in the usual way. As I have explained, a double baulk, to be of any service to its maker, must be so formed as to give the cue-ball the best possible chance of scoring from the red. Therefore, when you find that the usual miss into baulk from the side cushion cannot give you a good after-position, play up and down the table from the top cushion as in the two strokes on Fig. 159. Your idea is to play with just sufficient "strength" to bring the cue-ball back on to the red, and so guide it nearer to the corner pocket. If you miss it no harm will be done, providing, of course, that the cue-ball stops in baulk. Close to the cushions the red is not at all difficult to hit, nor the pace difficult to judge.

MAKING DOUBLE BAULKS.

The most constantly recurring positions which suggest
a double baulk—or rather, an attempt at it—to the player
in possession of the table, come when the red ball is close
up to the side cushion, either below or above the middle
pockets, or when it is placed on the billiard spot. And
of each and all of these strokes there are an infinite
variety. The most generally known among them I take
to be the easy shot on Fig. 160, which can be played from
an object-ball below either middle pocket. There is no
trouble in bringing the red ball inside the baulk line, and
very little more than a matter of gauging the pace to be
employed in causing the cue-ball to join it there. Plain
ball or by using "side," it is of no consequence in what
manner you strike the cue-ball, so long as you get it into
baulk, and *on the same side of the table as it first found
contact with the cushion.* As I have frequently mentioned,
it must be the player's aim to separate the balls as much
as possible when gaining a double baulk, both with the
view of making a score or shifting of the balls a difficult
proceeding for his opponent, and the leaving of a better
defined stroke when it comes to his turn to again play.
For to get the two balls cuddling one another or within
the radius of a few inches is equivalent, as you will find
in most cases, to having wasted your opportunity of
closing up the game. You thus present your adversary
with a fine target to aim at. If in his judgment the
placing of the double baulk spells danger to him, he will
endeavour to break up the position, and the odds are
that he will do so if you have left the balls close together.

On the other hand, the "leave" may tell him that your prospects of scoring are far from being good. Then he

FIG. 160.—A double baulk cutting the red thinly, and sending the cue-ball around the table.

will not improve them by depositing his ball in some almost inaccessible part of the table. Therefore you

must try to play the double-baulk stroke with clear ideas of what is demanded of it, and not with the sole purpose of bringing the two balls anyhow and anywhere into baulk. You must try to make the red ball do a little more than cross the table to stay somewhere over in the further baulk corner of the table. If you play it from the right side of the table, you want it to drop anchor in the left baulk corner, or at any rate somewhere on the left side of the baulk region, and *vice versâ* if it is played from the left side of the table.

Remember, the more thinly you make contact with the object-ball, the less distance will it travel. Then, too, the less pace is taken from the cue-ball. For, never lose sight of the fact that the greater the degree of the impact between the cue-ball and the object-ball, the more the latter gains, and the former loses, in pace. All impacts tend to depreciate the velocity of the cue-ball, the thinner ones, naturally, however, nothing like so much as the fuller ones. So in the case of the double baulk on Fig. 161, it will be found that a thinnish stroke on the object-ball will serve the double purpose of controlling it to its proper sphere (the left side of baulk), and at the same time assist in the cue-ball making its circuit of the table to come within baulk where it best suits your after needs (the right side of baulk). This kind of double-baulk stroke may be played whenever the object-ball is out of the "short jenny" or "long jenny" ranges right from the edge of the baulk line up to within a foot of the middle pockets.

With the object-ball placed further on towards the middle pockets than in the instance I have just dealt with, there is a pretty variation of that stroke (see Fig. 161).

For now it is the object-ball which is driven around the table, and the cue-ball that crosses over and comes into
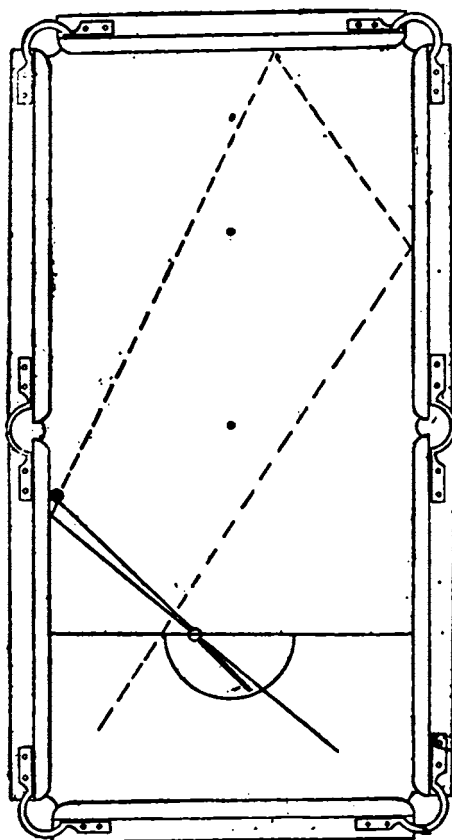
FIG. 161.—Double baulk by screwing the cue-ball back, *viâ* the side cushion, and making the red travel around the table.

baulk. Again the disposition of the two balls on either side of the baulk area is the chief care of the player, and

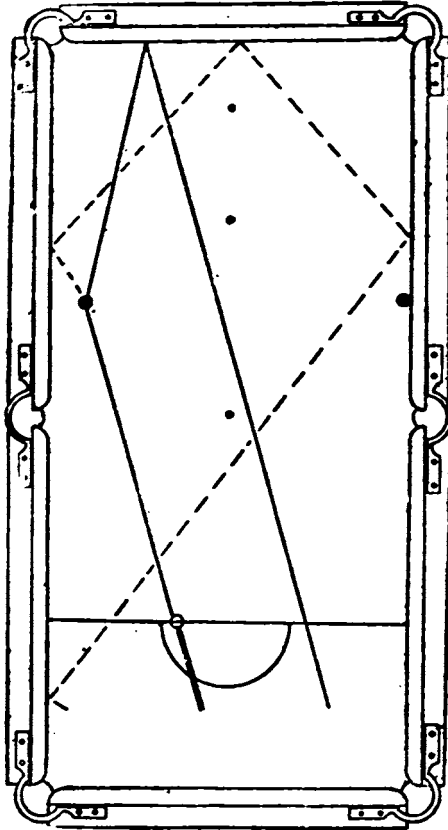this time the shot is not so easy of accomplishment. The cue-ball has to be "screwed" a little more than half-ball

FIG. 162.—Double baulk, running through the red, making the two balls come into baulk from the top cushion.

on to the red, a stroke not exactly difficult, but which on experiment it will be found not easy to accurately gauge

the pace of.   Hit the cue-ball too hard, as most have a
tendency to do when "screwing," and you will find it
intrenching upon the ground in the left side of baulk
which you have allotted to the oncoming red ball.   The
most reliable way of playing the shot is to use very little
more than medium pace, and use more of a "stun"
stroke than a "screw."   You will thereby, in great pro-
portion, make your double baulk assume the desired
shape—the two balls in opposite sections of baulk.

A very attractive, and, at the same time, simple kind
of double baulk can be made when the object-ball is by
the side of the table and above the middle pocket.
Fig. 162 shows an example of this kind of stroke, which
is greatly in vogue with the professional players, for its
ease and the certain means it gives of leaving good
position.   Three-quarter-ball on the red, causing the cue-
ball, which should be struck high up to get plenty of run
on it, to make a half run-through shot, and a nice free,
fast stroke will, on most tables, successfully consummate
the double baulk.   It does not matter whether the
object-ball is touching the side cushion or whether it is
six inches away from it, as the stroke can always be
accomplished by a slight variation of the placing of the
cue-ball.   I notice that few players venture to tackle the
object-ball when "tight up" to the cushion, although
they invariably attempt the double baulk when they see
any space at all between object-ball and cushion.   Well,
for the information of players in general, I unhesitatingly
state that the double baulk may be as easily made with
a "frozen" object-ball as with one inches away from the
cushion.   Try it, and see for yourselves!

Fig. 163 shows an ingenious handling of the two

balls. The red is well inside baulk, and the cue-ball outside, but near to the baulk demarcation line. To drop straight and fully on to the coloured ball, driving it down by the corner pocket, as the ordinary player would inevitably do, is not billiards at all. You simply make it the easiest of targets for your opponent. He "has a go" to stir it up, and it is good odds on his
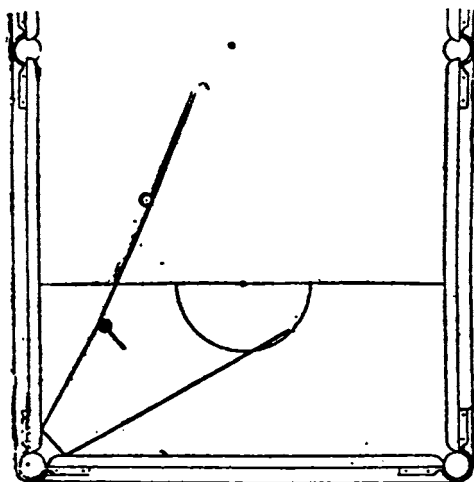
FIG. 163.—Cutting the red thinly to send the cue-ball into position on it for a losing hazard.

doing so. Any stroke whereby the chances of the game are turned against you is a bad one. Under exceptional circumstances you may be forced to play such, but, if you take my advice, do not select the double baulk as a medium of experiment. There is no more double-edged shot to be found in the repertory of billiards than the double baulk. It has a decided "boomerang" tendency—that is to say, an imperfectly

played or administered one hits you back in a way you
can barely appreciate until you mishandle one in the
stress of a trying handicap game or match.

Now, in reference to the double-baulk stroke shown
on Fig. 163, I analyze it that it could have been played,
and properly played, in each of three different ways.
By sending the cue-ball obliquely into baulk from the
further side cushion, a losing hazard might have been
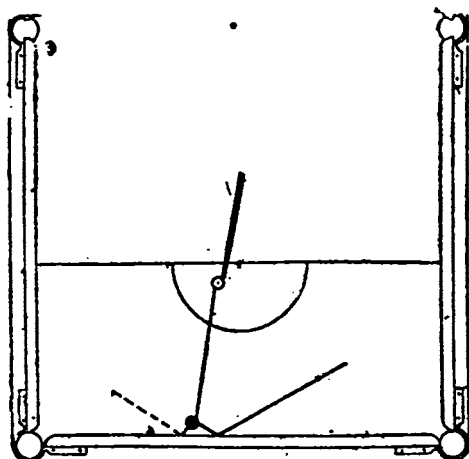
FIG. 164.—Playing on the red to open up a favourable "leave" in baulk.

secured for the succeeding stroke.   Then, too, by play-
ing on the left side of the red, using plenty of running
"side," a winning hazard or run-through losing hazard
would assuredly be "left on."   In both cases the balls
could not but be left apart.   Still, the position retained
or freshly occupied by the coloured ball would have an
element of unsoundness about it.   The first stroke
would leave it an easy prey to a stroke from the nearest

side cushion.   The second shot guards the red ball
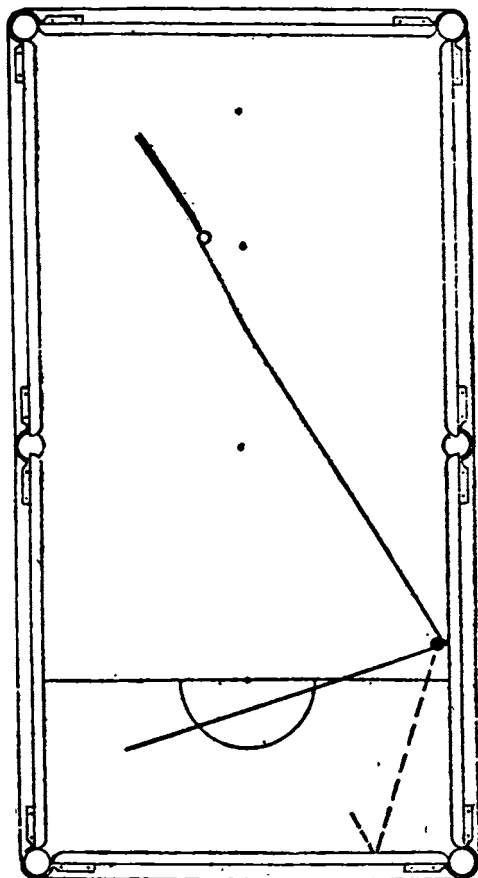
FIG. 165.—A thin slight reverse " side" stroke on the red ball leaving the
double baulk, and the two balls well apart.

better, though keeping it too much in the angles of the
left corner of baulk.

Fig. 163, however, shows what I consider to be the correct manner of double baulking with the balls placed as the figure will approximately show. Clipping the red very thinly with a gentle ball carrying some measure of left "side," the red is turned a few inches towards the middle of the baulk enclosure. The cue-ball takes the side cushion a little above the corner pocket, and, being turned on to the end cushion, runs thence somewhere up by the base of the D. A good game is provided for the maker of the double baulk, which, also, he will not improbably have an opportunity of resuming connection with, as a disturbance of the position is none too easy.

Fig. 164 gives an illustration of the best possible means of playing the red ball into favourable quarters, yet leaving the two balls well apart, and not at all easy to disturb.

On Fig. 165 an everyday sort of double baulk is presented. This must be played according to the double-baulk system—that of leaving the balls apart. By striking the red ball very thinly over towards its left side it is cut into baulk, the cue-ball crossing over to the other side of the table. The stroke may also be played by first striking the cushion just in advance of the red. This way of gaining the double baulk is nothing like so simple as playing directly on to the red, although I have more than once found it useful. A very common stroke, too, is exemplified on Fig. 166. It is a full run through the red, driving the latter across the table into baulk, somewhere in the further corner of it. By employing strongish right "side" the cue-ball regains in speed by contact with the cushion what it

has lost by the heavy collision with the red.   Running
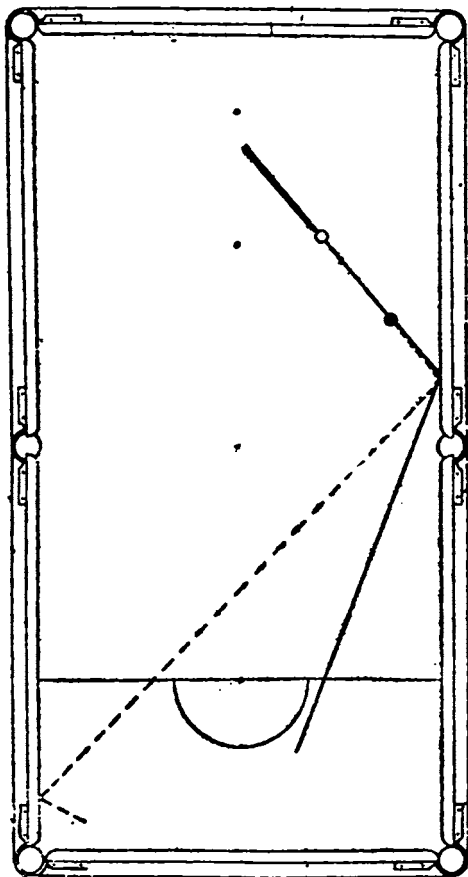
FIG. 166.—Double baulking, by running through the red with strong "side."

side accelerates the pace of a ball when it meets a
cushion.   And in this stroke the high striking of the

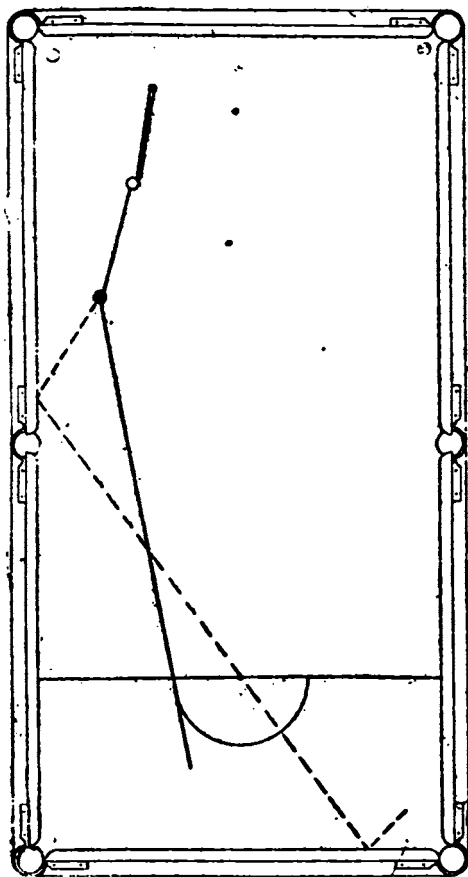cue-ball and the right "side" it is loaded with carry it

FIG. 167.—Another run-through double baulk.   The cue-ball carrying top left
"side" does its work out on the bed of the table.

on to the baulk end of the table. Furthermore, the
right "side" has the effect of pulling the cue-ball into

the side of the table it played on—the natural result, as I have often explained, of the reverse action of running "side" acting against the "nap" of the cloth.

In some respects the double baulk illustrated by Fig. 167 is similar to the one with which I have just dealt.   Here, again, we have a run-through running "side" action of the cue-ball, and a doubling of the red into baulk.   Once more, too, the "side" pulls the cue-ball in to the side of the table it is propelled from. The only distinguishing feature between the two strokes lies in the fact that the cue-ball does all its work this time out on the bed of the table.

Perhaps the most frequently recurring position calling for a double baulk is when the red ball is on its own landmark — the billiard spot.   Often enough a player has put down the object-white voluntarily or involuntarily, and started operations upon the red ball. He not improbably finds that a winning hazard or two on the spotted red ball are necessary.   One of these is badly played, leaving the cue-ball far out of a favourable standpoint for a second one.   It is close to the side cushion, thus accentuating the difficulties of a score.   The better the class of the players opposed, the less likelihood is there of the winning hazard being now attempted.   To play a single baulk—that is, to solely send the cue-ball into baulk—is to give away any advantage that you have in the way of possession of the table.   This the good player is, or should be, very loth to do.   He has an almost assured double baulk ready to his hand, and it is the correct game to play it.

Say, for instance, that the approximate position of the cue-ball may be gauged by an inspection of Fig. 168.

It would be a venturesome player who would try the
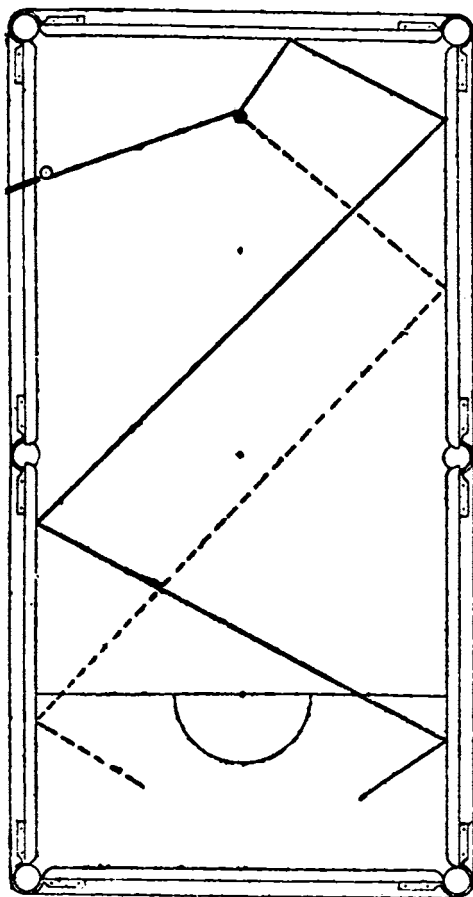
FIG. 168.—A double baulk, carrying the red ball from its spot behind the line. Top, right " side," and a quarter-ball contact required.

winning hazard from this position, the more so as his

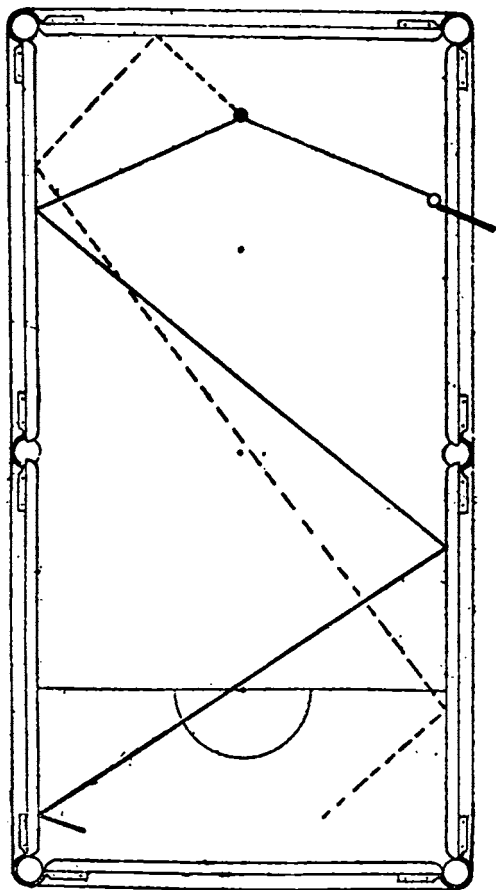opponent is waiting "in hand" for any slip that may be

FIG. 169.—Double baulk, by screwing the cue-ball with left " side."

made. So the medium course—the double baulk—as
the latter must be termed when placed side by side with

the out-and-out scoring attempt at the winning hazard, or the unadulterated non-scoring effort of a single baulk, is tried.

The cue-ball is struck fairly high up on its right side, and the contact with the red ball must be a thin one, somewhere about quarter-ball. The idea is to cut the red ball down towards the opposite centre pocket. After striking the side cushion it should run across the table into the baulk enclosure. Meanwhile the cue-ball, with its right " side," goes first on to the top cushion, then to the nearest side cushion. It then doubles across the table, avoiding the ugly-looking obstacles created by the angles of the left middle pocket. In striking the baulk left cushion the right " side " on the ball deadens it, and thence it runs rather sluggishly into baulk to face the red in the opposite corner. This is an eminently valuable double baulk, and one that it is quite difficult to miss.

I think one of its greatest charms is the prominent part that " side " plays in the respect of the cue-ball's running. In its opening impact with the top and top right side cushions the right spin accelerates its pace. Later, however, when meeting the left baulk cushion, its pace is obviously decreased to send it slowly over to its destination. It is a nice demonstration of the action of " side " in each of these particulars.

A variation of the stroke shown on Fig. 168 can be employed when the cue-ball is further down the side cushion. This is exemplified on Fig. 169. Here it is impossible to make the balls form the compound parallel angle that enables them both to enter baulk as in Fig. 168. The one or the other can do so easily enough, but
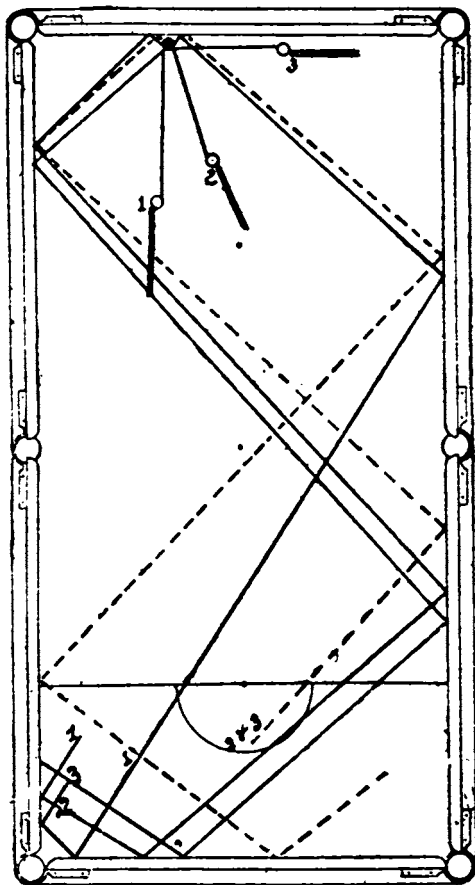
certainly not both of them. Thus another direction

FIG. 170.—Making double-baulks with the red ball placed by the top
cushions.   Three examples.

must be given to the cue-ball. This alteration of the
latter's passage results in a transposition of the courses

of the two balls, for now it is the cue-ball that first finds touch with the side cushion, and the red ball which has to make its way by the top and top side cushions into baulk.

Screw the cue-ball a little and employ plenty of running "side," in this instance left "side," getting well hold of the red ball, and the double baulk will inevitably occur. It is a sure outlet from an awkward position. As before, the cue-ball doubles across the table, finally stopping in one corner of baulk, and the less tortuously travelled red ball rests in the other—always the evidence of a well-played stroke.

Often enough a red ball will stray away by the top cushion quite out of play, although the cue-ball may be somewhere in its vicinity. Such positions as the trio illustrated on Fig. 170 are by no means uncommon. "Something" has happened, and the player is at once in a quandary. Yet there is a sure double baulk, which can be readily made from any convenient point around the red ball. Of course, the further the intervening gap between the cue-ball and the red ball, the more difficult the making of the double baulk becomes. But if the balls are fairly close together, say, anywhere with a three or four feet range, I consider these double baulks sufficiently easy to warrant their always being tried. I do not say you will always accomplish the stroke as intended—there are few indeed, if any, billiard players who can do so on any and every occasion—but the chances are so in your favour that it is undoubtedly "the game" to try it.

Stroke 1 on Fig. 170 is made by the use of left "side" and a little "screw" with a quarter-ball impact on the

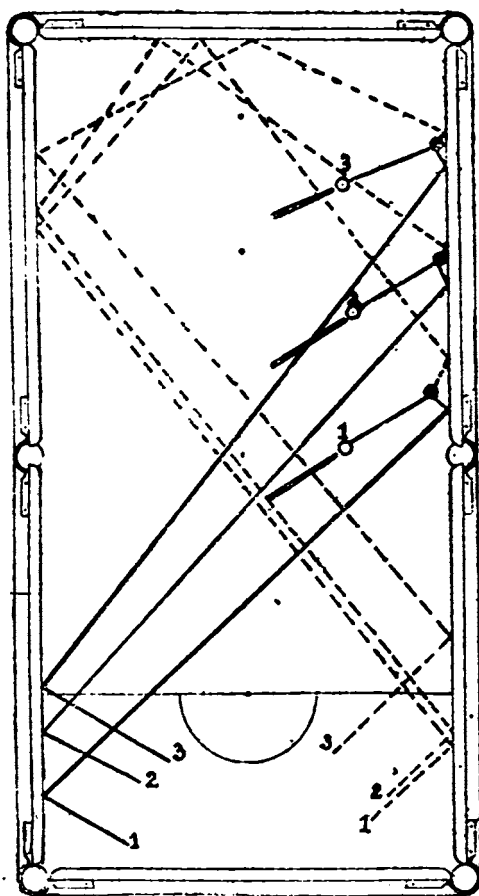red.   The cue-ball performs its feat of doubling across

FIG. 171.—Double-baulking with the object-ball lying beside the top side cushions.   Three examples.

the table after being thrown off from the top left-hand

corner, while the red finds its course to the baulk line by the medium of the top and right top cushions.

Stroke 2 on Fig. 170 merely reverses the path of the coloured and the white balls. Here the cue-ball has "screw" and right "side" applied to it. This time it has to be propelled for a half-ball impact on the red.

Stroke 3 on Fig. 170 is exactly the same kind of double baulk as the one represented on Fig. 169. The red is played upon a trifle more fully than half-ball, some left "side" being used to escape the attentions of the right middle pocket, which here is rather in the way of the cue-ball. A little care, however, will ensure this danger being overcome. I recommend these three double baulks shown on Fig. 170 as being within the compass of very ordinary players, and, what is more, they are, if followed on the lines that I show and tell how they should be manipulated, bound "*to leave the balls apart.*"

On Fig. 171 I remove the red ball from its previous contiguity to the top cushion, to provide some examples of the possibilities of double-baulking when it lies along an upper side cushion. Whether touching the latter or whether it be away from it does not make the least difference. I stipulate, however, that the cue-ball must be nearer to the baulk line than the red ball, as in the three expositions on Fig. 171. It is possible, of course, to double baulk when the cue-ball is in a line with the red or above it, but such strokes are too full of uncertainty for me to recommend them, or for even the great professional players to try them. Unless it is a run-through of some simple variety, it is best not to try the double baulk, unless the balls are shaped in something of the

fashion the three positions on Fig. 171 will show. In each of these a right "side" "screw" shot (the "side" and "screw," naturally, in proportion to the distance the cue-ball has to travel to the baulk end from the moment it strikes the side cushion) is required. The red ball circles around the table according to the angle it is thrown into. As the diagram specifies, the balls should be left in the opposite corners of baulk—the only sound principle of double baulk "leaves."

These three strokes on Fig. 171 necessitate that the red ball shall be struck a full half-ball, at least. They are really, each and all, easy shots, and worthy of cultivation.

Before leaving the subject of the proper method of making double baulks, I should like to write just a few words about a growing practice as regards these strokes. Of late the practice has been noticed among some good players in the amateur class of playing up at the spotted red ball when opening the game. Some undoubted proficiency has been attained in the way of effecting the double baulk, I must own. But the stroke is a most unsound one. You may bring off the double baulk twenty times successively, yet that does not argue that any one of the number is played correctly. To merely bring the balls inside the baulk line, without any definite idea as to what their position there will be, is, as I have before shown, only accomplishing one-half of what is really needed. The other half that goes to make the stroke a good and sound one, lies in providing for the balls to be well apart, and with a fairly favourable score to follow on with in the event of your opponent failing to disturb them.

To try and get the red and your own ball into baulk at the beginning of a game, or to screw in off the spotted red ball, unless in exceptional cases (such as being unable to give a miss by the state of the game, or badly wanting a break and having to force an opening), is bad billiards. The men who have studied these matters most—the professional players—do not attempt them. By experience they have proved them unsound. The old-fashioned and good—if conventional—miss in baulk and counter miss under the side cushion are the best discoverable openings up to date. There is no reason to desert them unless your adversary is many and many degrees your inferior. So in ending this chapter on making double baulks, I would like to point out that in their place they are invaluable, but, trifled and experimented with in the course of a game, afford anything but the rampart which is synonymous with their name.

Attacking the Double Baulk.

There have been few subjects which have received less treatment than the attacking of the double baulk. Why, I do not know. If the forming of a double baulk is not unnaturally considered an important department of billiards, surely the breaking up of, or the scoring, from such a position must be equally so? In a general way, only a very hazy outline of the plan of attack has been handed over to amateur players. They nearly all know the key to the finding of a ball standing over a baulk pocket. Away from there, or the oblique line

drawn from out the centre of the pocket, their treatment
is distinctly crude.   There are strokes to be made by a
straight-up-the-table-and-return shot, or from the side
cushions. But the ordinary player will not trust him-
self to attempt the three and four cushion masterpieces
(more or less lucky strokes they are, though, at any time)
that he has seen executed, to the unfailing round of
applause, by some professional or another.   I am not
hinting that the ordinary player is wrong in not going
beyond his depth.   I only state the facts.

I venture to think that a study of what I consider to
be the key to the attacking of double baulks will put
many of my readers in possession of a clue to disturb-
ing or even scoring on the most intricately placed balls.
For the purpose of an illustration of the method I place
a double baulk, as on Fig. 172.   The balls are in the
middle of the baulk cushion, which is defined by the
little ivory disc on the woodwork of the cushion.   To
the casual player this looks a most awkward posi-
tion to get at, but it really is by no means so.   You
may find it by either a left-handed or right-handed
circuit of the table, taking three cushions—the top side,
top, and baulk side ones.   The cue-ball has to be
placed on the baulk line, between the left spot and
middle spot according to the direction you wish your
ball to take.   Play fairly fast—not too fast—on the top-
side cushion, about 17 inches below the top pocket.
Give a nice bit of running "side" to the cue-ball, not as
much as you can apply, but a perceptible amount all
the same.   The idea, as may be traced by the lines on
the diagram, is for the ball to strike the top side and
top cushion, then to cross over to the opposite baulk

side cushion, just missing the middle pocket and its
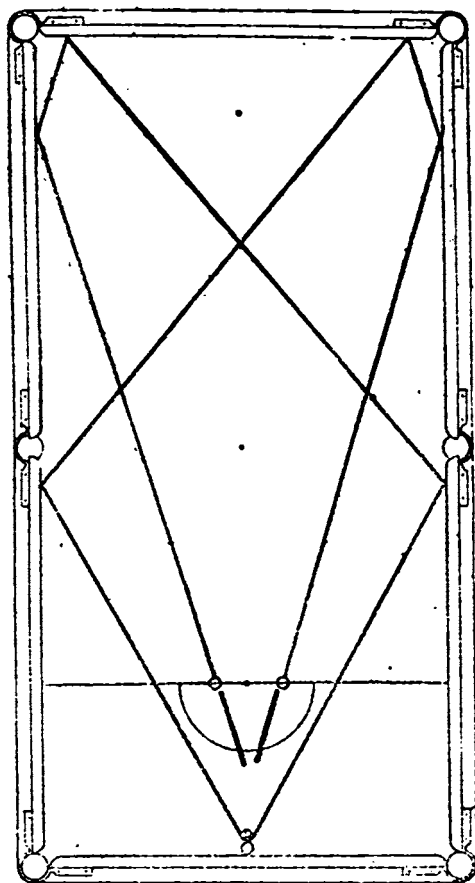
FIG. 172.—Attacking the double baulk.   Finding the centre of the baulk
and cushion.

shoulder.   From there the ball will find the middle of

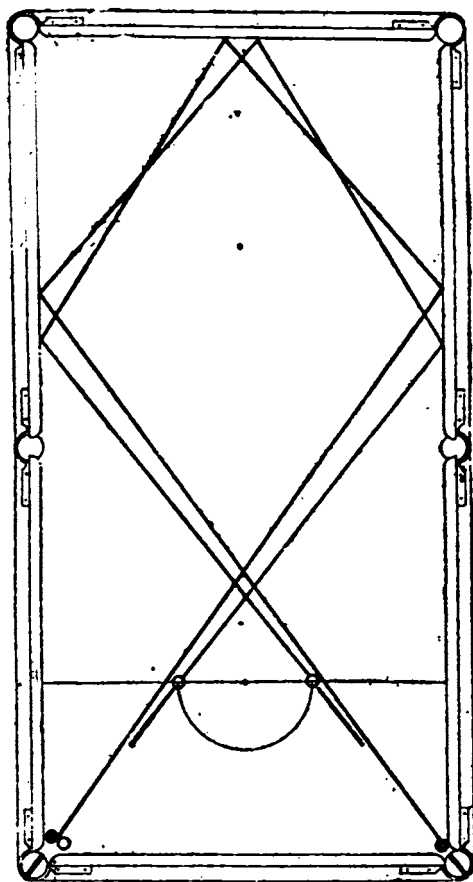the baulk cushion with an accuracy that is quite mechanical.

FIG. 173.—Old-fashioned corner-of-baulk shot, sending the cue-ball around the table.

This stroke, and the old-fashioned all-round-the-
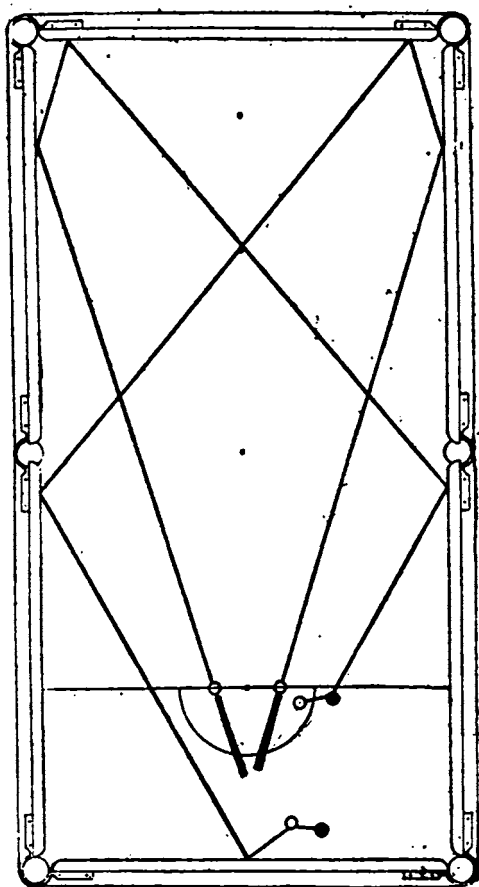
table stroke, as shown on Fig. 173, make a combination

FIG. 174.—Variations of the centre of baulk play.

which, carefully worked up by variations, may well be
said to cover the whole of the baulk enclosure.   To any

one who will go thoroughly into the matter, there is a whole field of interesting developments ahead. This is not my province to touch upon just now, therefore I return to my second diagram. It deals with a ball or position in front of the baulk pocket. The angle for the stroke is obtained by gauging the direct line through the centre of a baulk pocket on to the upper side cushion. Play off the corner spots and on to the point of the side cushion that you have ascertained is aligned to the centre of the baulk pocket. This time a fairly fast ball and no "side" are the requisites of the stroke. Played correctly—the use of "side" will infallibly spoil the effect—the stroke should be little short of a certainty.

Having obtained the means of access to the centre and corners of baulk, it should not be difficult to appreciate that an alteration of the placing of the cue-ball will lead to its penetrating other parts of the baulk area just as successfully. The corner-pocket stroke I should not interfere with. Let that stand to do its work in its own way. But by moving the cue-ball about, either to right or left from the position which places it in touch with the centre of the baulk cushion, the whole face of the latter should be accessible to a player who will thoroughly practice and become acquainted with the different variations. I give a couple of examples of the possibilities of these on Fig. 174. One word of advice about all these strokes must not be overlooked. The strokes require playing at a fairly fast pace, but, as I before said, not too fast. Playing very fast at a cushion often leads to the ball jumping away from it, a proceeding which completely spoils the

angle. Then, too, you must be very accurate in your striking of the first cushion. Any slight deviation from the correct line becomes very accentuated when a ball has to take three or four cushions. It may barely show on being sent off by the first cushion ; by the time it has left the third and fourth it will not improbably be a full ball distance out of the desired line.

A very much favoured means of breaking up double-baulk positions is obtainable *viâ* the side cushions. There are many and many of such which the round-the-
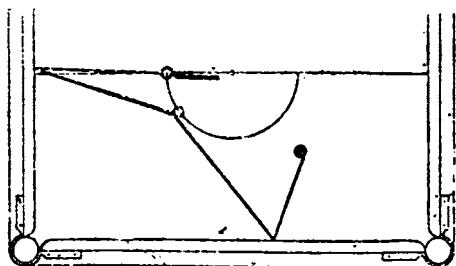
FIG. 175.—Cannoning on to a double-baulk "leave" from the side cushion.

table stroke will not give the player any chance of scoring off. He may be able to hit one ball, but to make contact with both would be an impossibility. So he looks to the side cushion or to the top cushion for a direct or semi-direct stroke on to and return from them, instead of the round-the-table one. The side cushion comes into the play very frequently, and is a particularly useful medium to enable the cue-ball to get at the enclosed red and white.

A fair specimen of the kind of double baulk " leaves " in which the side cushion can be utilized with advantage

will be found on Fig. 175, which represents a fast shot
played not so much with any idea of scoring the cannon,
as to knock the object-white as far away from the red
ball as possible.   It is not long odds against the cannon
occurring at the same time, still the player's aim is to
break up a "leave" that is an exceedingly favourable
one for his opponent.

The second figure shows a couple of strokes in which
the employment of a great deal of "side" is needed.
Now, I need hardly say that in all cushion play—and
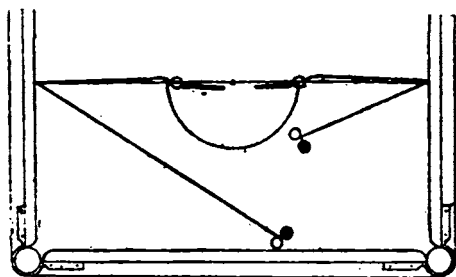
FIG. 176.—Making the cue-ball take a very acute angle from the side cushions
into baulk by the use of "side" and raising the butt end of the cue.

out on the bed of the table, for the matter of that—
"side" is a most uncertain and quite treacherous
element.   It distorts the reflected angle thrown by the
cushion into all sorts of fantastic shapes.   The slower
the stroke the more the "side" tells.   Often enough it
is "the game" to use the maximum amount to get in
touch with balls placed as on Fig. 176.   In both of the
positions there shown, a vast quantity of "side" is
required.   To bring sufficient of it into play, *the raising
of the butt of the cue* is a most valuable assistance.
Striking down on your ball in this fashion causes it to

swerve and go on to the side cushion at a different angle
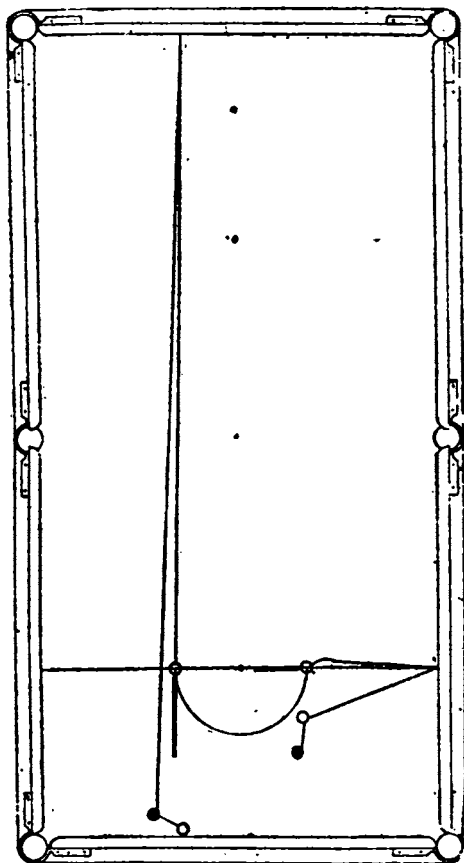
FIG. 177.—Cannons on double-baulk "leaves."   A straight-up-and-down-the-table, and side-cushion, strokes, the latter played with a raised butt.

to the aim.   In fact, the stroke might be described as
the quarter *massé.* It gives a player a much wider sweep

than if he used all possible "side" with the ordinary
horizontally aligned cue.   Try the stroke, and note how
much nearer to the centre of the bottom cushion you
can make a ball go by raising the butt of the cue than
by playing it in the usual way.   It is a good stroke to
practice, for by it you will find the limit of your ball's
run into baulk from the side cushion.   And when you
have gauged this, make a good mental note of it, as it
will be useful to you, if not invaluable, in some hard-
fought game or other.

It is a rare good stroke from the side cushion that
will get anywhere near to the centre of the baulk end
cushion.   A highly sensitive cushion might, indeed,
allow one to get within, say, six inches of it.   But that
would be quite an exceptional feat, and one not worth
while attempting to imitate except in practice, certainly
not in the course of a game.   In a general way, any one
who can make a ball get inside the parallel line of the
end cushion with the face of baulk is getting a lot of
"side" on.   As I before said, the less the pace on the
ball, the more acutely will the cushion throw it off.   A
very interesting ten minutes can be spent in experi-
menting with different speeds on the ball, though keeping
as nearly as you are able to the same amount of "side."

I have not much to say of the two strokes on Fig. 177,
because the foregoing remarks on the playing of the
cue-ball from the side cushion embrace every essential.
The same, too, I may say of the side-cushion shot on
Fig. 177, where, however, there is a new position de-
manding new treatment.   For the two balls shown by
the end cushion are not well situated for a cannon off
the side cushion.   Now the straight-up-and-down stroke

from the top cushion comes into operation. This
should never be played with "side," as the plain stroke
claims every advantage over it. Straight up and back
is the essence of the stroke from the top cushion. The
position of the balls for this shot on Fig. 177 is quite an
everyday one. You aim to get in between the balls,
and on your skill in hitting your ball truly in the centre,
and your judgment of the point on the top cushion, the
issue of the stroke depends—a combination which, I
suppose, you know is in front of you, as much as I do.

The strokes on Fig. 178 illustrate positions at the
extreme sides of baulk. Again the return shot from
the top cushion can be left to deal with these. The
position on the right is to be overcome by a well-judged
stroke, which sends the cue-ball to squeeze in behind the
object-white ball off the side cushion. To make this,
you place your ball on the extreme further side of the
D—on the left spot, in fact. To play it from the right
side of the D would be to make the shot an improbable
contingency. The object-white is right in the way
there, as the cue-ball coming back so obtusely from the
top cushion cannot squeeze in behind it. Even if the
cue-ball does find the side cushion for a contact on
the cushion side of the object-white, the odds are that it
will be thrown out and away from the red and not into
the latter, as a more obliquely running ball would be
made to do. This shot provides a useful lesson in the
way of playing behind a ball close to the cushion.
Most amateur players operating from the D do not
play these strokes obliquely enough. The difference
that is effected in them by a ball placed on the D's
middle spot on further corner spot is a radical one.

The first will give the cue-ball an inclination to get away from the cushion, and the second a magnetic
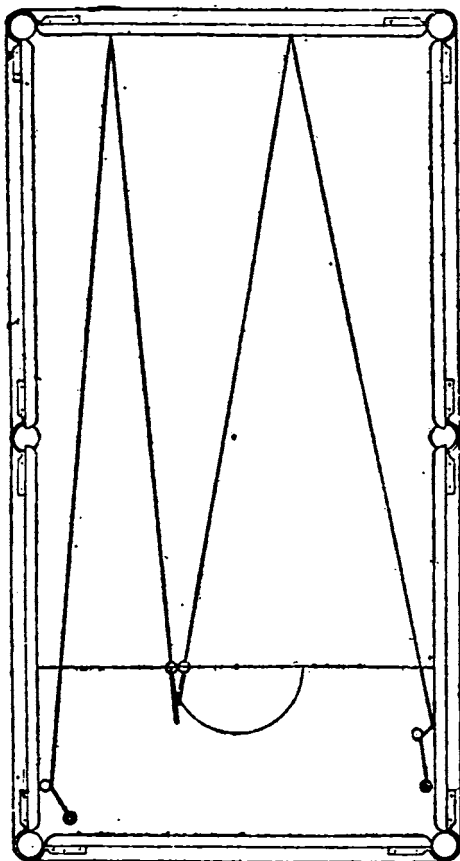
FIG. 178.—Playing back from the top cushion at double-baulk " leaves.

attraction in the way of clinging to it, particularly if you use some running "side."   A good position to try

these strokes on is when the object-ball is under one of the upper side cushions near the head of the table.

Fig. 178's position of the balls by the left corner pocket shows the reverse of the other stroke. Now, as straight an up-and-down stroke as you can get—from the left spot of the D—is the correct play. There is now no cushion to be considered, and you get to the object-balls as directly as you can.

In closing my double-baulk comments, I must mention that *unless you think your opponent will score and leave himself a good game afterwards, do not attempt to disturb the double baulk.* Give a safety miss instead in that part of the table that will force him to open up the game at a disadvantage to himself. You can easily do this by planting your ball somewhere at about half-table range, leaving a hazard from the red ball. This is the counter-move to a badly-left double baulk. To a well-arranged one you must perforce take the risk that comes with an attempt to score or to disturb the balls.

CHAPTER VIII

SAFETY TACTICS

THE whole theory of safety-play is to "leave" your opponent's ball in such a position that its path to a cannon or a pocket asks for a very good stroke—one in which "screw" or "side" must be used. The idea is to keep it out of plain-ball range, and yet to place your own ball as advantageously as possible on the object-ball. It is always the sounder policy to try and put your ball in a part of the table which will enable you to play on the red with a fair prospect of scoring. This is, perhaps, the great feature in all the *finesse* of billiards. You will see players giving miss after miss in quite aimless fashion. Their only object seems to be to keep the other man out. For those who play that kind of game, let me cite a case. It is to be measured by the positions seen on the accompanying figure (Fig. 179). What is the use of a safety-miss on the top cushion, or, in fact, anywhere save whence a losing hazard is to be made off the red ball into the near corner pocket? It would be a sheer waste of a stroke. For unless one makes it expedient for the other player to move his ball, he, assuredly, will not do so unless you give him cause. Instead, he will, like Brer Rabbit, "lie low" so long as

it pays him to do so, or else he will seize the opportunity
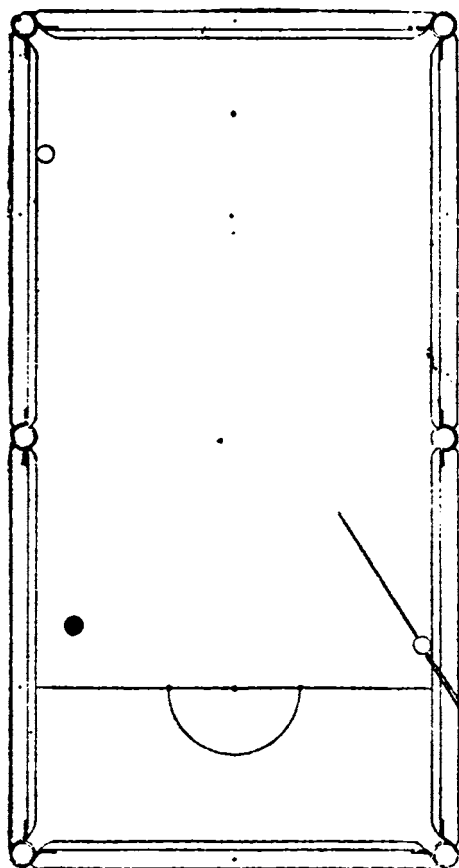
FIG. 179.—The idea of a good safety-miss.

you have let slip. So let me impress upon you that
it is an eminent advantage to be able to force your

adversary to play at the balls from an unfavourable position. If he scores, he is not at all sure to "leave" anything easy for his next shot. The odds are against his doing so, for "individual strokes" are not famous for their "leaves."

In what I have said I am, naturally, referring to those who know something of, and also can play billiards. To speak of *finesse* to the very ordinary player would be a thankless task. He knows that if he can get his ball behind the baulk line, it lies snugly safe when the other player's ball is "in hand." His chief safety-play rests in the potting of the object-white, and a speedy retreat into baulkland—a good policy enough in its way, when it is "the game." He never dreams of sending it to command the red in such a manner as Fig. 180 describes. He would never waste a consideration of the fact that he at once forces the other player to stir up the red. It is, in short, the same old heedlessness of positional play which is the outstanding characteristic of amateur billiards.

From the first moving of the balls the player should exercise his wits as much in regard to the defensive side of his game as to his scoring. I am by no means sure that the *finesse*, or safety tactics, will not demand most attention. It is a side of the game which has been mainly overlooked for a long time past. Even the professional players do not show that degree of soundness in their "safety" proportionate to their skill in other departments. This, to me, is rather surprising, as a good or bad safety-miss often turns the whole run of the scoring.

There are certainly some abstruse positions which

quite baffle the best executant. The player who can
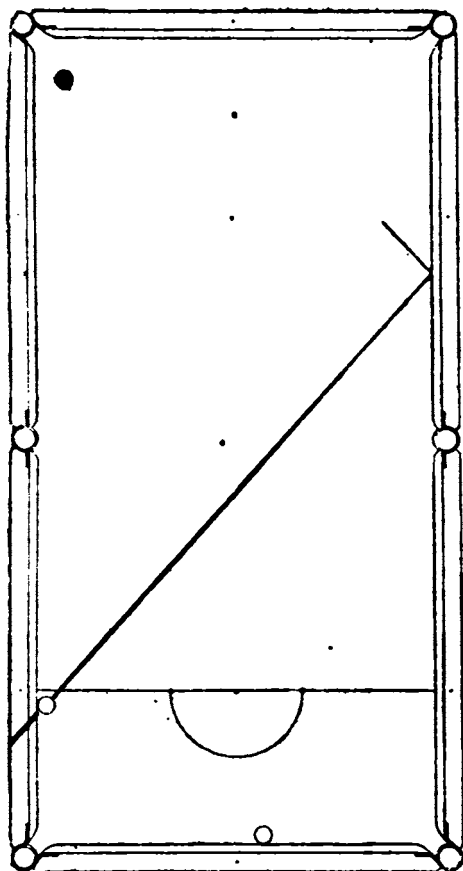
FIG. 180.—A good safety-miss.

turn these to ultimate account is the one who will be
hard to beat in a closely fought-out struggle, when

brains, and an allied coolness, count. There are
problems set by the strategy of miss and counter-miss
at billiards quite abstruse enough for most people, even
if they do not equal the more complicated movements
of the chess-board.

In the question of *finesse* on the billiard-table, the
player who opens the game, or first induces a bout of
safety-play, holds, in my opinion, a slight advantage,
providing, of course, that he knows something of billiards.
Let us start from the beginning—the opening miss into
baulk from the side cushion.   This should be played as
nearly as possible into the middle of the D, the closer to
the baulk line the better : firstly, because lying in the
central line one may take advantage of any bad miss on
either side of the table ; secondly, because the closer
one's ball lies to the line, the less distance will it have to
be sent to attack the object-balls—a big consideration ;
thirdly, it affords one's opponent little chance of making
a cannon, and forces him to seek safety under a cushion.

The best response to this opening miss into baulk is
undoubtedly to drop on the side cushion under a middle
pocket.   The idea is to get into position for a forcing
losing hazard off the spotted red ball.   It is no easy
matter, however, now that the " push " stroke is illegal,
to so gauge the run of a ball that it will stop under the
cushion-rail.   A very nice touch is required to do so.
The ball may stop a trifle short, and so leave a " long
jenny" into a top-corner pocket, or it may run on to
stop right over the middle pocket.   Fig. 181, though,
shows both the opening and counter-miss perfectly
played.

When the second player accurately plants his ball

on the cushion in line for the losing hazard off the
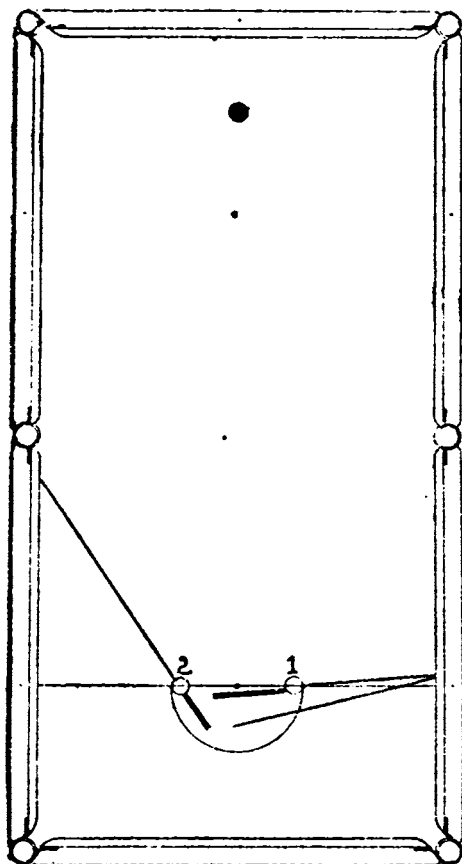
FIG. 181.—The opening misses.

red ball, then the first player has to knock it away.
Generally he will try to score, say by the medium of

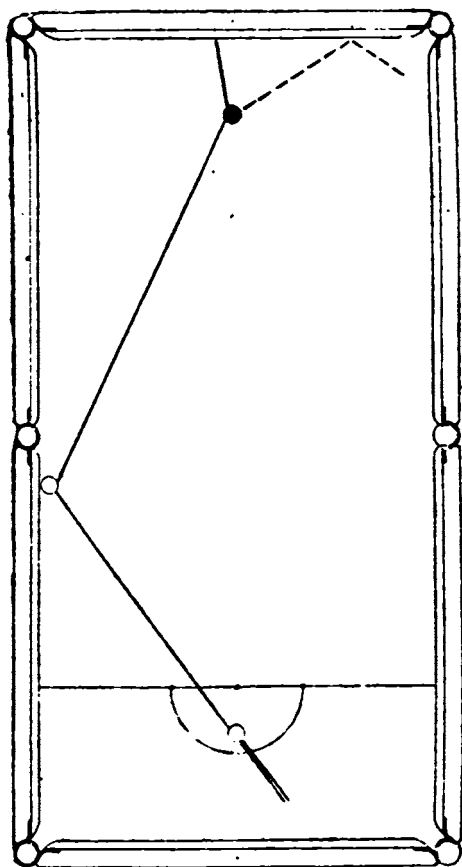the "kiss" shot, as seen on Fig. 182, playing three-

FIG. 182.—A "kiss" cannon following the opening misses.

quarter-ball at medium pace on the cushioned white.
Then there is the cross losing hazard, described on
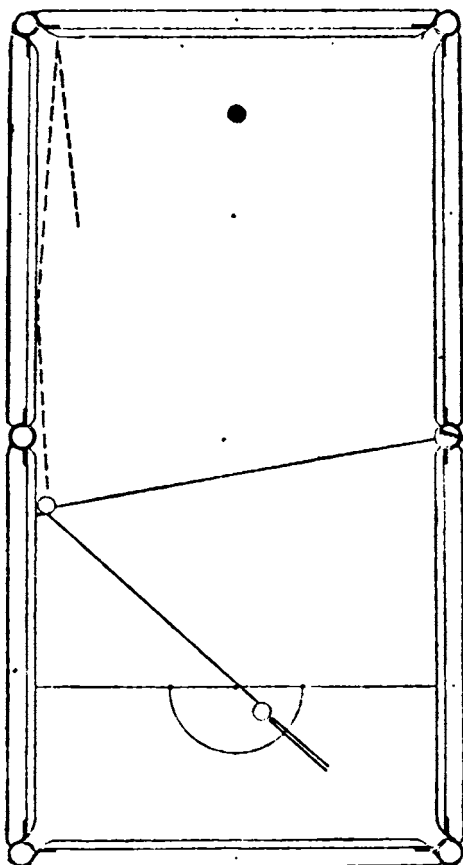
Fig. 183, in which the ball crosses over to the right

FIG. 183.—The "cross" losing hazard from the safety-miss under the
side cushion.

middle pocket, after contact with the cushioned white
and cushion. This is a good stroke, provided one keeps

the object-white somewhere midway along the top side
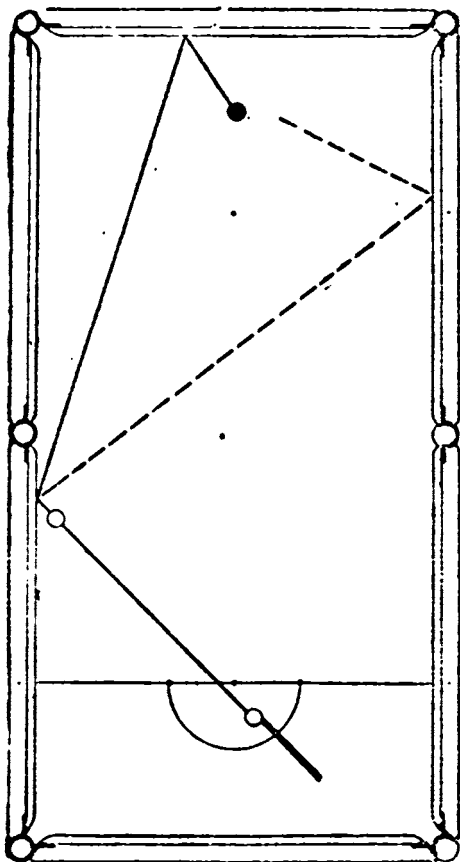
FIG. 184.—The old-fashioned run-through two-cushion cannon with strong " side."

cushion, and so making a winning or losing hazard from the red a difficult stroke. This cross losing hazard has

of late superseded the run-through cannon from the side
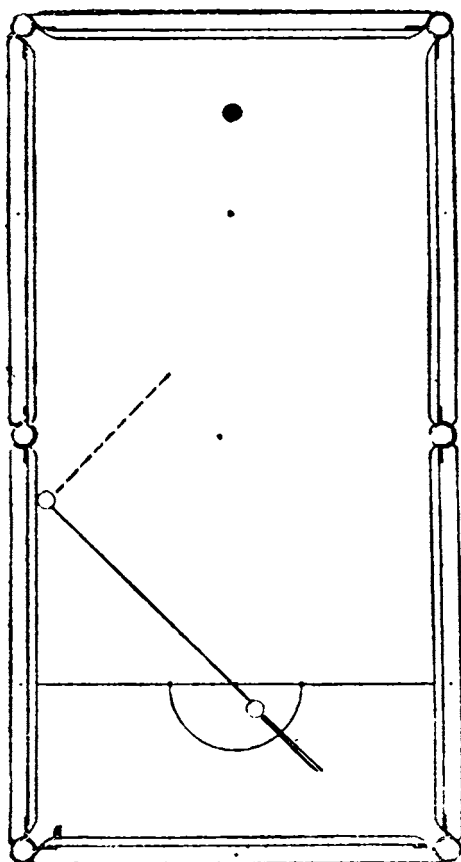
FIG. 185.—Sending your opponent out to the middle of the table, and
taking his place under the cushion.

and top cushions illustrated on Fig. 184. The cannon is
not so good as the losing hazard, for the reason that the

object-white must be driven down by the red ball. Therefore, if one fails at the cannon, the other player will, nine times out of ten, find himself left with an easy stroke on the red.

If, instead of going out for scoring strokes, the first player elects to still continue the game in a safety strain, he has a useful stroke or two with which to hold his own.   With a slow, full drop on to the cushioned white, hitting his own ball low down to kill its pace, he can knock his opponent's ball out to the middle of the table, and practically occupy the vacated position (see Fig. 185).   Out in the middle of the table as he is, the second player must move one or other of the object-balls, unless, of course, his ball covers the line of approach to the red.   In that case he can leave his ball in that line by merely touching it for a safety-miss. But should his opponent's ball, as in nineteen cases out of twenty it will be, be left the forcing "loser" off the red, the second player will have to seriously weigh the chances of this being made.   A good stroke in reply would be to safety-miss into baulk, about the centre of the D for preference (see Fig. 186).   If the first player makes the losing hazard, there is the possibility of the red kissing the baulked white, and at the worst he has only one ball to play upon.   There is another, and a sound retaliatory policy to be pursued by answering the first player's safety stroke with a similar one, as shown on Fig. 187.   The first player's ball is sent back towards the D, and the second player reoccupies the position, or thereabouts, that he took up with his opening stroke.   Then it becomes a question as to which of the two players fails in his intention of keeping

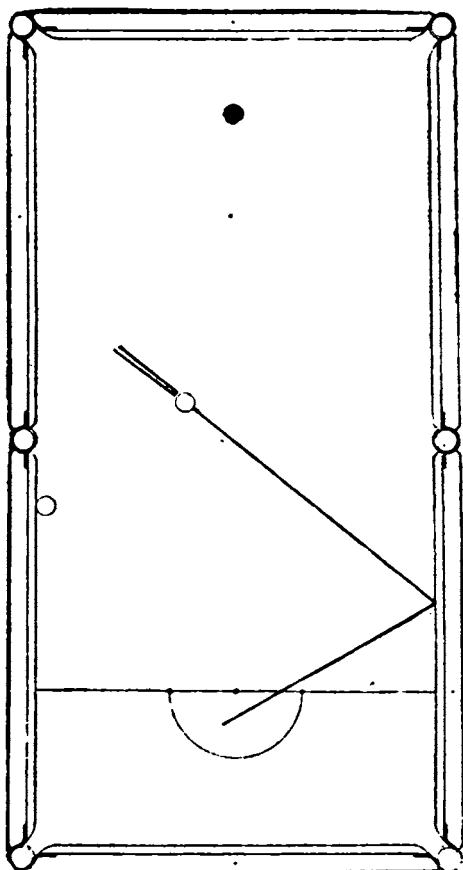his opponent in safe quarters.   A cross losing hazard, a

Fɪɢ. 186.—The second player adopts a retaliatory safety.

long "jenny" or a "kiss," or strong "screw" cannon
may tempt the first player to open up the game.   All

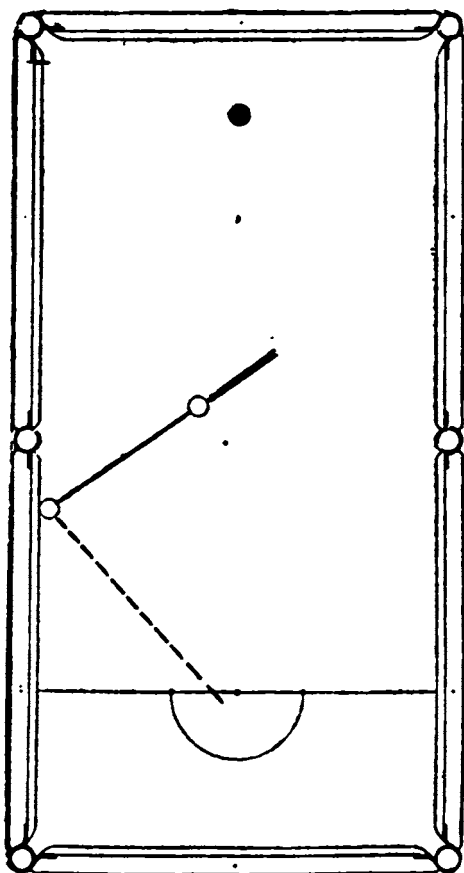the time, however, that he "sits tight" he holds an

FIG. 187.—A counter stroke.

advantage, for the second player will not, or should not, get anything like the same scoring opportunities.

Another good defensive stroke, but a difficult one to administer with certainty, is that described on Fig. 188.
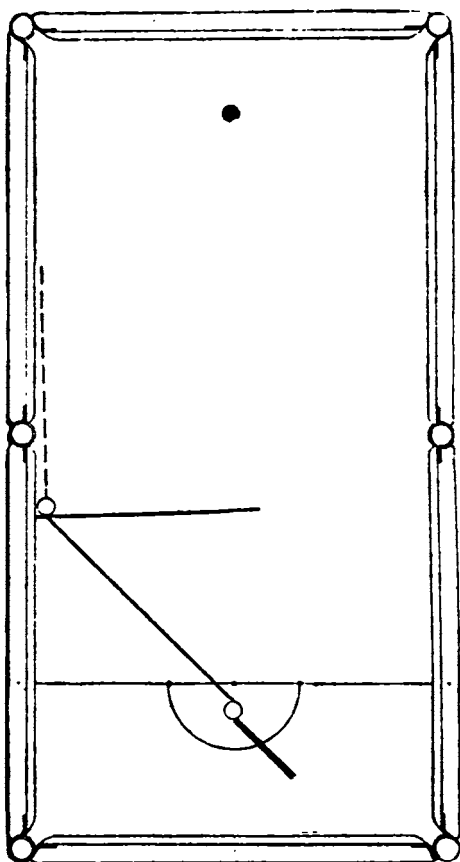
FIG. 188.—A good, but uncertain, safety stroke.

It has to be played very slowly, cutting the object-white midway, along the top side cushion. With strong

reverse "side" used on it, the cue-ball is played to come straight out in the middle of the table. The danger of this stroke lies in the chance of the object-white catching the further pocket "shoulder."

Turning to safety tactics, when a game is in full swing, it is unquestionably "the game" to go out for a score so long as you think that you have a reasonable prospect of making it. When the chances of making a cannon or a hazard equal the probabilities of failure, the player should try and score, for, as in other matters, the old military maxim of "offence is the best defence" can be well applied to billiards. Do not hamper your game with too much safety, but use it when your judgment tells you that it is advisable to do so. If you know your man you will, probably, set yourself to take advantage of some of his weak points, of which, by the way, few or none are free. Be chary of removing your opponent's ball when it lies under or tight against a cushion if a score is doubtful off it. The best possible "safety" is to get it there, and then remove the two other balls as far away from it as you can. "Distance lends enchantment to the view," in a deflective sense, on the billiard-table. A point which I must make special note of is the futility, as a general rule, of playing on an opponent's ball to dribble it into a corner pocket. Such shots require wonderful accuracy, and seldom, or never, come off. Take such a shot as that set out on Fig. 189. The red is safe from the object-white lying out on the bed of the table. Often enough a player will be seen to try and dribble it with exact strength down into the corner pocket. He does not appreciate the intense difficulty of what he is attempting. Where

the white could, perhaps, be " potted " at high
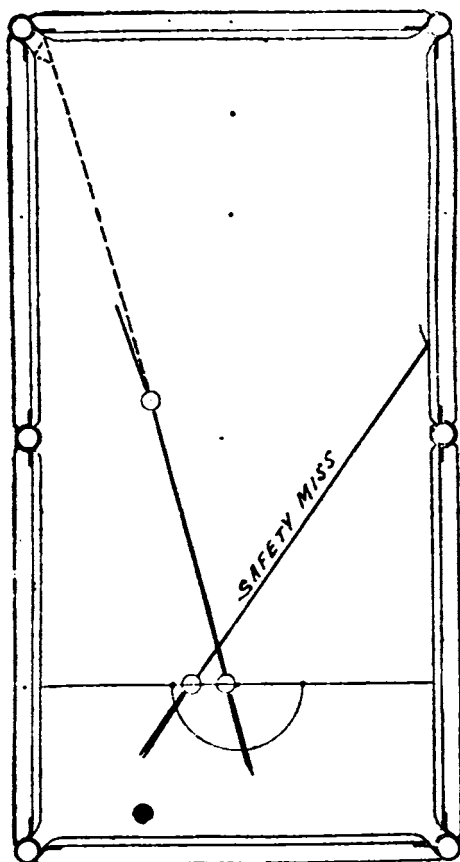speed, the slower running induces it to be affected

FIG. 189.—Safety-missing instead of playing on your opponent.

by the friction of the cloth. And these slow "safety"
dribbles usually leave the player they are meant to

"shut out" a fairly easy cannon to play for. The sounder game in such instances is to safety-miss, placing your ball somewhere in position on the red ball. Both points, the slow dribble to the corner-pocket and the safety-miss, are described on Fig. 189.

Again, on Fig. 190 there is another illustration of the same nature. It will occasionally happen that both white balls will be lying on, or very close to, an end cushion, with the red ball well out of the reach of either for a comfortable cannon. One player will attempt to hole his opponent's ball in the opposite corner pocket— a very awkward stroke, played, as it must be, to keep up its defensive character. His action simply loses him the advantage of initiating the "safety" and the pull that this invariably gives, unless, indeed, he succeeds in making a big hazard. Undoubtedly when the hazard is easy, it is "the game" to hole your opponent's ball. But mark well the position of the red. You have to consider whether it will be best to give a miss in baulk, leaving the red ball open to your rival, or to guide your ball down somewhere above the coloured one so as to make an easy double baulk, or if not a single baulk. Fig. 190 affords a nice example of each of the points under discussion. If the object-white could be easily holed in the right-baulk pocket that would assuredly be the correct procedure. But as its position requires great stroke-accuracy, on any but a very large pocket table, the attempt would probably mean a wasted innings. With the holing of the object-white thus quite uncertain, a much better and safer stroke is to be found in a safety-miss (as shown on the figure) on the opposite side of the table, trying to leave an easy

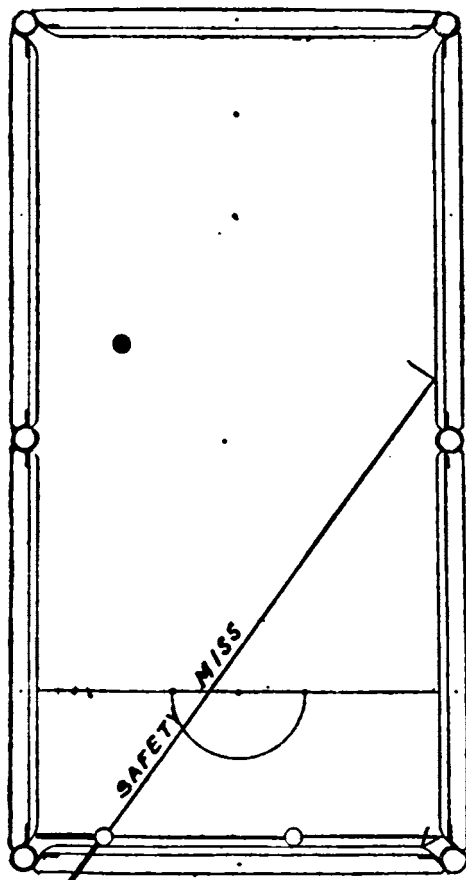"loser" off the red.   By playing it you leave your

FIG. 190.—The right and wrong method of safety-play.

opponent "tucked up" under the end cushion quite a
long distance from the other balls.   In self-defence he

must play on one of them, with the odds well against
his scoring, and in doing so he brings his ball out from
its unplayable position.   The hand of Fortune then
takes its part in the game.   But whatever the outcome
of your opponent's stroke, you have the consolation
(poor enough at times, doubly gratifying at others) of
knowing that your tactics were the best possible to get
the run of the balls in your favour.

Exceptions to the rule of not playing for safety by
hitting your opponent's ball may be indulged in when
it is lying very near to you.   Even then you need not
bother too much about trying to pocket it, except, of
course, the stroke is an obvious one.   It is a very moot
question as to which of the two things—the leaving of
an opponent in an awkward part of the table, or
"putting him in" and leaving a double baulk—pays
you best.   Don't hesitate to "put him in" and run the
two remaining balls behind the baulk line if you can do
so with ease.   But, as I have pointed out in another
chapter, the double baulk will be in your opponent's
favour if you do not leave yourself a fairly certain score
from the red ball.   Therefore, if there is any doubt in
your mind as to your ability to manage these two
essentials to your maintenance of the command of the
play, drive your opponent as far away from the other
two balls as possible.   Of such *finesse* Fig. 191 provides
a specimen.   You have nothing but an awkward
cannon, or an uncertain hazard, to play at, so you play
on the object-white, with the idea of placing it under
the baulk end cushion.   No matter how the balls are
left, no stroke the length of the table, or so, is easy.
And if your opponent should happen to score, remember

that it is not impossible to also do so off a double baulk, or so stir up the balls as to leave them "safe."
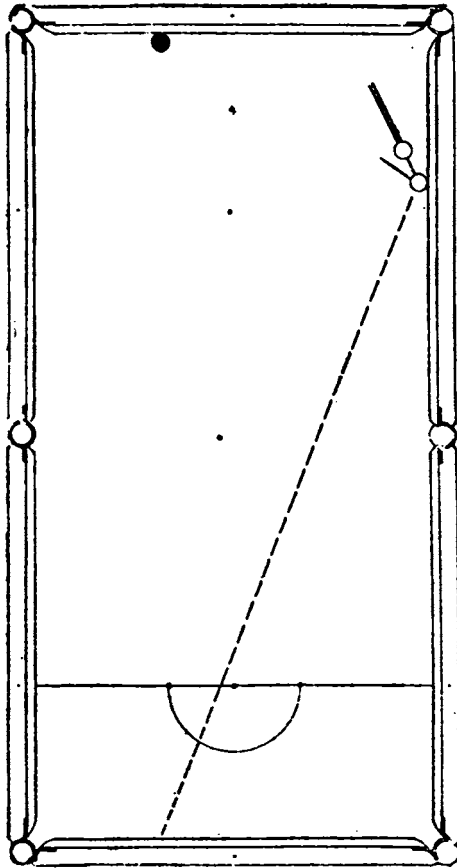

FIG. 191.—Driving your opponent's ball to the further end of the table for safety.

Another stroke which induces partial "safety" by

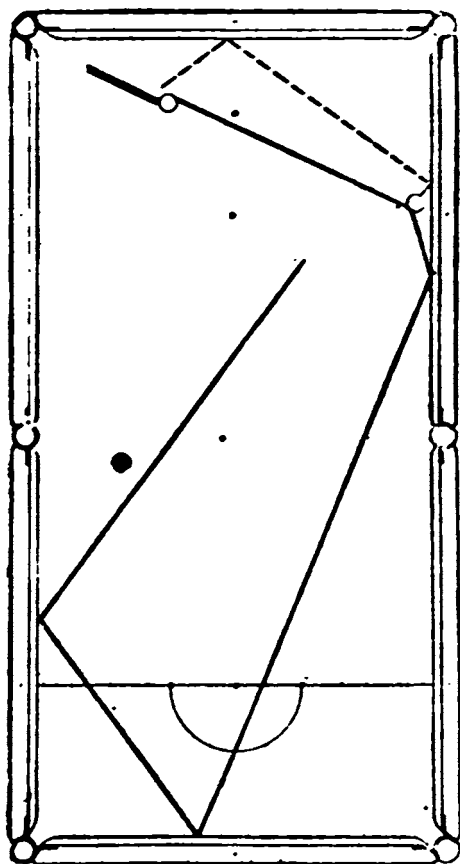playing on an object-ball comes with the red ball lying

FIG. 192.—Keeping your opponent away from the obvious middle-pocket stroke off the red ball.

within measurable distance of a pocket. Take Fig. 192
as supplying an instance of the kind. A ball lying

anywhere in the baulk half of the table, and for a con-
siderable distance beyond there on the right side of it,
will command the red for a hazard of one kind or
another into the left middle pocket.   Being your turn
to play, you would naturally avail yourself of the open-
ing to score from the red if your ball was lying in the
mentioned area ; but as it is not, you adapt your stroke
so that your opponent shall not get the opening.   If he
is lying in position on the red, you either move the red
or move him.   In moving him you play to send him
to somewhere about the middle of the top cushion.
You may merely play " safety," or may combine "safety "
with an attempt to score.   If the latter, then the running
of your ball will be a sort of hostage to fortune.   In the
stroke shown on Fig. 192 the player has tried a cannon
in conjunction with the " safety."   It is easy enough to
get your opponent away from easy position on the red,
but quite another thing to keep your own ball within
safe limits.

Mention of attempts to score and yet try to leave
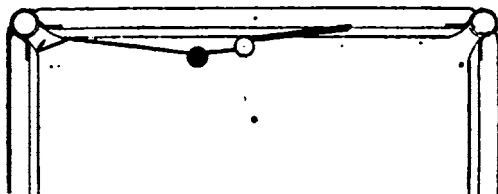some sort of "safety" in case you fail, recalls an

FIG. 193.—Leaving your ball in the jaws of a pocket if the losing hazard
is unsuccessful.

excellent device of Dawson's when playing awkward
run-through or very thin and slow losing hazards.   He
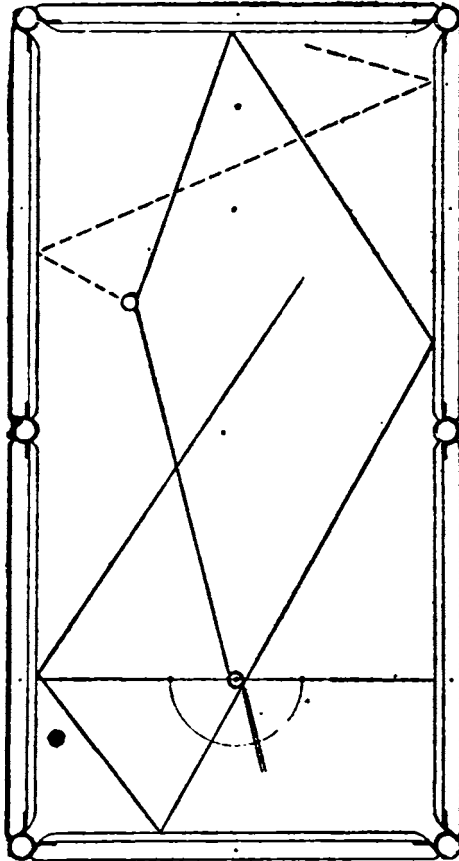
always plays them with "dead strength," so that his

FIG. 194.—Playing an all-round cannon with a view to leaving the balls well apart.

ball just reaches the pocket. If it does not go in, it stops right in the mouth, and his opponent is practically

left with one ball to play at and a covered pocket.
The "Standard" 3⅛-inch pocket favours this stratagem
considerably. Fig. 193 explains the idea of the play.

Another stroke bearing on the same matter is the
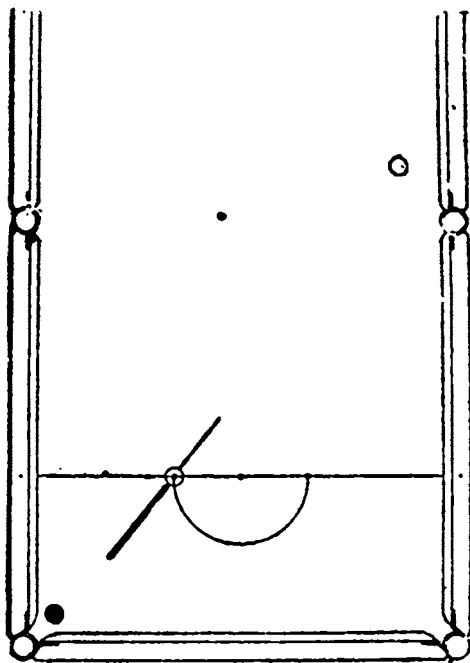all-round cannon shown on Fig. 194. To get well hold

FIG. 195.—"Covering up."

of the first object-ball is to bring it well down to the
baulk end after its run around the three top cushions.
To prevent this, you place your ball very wide, and by
using strong running "side" compensate for the loss
of angle. You hit the object-ball about quarter-ball,

cutting it over somewhere by the right top pocket. Using plenty of pace you avoid leaving your ball near the one in baulk, which is as much as you can expect to do in so far as leaving it in a safe position goes.

An excellent means of "safety" is to be found in "covering up" the red ball from a direct line of attack by your opponent. Say that you are "in hand" and the red ball is lying inside the baulk line as on Fig. 195. It is sounder by far to safety-miss somewhere in a direct line between your opponent's ball and the red than to try for a cannon. You at once place him at a great disadvantage, forcing him to go out for some kind of stroke which must be good odds against his getting. You rob him of his command of the red. This manœuvre of obstructing your opponent's direct passage to a ball can be applied with equal success in numerous positions.

Another method of hampering an opponent is to be found in placing your ball as close to the strikable side of his as possible. Take as an instance the position on Fig. 196, where such a proceeding is the best possible stroke to play. The spot-white is, say for example, your ball. It almost touches the plain-white, and leaves you a poor prospect of a score. The position of the red is such that plain-white should make pretty certain of doing something with it. Now, instead of going in for a wild, tear-away cannon, you are more likely to further your case by moving your ball a trifle so that it covers the side of the plain-white your opponent has to strike. He can now only hit his ball somewhere on the top, and to do so he has to raise his "bridge" so that it rests on the tips of the four fingers without the steadying influence

of the ball of the thumb.   Between these two drawbacks
the player's aim is invariably erratic.

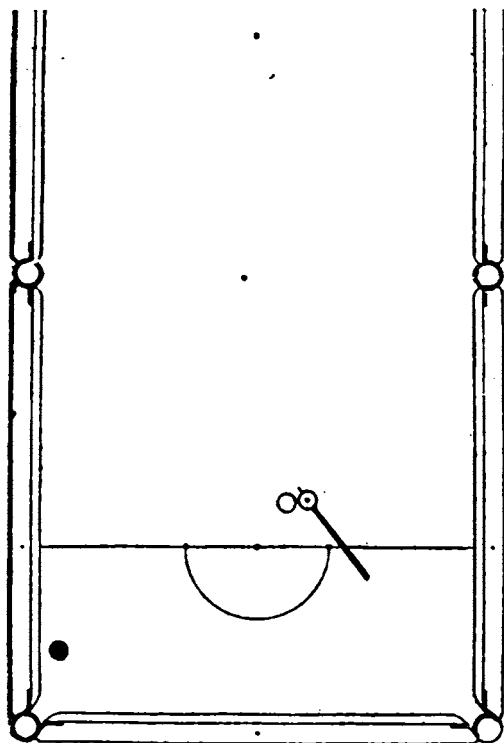I have frequently noticed bouts of safety exchanges

FIG. 196.—Safety-missing to hamper your opponent striking his ball truly.

at the commencement of which both players' balls lie
under the cushions.   One will give a miss, and the other
reply in like fashion.   But each time they keep the balls
against the cushions.   This is utterly wrong.   As must

be obvious, the player who first starts the "safety-misses" should get his ball out from the cushion.   By
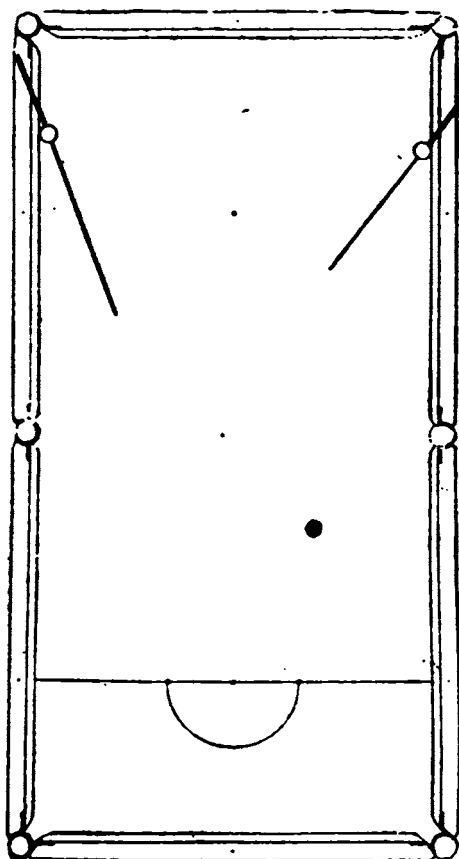

FIG. 197.—Safety-missing away from the cushions, instead of along them.

doing so he gets a pull at once, for by placing himself in a scoring position on the red, he forces the other

player to come out of his lair. Playing at a ball lying under the cushion-rail is not conducive to stroke-accuracy. Fig. 197 illustrates the idea of safety-missing away from the cushion.

Single baulks form a useful addition to the defensive side of one's game. When left in the top half of the table with the red in a poor scoring position, the object-white having disappeared in a pocket, one of the most safe mediums of closuring your opponent is to drive the coloured ball into baulk, leaving your own where it stood. A "stab" shot is the usual one employed for these strokes. Played with some judgment, one may control the running of the object-ball so that it stops somewhere by the baulk pockets, and, on occasion, may be actually sent into one or other of them (see Figs. 198 and 199).

Safety tactics may be applied with considerable success, and almost without fear of error, when your opponent's ball lies "angled" in the jaws of a pocket. By keeping the balls on his "blind side" (that is, on the side of the table which the intervening pocket "shoulder" shuts him out from a direct path to) you may shape them up so that you will come into the game with a grand position at your next stroke. Fig. 200 provides two specimens of the kind. With the opponent "angled" in the top pocket, the other player plays to open connection with the middle pocket on the same side of the table. "Angled" in the middle pocket, the other player tries to get the balls down by the baulk pocket along the same line of the table. These strokes really pay better than putting down the object white, and leaving a double baulk. The retaliatory play is obvious, for with the other player getting nicely in

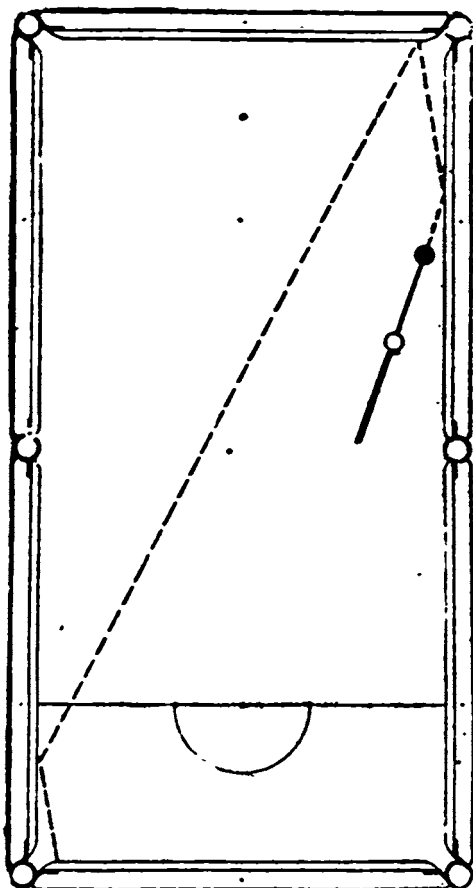touch with a pocket for a red hazard, the "angled"

FIG. 198.—Single baulk.

cueist should promptly pocket his ball, or, as it is technically known, "run a coup." To try and score, or

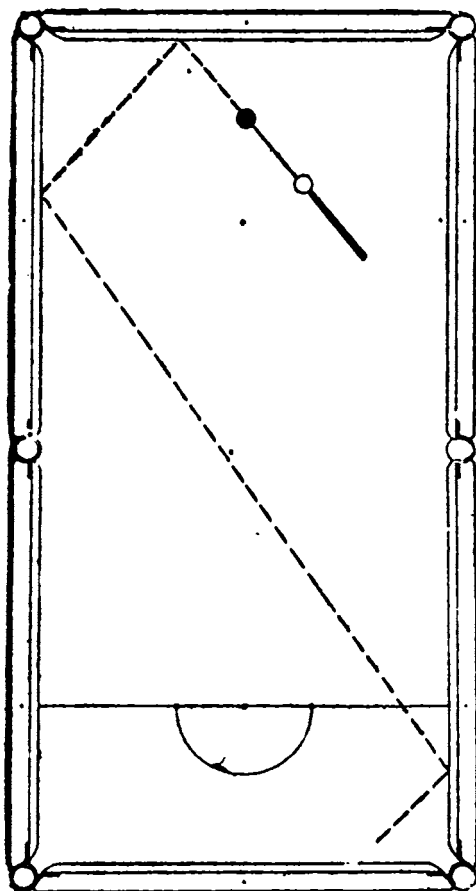stir up the other balls, is an unsafe game.   It generally

FIG. 199.—A single baulk.

means placing your ball on the table to the advantage
of your opponent.

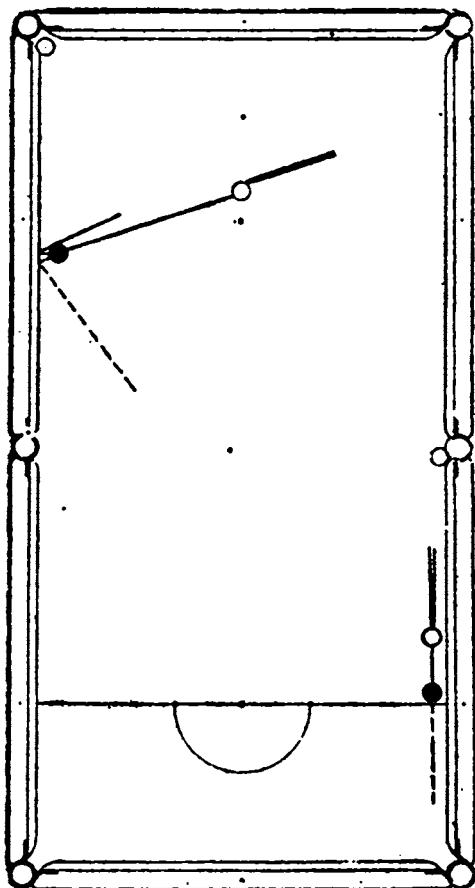Speaking of "running a coup," which, as I have said,

FIG. 200.—Taking advantage of an "angled" opponent.

means pocketing your own ball, I am strongly of opinion
that there is not enough use made of it. Often, if

instead of being lured out at a very difficult position, the player pocketed his ball, he would gain by the proceeding. He is only penalized three points for so doing, whereas by leaving his ball on the table he may be charged ten or twenty times the number. All, of course, depends upon the player's judgment and the position in which the remaining two balls stand. It would be folly to "run a coup" when a double baulk can easily be applied in retaliation. But when there is a doubt about the double baulk, it is an open question whether, between two strong players, the "running of a coup" would not be the best safeguard, and indirectly conduce to the advancement of the player who does so. It is quite the orthodox fashion to leave the "coups" until the end of a game is at hand. But it is certain that they would tell, if not so pronouncedly, very sensibly earlier on.

END OF VOL. I.