

THE BILLIARD ROOM.

BILLIARD BOOK.

BY

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BILLIARDS, ITS THEORY AND PRACTICE, 'THE HANDY-BOOK OF GAMES,'

HTC. ETC.

WITH NUMEROUS ILLUSTRATIVE DIAGRAMS.

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THIS TREATISE

18

Dedicated

TO

HIS ROYAL HIGHNESS

THE PRINCE OF WALES, K.G.

BY

HIS ROYAL HIGHNESS'S

MOST OBEDIENT, HUMBLE, AND DEVOTED SERVANT,

RAWDON CRAWLEY.

PREFACE.

HE very favourable reception accorded to my first Treatise on Billiards has induced me to produce the present volume. In it will be found a digest of all that is known of this excellent indoor game. From a long experience of the difficulties encountered by young players in acquiring a knowledge of the scientific principles of Billiards, I have thought it well to make my Book both elementary and practical. The instructions given are, I trust, sufficiently explicit to enable any one speedily to master the secrets of Billiards, even if he had never previously handled a Cue, or struck a Ball. Billiards has grown into a science since White and Kentfield illustrated its peculiarities; and so rapidly has it improved, that some rules and theories in my former Treatise are already obsolete. I gladly take this opportunity of tendering my acknowledgments to numerous celebrated players and mathematicians, who have favoured me with their advice and assistance during the passage of the work through the press, and especially to a Cambridge friend interested in the mathematical department of Billiards for the valuable Appendix on the Angles of Incidence and Reflection. In the technicalities of the Table, the Cues, and the Balls, I have derived great benefit from the courtesy of Messrs, Burroughes and Watts, the eminent Billiard Table-makers of Soho Square; and for the graphic Illustrations which accompany the text I am indebted to Mr. John Proctor, a young artist of considerable aptitude and taste. The Laws and Directions for the several Games have been compiled and amended from those furnished by the best authorities; and for some few of the Practical Diagrams I have consulted the works of previous writers. I am not conscious, however, of either repeating myself, or of improperly employing the thoughts of others. And so I may say with Imogen—

Good masters, harm me not;
Before I entered here, I call'd; and thought
To have begged or bought, what I have took. Good troth,
I have stolen nought! nor would not, though I had found
Gold strew'd o' the floor.

I shall be happy to receive, through my Publishers, any suggestions with which players may kindly favour me, with a view to the improvement of a future edition.

MEGATHERIUM CLUB: April 1866.

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BILLIARD BOOK.

CHAPTER I.

INTRODUCES ALL THE REST.

All the world 's a game,
And men and women merely Billiard-players.

Shakespeare (a little altered).

Not so very long ago it was reckoned a game for gentlemen only, and not the most reputable of amusements: a game, indeed, for club-men and tavern-frequenters, inevitably connected with late hours and heavy wagers. But the reproach which, not altogether without reason, once attached to Billiards has passed away, and scarcely a country or town house of any importance is now without its Billiard-table.

As a game of mingled skill and chance, Billiards stands at

the head of what may be called Indoor Athletics. Requiring far less mental exertion than Chess or Whist, it has the advantage of being a more social game than either of them, as it may be played by two persons or by a dozen; and while it provides amusement for the mind, it also affords exercise for the body. The use of the Cue brings all the muscles into action, and is for indoor play what the spade and the croquêtmallet are for the garden and the lawn. For ladies, Billiards is an admirable game. For men there are cricket and football, racing, hunting and fishing, riding, driving, swimming, gymnastics, and a score of other manly games; while for ladies Billiards and Croquêt are almost the only games combining exercise with amusement. It is believed that active players walk a couple of miles round the table every hour. The Miniature Billiard-tables that have lately come into use are admirably adapted for ladies. They occupy but little space, and are soon put out of the way when not required. For learning Billiards they are in all respects equal to the full-sized tables, as every Cannon and Hazard made on the one can also be made on the other.

In my first book on Billiards, I told an anecdote—strictly true—of a young lady who, by active use of the Cue, reduced a high shoulder, when dumb-bells and all other means had failed. Since then other like cases have come to my knowledge; and at this moment I could point to a lady, moving in what are known as the 'higher circles,' who by Billiard-play has recovered health and strength, after having tried riding and half the mineral waters in the queendom in vain!

Of the History and Introduction of Billiards I shall say but

little, seeing that my book is intended for the practical instruction of amateurs, and not for students in Archæology. The invention of the game is generally attributed to the French, but that some similar pastime was known to our Saxon ancestors there seems little reason to doubt. Originally Billiards, or its progenitor, was played on the ground with wooden balls or bowls; but how it came to be transferred to the table I have not been able to ascertain.

That Billiards was popular in the sixteenth century we have the evidence of Shakespeare, who does not hesitate at an anachronism, and makes the Serpent of Old Nile ask her attendant Charmian to beguile the hour, in the absence of her Antony, with a game:—

Cleopatra. Give me some music; music, moody food Of us that trade in love.

Attendant. The music, ho!

Cleo. Let it alone; let us to Billiards:

Come, Charmian.

Charmian. My arm is sore, best play with Mardian.

Cleo. As well a woman with an eunuch play'd

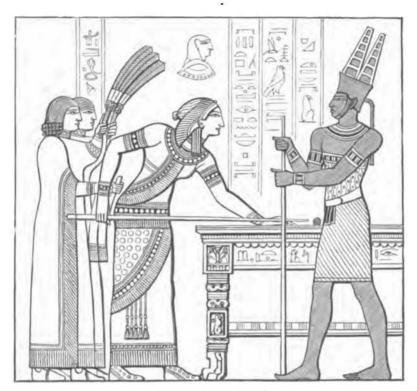
As with a woman: -Come, you'll play with me, sir?

Mar. As well as I can, madam.

Cleo. And when good will is show'd, though 't come too short, The actor may plead pardon.

Antony and Cleopatra, act ii. sc. 5.

Cuthbert Bede refers to this pretty falsification of history in his 'Book of Beauty,' and shows us his idea of Cleopatra playing at Billiards—in the dress of the period—with Mardian waiting to make his stroke, Iras looking on, and Alexis keeping score:—



'LET US TO BILLIARDS!'

Strutt, in his 'Sports and Pastimes of the People of England,' tells us that in the beginning of the eighteenth century, the Billiard-table was square, with three pockets all on one side—that is, one in each corner, and one midway between. In the centre of the table was a small arch of wood or iron, and at a little distance an upright cone which was called 'the king.' In the 'School of Recreation'—a little book published in 1710—there is given a representation of the table according to this plan. At certain parts of the game it was necessary for the ball to be driven through the arch and round the king without either of them being toppled over. This was not easy,

as, being loose on the table, they were easily misplaced. This was called the French Game. A similar method of playing was said to have been introduced by the Italians. In this—which was known as 'Trucks'—the king was placed at one end of the table. I am not acquainted with the name of the genius who doubled the number of pockets—and so doubled the interest of the game—got rid of the arch, and banished the king; but I fancy that Billiards began to be played in the modern fashion towards the close of the reign of our Second George, because, by Statute 30 Geo. II., it was made an unlawful game, and was forbidden to be played in taverns under a penalty of 101.

There are two ways of doing things—empirically and scientifically. For one man who works by rule of science, there are twenty who work by rule of thumb. Take any manual trade you like, and you will find that skilled artisans, as they are called, work out their mechanical problems by reason, not of any scientific plan of action, not because they know the 'why' and the 'wherefore' of their operations, but simply because they have been taught that certain effects produce certain results. And what is true of the mechanic at the bench, is also true of the players at various games. Of all the men of education who play at Chess, Whist, or Billiards, I doubt if even one per cent. of them know anything of the theory of chances by which two at least of these games are inevitably governed, or the scientific laws inseparable from their practice; and the knowledge of which laws. I have no hesitation in saying, is always a powerful aid to success.

CHAPTER II.

THE TABLE, THE INSTRUMENTS, AND THE GAME.

—And 'twixt his fingers and his thumb he held

A Billiard-cue, which ever and anon he twirled.

SHAKESPEARE. (Qy.)

cording to the game selected, on a slate table covered with fine green cloth. The object of all the various games played on the Billiard-table is to force one or more of the balls into one or other of the six pockets, by means of a third ball, termed the Striker's-ball; or, to make a Cannon, by forcing the Striker's-ball against the other two balls. Billiards is played by two or four persons, but in Pool and other round games, from three to a dozen or even more, may join.

THE TABLE.

The full-sized Billiard-table is twelve feet in length by six in width, and it therefore contains two equal squares inside the cushions. The best Tables are made with slate or metal slabs, covered with superfine green cloth, and with best native India-rubber cushions: and all Tables at which the English Game is played have six netted pockets, one at

each corner, and one in the middle of each side-cushion. The proper height of a full-sized Table is three feet from the floor to the top of the cushions. The Table must be accurately level. In order to obtain sufficient solidity of foundation, and to prevent vibration, a Billiard-table should never be set up in a room which is not properly prepared; a ground-floor is best, but wherever the Table is placed the floor should be level and firm.

Every Table, large or small, is provided with several Spots: the winning and losing spot (technically known as 'the spot'), at the upper end, thirteen inches from the top-cushion, and equally distant from each side-cushion; the winning (or Pyramid) spot, a little lower down; the centre spot, directly in the centre of the table, between the two middle pockets; and the baulk spot, midway on the baulk-line. Beside these, there are two other smaller spots—one at each end of a semicircle which springs from the baulk-line.

In the regular game of Billiards, the red ball is placed on the 'winning and losing' spot, and the players start from any point within the semicircle; and this rule applies to the various modifications of the Winning, Losing, and Cannon Game, which is known generally as Billiards, in opposition to Pool, Pyramids, &c.

Formerly it was the fashion to make Billiard-tables square, round, oval, octagonal, and of various curious shapes; and on the Continent, these variations of form are not uncommon even now. The ordinary Billiard-table of the French provinces is an oblong of eight feet by four, without pockets, and of course only fitted for the Cannon Game. The cushions were formerly

stuffed with list and layers of cloth, but India-rubber is now always used for this purpose. This change has greatly improved the modern style of play.

THE CUE.

The long tapering stick with which the ball is struck is called a Cue. The best Cues are made of thoroughly-seasoned ash. The Butt or handle should be well-flattened on one side, in order that it may be used to strike with when necessary. The other part of the Cue should be quite round, and taper finely and gradually to the tip. The tip should be made of two kinds of leather, hard next the wood of the Cue, and springy at the top. What are called 'French tips' are very good for fine play. They are made in the manner I recommend, with the hard leather foundation. The tip of the Cue should always be well chalked and roughed, in order to prevent it from slipping off the face of the ball. What is called 'French chalk' is the best, being free from grit, and neither too hard nor too soft.

Some players like a Cue with a piece of mahogany or other hard wood let into the Butt, to give it weight; but, generally speaking, ash will of itself be found sufficiently weighty.

In selecting your Cue, be careful to take one neither too heavy nor too light; not too large in the hand, nor too small or flat at the tip; neither too long nor too short. It should not be too stiff, for a Cue that wants elasticity will not make fine or side strokes; and it must be perfectly straight. The latter quality is easily ascertained by looking along it from end to end. A well-balanced Cue enables you to make your stroke

with ease and certainty; and in order that you may judge of its right length for your height, place the Butt of your Cue on the ground, and if its tip will just reach your chin, you will have chosen properly. As to weight, and size of grip, experience and natural tact will guide in one respect, and your own hand will inform you in the other. Some players like a heavy Cue, others a light one; but the Cue with which most execution can be done is one of moderate weight and good balance, with the Butt or handle sufficiently small to enable you to take a fair comfortable grip all round it.

The Mace is a hammer-headed Cue, thin and light in the stem. It is now very little used, even by ladies. With a Mace it is impossible to make high, low, or side strokes; or, in fact, to hit the ball in any other than a straightforward manner.

Having chosen your Cue, the next thing is how to use it. Well, you must take it in your hand—not too daintily—and hold it about such a distance from the Butt that there will be nearly the same weight in front of your hand as behind it. That is what is called the balance of the cue. Much depends on this; as, if held too near the Butt or too close to the middle of its length, your stroke will, of necessity, be cramped and awkward. You should neither grasp it too tightly, nor hold it too loosely. If you simply take it between your fingers and thumb, you will find that your stroke will be often deficient in form—or 'strength,' as the term is. If, on the contrary, you hold it in your hand as you would a club, your stroke will want elasticity and freedom. In this as in other operations, moral and physical, the medium course is best. But in the handling of the

Cue some slight variations will be found necessary in practice. For a light, graceful Losing Hazard, a light clasp is sufficient; for a strong, heavy Winning Hazard, a hardish grip with the entire palm and fingers is best. But for beginners a uniform method of holding the Cue will be found most successful; and the safest rule, on the whole, is to grasp, but not tightly, the Cue with the entire hand, and not with the tips of the thumb and fingers only.

THE REST OR JIGGER.

The Rest is a long stick with a brass, wooden, or ivory top; and its use is to assist the player when he cannot reach the ball he wishes to strike, but it should never be used except when absolutely necessary. The tops of Rests are variously constructed: some consisting of a simple cross-piece, and others with one or more grooves on which the Cue is to rest. Some of these are made with a high arch, to enable the striker to pass over a ball that may lie in the way of his Cue.

The High Arch Rest is sometimes called the Spider, from its long legs. It is used chiefly at the game of Pyramids, but it is also required at Billiards when it is necessary to pass the head of the Rest over a ball without disturbing its position.

The Rest is placed with one end on the table and the other in the striker's hand. The player then rests the Cue on the cross-piece or arch, and so strikes the ball.

When you employ the Rest, the tip of the Cue should be brought within an inch or two of the Striker's-ball. The handle of the Rest should be held firmly, and its head placed at such



WAY OF USING THE REST.

a distance from the Striker's-ball as to allow him to have a good view of every part of it. The Cue itself will require to be held between the finger and thumb, and not grasped.

THE BUTT.

The Butt is a tipless Cue made broad at its base, which is bevelled and leathered that it may lie flat on the Table, and propel the ball in a straight line. It is used in pushing the Striker's-ball from Baulk. The Half-butt is a long Cue properly tipped, and also leathered at its base. It is used either as a Butt or a Cue; in which latter case a longer Rest (called the Half-rest) is employed in conjunction with it. The Long-butt-and-Rest consist of a Cue and Rest made long enough to reach from end to end of the table.

In using the Butt, or in playing with the butt-end of your Cue—as in making the baulk, or in playing at a ball in baulk, when your own ball is in hand, that is, off the Table,—you should place the thick end of the Butt close to the striking-ball, and push it onwards by one free impulse; and not strike the ball with it. It is important to recollect this.

THE MARKING-BOARD AND CUE-RACK.

Every properly-appointed Billiard-room is furnished with a Marking-board and Cue-rack. The name of the latter explains its use. The Marking-board is either round or oblong. In the one case, it consists of a couple of discs, on one of which

are painted figures from 1 to 50, and on the other figures from 1 to 12. The oblong Marking-board is made to record the game by means of figures and a couple of sliding Markers. For Pool a Marking-board is especially prepared with coloured knobs and figures, to show the order of the players and the several states of their game.

THE BALL.

Billiard-balls are made of the finest ivory, so turned that the centre or core of the tooth is exactly in the centre of the ball. If they are not so made, and are not perfect spheres, they will not roll correctly. The regular match-balls are two inches and a sixteenth in diameter. For Pool and Pyramids, smaller Balls are generally used; while for the French Cannon Games, Balls from two-and-a-half to three inches in diameter are made.

BILLIARD-TABLE MAKERS.

Messrs. Burroughes and Watts, of Soho Square, are considered the best makers, and the fact of their having obtained prize-medals at the Great Exhibitions of 1851 and '62, justifies my giving them the first place.

Excellent Billiard-tables are also made by Messrs. Thurston, Catherine Street, Strand; Mr. Hunt, Strand; Mr. Palmer, High Street, Southwark; Messrs. Hopkins and Stevens, Mercer Street, Long Acre; Mr. Smith, Great Percy Street; Mr. White, Broad Street, Golden Square; and Messrs. Stevens, Great Scotland

Yard, Charing Cross:—while Bagatelle-boards of good quality may be obtained of Mr. Mechi, Regent Street; Messrs. Parkin and Gotto, Oxford Street; and Messrs. Asser and Sherwin, Strand.

TECHNICAL TERMS USED IN BILLIARDS.

The following are the principal technical terms common to Billiards:—

Angles.—A ball being struck in the centre against any part of the cushion, comes off the cushion at an angle corresponding to that at which it struck the cushion. This will be easily understood by referring to figure 1, Diagram I. If the white ball be struck in the centre from the left-hand spot in the baulk, it will proceed to the top-cushion, and return by a regular angle to the other spot at the right of the semicircle. This is true of the balls in any and all parts of the table, and after every return from the cushions. The whole science of this theory is contained in a single phrase—the angle of reflection is equal to the angle of incidence. On this fact hinges all the theory of Billiards; whether you strike a cushion or another ball with your own ball, the effect is the same. Modifications of the angles, rendering them more or less acute, are produced by two causes: the striking of the ball with the Cue more or less on one or the other side—the Side-stroke, in fact, about which I shall have much more to say; and the degree of fulness with which the Object-ball is struck by the player's ball. As one illustration of this law is as good as ten thousand, I need in this place

do no more than direct the attention of the reader to the figure; merely observing, that however many reflections may be made from the original line of incidence taken by a fairly-struck ball, all the lines of reflection or return from the cushion will be in directions counterpart to the first progress of the ball after being struck with the Cue.

Baulk, Baulk Line, and Baulk Circle.—The line drawn across the lower end of the table, about two-and-a-half feet from the cushion, is the Baulk-line. A ball inside that line is said to be in baulk, and cannot be played at by a player whose ball is in hand. The Baulk-circle is a semicircle of eleven inches radius, drawn from the centre of the Baulk-line, and from it the player starts whenever his ball is in hand. In the American and some other games, which will be explained by-and-by, the semicircle is not used; and the striker plays from any place behind the Baulk-line.

A Line-ball is a ball half in and half out of the Baulk, resting exactly on the Baulk-line, and therefore is not playable by the striker whose ball is in hand; but if more than one-half of the ball is beyond the line, then the player may strike at any part of the ball.

Cannon (or Carambole).—The Cannon is made by striking two balls successively with your own ball, either before or after concussion with the cushion. The number of Cannons to be made on the table is indefinite; as, whenever there are three balls on the table, there is always a possibility of the player making a Cannon.

Doublet (or Double).—This stroke is made by striking a ball, either your own or the object-ball, across the table, and,

after the ball has traversed the table once or twice, making a Cannon or Pocket. Case 2 in Diagram I. is an illustration of the Doublet. If the ball rebounds twice across the table it is called a Double-double. The white ball is struck at the red, passes over to the opposite cushion, and by a second angle of reflection falls into the middle pocket; or, by a similar stroke, the Object-ball may be pocketed.

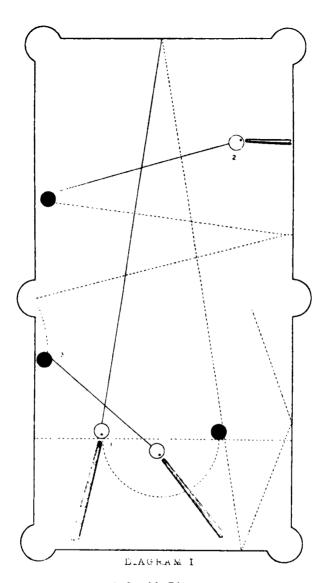
A Bricole Hazard.—Where the Doublet is made by striking the cushion first, with the view of making a Cannon or Hazard on the return of your ball, it is termed a Bricole, which is the French word for 'Back-stroke.'

Hazards.—A Hazard is a stroke by which a ball is forced into a pocket after striking another ball: a Winning Hazard when the Object-ball is played into a pocket, and a Losing Hazard when your own ball falls into a pocket after striking another ball.

High Stroke, Low Stroke, Following Stroke, and Side Stroke are so called from the part of the player's ball struck with the point of the Cue. These and their effects will be more fully explained in another chapter.

Jenny.—The Jenny is made by making a Losing Hazard in a middle pocket, off a ball lying near to the cushion and pocket. It is a very pretty and scientific stroke, and on the old tables could be repeated several times. With the highly elastic modern cushions this stroke is not very easy to make more than once. Case 3 in Diagram I. is an illustration of the Jenny, to produce which requires more or less 'side' on the Striker's ball, according to its position behind the Object-ball.

Miss.—The accidental or intentional missing of the Object-



Angles of the Table.

I. Stocks showing the law or angles. The plain line is the angle of Incidence; the distert lines the angles of Reflexion 2 Angle-doublet, without side stroke 3 A Joury

ball is termed a Miss. It may be made either with the point of the Cue or the Butt. Most rooms are provided with a properly-made Butt for the giving of Misses or striking a ball from the cushion; but it is advisable to have your Cue prepared with a flat end, properly leathered.

Screw or Twist.—This stroke is made by striking your ball below its centre, the effect of which is either to retard the progress of the ball, make it stop dead at the point of concussion with the Object-ball, or return in the direction from which it was struck. Of this, too, further explanation will be given.

Object Ball and Striker's Ball.—The striker's (or player's) ball is the one immediately in front of his Cue, when he is making his stroke, and which he strikes in order to make a Hazard, Cannon, or Miss: the Object-ball is the ball aimed at by the player, with his own ball.

Coup (or Coo).—A ball that runs into a pocket, or goes off the table, without touching either of the other balls.

These are all the technicalities that need particular explanation.

CHAPTER III.

GENERAL PRINCIPLES-HOW TO MAKE HAZARDS.

By different methods different men excel, But where is he who always can play well?—Churchill. (Qy.)

THE general principles of Billiards may be acquired, by reason of a certain number of regular and easilyunderstood axioms. The practice, however, is not so easy, and every axiom should be illustrated by actual play with Cue and Ball. Eye and hand should act in strict unison; and what the one sees to be possible, the other should be practised to accomplish. In making your stroke, an instantaneous glance will be sufficient—a glance that rises from the Striker's-ball to the Object-ball, and rests there while the stroke is being made. As the rifleman looks at the target rather than the muzzle of his piece when taking aim—as the cricketer has his eye on the wicket at which he is about to bowl rather than the ball in his hand—as the boy fixes his attention upon the sparrow he wishes to hit, rather than the stone between his fingers; so the Billiard player must give his mind to the Object-ball rather than to his own. With amateurs this is at first a little troublesome; but as 'knowing' is the halfwayhouse to 'doing,' he has half conquered his difficulties who knows precisely what his difficulties are.

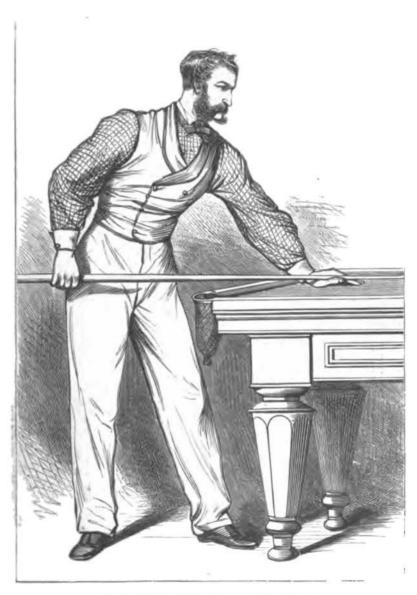
POSITION.

First, as to Position.—Stand easily with the knees unbent, and the stoop from above the hips. A right-hand player advances the left foot—a left-hand player his right. Keep the head well up, and avoid all contortions of countenance. In some situations—as when your ball is under the cushion, or when you are using the Rest—it will be necessary to vary the position of your feet, as by spreading them apart, or by resting one foot on a chair, and so on. But always endeavour so to stand as to keep your head well above the centre of your position; in fact, to properly carry your body, the centre of gravity must always be maintained with a certain degree of nicety. In the two figures introduced on pp. 21, 22, you have the proper positions for ordinary play.

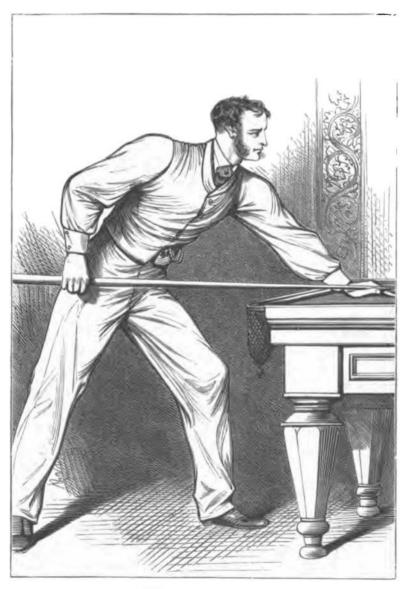
Place aux dames! In the figure on p. 20 we have the posture a lady assumes when about to make her Hazard at Billiards. The pose should be easy and natural, unrestrained and graceful; with the Cue held as nearly parallel to the table as possible; the Bridge-hand resting firmly, but not too rigidly, on the table, and the Cue-hand so disposed as not to interfere with its perfectly free action. The Cue should be taken in the palm with a gentle grasp; not held as you would hold a whip or a stick, nor suspended between the fingers like a fork or a fan. The stoop should be made from above, not from below, the waist—the head inclined gently forward, and the feet well planted on the floor at such a distance from the table as is demanded by the nature of the stroke. All violence or extravagance of gesture and position should be avoided.



THE LADY'S POSITION.

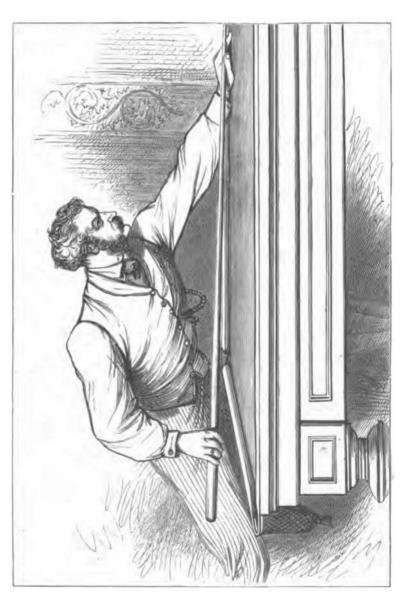


POSITION OF THE PLAYER FOR AN ORDINARY HAZARD.



POSITION FOR A HARD HAZARD.







This bit of advice is, however, addressed to gentlemen—ladies are always graceful!

The figure on p. 21 shows the gentleman's position in making his Hazard: knees unbent, body inclined a little forward, Cue-hand well-down, Bridge-hand pressed on the table not too hardly, and head nicely poised.

In making a hard stroke, instead of bending both knees, the stride is widened (see fig. p. 22). This is done in order to obtain a sufficiently horizontal position of the Cue.

It must be remembered, as before said (see p. 19), that for all ordinary strokes the Cue is to be held horizontally, or very nearly so. Sometimes, however, it is necessary—as when a ball lies close to another or under a cushion—that the Cue be raised in order that you may get its point to the top of the ball (p. 23).

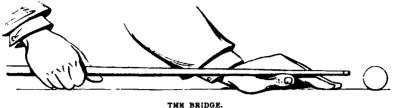
Again, the ball may lie close against a side-cushion, when, in order to avoid the use of the Rest, the right leg is to be stretched out (p. 24).

Or, when such a position is not easily taken, the Cue may be placed behind the back (p. 25).

THE BRIDGE.

Next, as to the Bridge.—You have taken your Cue in your right hand, and you now place your left hand on the table behind the ball you wish to strike. The wrist and the tips of all the fingers, close together, should touch the table, with the knuckles well raised archwise, and the thumb easily but not too much extended. This is the 'Bridge;' and between the

thumb and forefinger you place the Cue, in taking aim before vou strike.



Sometimes it will be necessary to raise the hand to the very tips of the fingers—as when you intend to strike a ball at its

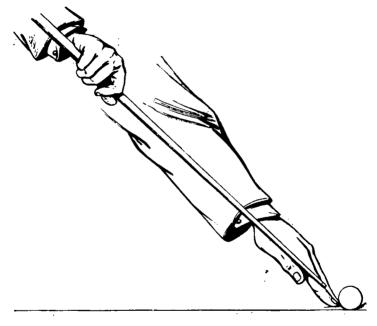
top, or to avoid touching another ball that lies close to your own. This figure and the next show the proper way in which the High Bridge is made. Considerable judgment is required to make the High Bridge, a modification in the manner of grasping of the Cue being necessary according to circumstances: and as, in every game that is played, novel and unexpected incidents arise, it is well that the tyro should be prepared to meet them in the most effective manner.

The amateur who means to become a player should avoid all cramped and awkward styles of making his Bridge,-as by



THE HANDS IN MAKING THE

bending the fingers under the palm, having the Cue between the second and third fingers, spreading the fingers wide apart, extending the thumb at a right-angle with the forefinger, thrusting up the thumb beyond the knuckles, laying the hand too flat on the table, and so on. But in order that my pupils may know not only what to do, but what

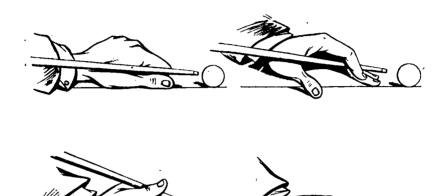


POSITION OF THE HANDS IN MAKING THE HIGH BRIDGE.

to avoid, I give a few examples of bad Bridges—in the following page.

For all ordinary strokes, the Bridge should be easy and natural—the hand not too hardly pressed on the table, and the fingers not too firmly set together. The distance between the Bridge and the Striking-hand is important. It should neither

be too long nor too short: about twenty-eight or thirty inches is the space for most common strokes, though occasions will arise when a much greater or lesser distance will be necessary. Here, as in other parts of the game, the judgment of the player



EXAMPLES OF BAD AND AWKWARD WAYS OF MAKING THE BRIDGE.

must be exercised. It is impossible to provide a rule and direction for every incident in Billiard-play; something must be left for tact, talent, and genius to accomplish, or why are we blessed with intellectual faculties?

THE STROKE.

Now, then, for the Stroke.—Look well at the ball you have to strike with your Cue. Take a glance at the Striking-ball, sufficient to acquaint yourself with its exact position, and then with your eye on the Object-ball draw back your hand and

make your Stroke. A very little practice will enable you to do this with ease and certainty. In taking aim, point your Cue to that part of the ball you wish to strike, and avoid all seesawing of the Cue. Having once got the correct sight, make your Stroke by a full, free, and direct blow, without hesitation and without fear. Do not draw your Cue-hand too far back, nor vary the height of the tip of your Cue by raising and depressing it before making your Stroke. Nothing is so destructive of all chance of becoming a good player as uncertainty of execution. Another point to be considered, and a highly important point too, in the making of your Stroke, is the amount of force necessary. For all ordinary Winning and Losing Hazards, the Stroke should be made with a free forward sweep of the arm from the shoulder, and not merely from the elbow.

In Billiards so much depends on freedom of execution, and on full power of Cue, that the Stroke from the shoulder cannot be too much insisted on. Of course there are many positions of the balls in which this shoulder-power is not required; but it is absolutely necessary that everyone who wishes to become a good player should avoid at starting all cramped and confined modes of play. Did you ever try your hand at amateur carpentering? If you have, you will have noticed how much more effective is the sweep of the plane when it is made by a joint motion of the body and arm. So also, in the Shoulder-stroke, the whole body will sympathise with the full, free, forward drive of the arm. Good swordsmen and boxers will at once understand the importance of trunk and hand acting in concert. And then, again, much—very much—depends on the

will of the player. If you make your Hazard with carelessness or uncertainty, it will only succeed by accident; but if you consider it well and set your mind on it, you will be sure to accomplish it—that is to say, if your aim be correct and your blow certain and unhesitating. I do not want to lay too much stress upon this subject; but I may say, at once and decidedly, that unless your mind is thoroughly satisfied that your hand can carry out its intentions, you will never be a Billiard-player. Hesitation, doubt, and fear are injurious to your chance of excellence. If you mean to succeed, make up your mind to it, and persevere until you do. There is a very old and respectable saying, which tells us that what is worth doing at all is worth doing well. Therefore, do not play at Billiards in a careless dilettante style, but resolve to attain success, and do not be content until you accomplish it.

In the large majority of cases the ball must be struck, and not pushed. A moderate degree of strength will be found ample for ordinary purposes. It is not necessary to use a sledge-hammer to break a walnut. Too hard a stroke alters the angle which the ball would naturally make if struck full in its centre, while too soft a one does not, perhaps, enable you to reach the Object-ball.

Different players have different ways of performing the very simple action of striking the ball. Some play freely from the shoulder, with a good and graceful sweep of the arm; this is the right way, and in the majority of cases will prove successful. Others hit the ball with a sudden jerk, which is the very worst way in which a ball can be hit; and others, again, push at it. The only really proper method of striking your ball is

to hit it fairly and smoothly without drawing back your hand too much, or allowing it to travel too far over the table after the ball is struck. From four to six inches is sufficient for the draw-back of the Cue-hand. Above all, endeavour to keep your Cue as parallel to the table as you can—that is, in all ordinary Strokes. Occasions will arise when you must raise or depress your Cue-hand, in order to make the proper Stroke.

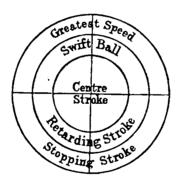
You must also remember that Billiards can only be properly played when the mind of the player is free from other cares. The man with his head full of anxiety may certainly play at Billiards, but he cannot play well; the player who allows himself to become too much excited with the game, will be very likely to lose it; and, as the angry man gets the worst of the argument, he who gets out of temper with himself, his opponent, or the marker, will stand but a poor chance against a cool and clear-headed player.

The grand principle of Billiards is this—the angle of reflection is always equal to the angle of incidence. Though, at first sight, the sentence may look rather learned and abstruse, it is by no means difficult to comprehend. It is the main theory of Billiards to be borne in mind; the tyro will, however, do well to remember that, like other theories, it is subject to variation and modification under particular circumstances. But, as I have already dwelt somewhat fully on this subject, I may content myself by referring the inquiring reader to pages 51 and 52, and to the Appendix, where the matter is discussed at some length. For the scientific investigation contained in the latter as to the equality of the angles

of incidence and reflection, I am indebted to an eminent Cambridge mathematician.

Well, now we come to consider the way in which the Strokes are to be made. Let me request your attention to the brief instructions that follow. Once conquered, you will have gone far on the road to good play; neglected, and you will never be a good player, though you play all your life.

All the Strokes made with the Cue are simple and easy when once comprehended. A ball struck in the centre of its circumference travels at a certain speed according to the force of the blow; struck above its centre, its rate of progression is increased; and struck below its centre, it goes more



STRIKING-POINTS OF THE BALL.

slowly, stops at the point of concussion with another ball, or returns to the place whence it started. The diagram explains this more fully. In the above figure we have the striking-points of the ball shown very clearly; and in making the Strokes I presume that the Cue is directed above or below the central horizontal line, but not much towards either side of the perpendicular. If you strike your ball on either side,

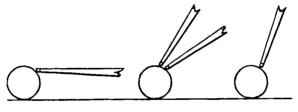
you make the Side-stroke, of which I shall have to say more hereafter.

In making the Central Stroke the Cue must be held straight to the centre of the ball, and struck fairly, either hard or gently, according to the necessity that presents itself. The Central Stroke is the one that is most ordinarily adopted, and by it most of the common Hazards and Cannons may be made. In playing at the cushion for Bricole, and in all cases in which you wish to impart to the Object-ball a line of motion similar to, or the counterpart of, that of your own ball, the Central Stroke will be sufficient. The next figure will show you how the Cue should be directed to make this stroke.



The High Stroke is made by hitting the ball above its centre, and with the Cue raised a very little from the horizontal. In fact, the nearer you can keep your Cue parallel to the table, the more successful will be your stroke. I have already said that the velocity of the ball is much increased by striking it above the centre. The motion imparted to it by the Cue is continued according to the original force of the stroke, till it comes in contact with another ball or the cushion—when it runs more or less straight in the direction towards which it was struck.

The High Following Stroke is made by hitting your own ball still higher from its centre. The hand and cue should be made to flow, as it were, after the ball, and the effect of this action is to impart to the ball struck a similar mode of progress, straight to the pocket or cushion. This is a very useful stroke when you want to pocket your own and the Object-ball in the same pocket, or to make a Cannon on to a ball nearly in a line with your own and with the Object-ball. The Following Stroke, when properly made, causes the Object-ball and the ball struck with the Cue to progress in the same line. Very often, indeed, when you do not intend it—as in Pool and Pyramids—your ball follows the one struck instead of stopping short of the pocket. It is good practice to place a red ball between the two middle pockets, and, with your own ball near the side-cushion, endeavour to make the Single and the Double Hazard. You will soon find that you can accomplish either Hazard at will.



HIGH FOLLOWING STROKS.

HIGH OBLIQUE STROKE.

The High Oblique Stroke.—When you hold your Cue high across the centre of the ball, and strike down sharply, you make what is called the High Oblique Stroke. The Cue must be raised so as to command the top of the ball. The effect of this stroke is to make the ball jump up from the table, so as sometimes to force it over the top of a ball that may lie in its line of progress. This is a very useful stroke, and is occasionally employed to cannon on a distant

It was by a stroke of this kind that a German player could make a Cannon, with his own ball on one table, and two balls on another table. It is frequently practised by betting-men, in order to catch flats, and it was by means of this stroke that Jabez Hare used to jump his ball into a pocket over another ball placed just in front of it without touching the latter. It is called the Dip, and can only be acquired by considerable practice. Raise your bridge to the very tips of the fingers, and make the stroke by a sudden 'job' downwards and forwards at the same instant, with a kind of sudden rubbing action of the Cue's point. But you must be careful not to tear the cloth; for if you do, you will in most public-rooms be charged a guinea for your experiment. For the method of pointing the Cue see the figure. The Cue must be grasped firmly, but not too tightly, or you may fail for want of freedom in the stroke. The philosophy of the stroke is this: The ball is hit so high that the applied force is more downwards than forwards, and the ball is forced to roll on its centre backwards. The forward impetus is diminished by the backward roll, and the applied force therefore being principally in the downward direction, the clasticity of the ivory of which the ball is composed compels it to bound or jump. With regard to the Cannon from one table to another, there is no such great difficulty as at first sight appears. Two balls are placed on one table, at a proper angle for an easy Direct Cannon. The player then places his own ball on the centre spot in the baulk of the other table, takes his Cue between the fingers and thumb, with the palm upward instead of downward as in ordinary

strokes, and strikes the ball high and downwards to the table. The ball then rises from the Cue's point and flies onward. The great point is to strike the first ball on the distant table; and if you do that, the Cannon will follow almost as a matter of course. I have made this stroke many times. It is a mere matter of practice, and of no particular use except as a curious exemplification of the power of Cue acquired by long familiarity with the instrument. I know many players who can make the stroke. Almost any clever marker can show it to you, when you get him in an exhibiting mood.

The Low Stroke.—This is made by striking your ball below its centre; and by just so much as you strike it nearer to the table you retard its progress, till it either goes slower, stops, or returns to your Cue. (See the figures for the position of the Cue in the Low Stroke.) When you strike your ball at its lowest point, you convert the Low Stroke into the Screw or



Twist. Let me explain the difference between the two strokes. Inasmuch as the High Stroke, as I have already explained, accelerates the motion of the ball, and the higher it is struck the faster it goes, so does the Low Stroke retard the speed or even reverse the course of the ball. Thus an ordinary Low Stroke has simply the effect of making the ball travel at a slower rate than usual; but a Screw, or Twist, causes it to be retarded in its motion, to stop dead at the point of concussion with another ball, or recoil on such concussion and return in

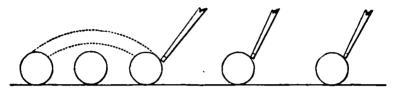
the direction whence it was propelled. The reason for the motion given to the ball by the *Screw* is that its mode of progression is reversed; and, instead of travelling by a series of over-and-over revolutions, like a coach-wheel, it goes forward by a series of under-and-under revolutions, like the hoop thrown from the hand in the common schoolboy trick. Travelling thus, under and under, and at the same time forward, when it reaches the Object-ball its forward motion is stopped, and the backward roll produces its natural effect and causes it to return. Indeed, the Screw may be put on so strongly that a ball may be projected from the baulk to the centre of the table, and return without contact with another ball, so soon as the forward motion given to it is exhausted.

But there is something more required in making the Screw than simply striking your ball below its centre. The ball must be struck low, and, at the same time, with a peculiar and sudden drawback of the hand, accompanied by an indescribable turn of the wrist. Moreover, the point of the Cue must be made to impinge upon the ball with a sharp twisting motion. A Cue with a small round top, well chalked, is necessary for a successful Screw.

The Screw is highly useful in a variety of cases—in the making of Cannons, in Winning Hazards, &c., in getting out of difficult situations, and making the best of a break. All degrees of strength may be employed in the Screw. The Cue must be held as nearly horizontally as is possible, regard being had to the nature of the stroke.

The High Oblique Screw.—This curious and often very useful stroke is made by striking your ball on its top-side,

with a downward rubbing action of the hand, accompanied by a sort of half-turn of the wrist. The action is nearly indescribable, but any good player can show you how to make it. The ball must be struck on the side that is towards the player. If struck on the outer side, you will produce a Reverse Screw.



THE DIP AND THE HIGH SCREW.

The effect of the High Screw is to cause the ball to jump a little, and to twist back on reaching the Object-ball. It is a very useful stroke when you wish to strike a ball near to your own and cannon back on to a ball behind, or make a Hazard in a near pocket. The method of placing the Cue is shown in the figures. The Bridge must be raised by placing the tips of the fingers on the table, and striking downwards with a firm decided Twist. As an ounce of practice is worth a pound—or ever so many pounds—of theory, let me request my readers to practise the strokes shown in Diagram II. They may all be made without Side-stroke, and will be found very useful to young players.

Case a, Diagram II., is the Central Stroke combined with Division of the Object-ball, the angles of departure being equal to each other. The angle is acute or obtuse according to the quantity of the Object-ball covered by the Striking-ball; or, in

other words, in proportion to the amount of division employed—as explained in the next chapter.

Case b is a High Stroke used in making a Cannon. Here the Object-ball is sent forward in the direction of the dotted line, and the Striker's-ball proceeds to the other ball and cannons. This is a stroke that very frequently occurs.

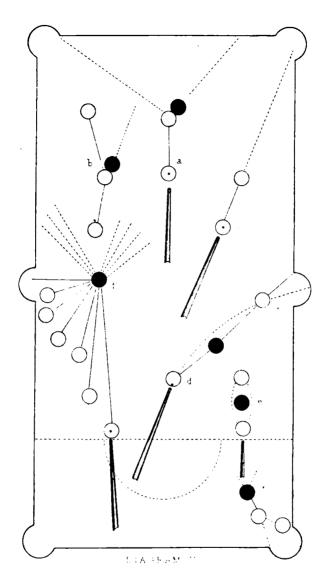
Case c is the *High Following Stroke*, in which both balls proceed to the pocket, the one following the other in a direct line. Of course a stroke of this kind may be made on any part of the table. Such strokes occur in every game.

Case d is the *High Oblique Stroke* already explained. The Object-ball is reached without touching the centre ball; or the centre ball is thrust aside and the Cannon follows.

Case e is the Dip, which, though rather difficult to show in a diagram, will be clearly understood when tried on the table. This may be made by jumping over the centre ball, or by passing round it. In the latter case, the Side-stroke must be employed.

Case f exemplifies the Screw, just according to the quantity of Screw put on your ball—which in this case is supposed to be in or near the baulk. By it you may make either of the Cannons shown, or square your ball into the pocket for the Losing Hazard, as seen here by the straight line. The ball struck will fly off in one or other of the angles shown by the dotted lines, according to the side on which it is struck. In all the cases here described, your own ball is supposed to be struck in the centre, higher or lower as the case may be.

Case g is the *High Oblique Screw*, by which you make either a back Cannon or a Pocket:—try both.



Illustrations of various strakes.

The Side Stroke requires a chapter for itself; but before we come to that it is necessary that I should show you how strokes may be made by dividing the Object-ball; that is, by striking the Object-ball in such a way as that only part of it is covered by the Striker's-ball.



CHAPTER IV.

GENERAL PRINCIPLES—STRENGTHS—DIVIDING THE OBJECT-BALL.

Like one or two contending in a prize

That thinks he hath done well in people's eyes,

Hearing applause.

SHAKESPEARE.

NOWLEDGE is power, says the time-honoured maxim; and in few things is its truth more apparent than in Billiards. Nearly every amateur makes good strokes occasionally, without knowing how or why, receives the applause of the bystanders, and feels that he does not deserve it. Now, what he should do, if he would become an adept at the game, is to study the reason and philosophy of the various Hazards and Cannons which present themselves in the course of his practice. Take a private room for an hour or two, or go early to your club, and knock about the balls at random; and you will soon discover, that on the Billiard-table certain effects follow certain causes, as regularly and as definitively as in a mathematical problem. If you watch a first-rate player you will see that his great object is to keep the balls before him, so that every stroke, when completed, shall leave another to follow. This is the very perfection and science of Billiards,

only to be acquired by practice and study. The professional players have most of them begun to play at an early age, and they know, as it were by intuition, the effect of almost every Hazard they make. But you, who were probably at school or college, fitting yourselves for honourable and useful careers when they were preparing their hands and eyes for excellence in a simple pastime, cannot expect to rival them without much practice. But you can acquire what they know very little about—the science of the game; and as knowledge is power, a little study will soon enable you to overtake them—if you cannot, indeed, pass them—in the contest.

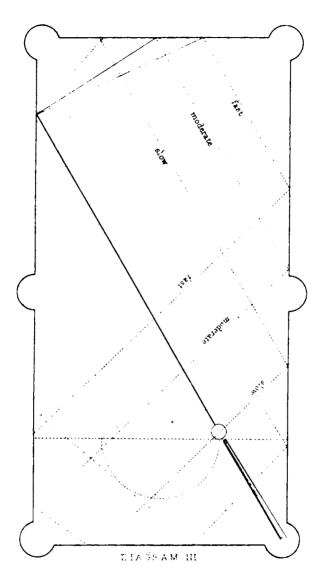
STRENGTHS.

One of the great secrets of success in Billiards is a thorough knowledge of 'Strengths.' By this term I mean the power of the Cue over the ball by the force with which it is struck. And with this is combined a knowledge of the greater or lesser elasticity of the cushions. A fairly good player will be enabled to judge of the latter point by striking his ball once or twice from end to end of the table. From good indiarubber cushions, a ball struck moderately hard will traverse the table three or four times from end to end. On some very fast tables as many as eight passages up and down may be made; but the fastest tables are not always the best. Something depends, also, on the temperature of the room. After a day's play the cushions will be much more elastic than they were in the morning, when they have been subjected to the cold

air of the preceding night. It is the custom, however, with Markers who understand their business, to run a hot-water iron round the cushions every morning as soon as they have brushed the table. By this means the cushions are at once brought into play; and they remain in good playing condition, after being thus treated, from morning to night, either in winter or summer.

In order to accustom yourself to the proper degree of strength necessary to the making of certain strokes, and to familiarise your mind with the condition of the cushions, it will be as well to begin with a single ball, and to strike it about the cushions in various directions, marking the effect of each stroke. This you may do by chalking the place at which your ball touches the cushion after its first reflection, always remembering the grand maxim that with a fairly-struck ball—that is, a ball struck in the centre with moderate force—the angle of reflection equals the angle of incidence. Look at the diagrams for illustration of this law.

But this maxim, like others that we know of, is capable of a large amount of variation; and the variation arises from the manner in which your ball is struck, rather than from any peculiarity in the cushions. Whatever be the strength or elasticity of the cushions, their effect upon the ball is invariable. What you can do once you can do a thousand times, so far as they are concerned, provided always they are in good average condition. Well, then, now that we know that the variation in the line of reflection depends upon the force exerted by the player, the next thing to learn is how to modify the strength of your stroke, so as to produce, with something like certainty,



Illustrations of strengths.

the effects you wish. I will try and explain the 'how' and the 'why' in a diagram.

In Diagram III. are shown the different effects produced by the same ball played with different degrees of strength. Here it will be seen, that, just according to the force given to the ball in the original impetus, is its line of angle altered after striking the cushion. Hence the importance of a strict attention to 'Strengths.' The black line represents the course of the ball before it strikes the cushion; the thin line, the course of the ball after its first projection; and the dotted lines, the direction taken after the ball's second and subsequent reflection. The same rule holds good in all parts of the table, up, down, and across it; but as it is impossible for me to state, as it is also impossible for you to know, the exact degree of force necessary in order to produce the variations required, it will be enough that I show you the effect consequent on the greater or lesser employment of force in the making of a stroke. must remember, also, that the same law applies to balls struck one against another-with this difference, that the effect of more or less strength is shown in the directions taken by both balls. All angles are modified by the degree of fulness with which the Striking-ball and the Object-ball are struck. If both be struck full, the angles taken by each after impact will be equal to each other; but if the point of contact be more or less on one or other side of the Object-ball, the angles will be more or less acute,—always observing the fact, that a hard fast stroke makes the angle of departure sharper than a soft slow one.

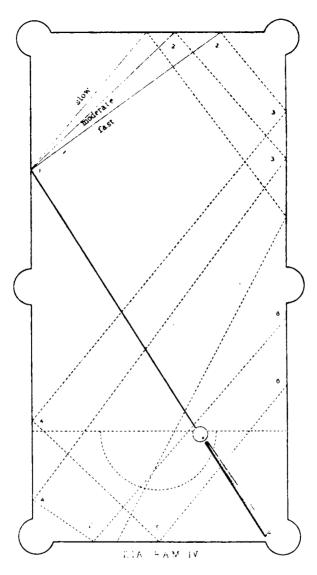
From all this—which may seem rather dry to beginners—you will perceive the importance of early acquiring a good

knowledge of 'Strengths,' for much depends upon such knowledge. I may say, however, that as a general rule, moderate strength and delicate use of the Cue is more certain of execution than mere force. The amateur generally strikes his ball with more power than is necessary. From this cause he frequently retards his progress in the game; for, as he becomes more proficient, he has to unlearn much that he has learned—just as a child beginning to talk has to discard the jargon of the nursery for words and sentences that convey not merely sounds but ideas.

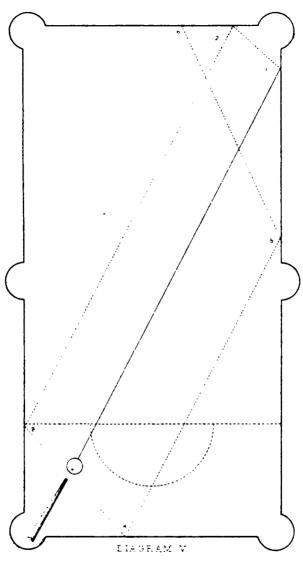
Examples of angles, so produced, might be multiplied to infinity; but in order to show you what may be done with a properly-struck ball, I give another diagram, in illustration of the law of incidence and reflection.

Diagram IV. presents a further illustration of Strengths and Angles. Here you will see how a ball may be made to strike all six cushions—marked 1 to 6 in the Diagram, in order to show the direction of the ball and the striking-points. A moderately high, hard Following-stroke will effect the object. The examples shown may of course be modified, so as to embrace a considerable variety of similar angles. A very simple illustration of the same stroke is shown in Diagram V. The ball must be hit high, fairly in the centre of its width. If not so struck, you will find that it will deflect sharply from the first cushion and not return in the desired angle, in which case it would be impossible to strike all the cushions.

This stroke is very common with betting-men, and therefore it is as well that you should be made acquainted with it. The whole secret is in knowing where to strike the first cushion,



Strengths and angles.



Strongths and anales.

and how to hit the ball. These conquered, nothing but a sufficiently high and strong stroke is necessary. Billiards is an excellent game, but, like other excellent things, it is apt to be abused by unprincipled men. Whenever you meet a smartlooking fellow in a public-room, who offers wagers against your making certain strokes which he can accomplish, treat him with civility, but don't bet with him. Learn all you can from him, but avoid giving him a chance of winning your money. After a while, when he finds that he cannot get half-a-crown out of you, he will, in very desperation, love of play, or vanity, show you a few good strokes. This is the almost invariable practice. Take any advice from him, but don't bet. A game or two with him, for 'love,' will, perhaps, not be bad practice. He may not be a 'sharp,' but if he make his living by Billiards, he is not a man to know intimately. I wish I could give you the names of some of these smart active young gentlemen. They are very well known, and generally carry a piece of chalk in their waistcoat-pockets, have a favourite Cue, and call the Marker by his Christian name. Just a word in your ear. These clever fellows are sometimes well dressed, and pass for gentlemen. Indeed, some of them have had university educations, and are even members of good clubs. But, beyond a half-crown game or wager, they are dangerous. I remember a remarkably good-looking, pleasant-spoken, handsomely-dressed chevalier d'industrie, who was for years reckoned simply as an excellent player. But it was observed that only youngsters and new men played with him for high stakes. He had the run of half-a-dozen clubs, and nobody had anything to say against him. At last, one night Lord Nosoo

introduced him to the Billiard-room of the Megatherium, where I happened to be playing Pool. He took a ball and played indifferently well, dividing a Pool now and then, and betting an occasional halfcrown. When the Pool was over, somebody challenged him for a game at Billiards, and he played. I sat down and looked on, saying nothing. Before the match was over the chevalier had won more pounds than I should like to name. He was certainly very lucky, and appeared always to improve in his play as the game went against him and the betting got higher. I was interested and watched intently, but could discover nothing unfair. I noticed, however, that he seldom or never played at the white ball, and that in each game he had the spot-ball. But I thought nothing of that, many players preferring to try a Hazard or Cannon off the red rather than pocket an opponent's ball. And so the match went on, till there were a good many members looking at the game, and betting. At last, the chevalier's opponent, wishing to leave the room for a little while, requested me to finish the game for him. I consented, and played the next stroke with the ball left on the table by my friend. I had hardly played half-a-dozen strokes, when the secret of the chevalier's extraordinary success was revealed to me. He had changed the balls, substituting for the true white ball one which was faulty in its roll. This gave him a certain advantage over his opponent; and, being a good player, he won as often as he liked. Many gentlemen will remember how we exposed the lucky chevalier that night. A few years afterwards I saw him playing in a room in a Palais Royal hell. But he levanted directly he caught my eye, and left his game unfinished.

It is astonishing how many tricks and disreputable manœuvres men who make a living by Billiards will have recourse to. On another occasion I was present at a match in which a professor gave a good many points to a talented amateur. The betting was in favour of the amateur, but the professor won, principally by a series of gentle Losing Hazards in the middle pockets. Being a master of 'Strengths,' he was able, every now and again, to place the red ball near a middle pocket, when he invariably made a good break. On playing afterwards on the same table, I fancied that the middle pockets 'drew' somewhat—that is, the balls appeared to roll too easily into them. I had the cushions removed, and the cloth lifted, when, as I suspected, I found that the slate had been slightly scraped away, and lowered from the centre of the table to each pocket. In this case the marker must have been a party to the swindle. Albert Smith refers to this incident in one of his pleasantly-written sketches.

THE DIVISION OF THE OBJECT-BALL.

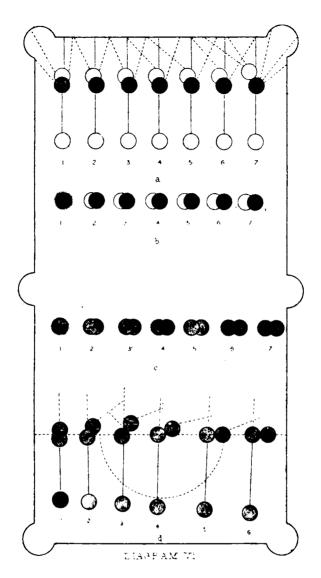
Revenons à nos moutons. Having acquired a fair knowledge of strengths, which will also include a good acquaintance with angles, the next point is the Division of the Object-ball. By this phrase is meant the amount of contact between the ball struck with the Cue and the Object-ball. When the Striker's-ball is hit full, and fairly in the centre, and struck full against the Object-ball, it is called a full ball: when about half the Object-ball is covered by the Striker's-ball, the stroke is called a half ball: when less than half the

Object-ball is covered, it is a third ball, a quarter ball, an eighth ball, or, a very fine ball.

Diagram VI. shows what I mean by the Division of the Object-ball. The balls at a show—1, a full ball; 2, a three-quarter ball; 3, a half ball; 4, a third ball; 5, a quarter ball; 6, an eighth ball; and 7, a very fine ball. The illustrations b, c, d, in the same diagram, show different views of the same balls.

It is very difficult to convey in words a precise explanation of this mode of dividing the Object-ball, but I will try to make myself as well understood as I can. When a full ball is played, the centre of one ball strikes the centre of the other's circumference, and the effect of the stroke is to make both travel in precisely the same direction. This, therefore, is the stroke to play when you want to drive the Object-ball full and straight into a pocket. It is generally called a straight ball. You must keep your Cue on a level with the centre of your ball, and grasping the Cue firmly, but not too tightly, hit your ball fairly and freely, with sufficient strength to make both balls travel to their destination.

A three-quarter ball will cause the balls to deflect from the line of aim; in every case the Object-ball leaves its position in the direction of the line joining the centres of the balls, and consequently—the less the contact the wider the angle between the directions of the balls. This sentence in italics is, in fact, nearly all that can be said on the matter, except that the law refers to balls played with moderate strength. If the stroke be slow and gentle, the angle will be proportionately narrow; if sharp and hard, proportionately wide—

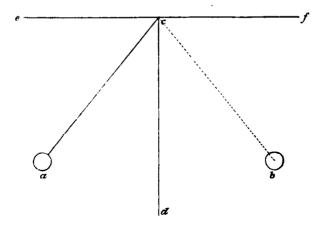


Division of the Object Ball

as I have already shown in Diagrams III. and IV. The width of the angle may therefore be said to be governed by two causes: first, the amount of impingement between the Striker's-ball and the Object-ball; and, secondly, the amount of force exerted by the player. I might, to be sure, have placed reference letters to each illustration of this law, but a glance at the Diagram will, I fancy, be all that is required by the reader to enable him to comprehend the theory here advanced. In dividing the Object-ball, care must be taken to hit your own ball full, and at the same time to strike the Object-ball in such a manner that neither more nor less of its surface is covered than will effect the purpose intended.

Of course this presumes great accuracy of eye, nicety of calculation, and delicacy of hand; but after a while you will get so accustomed to divide the Object-ball, that you may reckon almost with certainty upon effecting the end you desire. And you will please to remember that success in Billiards depends upon accuracy, nicety, and delicacy.

But to illustrate the theory more fully:—



Suppose you strike the ball a at the cushion, or at another ball at c, the line of reflection will be towards b. If you now draw a line, cd, at right-angles to the line ecf, which represents the cushion, you will find that the angle acd is equal to the angle dcb. This will serve as an illustration of the law above enunciated, viz.: that the angles of reflection and incidence equal each other.

The law applies with practical exactness to bodies one of which is moveable, and the other at rest. But where both are equally moveable and elastic, a modification of the law takes place, and a compound action results. This you will discern in the course of your play; and to counteract the departure of the balls from the strict lines of incidence and reflection, the judgment of the player must be exercised—every angle being modified or altered by the force applied. It will be understood that every stroke is capable of considerable variation, according to the manner in which it is struck: if, therefore, you do not immediately succeed in making the Hazards or Cannons shown in the several diagrams, you must try again and again, till you obtain the degree of 'division' or 'side' required.

Presuming that you have succeeded in conquering so much of the theory of Billiards as I have explained, and believing that *le premier pas* is not so very difficult as to frighten you, we will proceed to the next step—the grand one, indeed, without which Billiards cannot be successfully played on modern tables, with accomplished men for opponents: I mean the 'Side-stroke.'

CHAPTER V.

GENERAL PRINCIPLES-THE SIDE-STROKE.

After the blow is given there is no manner of intelligence can alter its effects. Be careful, therefore, how you give the blow.—Butler.

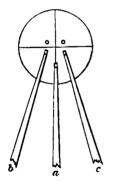
OTHING is so common as to hear young players talk

about the Side-stroke, and nothing is so likely as to find that they know little or nothing about Put into the simplest possible language, the meaning of the Side-stroke is this: if you strike a ball on its side it will, while rolling forward on a horizontal axis, also spin on a vertical axis towards the side on which it is struck. On contact with another ball, or the cushion, the former will be diminished or altogether stopped, according to the force of the spin, while the latter is continued. The result of this is, that the spin causes the ball to roll in the direction of this latter It follows, from this, that you must always strike the ball on the side towards which you wish it to go. The proper effect of the Side-stroke is not seen till after contact with the Object-ball or cushion; when, if the ball has been struck on its right side, it will travel to the right; if on its left side, to the To increase the divergence you must put more 'side' on left.

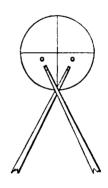
as it is termed; which means that you must hit it more towards the outside, and thus-according to the principle already laid down as to the speed of the ball being increased or diminished according to the nearness to and side of the circumference at which it is struck—increase or diminish the speed of its spin according to the angle you wish to make after striking the Object-ball or cushion. In making a Sidestroke you must recollect that in hitting your ball very much towards its side, the Cue is apt to slip; to prevent which, the tip must be well chalked. Most players use a little Sidestroke without intending to do so, it being difficult always to strike the ball exactly in the centre. With the really scientific player, however, the quantity of 'side' is a matter of the nicest calculation. The progress of a ball struck on its side is somewhat retarded; but after contact with another ball or the cushion, it flies off at a more or less sharp angle. scarcely say, that if the ball be not absolutely true, you cannot play with correctness, much less employ the 'side' with effect. Immense care is taken by turners in producing thoroughly true Billiard-balls; and before they are sent out they are tested by Messrs. Burroughes and Watts, and all other reputable Billiard-table makers, with a machine by which the very slightest variation in weight or exactness of roll is instantly detected. I remember once playing with a noted professional, and, greatly to my astonishment, I failed repeatedly to make some not very difficult strokes. I could not understand the reason, and I lost the game. In the following game, however, we accidentally changed balls, when I immediately discovered that the Spot-ball, with which I had previously played, was untrue. On attempting a slow twist my opponent, who then had the Spot-ball, made the same discovery. We had all the balls tested, and found that they were every one more or less imperfect. I looked at the name-plate on the table, which was a new one, and I saw that the maker did not stand in the first rank of tradesmen. Caveat emptor. Never buy a Billiard-table or Billiard-balls of an inferior maker.

Well, now that you know what the Side-stroke is, the next thing to learn is how to make it.

It is not easy to strike a ball out of its centre and at the same time strike it with exactness. The Cue, instead of being



POSITION OF CUE FOR SIDE-STROKE.



POSITION OF CUE FOR REVERSE

held parallel to the intended direction of the ball, must be held at an angle a little more or less acute to it, as in the foregoing figure, where a represents the centre stroke, b and c the right or left Side-strokes. This manner of holding the Cue will also be found useful in making a Screw—though not absolutely indispensable. The next figure shows the way in which the Cue must be inclined across the ball when

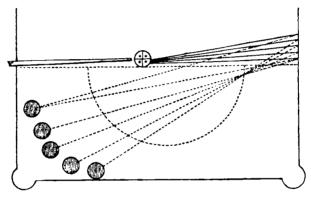
a very strong Reverse Side-stroke is required,—that is, when it is intended that the ball on its return towards the player shall diverge towards the side; the dots on the ball showing the striking-points.

These theories may appear difficult of proof: but how many other generally-accepted theories are easy of demonstration?

But, beside pointing the Cue and striking the ball at any angle from its direct line of progression, the Side-stroke must be accompanied by an imperceptible and indescribable twist of the hand, and a rapid rub of the Cue's point upon the ball. Care must be taken, too, not to strike at the ball with too much force. Moderate, or rather slight, strength only is necessary to make the Side-stroke to perfection. Calculate the distance your ball has to travel before its impact with another ball or the cushion, and put on the 'side' accordingly. If you make too hard a stroke, you will defeat your object, and the 'side' will not take effect. Instead of the ball flying off at an angle after contact, it will go straight on, just as if you had struck it in the middle for an ordinary Winning Hazard. Certainty of execution can only be attained by careful delivery of your Cue, and a definite, though not too strong, stroke. The whole theory of the Side-stroke lies in the fact that by it the player is enabled to enlarge, as it were, the striking surface of his ball.

To make the Side-stroke with ease and elégance, you should stand well behind your ball and deliver your stroke with precision. It is not easy to explain the reasons, much less the practice for the proper playing of Side-strokes; and, therefore, I advise you to get a good player to show you how to make it; and then practise for a few hours on a private table. No better mode of practising the Side-stroke can be found than in playing your ball against the side-cushion from the baulk, outside the line and bringing it back within the line, first on one side and then on the other, by putting on corresponding 'side.'

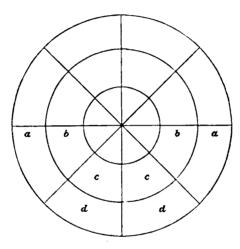
In the next figure I show this. Here we see how a ball struck on its side will return into baulk on an angle more or



PLAYING A BALL OUT OF BAULK-ILLUSTRATING THE SIDE-STROKE.

less wide, according to the amount of strength and 'side' employed. To such nicety can good players make this stroke, that they can tell to within an inch where the ball struck will stop. Practise this stroke till you can place your ball in any part of the baulk you wish. An easy way is to place a ball on the baulk-line, and play your own ball out of baulk and in again, without striking the ball on the line; or by endeavouring to pocket your ball in the corner from the same kind of stroke.

Next as to the quantity of 'side' requisite.—Here much must be left to the judgment of the player; but it must always be remembered that the amount of 'side' required is in proportion to the obtuseness of the angle. Suppose the ball played to be divided into a number of imaginary parts, as in the following figure. Here we have a diagram pretty nearly representing a vertical section of a Billiard-ball—only that it is flat instead of round. With the Side-stroke may be combined the High or the Low-stroke, the Screw, or the Following-ball. The figure is therefore divided horizontally, and just as



THE DIVIDED BALL,
SHOWING THE VARIOUS PLACES AT WHICH IT MAY BE STRUCK FOR 'SIDE.'

the ball is struck above or below its centre, the stroke becomes High or Low—a Follow, or a Screw. At a a we get the extreme centre side; at b b a moderate centre side; at c c a still less perceptible side and slight screw; at dd a side and strong screw. The same strokes above the horizontal line produce exactly contrary effects, the pace of the ball being accelerated according to the height at which it is struck. By this you will immediately comprehend that greater or less deflection of the ball after contact, will be produced in exact accordance

with the amount of contact between ball and Cue. It may seem to be putting a rather 'fine point upon it' to insist on these lines of 'side,' &c.; but you will soon get so accustomed to this manner of dividing the Striking-ball, as to be able to point your Cue to any part of the ball's surface, and to strike at that part with certainty and dexterity. The precise amount of 'side' necessary for the accomplishment of any defined object is only to be attained by actual practice. I can no more give you directions for the actual quantity of 'side' requisite, than a writer on carpentry could tell a mechanic precisely how much wood to plane off a board in order to produce a perfectly smooth surface. On the Billiard-table itself an expert will be able to show you more—in this particular respect—in a couple of hours, than I could, writing in the library of the Megatherium, in a couple of years.

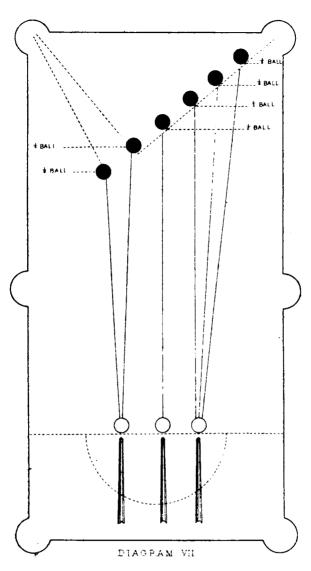
But some things I can tell you of which the expert is most probably ignorant. One of these things is, that the side is never communicated; that is to say, it is not imparted from the Striking-ball to the Object-ball. I have stated this in my previous works on Billiards, and have been contradicted by more than one fine player; but the fact is a fact, nevertheless. What many players imagine to be 'communicated side' is nothing more than a peculiarly sharp division of the Object-ball. The Striker's-ball flying off sharply from the ball it strikes, sends the latter forward, or sideways occasionally, at another sharp angle, because of the small quantity of the ball's surface actually in contact.

Except the point of the Cue be round and fine, and

properly chalked, you cannot make the Side-stroke. For Pool-strokes, which are all Winning Hazards, a flat-tipped Cue will do admirably; but if you want to play Side-strokes to perfection, you must be careful to have a finely-tipped Cue.

And now, a few words by way of caution. The Side-stroke is not to be employed without judgment. Where a stroke can be made with the ordinary full blow, 'side' is unnecessary and sometimes mischievous. Many young players are fond of showing off with a Side-stroke, but it is sounder play to make the stroke without 'side' whenever it is practicable.

As I have already said, all the strokes that can be made by dividing the Object-ball and hitting the Striker's-ball full, may be made with the Side-stroke, but the converse is not true, for some strokes that cannot be made by the division of the Object-ball can be easily enough made by employing 'side.' My advice to young players is to keep the Side-stroke for the last occasions, and to endeavour to play the game in a straightforward regular manner, reserving the 'side' for really difficult strokes. But there is a method of employing 'side' which is highly useful, and which may be brought into play in almost every game on the table: I mean the combination of 'side' with the division of the Object-ball—the division of both balls, in fact. Of course it is much more easy to divide your own ball than the Object-ball, because the one is immediately under your eye, and the other is at some distance. But when you divide both balls, you arrive at a certainty and precision of execution to be got at by no other process. But more than this you are not obliged to put on extreme 'side,



Losing hazards to be made by dividing the object-ball, by side-stroke, or by both combined.

or extreme division of the Object-ball; a little of each will easily be made, and success will crown your efforts.

The Side-stroke is most useful in Cannons, as we shall see by-and-by. This chapter I conclude with the explanation of the strokes shown in Diagram VII., which contains representations of some of the most obvious and frequently-presented Hazards. They may be made either by Dividing the Object-ball, or by the Side-stroke. I should advise the amateur to endeavour to make them first by one method and then by the other. He can thus take his choice of difficulties—an easier thing in Billiards than in life.

In the Hazards shown in Diagram VII. it will be necessary to strike your ball with a moderate degree of strength only. A good deal depends too on the proper placing of the ball on the baulk-line. By moving his ball on the baulk-line a little to the right or left, the player can alter the angle described by the three points severally occupied by the Striking-ball, the Object-ball, and the pocket; and, by putting on 'side' according to circumstances, make the Hazard intended. (See Appendix.)

In Diagram VII. the Striker's-ball is supposed to be in baulk, but for convenience' sake I have placed the balls on the line instead of beneath it. Hazards of this description occur in every game. They may be made either with or without Side-stroke; but the easier plan is to combine 'side' with 'division,' and to give to your ball a slightly pushing or flowing motion—not too hard, but still decided and firm. A great mistake is made by beginners in hitting the ball too forcibly; for by this means they break through the natural

angles taken by the ball if it is struck full in the centre, and likewise destroy the proper effect of the 'side.' I cannot too often insist on a regular and calculated strength of the blow given to the ball with the Cue. Gentle firmness is the characteristic of a good player, effort and show that of a tyro. (See Appendix, sec. 8, for the scientific argument as to the theory of the Side-stroke.)



CHAPTER VI.

GENERAL PRINCIPLES-DIVIDING BOTH BALLS.

Can you call to mind the night,

Now some years since, when, in this very room,

Your judgment conquered me? RICHELIEU. (Qy.)

ERFECTION in Billiards is attained by a careful and judicious application of means to ends. set style of play must fail if the player be incapable of changing his tactics according to the exigencies of his game. It is useless to tell the tyro that such-and-such ways of striking his ball lead to such-and-such results, if he possess not the tact to accommodate his stroke to the necessities of the particular case before him. Sometimes, for instance, a hard stroke gains him a position he would have failed to attain by a gentle one, and vice versâ. A little 'side,' judiciously applied, is often of the greatest use, but Side-stroke in the wrong place is simply waste force. So also with the Screw and the Following-stroke; a ball struck too high or too low defeats its own purpose, and the player is vexed at his want of success. I have seen some very good players utterly put out of conceit of their game by failing to make some ordinary stroke that looked almost too easy to miss. And more than once or twice I have lost a game through sheer carelessness, the stroke

before me looking as if it were easier to make than to miss. Of course these little accidents will happen with the best of players occasionally, and I refer to them merely to remind you that you cannot be careless at Billiards and at the same time play well. I don't believe in doing anything carelessly. The man who plays at Billiards simply to pass away the time, should, at any rate, play as well as he can; it is a proper compliment to pay his adversary.

Do not simply read my Billiard Book for amusement, but take pains to carry my advice into practice. Having explained the different sorts of strokes and the proper way to make them, we come now to consider the best plan of bringing them into profitable employment.

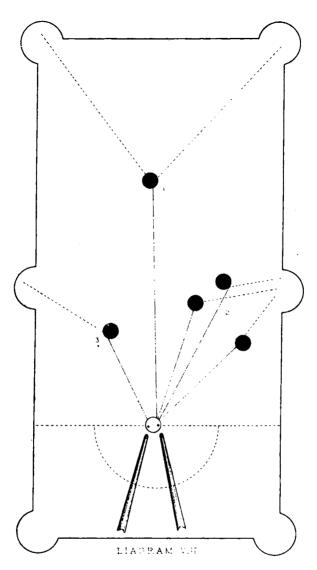
The beginner having conquered the Screw, the Followingstroke, and the Side-stroke, and being able to Divide the Objectball with some degree of accuracy, the next point is to combine his knowledge so as to be able to play the proper stroke at the proper time. This it is that shows skill in Billiards; in this we distinguish the player from the pretender—the careful student from the mere tyro—the clever professor from the careless amateur. Many young men can make particular Hazards with dexterity—some excelling in Losing Hazards, some in Winning Hazards, and some in Cannons; but it requires tact and practice to know which stroke to make at any particular time, and the best way of making it. Judgment and accuracy of calculation are indispensable to the playing of a thoroughly good game. By a 'thoroughly good game' I mean such a one as enables a man to hold his own with the greatest chance of success against all-comersregular professional players always excepted. Of course I do not expect any gentleman-player to be able to contend on equal terms with a Jonathan or a Roberts; what I want to impress upon my readers is the necessity and value of always doing the best they can, and not being content with mere mediocrity. It is useless to multiply diagrams if you do not practise them on the table. Not, however, that you should make yourselves slaves to Billiards—nothing would be much more absurd than that. An hour's careful play daily will make you a good player, especially if you are judicious in choosing your adversaries, and matching yourself, by preference, against good rather than bad players.

I will now proceed to explain that style of play which I call the *Division of both Balls*, and which I recommend as the safest way of making ordinary strokes.

Always remember the grand law in Billiards, that the angles of incidence and reflection are equal to each other, when you neither divide the Object-ball, nor put 'side' on the ball you strike with your Cue. When you do either of these, you modify the law to a greater or less extent, and render the angle of reflection narrower or wider than the angle of incidence. Now, as extreme Division of the Object-ball is a matter of some uncertainty when the Object-ball is at a distance from your own ball, and as the constant employment of much 'side' leads to irregular play, the true plan, and that which will be found of most advantage in a general way, is to divide both balls. By this I mean the use of a little 'side' and a little less 'division' of the Object-ball than would be necessary if you struck your ball full. To take an instance

of very common occurrence in every game of Billiards. The Object-ball lies midway, or nearly so, between the middle and the top pockets, and your ball is in hand or in baulk. If you strike your ball full and hit the Object-ball accurately, so as to make the half of the one ball impinge upon the half of the other ball, you will lodge each ball in opposite corner-pockets. If you fail to play a true half-ball, you will probably miss both Hazards. But the pair of breeches, as this stroke is commonly called, may be easily made if you put a little side on your own ball, and strike the Object-ball about half a ball. Again, in making Losing Hazards in the middle pockets from baulk, you put on a little 'side' and divide the Object-ball, and make the hazard easily. The quantity of side must of course be determined by the acuteness or obtuseness of the angle between the Object-ball and the pocket. You must remember also to put on the right or left 'side,' according as you wish your own to fall into the right or left-hand pocket, and at the same time divide the Objectball as exactly as you can.

By 'dividing both balls' the player can arrive at a much greater degree of accuracy than by the Side-stroke alone, or by the Division of the Object-ball. The observant player will notice the course taken by the balls after impact, and after a while will be able to judge pretty nearly as to the amount of 'division' required. The variations produced in the angles by the dulness or liveliness of the cushions on different tables may be corrected by means of more or less division; but I can give no rule for this. Every player must exercise his own judgment in a matter of this



1 Winning and losing hazard by dividing both balls (the breeches) 2. Losing hazards by dividing both balls. 3 Losing hazard by dividing both balls. In each case the dark ball is the object ball and the players ball is in builk.

kind, and as difficulties present themselves he must conquer them as best he can. Much depends upon the delivery of the Cue: many players hit the Striking-ball full when they intended to put on 'side,' and divide the wrong half of the Object-ball. This arises from the see-saw or swing of the Cue before striking the ball. You may point correctly at your ball, but you must also strike it at the precise spot pointed at, or you will fail to make the stroke you desired. Instant delivery is of more consequence in 'dividing both balls,' or in making a Side-stroke, than it is in merely striking your ball full at the Object-ball for a Winning Hazard. An imperfect bridge or a badly-chalked Cue will cause the failure of the easiest strokes, and altogether defeat the intention of the player. When therefore he wishes to 'divide both balls,' he should not only see that he draws the imaginary lines of angle correctly, but he should be careful to keep his bridge-hand in the proper position, and not play with too backward a swing of the Cue. There is great difference between freedom of delivery and a cramped action of the striking-hand. The principle to be borne in mind in 'dividing both balls,' is that the lines of departure of both balls after contact should correspond exactly. The Sidestroke alone, or the division of the Object-ball alone, will not effect this, but by 'dividing both balls,' the proper direction of motion of each ball after impact may be attained. You must also employ a regulated degree of strength, according to the distance you wish your ball to travel, and not strike hard for a Hazard that needs only ordinary force, or play a gentle stroke for a wide Hazard or Cannon. By 'dividing both balls' you arrive at a nearer approximation to the law as to the

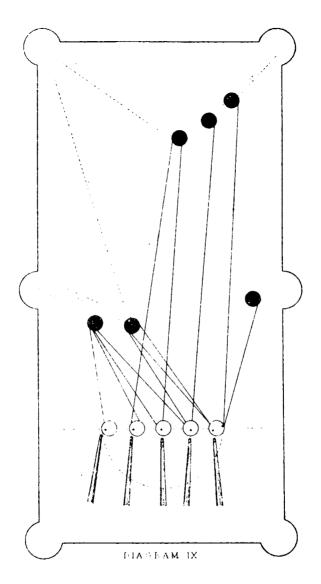
angles of incidence and reflection being equal to each other than by any other means; for it is really more difficult to strike your ball full in the centre, and cause it also to strike the Object-ball full, than it is to strike your ball a little on one or the other side, and at the same time to cause it to hit the Object-ball by a half, quarter, or fine ball.

These remarks apply to Hazards all over the table, at all degrees of strength, and at any distance between the ball struck with the Cue and the Object-ball. When once acquired, the dividing of both balls is not only easy of execution, but eminently practicable. Try it: place a couple of balls in position, and make the stroke again and again, till you can carry out the theory here advanced.

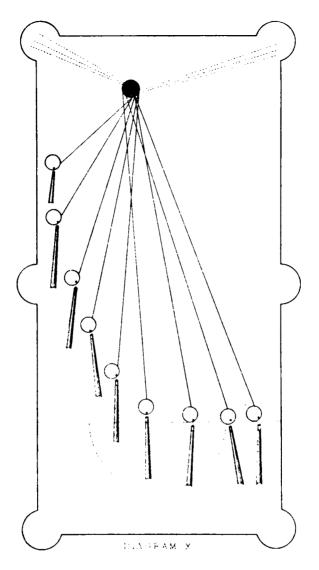
Of course the 'division of both balls' is as applicable to Cannons as to Losing Hazards; while in the making of Winning Hazards there is this advantage—that you may hole the ball you strike at without the danger of running into the same or any other pocket: a most decided advantage in the various Pool-games.

With the 'division of both balls' you can, at proper strengths, combine the High or Low stroke at pleasure. This gives a power at your Cue's end of accomplishing many strokes that would otherwise be impossible.

In the regular Winning and Losing Hazard and Cannon game —Billiards par excellence, as played in England and wherever Englishmen go, all over the world—this method of playing is peculiarly advantageous. By it you can make not only the stroke you wish to make, but you may play with much greater certainty of leaving your ball and the Object-ball in



Losing hazards from the bandle by dividing both bails



Losing bazards by dividing both balls. The white u the player's ball v in each case the proper position of the cue is coven in the diagram.

favourable positions. And you know how useful it is to be able to keep the balls before you and play without the Rest. If you watch good players, you will see that they seldom need to use the Rest. This, of course, arises from their accurate knowledge of Strengths and the proper application of the Sidestroke.

Practise a few strokes with the 'division of the balls' to which I refer, and you will eventually understand the reason for such 'division.' Indeed, I may say that the Side-stroke of itself is deprived of half its power when the Object-ball is struck full: but, combined with the Division of the Object-ball, the Side-stroke is a wonderful improvement upon the style of play practised by our forefathers. In the hands of a thorough adept, it is a most surprising agent. But I need hardly say that, head and hand must work together.

In illustration of these remarks, examine the Diagrams VIII. IX. and X., which, however, are but examples of hundreds of positions that continually present themselves in the course of almost every game. It would be utterly impossible to give diagrams for all, or even the majority of, Hazards on the Billiard-table. They are as various as the 'hands' at Whist. The cards and the balls are always cards and balls, no matter how many the rubbers and the matches you play; but their combinations differ with every shuffle and deal of the one, and every roll and break of the other. All that I can do, is to show you such strokes as nearly approximate to those which are common in the great majority of games, whether played by amateurs or professionals.

CHAPTER VII.

GENERAL PRINCIPLES-LOSING HAZARDS.

By Losing Hazards we often win; for in life, as in Billiards, what seems a mischance often proves a stroke of good fortune.—*Proverbial Platitudes*.

man can become a really good player without practice. But practice itself may be useless unless it is properly directed. Before you rely on the Side-stroke, get a thorough acquaintance with the principle of the regular Hazards, made by Dividing the Object-ball, as already explained.

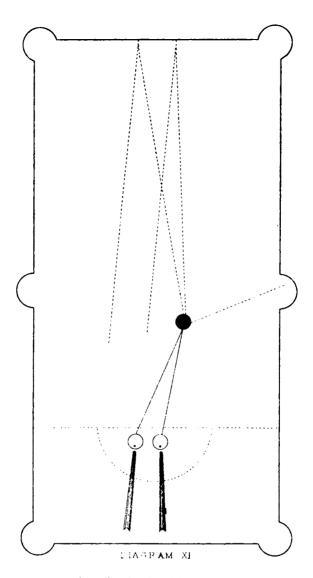
In playing Losing Hazards, your object is to lodge your own ball in a pocket after contact with the Object-ball—the white or the red, as the case may be. The grand principle to be observed is this—carefully notice the line between the Object-ball and the pocket, and then place your own ball in the baulk in such a position as will make the line between it and the Object-ball correspond as nearly as possible to the line between the latter and the pocket; using as much strength as will carry your ball into the pocket and leave the Object-ball in the place you wish it to occupy for the next stroke. This you do by Dividing the Object-ball in such a way as will regulate the amount of impingement between it and your own

ball. By thus drawing an imaginary line first, from your Playing-ball to the Object-ball, and then from the latter to the pocket, you will immediately get a reason for the Hazard. And when you know the reason for a thing, you have more than half conquered the means necessary for its accomplishment.

The same rule will of course apply to Winning Hazards and Cannons; though a rather different method of play is necessary for them, as we shall presently see.

Losing Hazards should be made with moderate strength sufficient to carry your ball well to the pocket after impact on another ball, and to cause it to rebound from the cushion should you fail to make the stroke. If you strike your ball too hard, you alter the angle it would make if struck with moderate strength; and if too softly, you leave a Hazard for your opponent if you miss the pocket. Moreover, you are very likely, if you play with too much violence, to drive the ball you aim at into baulk, even if you make the Hazard you intended. But in these cases very much must be left to the judgment of the player. He must so regulate the strength of his stroke as to either drive the Object-ball from its position to the cushion, so that it rebounds into baulk and out again, or so that it does not reach the baulk at all. This, of course, is to be regulated by its position on the table. Much depends on the place of the Object-ball after your stroke. The player who makes a Losing Hazard and leaves the Object-ball in baulk deprives himself of the chance of a second Hazard off that ball, because, being in hand, he cannot play at a ball in baulk.

Losing Hazards are generally more useful to the player than Winning Hazards. If a Winning Hazard is made with the white ball, you have only two balls left on the table; and if made with the red ball, the latter has to be placed on the spot—the position on the table in which it is least likely to be useful,—while in the former you may so calculate the strength of your stroke as to be able to place the Objectball in a favourable position for a second Hazard or a Cannon. It is in this succession of strokes that the strength of good play is to be found. The beginner is content to make a fairly difficult Losing Hazard without reference to the stroke that is to follow; the adept, on the contrary, makes his Hazard with the intention of leaving the balls open for another stroke. What are called 'good breaks,'—that is, a succession of Hazards and Cannons—are accomplished not so much by any particular talent for Hazard-striking, as by a nice calculation of the positions of the balls after each stroke. In this way the professional player is able to make thirty or forty off the balls whenever they lie in a favourable position for a break—as, for instance, when the red is at an easy angle with either of the top or side pockets. He then plays from baulk, and makes a succession of Losing Hazards, sometimes in the same pocket; or if he finds the angle getting too wide for the one pocket, he shifts the position of his own ball on the Baulk, and loses it in the other. In this way he may make a dozen or more Hazards off the red. It is a very common thing for a skilful player to make twenty Hazards from Baulk off two balls favourably placed—say the red at an angle with a top corner-pocket, and the white lying square with a middle



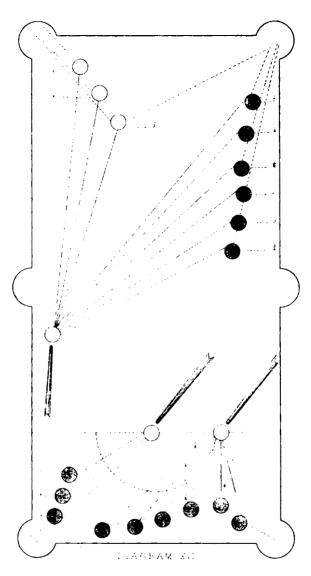
Losing Hazards without Side stroke.

pocket, as in Diagram XIX. I have known players to wager upon scoring thirty off two balls so placed; and there are very few games in which the balls will not occasionally fall in one or other of these positions. When they do, the player should try all he can to make a good break, for in that lies the main secret of success. Luck will assist a player sometimes, but it will never stand a chance against calculation and skill.

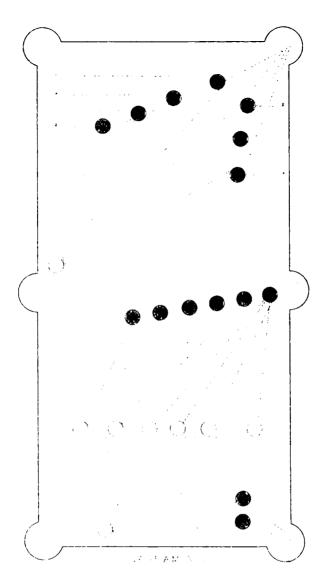
Take an instance of very common occurrence—the Objectball a little below the middle pocket, towards the centre of the table, and the player's ball in hand. This stroke is shown in Diagram XI. Now, the intention of the player is to make a Losing Hazard in the centre pocket and drive the Object-ball to the top-cushion, so as to leave another Hazard off it in the opposite pocket after its rebound. Everything in this case depends upon the strength of his stroke, and the position of his own ball. If the striker's ball is placed too near the centre of the baulk, the angle taken by the Object-ball will be too narrow to allow him to make another easy Hazard in the same or opposite pocket on its rebound from the cushion. But by putting his ball in a proper position within the baulk, he can nearly always secure a second Hazard. For suggestions as to the way in which this is to be accomplished, see Appendix B. A good player with a thorough command over the strength of his stroke can make an almost indefinite number of Hazards from a ball properly placed. I have myself frequently scored the game of fifty from a centre Hazard off the red. The way to do this is-first, to make sure of your Losing Hazard. This is done by a half-ball on the red. Played with moderate strength, you will pocket your own ball, and drive the Object-ball to the top-cushion in a direction corresponding to the first line—that between your ball and it. The Object-ball will then return in the direction shown in the dotted lines (Diagram XI.) more or less towards the side-cushion, according to the position of the Striking-ball and the amount of division employed. I once saw Roberts score thirty-seven Hazards off a red ball so placed, and then when the red had failed to come down to the centre of the table, finish the break with a pair of breeches in the end pockets—in all 117 off a single ball! This is, of course, a very extreme case.

In my day Kentfield—or Jonathan, as he is called—was the great player. His forte lay rather in Cannons and gentle Hazards than in tours de force. The difference between his play and that of Roberts, Bowles, Hughes, or any of the great 'cracks' of these times, is that he makes very little use of the Side-stroke, while they employ it for almost every Hazard. For a beginner, a judicious use of both 'side' and 'division' is best and safest. As I have already observed, the most successful plan is to begin your practice without 'side.' When you can make all ordinary Hazards by the simple Division of the Object-ball, then—and not till then—you may try the Side-stroke.

In Diagrams XII. and XIII. I show a number of such Hazards as occur in every game. The diagrams sufficiently explain themselves, and need very little said about them, except this—they occur in similar positions all over the table. Therefore a similar method of playing at them will produce like results.



Losing Hazards without Sule stroke.



Loring Hazards without Side stroke

The Hazards at the baulk-end of the table in Diagram XIII. require to be made with judgment—not to be struck too hard nor too gently, but with that ease and certainty which distinguish the player from the tyro. Let the stroke in each case be made in a full free style from the shoulder, with sufficient force to bring the ball played at out of the baulk—dividing the ball in each case in the proportion shown—a half-ball, quarter-ball, &c., as the case may be.

So also with the narrow Hazard in the baulk in Diagram XIII. Play with enough force to bring the Object-ball out of baulk; but at the same time make sure of the Hazard. It may happen that it will be better for your game to lodge the red in the pocket, than to make a Losing Hazard. If it should be so, play hard enough to carry your own ball up the table, so as to leave another Hazard off the red on the spot.

When the red is close in the corner, and you wish to pocket yourself off it, you must play on to the cushion, and when your ball touches the red you will make the Hazard. This is a very pretty stroke, which occurs frequently in each corner of the table.

In Diagram XV. I show Losing Hazards (1) from off the red ball on the spot. The various positions of the white ball will suggest a different mode of treatment for each stroke: as the 'side' widens the pocket, so you must put on a little more or a little less, as the angle widens or narrows. There is nothing but practice for strokes like this.

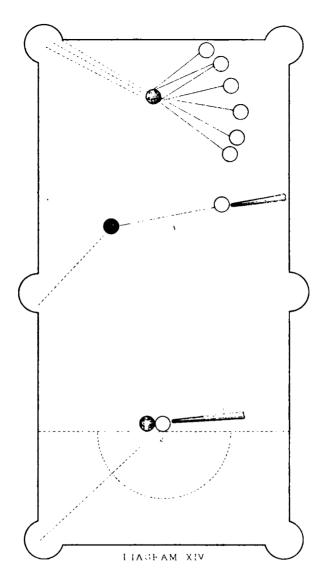
The pretty Hazard (2) at the bottom of Diagram XIV. often occurs. Both balls are on the baulk-line—the red just

outside, so as to be in play, and the Striker's-ball so placed as, while strictly in baulk, and not actually touching the other ball, to be sufficiently close to enable you to push it it into the corner pocket. You must put on a very little 'side:' and, with a decided, but exceedingly gentle, push directly towards the pocket, make the Hazard. A little practice will enable you to make this stroke with such certainty as to scarcely move the red ball. And in this way the stroke may be repeated for a dozen or more times.

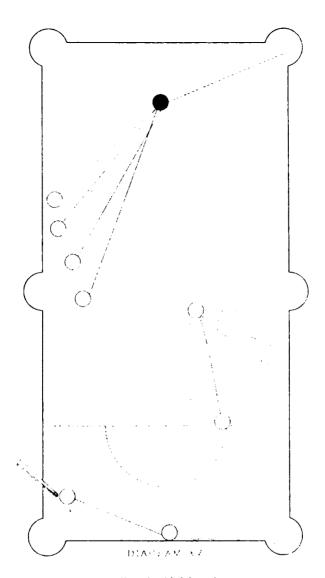
The Hazard marked 3 in this diagram is easy; it requires very little 'side.' Most players would make a Winning Hazard of this stroke; but whenever you can convert a Winning into a Losing Hazard, you gain a great advantage, for the Objectball is generally left in a better position for another Hazard or Cannon than when it has to be spotted. Or, you may put on the counter or 'reverse side' for a Hazard like this. In all such positions the theory is to make your own ball run straight for the pocket, and this you do by increasing or decreasing the angle as occasion requires.

Diagram XV., Case 1, shows a Hazard that very commonly occurs. Here again a little 'side' and 'division' will greatly assist you. Keep the point of your Cue well down for this stroke. The lines from the several balls to the red will show you the points of contact and the methods of play.

Case 2 in the same Diagram is a pretty stroke, in which 'side' and 'screw' are to be judiciously combined. Do not play too hard, but make the 'screw' decidedly. Be careful not to bring your ball too far back, or it will curl over to the side-cushion instead of making the pocket, as you want it to do.



1. Losing Hazards from the Spot-ball-2- ℓ osing Hazard with Side-stroke 3. Losing Hazard .



Losing Hazards with Side stroke.
1. Division of Object-ball. 2 Screw. 3. Object-ball hit full, and side put on Sinker's ball.

Case 3 is another illustration of the 'side' judiciously applied. Here you must put on the *in* side, and strike the Object-ball full. Your ball will twist to the cushion, hug it, and roll slowly into the corner pocket. A nicely-chalked fine-pointed Cue, well in hand, is required for this stroke. Many players make this Hazard with a pushing action, and a *very* slight turn of the wrist.

Of course, I might multiply diagrams of Losing Hazards; but those I have shown will be sufficient to indicate to the beginner the way in which he should play. In my next chapter I shall say something about Winning Hazards; after which we may go on to the consideration of Cannons and Cramp Strokes.

Just one word more. In making Losing Hazards—I repeat myself, but no matter—hold your Cue rather lightly than tightly, and keep it as parallel to the table as you can, consistently with the nature of the stroke and the position of the balls. When you play at a ball close under the cushion, shorten your Cue and push rather than strike. By this means you will often make a Hazard that would otherwise, in all probability, be missed.



CHAPTER VIII.

GENERAL PRINCIPLES-WINNING HAZARDS.

Upon the Cue his willing hand was laid;
Firm was the grasp with which the stroke he played;
Fearless the pulse, true, steady was the aim,
That, well directed, won for him the game. Byron. (Qy.)

OTHING appears to the amateur, when watching

the play of a thorough master, more easy to make than a Straight Winning Hazard. And the stroke is really not difficult when you know how to make it. All that you have to do is to strike your own ball firmly in the centre, in such a manner as to send the Object-ball straight to the pocket. To accomplish this, you must strike your ball rather below than above its horizontal centre, at the same time being careful not to strike it on the side. The Side-stroke is seldom much needed for Winning Hazards. When a straight Winning Hazard is to be made, the impact between the two balls should be full and perfect, the centre of the one striking that of the other. The reason why you strike your own ball rather low is, that you may determine pretty nearly upon the place at which you wish it to stop. Of course, you will strike it rather high, with a 'following' motion, if you want

it to run into the pocket after the Object-ball. Much, too, depends upon the strength of your stroke. When the Object-ball is at a good distance from the pocket, the contact should be sharp and sudden; when it is near the pocket, the stroke may be made more gently. In some situations, you will require to simply touch the Object-ball in order to roll it quietly into the pocket; in others, a sharp stroke will be necessary: but in almost every case you must depend rather on the Division of the Object-ball than on the Side-stroke. Of the two methods of making the Winning Hazard, the Stopball—that is, a ball struck rather low and sharply—will be generally found more useful than the Following-ball.

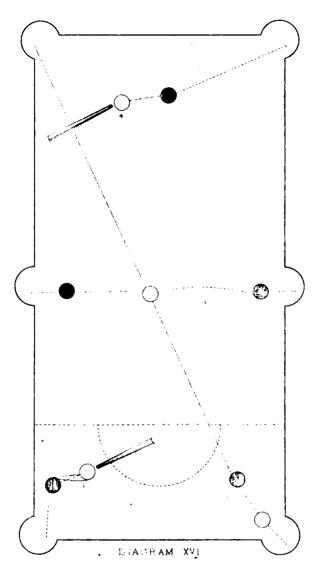
The Straight Hazard will occur in all parts of the table; and to make it properly, the same description of stroke will suffice. If your own ball be in a line with the Object-ball, and the latter with the pocket, strike with a rather low drawback; and if you are pretty close to the pocket, and wish to avoid running in yourself, put on the least possible 'side.' This, indeed, you will in most cases do without knowing it. When you want to hole the red in a baulk-pocket, strike with sufficient strength to carry your ball up the table, so as to leave another Hazard off the 'spot.'

Winning Hazards in the middle pockets require to be made with much nicety when the Object-ball is not in a direct line. And this brings us at once to an important point: all Winning Hazards, whatever the relative positions of the Object-ball and the pocket, may be converted into Straight Hazards if they are properly struck. How? Nothing more easy when you know the reason for the stroke. To hole a ball at an

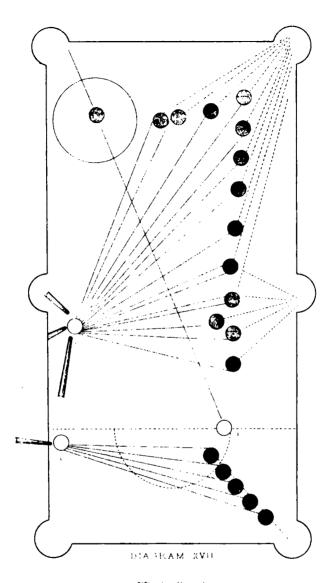
angle with a pocket, you must divide it by just so much as is necessary to make it run straight to the pocket: in other words, strike your ball so that the line joining the centres of the balls when in contact may, if produced, pass through the centre of the pocket. By striking a three-quarter, half, quarter, or eighth ball, you may pocket it from almost any part of the table, if it be a few inches distant from the cushion. When the Object-ball is not in a direct line with the pocket, you must make the stroke a straight one by hitting it on one or the other side according to circumstances. By proper division of the Object-ball you may drive it in any direction you choose; and if, at the same time, you regulate the strength and height of your stroke, you may always calculate, with more or less accuracy, upon the place at which your own ball ought to stop.

Just as you strike your ball high or low, you accelerate or retard its progress after contact with the Object-ball. The great art is, first to make the Winning Hazard, and next to regulate your stroke, so as to determine the stopping-place of your ball. This, indeed, is the grand secret of Poolplaying. In Diagrams XVI. and XVII. I have given a variety of the most ordinary Winning Hazards. Place the balls in the positions indicated, and try and try again till you succeed in making them.

The Stop-stroke (Diagram XVII. Case 1), by which you can make your ball stop dead at the place of contact with the Object-ball, is one of the most useful on the table. It is made with a rather low sudden drawback, the point of the Cue rubbing downwards, as it were, at the instant of striking. In the hands of a good player this is an elegant



Winning Hazards
1. Fine winning Hazard 2. End ten stroke 3 (entre ten stroke 4 Spot stroke The lines of Case 1, show the various ways in which this stroke may be mude, according to the quantity of side or division employed



Winning Hazards.

1. Wowing Hazard and Striker's ball to stop in the circle 2. Winning Hazards without Side stroke The position of the player varied with the stroke.

3. Winning Hazards by dividing the Object ball.

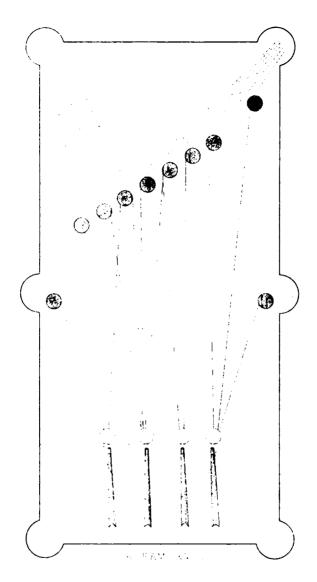
stroke, particularly useful in Pool or Pyramids. I have won scores of games with it, though it requires long practice, and great freedom of Cue to make it properly. The best way for the amateur is to begin with two balls close together, increasing the distance gradually till he can make the Winning Hazard in any pocket he aims at, and stop his own ball in a circle no larger than the crown of his hat.

The Centre Ten-stroke (Diagram XVI. Case 3) is another highly useful one. This is made with a good firm drawback. You play on the red and lodge it in the one pocket, and your ball screws back upon the white, makes the Cannon, and follows it into the other middle pocket. A little practice will soon enable you to make a similar stroke in the end pockets from one corner to the other, on either side. To be able to do this, you must have great command of Cue, and no little nerve, as the slightest deviation or inaccuracy in the stroke will cause its failure.

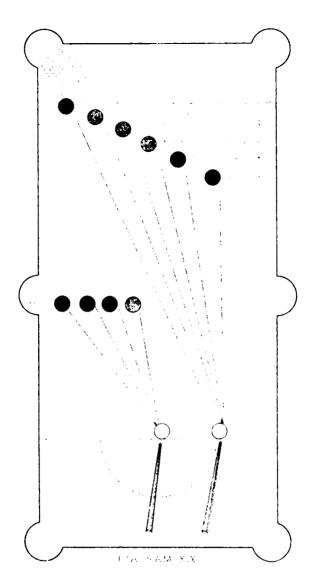
To make Winning Hazards with grace and certainty, the Cue must be grasped, and not held merely between the fingers and thumb. But very great force is not necessary, or you will defeat your own intentions. In fact, the whole science of Billiards depends upon a nice adaptation of means to ends. Some strokes require a touch so gentle as hardly to be perceptible; others need a rather firm heavy blow.

The Slow-screw is made with a decided twist, your ball struck low, with the rubbing-down action and the turn of the wrist I have already mentioned. As this motion of the wrist is not to be described on paper, get some good player to show you how it is done.

The Spot-stroke (Diagram XVI. Case 4) is another of those popular and successful Hazards so much practised by good players. Roberts, Kentfield, Hughes, Davis, and other first-rates, are particularly happy in this excellent Hazard. There are two ways of making it; the choice of which must be left to the player, the position of the balls, and the exigency of the game. When the red is on the spot, and your own ball is directly behind it, in an exactly straight line with the end pocket, you may play a low drawback screw, which will lodge the Objectball in the pocket and leave your own a few inches behind the spot. In this way the Winning Hazard may be repeated several times in the same pocket. But beware of stopping your ball too near to, or on, the spot; as, in that case, the red will have to be spotted in the centre, and your break will be at an end. In the American Game, when the red is placed on the lower spot, and you have four pockets to play into, the drawback will be found very appropriate; but in the English Game the better way to make this stroke is by putting on a little side and a little division, so as to drop the red gently into the corner pocket, and leave your own ball in such a position as to give you the Hazard in the other corner. And thus alternating your stroke, you may make several successive Hazards. I have frequently made sixteen, twenty, or more Hazards in this way. And, by the way, I have seen Roberts, Bowles, and others make many more. It is a highly effective stroke, and a very great favourite of mine. Once get the balls into the proper position for it, and it is only a matter of care, judgment, and calculation, as to what extent you may carry your break. But do not imagine that it is easy. You must practise frequently before you can make the Spot-stroke half a



Winning Azzardi. Players ball in baulk, to be struck till and the Object-ball divided.



Winning Hazarás.

Player's ball in builk. The direction of the are shows the position of the Striker.

dozen times consecutively. But when you have once acquired the knack of striking the red, and properly placing your own ball, the rest is simply an exhibition of skill derived from practice and study.

Now, I might give you fifty diagrams of Winning Hazards, but exemplifications of their principle will be sufficient to enable the tyro to make them himself. As a rule, it is well always to use sufficient strength to bring your own ball away from the pocket, so that in case you fail with the Hazard, you may not leave an easy stroke for your opponent. When you have made the Spot-stroke several times, it will often happen that the balls will be close together, in a line with a corner pocket. In such a case, if you think a repetition of the stroke unlikely, finish with a Following-ball and score six; or try for the Winning Hazard with force enough to send your opponent.

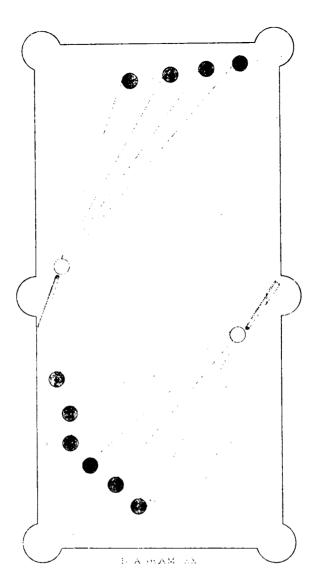
The Side-twist—said to have been discovered by one Carr, a marker to Mr. Bartley, Billiard-table keeper of Bath, some half-century ago—will be found most useful in the making of Winning Hazards, especially those of a difficult character. In the Pool-games it is found particularly useful: as also is the 'counter-side,' which causes your ball to turn in the opposite direction to that which it would have taken under ordinary circumstances.

In Diagrams XVIII. XIX. XX. XXI. and XXII. I give other examples of Winning Hazards. These sufficiently explain themselves—the lines from the Striker's-ball to the Object-ball in each case showing the point of contact. The

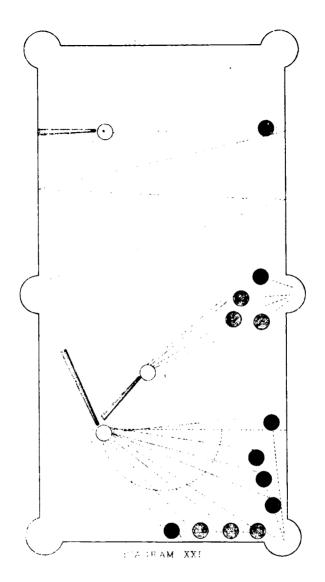
only rule to determine the exact spot of the Object-ball required to be struck for a winning Hazard is this:—draw a line from the centre of the ball and the pocket parallel to the plane of the table. The point where this line produced meets the surface of the ball, is the spot required. In most instances the position of the Cue is shown in the diagram; this will better inform the amateur than almost any amount of written instruction. Indeed, the way in which the Cue is pointed to the ball to be struck almost invariably governs the nature of the Hazard. Care should therefore be taken to point the Cue correctly, and to make the stroke in exact accordance with the striker's intention. Some players arrive quickly at the knowledge and knack required; others point the Cue rightly, and then immediately fail in the stroke. arises from a deviation between the pointing and the striking, in consequence of the hand being raised in drawing back the Cue. The hand should be kept nearly parallel to the table, or the resulting stroke will be a failure. I have noticed that very tall men generally strike too low, from the fact that they do not sufficiently bend to their work. When once the habit is acquired of striking the ball in a particular way, it is difficult to alter it; therefore, get into the habit of striking properly. In the cases shown in Diagrams XVIII. to XXII., inclusive, the putting on of 'side' to any great extent is unnecessary.

The Hazards in Diagram XXII. are explained by the directions given at the foot of the figure.

The Doublet Winning Hazard in Diagram XXI. is an example of doublets which occur all over the table. Like that in Diagram I., it is easy of execution if the Striker's-ball be hit full, and the Object-ball divided.



Winnite Harards . The white is the property ball.



Sommer Greatele, players bull in baulle. 2. Doublet winning florard. Someogreament, in makin pocket

CHAPTER IX.

GENERAL PRINCIPLES—CANNONS.

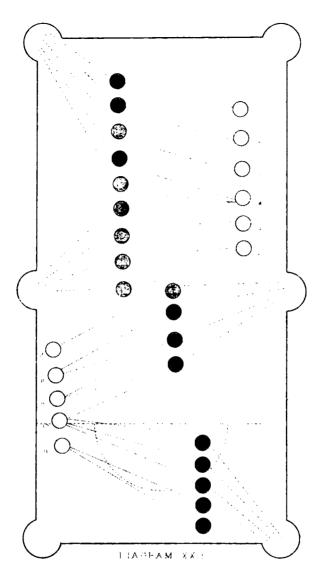
Some praise at morning what they blame at night,
And swear the cushion-cannon play was right;
While others for the flukes abuse the board,
And curse their luck when matched against a lord.—POPE. (Qy.)

N the days of list-cushions, which, by the way, was a good many years ago, before you, dear player, knew

I can remember, though some of my old friends of the Megatherium tell me they recollect them—in the days when Jonathan was the player and teacher par excellence, and Brighton was honoured and patronised by the 'finest gentleman in Europe'—in the days of exclusive play on old wooden boards, and heavy bets on very slow and tedious games—Billiards was mainly a game of Cannons. And that Billiard-players really did know something about Cannons in that ancient period, Kentfield's work is sufficient proof. But our fore-fathers knew little or nothing about the 'Spot-stroke,' or the 'Slow-screw,' or the 'Side-stroke;' and though they could make Cannons from the cushions, and 'all round the table,'

they must have been poor players compared to our modern 'cracks.' I fancy that the very best of them would have stood but little chance against a Roberts, a Tabley, or a Hughes. Cannons neatly and dexterously made are admirable aids to a game. The French are great at this. In France they usually play upon a small board, with three-inch Balls and wide-tipped Cues, which render the Cannons easy to attain! Foreigners do not play particularly well at the English Game, and even at Cannons they make but a poor figure with two-and-a-quarter-inch Balls. I have played in Paris and elsewhere with Frenchmen, but I never met any who thoroughly understood the science of Billiards, or played upon any well-defined system.

Well, then, the question is—how to cannon successfully? This problem is identical in many respects with that of making Losing Hazards, for which I refer you to Appendix B. I might exemplify my theory in a thousand ways; but as I cannot present a tithe of that number of diagrams, I must content myself with giving suggestions and leaving their application in the hands of the player. In Cannons, a clever 'division of both balls' will be found of immense use. For you must remember that every Cannon is six inches wide; that is to say, that the extreme touchingpoints between the Striker's-ball and the third ball of the Cannon may vary to that distance—two inches for each ball. Place three balls on the table and exemplify this fact for yourselves; don't take my word for a single law, but in every case prove it on the Billiard Table. And here I may say, once for all, that every diagram here inserted, and all



Winning Hazarda.

1 Fine balls: 2 * ball. 3.4 ball; 4.4 ball. 5.4 ball. 6.4 ball. 7.4 ball. 8.4 ball. 9.4 ball. 10.4 ball. 11.4 ball. Player must stand well behind his ball for each flazard.

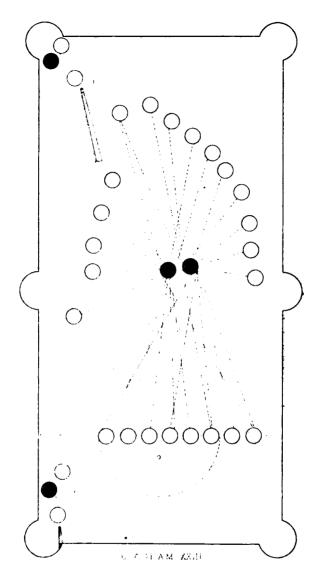
the examples here adduced, have been tried and proved before they were made public.

In Cushion Cannons we come to a direct and never-failing proof of the law, that the 'angle of reflection equals the angle of incidence'; and, however many times you may cause your own ball to reflect from the cushion after the first ball is struck, the reflection will in every case correspond to the direction taken after impact with the Object-ball—always, of course, allowing for the quantity of 'side' given to your ball, for the amount of division on the Object-ball, and for the strength. This is the grand indisputable theory of Cannons.

Now, as the Cannon is always at least a ball wider than the Hazard, it would seem that the one is by so much the easier than the other. This is true in theory, though in practice it varies with the style of the players—some having a greater aptitude for Winning Hazards than for Cannons or Losing Hazards. In certain positions the making of the Losing Hazard requires the greatest nicety. There being only just room for the ball to enter the pocket, the least deviation from the proper line sends it against the cushion and causes the stroke to be missed. But in Cannons the very slightest impact, the merest touch, between the balls is sufficient to enable the player to score. Nor is so nice an observance of strength an actual necessity in the making of Cannons as in that of Hazards —the fairly-hit ball always going in the direction intended and flying off from the first to the second Object-ball at the proper angle, irrespective, to a certain extent, of the force with which it is struck. Remember, 'to a certain extent' only; it is the 'uncertain' extent that is dangerous. Of course a too hard stroke will be equally faulty in Cannons as in Hazards, breaking through all the angles of the table and destroying all the science of the game. In making Cannons, therefore, strength is not to be lost sight of; the player who makes his stroke with calculation and judgment may often make a great score out of an unpromising break of the balls. As I have before said, the main art of the player is to keep the balls before him, and score as long as he can.

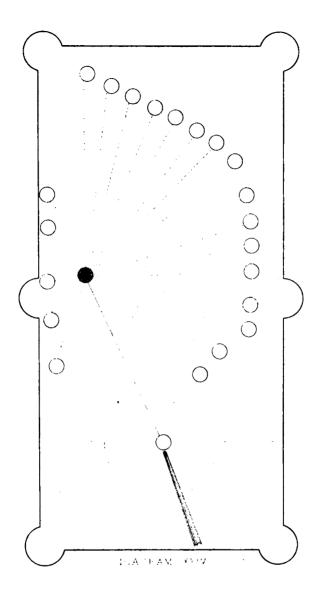
In Diagram XXIII. I give several examples of Cannons, all of which may be made without Side-stroke; though it will be seen that some require Screw. Though I say they may be made without Side-stroke, most players will put on a little 'side' in order to render them somewhat easier of execution.

When the balls lie pretty close together, a succession of Cannons may be easily made. I recollect winning a game of one of the best players at the Megatherium, by a series of Cannons, when my chance was almost gone. The balls lay together in a triangle, thus ••, close to the cushion inside the baulk. I played gently, and drove the two balls before me from end to end of the table, always taking care to use just sufficient force to send one ball a very little way in front of the other, and reversing their positions with every stroke. Arrived at the top-cushion, I had the two balls in front of the corner pocket, where they remained partially fixed. I made several Cannons on to them, while in this position, and ended by driving the red ball into the pocket, following in after it, and winning the game. I think I made nineteen Cannons in this break, and a Six-stroke to finish with—in all, forty-four. The positions of



Conserved the bulls of the remnenement of the series of canons described in the rest of 1 section at end of series of Purce canons without side stroke.

There is that a family the owner arms is require series.



Direct canons without side strong The lower canone require serew

the balls at the commencement and at the end of this series of Cannons is shown at a, b. Try this, and you will find it by no means so difficult as it appears. Your principal object is to avoid the spreading apart of the balls. To keep your own ball behind the others, it will be necessary to use a very slight 'side,' reversing it with every stroke. In passing the middle pocket be careful not to run in; but if you find the balls getting wider and wider, then the best way is to make a Losing Hazard and start again from the baulk.

DIRECT CANNONS.

Direct Cannons—that is, Cannons from ball to ball without playing from the Object-ball to the cushion before the second ball is struck—occur in every game, and all over the table.

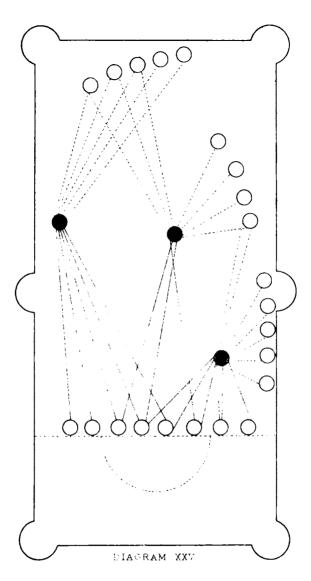
In Diagram XXIV. another series of Cannons without Sidestroke is given. All these require more or less Division of the Object-ball, the player shifting his position according to circumstances. In all cases the dark ball is the one first struck with your own ball, though, of course, it will not always happen that you cannon from the red to the white. The diagram is so given simply for convenience' sake.

Various Cannons are shown in Diagram XXV., all of which may be made by Dividing the Object-ball or by Screw. These Cannons occur at various distances; but all examples of the Direct Cannon can be but modifications of these or similar positions of the balls. It is not, therefore, necessary

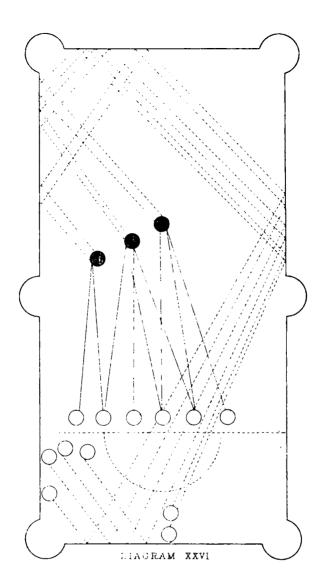
that I should multiply instances. The clever student of Billiards will be able, from the examples adduced, to make hundreds of modifications for himself. Let him try these on the table.

CUSHION CANNONS.

Of the nature of Cannons and the way to make them, most Billiard-players require to be told little. But yet how few players do we encounter who thoroughly understand and practise the true principles on which they depend! A correct knowledge of the angles of the table, and the degrees of strength necessary to carry the ball just so far and no farthera proper appreciation of the value and right application of the Side-stroke, and a judicious employment of means to ends—all these are necessary to the making of Cannons. But none of these can be attained without practice, and it is not given to every man who handles a Cue to be able to draw just conclusions from even the most plainly-stated and obvious Hence the necessity of a good tutor. premisses. known lots of fair average players who could no more tell you the 'reason' for their strokes—no more trace effects back to causes, and give intelligible explanations of special strokes and hazards—than they could calculate an eclipse or square the circle. Not, however, that any large amount of perception is necessary to make a good Billiard-player—and certainly school-knowledge is not an indispensable condition; for you, and I, and all of us, know first-rate Hazard-strikers, and dead-shots at Pool, who would find it difficult to pass



Direct canons by durding the object-ball and by screw



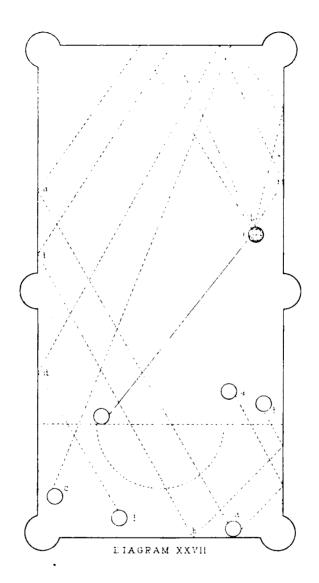
Cushion Canons The balls on the bailk line are the striking balls

the preliminary examination at Eton or Harrow. But what is wanted is a light steady hand, a good eye for distance, and a quick, resolute, and farseeing appreciation of difficulties. Are these qualities to be attained by practice? Most certainly they are—especially if the amateur will take the trouble to learn the 'why' and the 'wherefore' of his play.

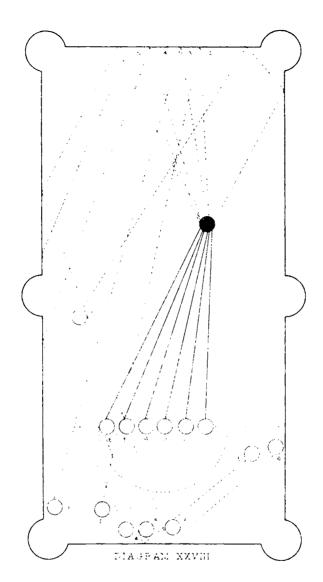
Having already given some examples of Direct Cannons, it remains for us simply to examine the principle of Cannons from the cushion. This principle may be explained in a few sentences: the angle of reflection is equal to the angle of incidence; thus a Billiard-ball, struck with equal force in two directions at right-angles to each other, takes the mean direction between the two, or what is scientifically called the diagonal of the parallelogram. In simpler language, every angle of reflection at a cushion after the first impact of two balls is equal to the angle of incidence. Exemplifications of this law are seen in Diagram XXVI., where the angles would be absolutely equal to each other but for the 'side,' which is either purposely or accidentally put on the ball by the Cue of the striker. In this figure we see how Cannons 'all round the table' are made; the variations occurring from the difference of position between the Striker's-ball and the Object-ball. This plan of playing from the Object-ball on to the cushion, for the purpose of making a Cannon upon a ball in another part of the table, admits of immense variety in style and treatment; but the principle of the stroke is the same in every position of the balls. It strikes a looker-on with surprise to see a good player make Cushion Cannons from end to end of the table; but there is really no more difficulty in these

than in Direct Cannons. All the player has to do is to calculate the distance, and make his first angle from ball to cushion assume the direction all the other angles should take. This is the secret of all Cushion Cannons.

But then the principle is liable to variation in its results, perhaps some players will say. I say No; the principle is unvarying; it is the method of play which causes the variation observable. In Diagram XXVII. I illustrate this theory. Suppose you play a ball from the left-hand baulk-spot to the red, with a view to cannon upon a ball in baulk. You must so arrange the quantity of 'side' and the amount of 'division' as to cause your ball to diverge, in its first angle from the red to the cushion, by just so much as will make the second angle, and the third angle, sufficient in strength and direction to reach the ball in baulk. Par exemple, the first stroke (a) shown in the diagram is, nearly, a regular angle from a ball without Side-stroke—each of the lines of angle being equal to one another. The second stroke (b) is a little more acute, and consequently requiring a little 'side,' and a less full stroke on the Object-ball. The third stroke (c) requires a more full stroke on your own ball, but a very fine division of the red, so as hardly to touch it in order to make the Cannon on to the ball in the left-hand corner; while the fourth stroke (d) must be a sharp Side-stroke Following-ball, so as to 'go through' the red, and touch the cushion almost directly—the 'side' causing its divergence to widen more and more the farther it travels. In all these strokes—which are but examples of thousands of strokes that occur in the course of every man's play—the principle of equal angles is



Cushion Carions, strikers ball in hand. The corresponding letters (a a dec) show the direction of the curions. Carions of a similar character can be multiplied all over the board.



Cushion Canons, striker's ball in hand.

The corresponding (11 &c., show the corresponding canons

observed; the variations, as I have already said, being due, not to any falsity of theory, or possible chance of difference, but simply and entirely to the mode in which the original stroke is made.

In Diagram XXVIII. are half a dozen strokes which show the principle of the Cushion Cannon as fully as need be. We presume the player's ball to be in hand and to be shifted on the baulk-line as occasion requires, in order to make the several Cannons with as little trouble and as much certainty as possible. The first stroke (1) will need little or no 'side,' and should be played with a moderate degree of strength, supposing the ball on which we want to cannon to lie at or near the place marked in the diagram. The next case (2) is rather more difficult, and wants a strong full-ball. given to show how the stroke may be made, if the balls happen to fall in the positions marked; but if the Striker's-ball were in hand, of course he would play it from either point of the baulk-semicircle rather than from the centre. Not so, however, with the next stroke (3), which, being a regular angle nearly, requires but very little 'side.' The stroke marked 4 is also easy of execution, as in that, again, the angle is not made acute with Side-stroke. Cases 5 and 6 are but modifications of the others, and are inserted to show that the length of the Cannon does not in any way interfere with the principle on which it should be made, provided sufficient force be properly employed.

A good player combines Hazards and Cannons in a neat and rapid manner, never giving a chance away, or making a speculative stroke when an ordinary one will answer as well, to keep his break from ending ingloriously. It is an old saying, that there is always a Cannon to be made while there are three balls on the table. This is to a certain extent correct; and it is to the judgment and skill of the player that great breaks are due. I think little of a man who can make a few good strokes, but fails to make the most of a promising break. The real way to play at Billiards is to keep your eyes open, and take advantage of every fair and legitimate opportunity of adding to your score.

What is here said about Cannons may appear rather too recondite; but it must be remembered, that what is called the 'science' of Billiards depends upon a nice observance of the theory of Angles, and a careful and regular method of play. He who would succeed must endeavour to play as though his game depended on the one particular stroke then before him; never allowing a chance of scoring to be neglected, and always looking well to the position of the balls before he makes his stroke, and to their probable position after the balls have ceased to roll, whether the Hazard or Cannon be accomplished or not.

In closing this chapter allow me to remark, that what may appear difficult of execution in the Diagrams is easy enough after a little familiarity with the several games. The smallness of the balls represented in the various figures here introduced, does not enable me to indicate the precise spot at which each one should be struck. This the player will, however, soon learn for himself. Every position of the balls on the table requires its own special study—not, however, that the player

should linger over his stroke; for a little practice, combined with the shrewdness for which he must allow me to give him credit, will enable him to see at a glance what is the best course under every variety of circumstance. Where a Winning or Losing Hazard may be doubtful, a Cannon may perhaps be made with ease: and with this advantage—that the missing of the Cannon is generally attended with less chance of your opponent scoring after you, than the failure of the Hazard. But in either case, play with such strength as will enable you to leave the balls safe, if you fail to score

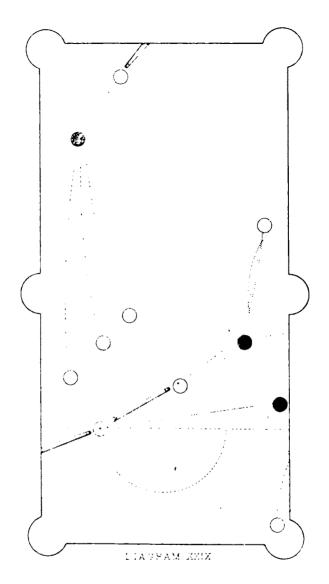


CHAPTER X.

EXAMPLES OF CANNONS.

Is it possible?
'T is true; there's magic in the art of it.—OTHELLO.

THE astonishing facility with which some players handle the Cue, gives amateurs the idea that Billiards is a very easy game. So it is, if players be content to remain in the army of mediocrities. In this respect, Billiards resembles Whist. Anyone can be taught to play in a few hours, but to become excellent at either, it is necessary to practise assiduously, and with a full and perfect comprehension of the principles which govern the This is nowhere seen in Billiards so thoroughly as in the making of Cannons. Various curious feats are occasionally exhibited on the Billiard-table; and one, which was characterised as 'unparalleled,' was, in November 1865, performed by Cristmas, the manager of the Cocoa Tree Club, St. James's It consisted in the making of no fewer than sixty-four consecutive Cannons, without allowing either of the balls to touch the cushion during the whole performance. When the account of his feat appeared in the papers, folks wondered how it was done, and various clever players tried to place the balls in positions favourable for its accomplishment.



Bigger strong to Farman. The curved times show the entert of the safes whole on historymisters of the curve the expedit strong these substitutions of the curve the expedit strong the substitution of the curve the expedit substitution of the expedit substitution of the curve the expedit substitution of the expedit substitution of the curve the curve the expedit substitution of the curve the curve the expedit substitution of the curve the curve the curve the expedit substitution of the curve the curve the curve the curve t

secret is this: the three balls are placed close together on the table, in the form of a triangle, thus:— . The player uses a light broad-tipped Cue, and plays at the two balls with just sufficient strength to strike them both, without allowing his own ball to remain in actual contact with either of them. this way he makes Cannon after Cannon, always with such graduated strength as to accomplish his purpose and no more; taking care not to divide the balls too much. With a little practice, a great number of Cannons may be so made. In fact, the feat is but a modification of the old trick, in which the sharper bets that he will make a hundred Cannons with three balls. In this case, however, he changes the Striking-ball as often as occasion requires. Another way of making a long series of Cannons is shown in Diagram XXIII. and its accompanying text. But in the latter instance, it is the Striker'sball, and not either of the Object-balls, which is kept from touching the cushion. The whole art is in the employment of a perfectly-commanded strength of Cue.

But enough of the *principles* which govern all Cannons: let us now illustrate those principles by a few examples.

DIAGRAM XXIX.

SIDE-STROKE CANNONS.

Here we have (Case 1) a Cannon that is not difficult to make, though most players bungle over it. You must strike your ball low on the *in-side*,

with a sharp concussion, but not much drawback, or you will miss the Cannon and bring your ball into an awkward position.

Case 2 requires 'side' and division, according to the position of the ball played on. Your ball must be struck rather low, with a rubbing 'side'.

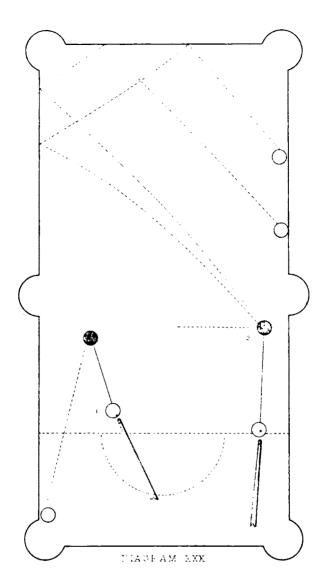
Case 3 may be made either with or without 'side.' If without the Sidestroke, the Division of the Object-ball must be very fine, with a slight 'following' action. But whether you use 'side' or not, your ball must be struck gently, or you will make the angle too wide.

DIAGRAM XXX.

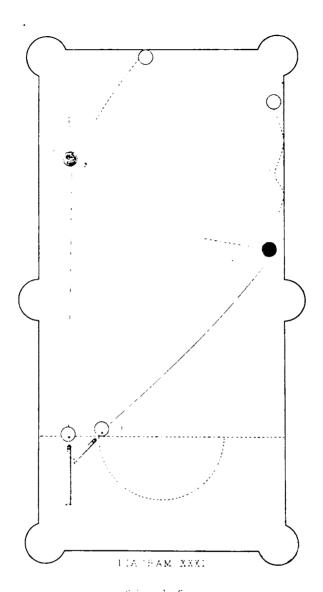
SIDE-STROKE CANNONS.

Case 1 is an ordinary Side-twist, and the ball must be struck low, with a decided drawback.

Case 2. Here we have two illustrations of the force of the Side-stroke. In one instance the 'side' is so strong as to make the curve very decided, but after the first contact with the cushion the curve is very much diminished, and on the second the angle is nearly straight to the ball. In the second stroke, from the same position, the 'side' is less strong, and consequently the angle is much narrower. In all such cases the player must exercise his best judgment as to the quantity of 'side' required. In this consists the science of the Side-stroke. In order to avoid a complication of lines, I have, in this and other Diagrams, omitted to note the direction taken by the Object-ball after concussion.



Sule-stroke Canons Curved unes showing the effect of side-stroke



Fire stroke Canons I Hadi Sule stroke and directival strok full The object-ball thes towards centre of table and structes ball hads the austron to the canon 2. Fine Sule stroke

DIAGRAM XXXI.

SIDE-STROKE CANNONS.

Case 1 shows how a Side-stroke combined with a Top-screw acts in making a Cannon when both balls are near to the cushion. The ball after the first contact curls towards the cushion, and after slightly touching it, glances off to the third ball. This is a very pretty stroke. The Object-ball is to be struck nearly full, more on the side towards the cushion, which causes the ball to fly off to the middle of the table, as shown by the dotted line, and does not therefore interfere with the Cannon. If you strike it too full on the out-side, it will run along the cushion and 'kiss' the other ball away.

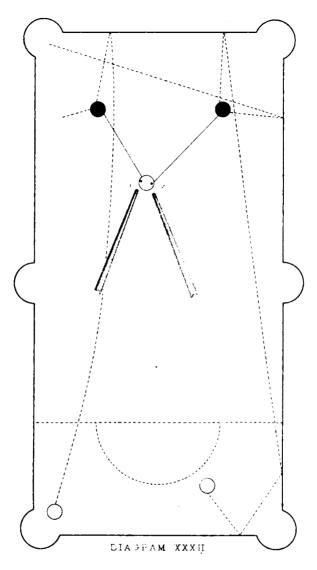
Case 2 is a narrow angle, produced by a 'slow' side and Following-ball—a most useful stroke to learn. Strike your ball rather high, with a flowing action of the cue and good strength.

DIAGRAM XXXII.

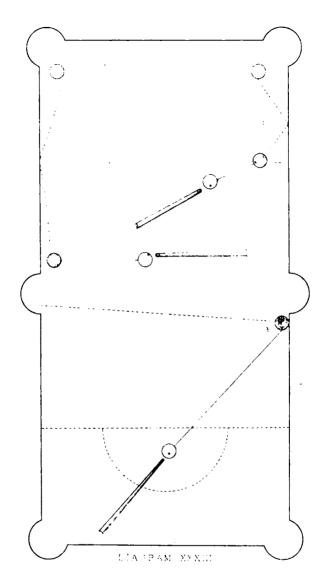
SIDE-STROKE CANNONS.

The Cannon shown in Case 1 requires a high 'side,' struck rather sharply; or the stroke may be made with a counter-side. In either case the stroke must be decided, and rather sudden. But avoid a jerk, which is always destructive to success. It is, perhaps, rather curious to talk of the side of a spherical body, but you must recollect that the face of the ball presented to the player is rather a disc than a sphere. At any rate, it is easy for the player to accustom his mind to the distinction. In making this stroke the slightest bias in the ball is fatal to its success. Kentfield says that all balls, however truly turned, must have some bias; but in his day less care was taken in the selection of the ivory than now prevails.

Case 2 presents a stroke which frequently occurs—a Cannon in baulk and a Doublet. The Object-ball must be struck nearly full, while a strong 'side' is put on the player's ball.



 $1\,\mathrm{Side}$ -stroke canons. 2 The ball played upon doubles into the pocket, and the canon following.



1.2 Side stroke ration 3. Doublet canon or hazard

DIAGRAM XXXIII.

SIDE-STROKE CANNONS.

The Cannon shown in Case 1 is easy of accomplishment: a slight in-side-stroke carries your ball to the cushion, from which it rebounds to the third ball and makes the Cannon. Make the stroke gently, or you will fail. A Screw would give you the same Cannon direct, but so much certainty must not be reckoned on.

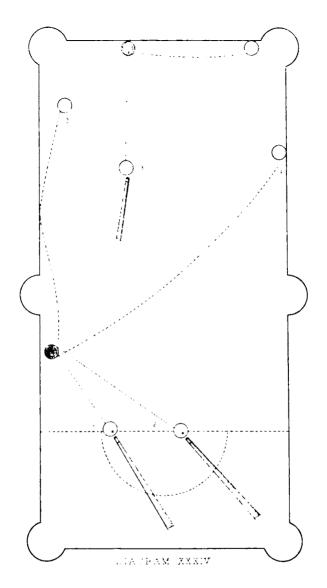
Case 2 is a square Cannon made by a Side-twist. Your ball will roll to the cushion and rebound slightly, but not far enough to miss the third ball. This is an elegant stroke, which may be made in any part of the table.

Case 3 is a Cannon or Doublet by striking the Object-ball full on the inside nearest the cushion, or by playing it very full on the out-side—in both cases putting the right-hand side to your own ball, with good strength.

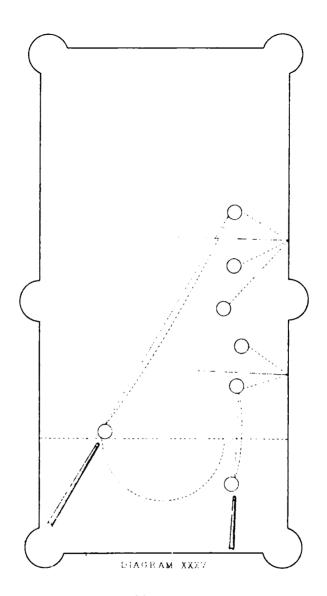
DIAGRAM XXXIV.

SIDE-STROKE CANNONS.

- Case 1. Play a high ball with strong right-hand Side-stroke, and some screw.
- Case 2. Less 'side' is required for this ball, but your ball must not be struck below the middle.
- Case 3. Hold your Cue nearly upright with a firm grasp, and press your ball on to the Object-ball with a sort of pushing rub. This is a most scientific stroke, which you must practise till you acquire; for it very frequently occurs. The same effect will be gained by the counter-side, but not so certainly as if you strike your ball on the side at which the Cannon is to be made. A similar stroke may be made at any part of the cushions. In this as in other diagrams, the Cannon is but the representative of hundreds of like Hazards. They are to be made with nicely-graduated strength. If you play too hard, you will break through the proper angles and miss the Cannon.



1 2 Sule stroke canons 3. Canon with a kiss



Side stroke autons

DIAGRAM XXXV.

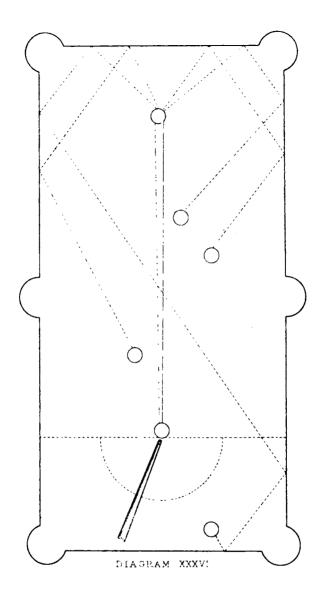
SIDE-STROKE CANNONS.

In both these Cannons I show the true and the apparent line of the ball as it leaves the cue, the dotted line assimilating to the actual course of the ball. Cannons made from the cushion in this way are not difficult of execution, provided your calculation of the angle be correct, and you put on 'side' accordingly. Practise strokes of this character with fair but not violent strength; they are very useful.

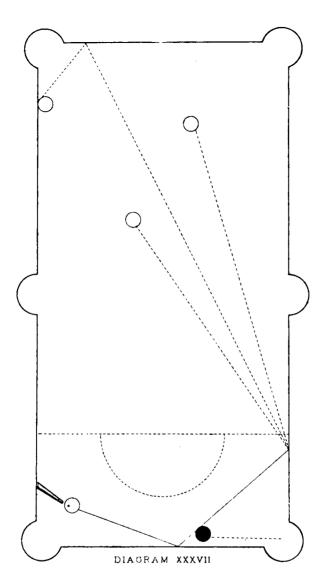
DIAGRAM XXXVI.

SIDE-STROKE CANNONS.

These strokes are by no means difficult. They require a high Side-stroke, freely applied,—that is to say, with sufficient force to carry your ball sharply back from the cushions. They might be multiplied indefinitely. In every instance of this kind, the player will exemplify the axiom of the equality between the angles of incidence and reflection. Balls placed in positions like these, present to the ordinary player a fair chance for a Cannon; with other Cannons or Hazards being left when the ball ceases to roll. Of course every variation of position will require variation of style. Stand well behind your ball, and use moderate strength.



Stde-stroke canons



Side stroke canons

DIAGRAM XXXVII.

SIDE-STROKE CANNONS.

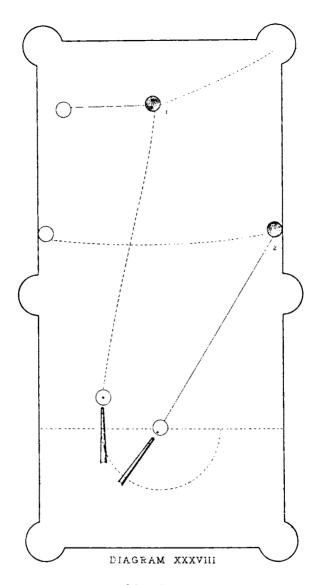
In the cases here shown the contact between your ball and the Object-ball should be of the slightest, while sufficient strength is used to carry your ball up the table. A high 'side' is required on the right when the Cannon lies to the right, and vice versa. These Cannons are examples of thousands of like character, which occur in the course of every man's play. They are, therefore, sufficiently representative. When they are made without 'side,' the impact between the Striking-ball and the Object-ball should be rather more decided; but in every case you must employ enough strength to drive your ball well up the table.

DIAGRAM XXXVIII.

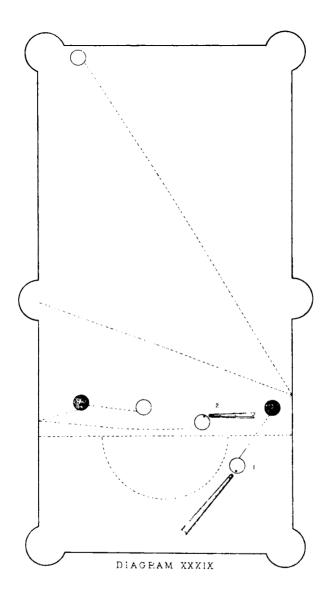
SIDE-STROKE CANNONS.

Case 1 is an instance of 'side' with a strong Screw—a most scientific stroke. Hit your ball low, with a good drawback.

Case 2 requires a screw and good 'side:' the ball and the cushion must be struck at the same instant; or a very full ball, so as to make the Object-ball 'kiss' away from the cushion. In either case, your own ball rebounds from the cushion across the table. A good break commonly follows a Cannon made from balls in this position.



Side-stroke Carons
L Caron with a strong screw and the corner pocket made
2. Caron across the table.



I Conon and double 2 Canon from cushion

DIAGRAM XXXIX.

SIDE-STROKE CANNONS.

Case 1 is a good instance of gentle 'side.' Play high, with an in-side.

Case 2 is a Cannon from the cushion, with a very narrow angle. Make your 'side' slight, and your blow not too strong.

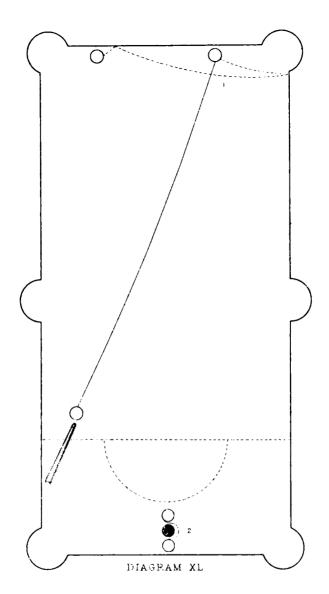
These are examples of numerous Cannons; and the player will do well to practise them, by varying the positions of the balls a little with every successive trial. Case 1 occurs so frequently, that every player should be able to make it; but if you strike too full or too hard, you will fail.

DIAGRAM XL.

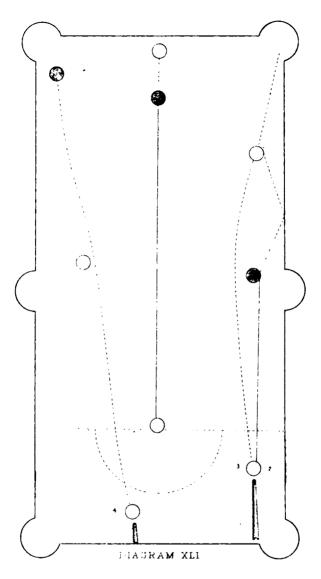
SIDE-STROKE CANNONS.

In Case 1 you cannon by a 'kiss.' The Object-ball is driven against the topcushion, and the 'side' and screw put on your own ball send it to the sidecushion, whence it rebounds to the other ball.

Case 2. You cannon in this instance by playing with a nearly perpendicular cue at the ball nearest the cushion, striking it on either side, according as you wish it to curl to the right or the left:—a most elegant stroke, which requires very decisive treatment and some practice.



Side-stroke Canons. Lanon by a kiss-2 amon with the balls close.



1 (incm by a kass 2. Side stroke canon . 3. To strike the distant ball without touching the red. 4 To go round the white for the redshaward .

DIAGRAM XLI.

SIDE-STROKE CANNONS.

Case 1 is a Cannon with a 'kiss': this is a most brilliant and useful stroke. When the red ball is on the spot, and the white one behind it close to the cushion, the player in hand wishes to make a Cannon: strike the ball directly in the centre, and play full at the red; the red will 'kiss' upon the white, and on its rebound from the cushion will meet the Striker's-ball and give you the Cannon.

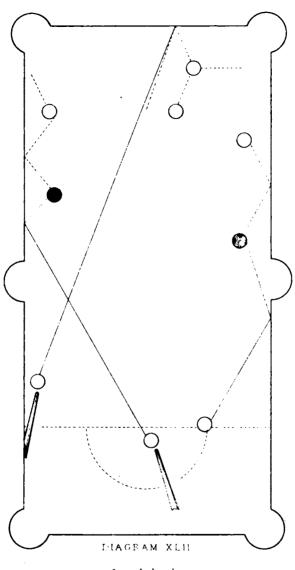
Case 2. If you wish to cannon you must put on a decided in-side. If you want to miss the ball, and play at the one farthest from you, put on a strong left-hand side, and aim away from the cushion-ball. This is a good Cramp-stroke.

Case 3 also is a Cramp-stroke. Suppose a red ball left over the pocket, and the white in the way. If the red be not removed, your opponent will be sure to pocket it; what then are you to do? Why, make a strong high inside-stroke, aiming two inches from the white. Of course the same effect will be produced, whether you put on right or left 'side,' according to the position of the balls. The 'side' will carry your ball round the white and on to the red, when if you do not make the Hazard you will at least remove the ball from the pocket. Strokes of this kind are very useful, and comparatively easy to accomplish, when you have acquired sufficient command over your cue to enable you to strike your ball on any part of its surface. Hold your cue firmly, but not too tightly, or you will drive away your ball in a direction contrary to the one you wished it to take.

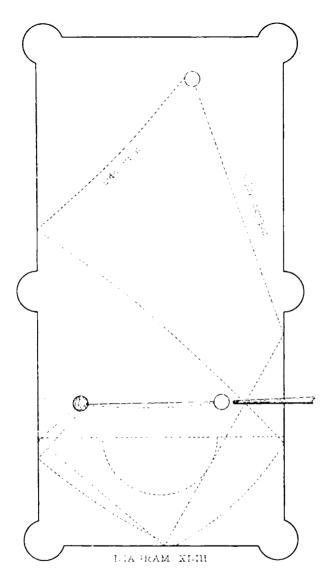
DIAGRAM XLII.

SIDE-STROKE CANNONS.

Cannons by Bricole.—These are illustrations of numerous Cannons made by playing first at the cushions. Various situations will present themselves when such a mode of play is not only desirable but absolutely necessary. In the instances shown in the Diagram it would have been necessary, in order to make the Cannon, to go, as it were, through the first ball, with a strong following action—a hazardous, inelegant, and uncertain style of play when you lie at a distance from the Object-ball. But if you play Bricole, and so make the Cannon, the stroke itself is a pretty one, and you are nearly sure to leave another Hazard on the table. These Cannons can be made without Sidestroke; but, generally, they come off better when the 'side' is neatly put on—not too hard, but judiciously and firmly; with the Cue well in hand, and your mind thoroughly made up for the accomplishment of the stroke. So much depends on hand and head acting in unison, that I cannot too often insist on the player giving his whole attention to Hazards of doubtful character. They should be practised repeatedly.



Canons by bricolo.



Canon by side-stroke or regular angle.

DIAGRAM XLIII.

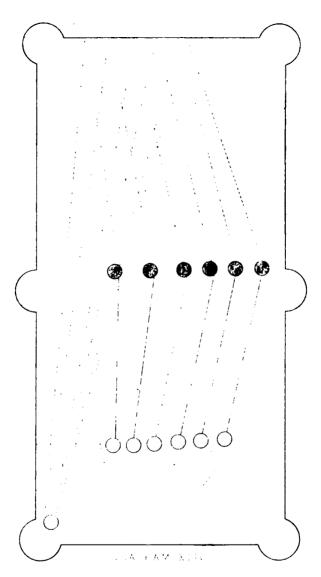
SIDE-STROKE versus REGULAR ANGLE.

This Cannon shows the distinction between the Side-stroke and the regular angle. The Cannon may be made by either plan. The plain angle is shown by the straight lines, and the Side-stroke by the curved ones. I have introduced it, not so much for anything in the Cannon itself, as for the purpose of illustrating the effect of the Side-stroke. Of course this, as in other cases, is but a representative Cannon. The thoughtful student will, after receiving the hint, be able to place the balls in various positions which exhibit similar modifications of the principle; the 'side' being put on to suit circumstances, and the strength adapted to the distance the player's ball has to travel. It was by strokes of this kind that Kentfield obtained his great fame as a Cannon-striker. Cannons made by playing 'all round the table' are not so difficult as they appear, for if the first angle be true, all the succeeding lines of reflection will be counterparts of it: the six inches of width allowed for every Cannon being sufficient to correct the slight deviation from the true angle, which arises from the sharpness of the rebound from highly elastic cushions. From the old list-cushions, greater certainty of angle, but less swiftness, might be calculated on. Much, however, depends on the judgment of the player.

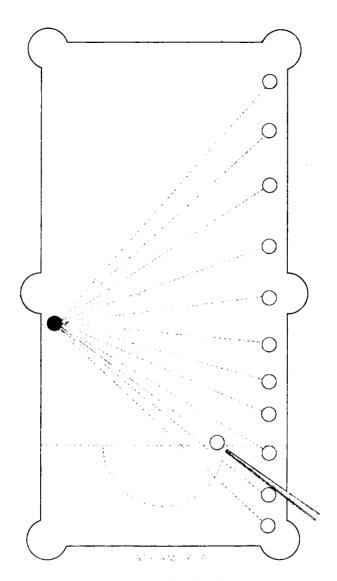
DIAGRAM XLIV.

SIDE-STROKES AND REGULAR ANGLES.

Here again we have Cannons that may be made by either Side-stroke, or the regular angles of the table. In the first case, the angle is a little sharper than in the last, so that the player must shift his ball to the right or left of the centre baulk-spot, just as he may choose to make the stroke by a full stroke or a 'side.' Kentfield and White generally played these strokes without much 'side'; but, then, they were not in the habit of playing on tables with india-rubber cushions. The present style of cushion, having more spring and elasticity than those which were stuffed with list or cloth, renders the application of the Side-stroke of more importance than in the old times; but perhaps, after all, for certain effects, as for dead Cannons in straight lines, the list-cushions were less variable in their results than the fast cushions of modern tables. However, it is so pleasant to play on a fine table, with a beautifully smooth cloth, and exquisitely elastic cushions of india-rubber, that it would be absurd to advocate the old style.



Canons by side stroke or regular angles , player's ball in baudk



Canons to illustrate the effect of the Side-stroke

DIAGRAM XLV.

ILLUSTRATIONS OF THE SIDE-STROKE.

These Cannons very admirably illustrate the extreme effects of the Sidestroke. All the upper range must be played high on your ball; the squared Cannon opposite the centre pocket with a half-screw, and all the lower range with a low side-screw, not too hard. Nothing will give you a better notion of the capabilities of the Side-stroke than these Cannons. I should therefore advise players to try them one by one, not contenting themselves till they have made them with ease, dexterity, and certainty. It will be well, also, to vary the position of the Striking-ball-bringing it nearer to, or farther from, the centre spot on the baulk-line, and marking the place of its rebound from the Object-ball with a piece of chalk. It is only by such means that certainty of execution can be acquired. You will find, however, that the certain Cannon, on your own pet table, is by no means to be depended on at an unfamiliar one. Every Billiard-table has its own special characteristics, just as every carriage or every horse has. This remark applies also to Cues. When you are accustomed to the weight, feel, and balance of a Cue, it is sometimes difficult to play in your usual style with a strange instrument. Indeed, I have found even the aspect of a Billiard-room to affect my play for the first half-hour or so. All these little matters must be taken into account by players of susceptible temperament.

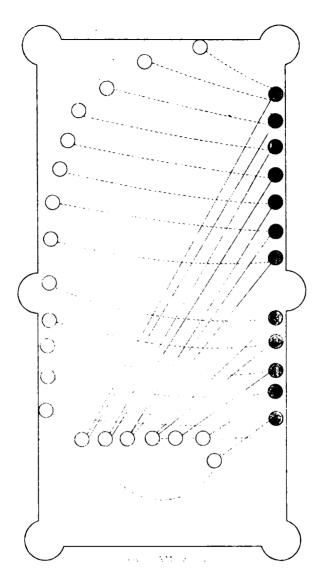
DIAGRAM XLVI.

CANNONS BY DIVISION OR SIDE-STROKE.

These Cannons may be made either by 'side' or 'division.' The first style is the most elegant—the last the most easy. Try both. A full stroke on the Object-ball will send your own ball against the cushion, and cause it to rebound sharply across the table. When 'side' is employed for the making of Cannons of this kind, the strength must be modified by the player as may be necessary. When the Object-ball is under the opposite cushion, you reverse the side, and place your ball—if it is in hand—farther and farther from the baulk-spot, as the distance below the middle pocket and the Object-ball is increased.

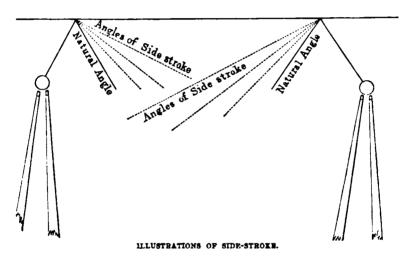
GENERAL OBSERVATIONS.

These Diagrams might be multiplied indefinitely; for it is well known to every player that scarcely two Cannons are absolutely identical with each other. But the character of certain Cannons is sufficiently well defined to render further illustration unnecessary. From the Diagrams here given, the judicious student will be able to make for himself any number of variations, each one of which will be found useful in practice. I would advise him to begin with the simple examples, and proceed regularly, till he is able to accomplish the more difficult feats. An hour's practice, two or three times a week, will soon make him player enough to contend in the public-rooms.



Carons by full strokes for the regular angles and variations of Sale for the upper range

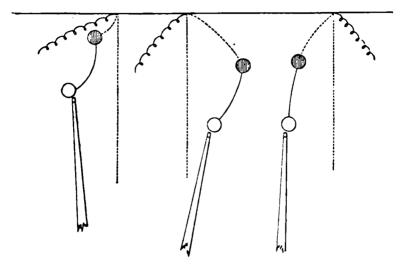
Though I may perhaps repeat myself, I must, in concluding this chapter, impress upon the amateur the necessity of fully conquering the *principle* of the Side-stroke. If you play a ball full against the cushion, and mark the return-angle, you will see that the second angle is the reverse of the first; but if you put on a little 'side,' you will see that the angle widens; a little more, and it widens still more; extreme 'side,' and the angle is yet further extended. Let me illustrate this by a Diagram. The straight line in the figure below represents the



cushion. If you strike your ball full in the centre, you make the natural angle; if on either of its sides, you make the angles more and more obtuse, according to the amount of 'side.' The positions of the Cues will show you the distinction between the strokes: for plain strokes a straight Cue—for side-strokes the Cue must be held rather across the ball and nearer or farther from the body, as already explained.

The lines of progression here shown are straight, but on

the table they are more or less curved. This is very difficult to illustrate; but the following figure will give you some notion of the actual effect of the 'side':—



ILLUSTRATIONS OF SIDE-STROKK.

I have purposely kept these illustrations for the conclusion of the chapter on Cannons, the rather because I was unwilling to burden the mind of the pupil with too much science—or the appearance of it, if you choose. The curved lines in the figure represent the course of the ball from the Cue to the Cushion, and the curled lines its progress after concussion. The perpendiculars are merely introduced to guide the eye as to the positions of the Cues.

Au reste! The amateur who has carefully followed me thus far will, I imagine, obtain a much better idea of Billiards than ever he had before. He has only to carry the theories into practice to become a good player.

CHAPTER XI.

CRAMP-STROKES AND TRICK-STROKES.

'Tis one thing to be tempted, Escalus, Another thing to fall.

What know the laws,
That thieves do pass on thieves? 'Tis very pregnant,
The jewel that we find we stoop and take it,
Because we see it: but what we do not see,
We tread upon, and never think of it.

Measure for Measure.

T is a common saying with players, that there are sixty
Ten-strokes in every game at Billiards. Perhaps there
are, but the difficulty is that the balls do not often fall
in such a way as to enable the player to make a Ten-stroke
once in an evening, much less in a game.

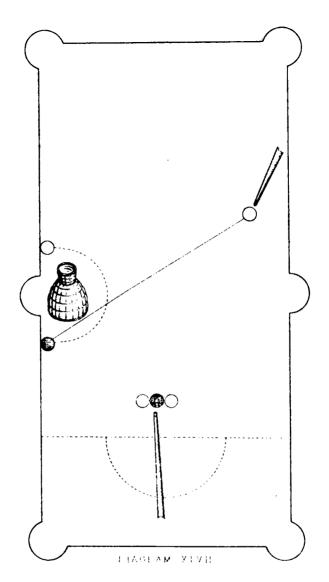
BILLIARD-TABLE TRICKS.

By Cramp-strokes I do not mean Trick-strokes. Cramp-strokes, properly played, are often of very great utility in redeeming an otherwise lost game, and in turning an unpromising break into a good one. By Cramp-strokes I understand violent screws and twists, pushes, kisses, very strong side-strokes, and almost imperceptible touches, together with

many other tours-de-cue which are only to be acquired by dint of long practice, and cannot readily be described on paper. Trick-strokes are generally acquired by rooks and billiardsharps as a means of betting. One of the most common of the Trick-strokes is the Dip (see page 43). The ball is struck on the top, or nearly so, with a well-raised finely-tipped cue; and if the stroke is neatly made, the ball rises a little from the table, and, instead of rolling, flies sharply along, and only rolls when it drops. It is with a stroke of this kind that the Cannon is made from one table on to two balls on another table—a stroke which was once considered so wonderful that it was talked of in every club and public-room, and thousands of people went to a well-known tavern to see a young German make it; now, however, that every player of any power of Cue can master it, nobody cares anything about it. This stroke I have already referred to. By the Dip the sharper makes the well-known betting-stroke of striking a ball between, or rather over, two balls placed less than a ball apart from each other (Diagram XLVII., Case 1).

Byastrong Side-stroke 'kiss' he makes the *Pool-basket Stroke*, a really clever performance (see Diagram XLVII.) A ball is placed close to the cushion on either side of the middle pocket, and between the two is put the pool-basket or a hat. The player then plays from the opposite side of the table, at a sharp angle, and with a Screw and strong Side-stroke causes his ball to force away the Object-ball, 'kiss' on to the cushion, curve round the basket, and cannon on the other ball.

Then there is the sharper's stroke of placing three balls in a line across the centre of the table, and betting that he will



Track Strokes I The three balls close together I the loof basket stroke The direction of the cue shows the position of the prayer

pocket the one over the cushion without touching the centre ball. The bet taken, he puts a hat over the centre ball, and by striking the hat with his ball, knocks the other ball into the pocket.

Again, there is the dirty catch of placing a ball close over the middle pocket and betting half-a-crown he will pocket the ball, and a shilling he knocks off the brass—a little arrangement by which the sharper robs the verdant youth who bets with him of eighteenpence; for he does pocket his ball, and he does not knock off the brass. These and numerous like strokes are practised by men who carry a piece of chalk in their pockets, and are particularly familiar with the marker. It is scarcely necessary to say that they are men to be avoided.

While on the subject of Trick-strokes and Markers, I may as well introduce a pleasant and cleverly-written little sketch by the author of 'Lost Sir Massingberd,' a story that should be widely read. The sketch is entitled

THE MARKER.

'I am a Billiard-marker in the Quadrant. If a man can say a bitterer thing than that of another, I shall be obliged to him if he will mention it, as I shall then have a higher opinion of my profession than before. Everybody else seems to be making capital of their experiences, and why should not I? I see a great deal of what is called life, up in this second-storey, and why should I not describe it? I am sure I have plenty of spare time. I have been here long enough to become unconscious of the roar of foot and wheel that rises from the street below; neither is there anything in the apartment itself to distract my attention much; no literature, save an illustrated edition of Allsopp's advertisements hung all round the walls, and a statement—which I know to be a lie—in seven colours,

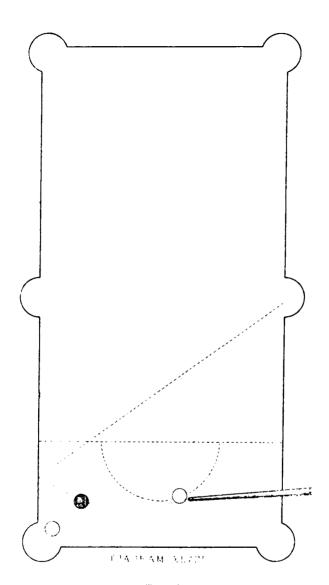
about the best cigars in London: no pictures, besides a representation of Mr. Kentfield, which I hope for that gentleman's sake is not a correct one. He has one or both of his hips out, and is striking a ball in one direction while his eves are steadily fixed in another. furniture, there is an immense oblong table with a white sheet upon it, one rickety chair, high-cushioned forms around the room, a rack for the public Cues, two painted boards for marking at Pool or Billiards, a lucifer-match box over the mantelpiece, and spittoons. The atmosphere is at all times chalky. In the evening, cigars and beer and gas make continually their fresh-and-fresh exhalations, but in the morning their combined aroma is stale. I feel when I first come in as if I were drinking the beer that has been left all night in the glasses, and endeavouring to smoke the scattered ends of the cigars. I sit upon the rickety chair with the rest in my hand, and my head beneath the marking-board-sometimes for hours-waiting for people to come. I arrive about twelve o'clock, and there is rarely anyone to play before the afternoon. Yes, there is one person-Mr. Crimp. I call him, and everybody calls him, and he calls himself, Captain Crimp; but I now exhibit him in plain deal, without that varnish of his own applying. His step is not a careless one, but he whistles a jovial tune as he comes upstairs, until he finds I am alone, when he leaves off at once, ungracefully; first, however, he looks in the cupboard where the washband-stand is kept, remarking "O!" regularly every morning, as though he did it by mistake; and, finding nobody there, he proceeds to business.

'Mr. Crimp assists me with his own scrupulously clean hands in removing the white cloth, and immediately becomes my pupil. I have taught him several skilful strokes at different times, which his admiration for the science of the game leads him to reward me for, quite munificently. Curiously enough, there is also an understood condition that I should say nothing about this. Later in the day, and when the company has arrived, it often happens that he will get a little money on, and accomplish those feats himself. A certain winning hazard in a corner-pocket, which appears particularly simple, I am now instructing him to miss—so that his ball may go round all the cushions and perform its original mission at last. It seems a

roundabout method enough of accomplishing its object, but it will have its uses for the Captain, I have no doubt. His interest in the game extends even to the condition of the table itself. He knows how the elastic sides are affected by a change of weather, and he prefers the right-hand middle pocket, for choice, to play at—it draws. Our lesson commonly lasts about an hour, unless we are interrupted. I have another occasional pupil in young Mr. Tavish. He learns Billiards as he would languages or dancing; but he will never do much at it. His attitudes, however, are after the very best models; and when he has made a fluke, he can look as if he intended it better than any man—a property in all situations of life not a little useful. Mr. Tavish is the pink of fashionable perfection. Between two and four come our chance customers, who are the most interesting to me, and of a very various sort:—

- A couple of brothers who have not met for years, and who are about to part, perhaps for ever—one just returned from Jamaica, and the other on the point of starting for India. They talk of their past adventures as they play—of their future prospects, of their respective sweethearts, of their home (for nobody minds a Billiard-marker)—as though they were quite alone.
- 'A father with his grown-up son will knock the balls about for half an hour, to see if he retains his ancient skill, dilating all the while on mortgages, on the necessity of a rich wife, and on the young man's allowance, and compressing the Chesterfield Letters into a fifty-game. Now and then comes a parson, who looks into the cupboard, just as Mr. Crimp did, for fear that his diocesan should be in hiding there.
- 'Two University men, who are up in town for a week's lark, but are supposed (I hear) by sanguine friends to be at college, reading at that present; their talk is of the boats, the proctors, the tripos, and of the man who went to the bad.
- 'Sometimes—for I was not born into the world a Billiard-marker—these topics touch me nearly. What does it matter? I am here; and, whether through my own bad play, or an unlucky fluke, it is now all one; my mission is to mark, not moralize.
 - 'After four drop in the Pool-players—five or six habitués and a

few strangers: some of them gentlemen, but the majority evident "legs"-quiet resolute-looking fellows, with hard keen eyes; abstemious moral persons, with iron nerves, and perfectly heartless, who live by this particular pastime. They would win the last halfcrown of the player before them, although they knew the loss would insure his immediate suicide. They would remark, after he had drowned himself, that he had "taken to the water." From the prosecution of this game for eight hours daily, their view of life has been formed; it is one gigantic Pool to them, wherein every man's hand is against the other's, and the misfortune of one makes all the rest happy. Each has a little sort of coffin, locked, which holds his particular cue. He looks along this weapon carefully, to make certain of its straightness, rubs the thin end with scouring-paper, and chalks the top with his own private chalk, of which he carries a piece about with him, in his waistcoat-pocket. From the time when I have given out the balls to the last stroke which wins, or divides the Pool, these men maintain an almost unbroken silence. No judge in delivery of a death-doom, no priest in the celebration of religious rites, could be graver or more solemn than they. My "Blue on yellow, brown your player," and "Red on white, yellow in hand," break forth amidst the hush, like minute-guns during a burial at sea; the click of the balls, the whiz when one is forced into a pocket, are the only other sounds. Many of our visitors in the midday ask for lunch, which is invariably toasted cheese; but these night-birds, with the exception of a little beer and tobacco-smoke, suffer nothing to pass their lips. Sometimes, amidst those solemn scoundrels there appears a jovial face—a naval man on leave perhaps, or somebody who is really a little screwed, and creates a disturbance: laughing and singing, putting the best off their play, and endangering the wariest by his mad strokes. Mr. Crimp looks on those occasions as though, being hungry, some one had come between him and his dinner; and I observe his lips to move silently—I do not think in prayer. There is a pretty constant attendant here, a Mr. Scurry, who is, I know, his special aversion. This gentleman comes for no earthly purpose but to amuse himself, and with his spirits always at high-pressure. He makes puns, and uses ready-made ones, about everything connected



Ten stroke

with the game. He is come, he states on entrance, "To plunge in the quiet pool." "Consider yourself, Captain," said he, vesterday. while he held that instrument over Mr. Crimp, "under a rest." "No rest for the guilty" is his quotation, whenever that is He calls the cues that have lost their top-leathers called for. "ex-cues." You can imagine what a range such a man finds in "stars" and "lives;" how the church and army are each laid under contribution for his remarks on "cannons;" how "misses" and "kisses" are remarked upon. If the red ball is kissed, he remarks, on each occasion, "No wonder she blushes!" And all this waggishness of his is the more creditable, inasmuch as he might just as well whisper it into one of the pockets, as impart it to his company with any hope whatever of appreciation. He does not want that; it is merely that he has an exuberance of merriment, and must let it off somehow: which is to the others generally an awful crime, and beyond their experience. Mr. Scurry gives me a shilling now and then, as do many of the earlier visitors. I have also my rewards from Mr. Crimp; and I am not, besides, ill-paid. It is not of the hardships of my profession that I have to complain (though I am up always until three in the morning, with the thermometer for the last six hours at about eighty) so much as of its unsocial character: nobody trusts me; nobody interests himself in me in the least, or considers me as anything beyond a peripatetic convenience for getting at your hall when it is out of reach. Nobody ever gets familiar with me, except Mr. Crimp, and I am the dumb witness, daily, of innumerable frauds.

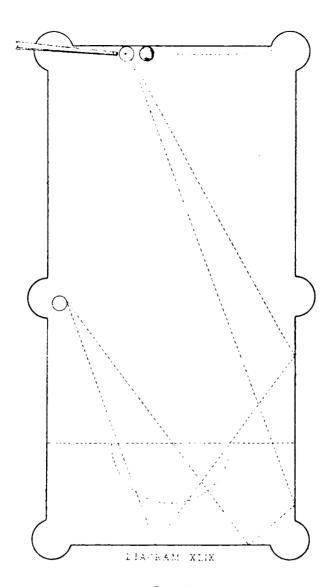
'I know the real skill of every player to a hair, and how much he conceals of it. I think I may say, from long habit of observation, that I know the characters of nine-tenths of the men who enter this room; and if I do, some of them are exceedingly bad characters. The calm dead hand at a hazard, whom nothing disturbs from his aim; the man who plays for a stroke only when it is a certainty, preferring his own safety to his enemy's danger; the hard hitter from whom no player is secure; the man who is always calling his own strokes flukes; the man who is always calling other people's by that derogatory name; and the poor fellow who is for ever under the

cushion. My world, which is not a small one, is mapped out for me, with all its different species of men, upon this table; for I stand apart, and mark many things beside the score.'

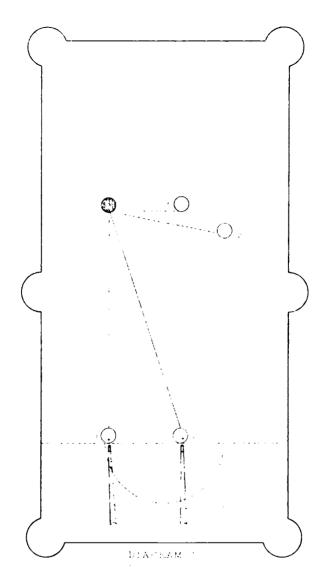
CRAMP-STROKES.

The Cramp-strokes that are really useful should be practised by all players; as who knows when he may not want them? They are like the bank-notes carried in the most secret pocket of your porte-monnaie—not intended for every-day use, and only to be brought out when there comes a real necessity for employing them.

A good Ten-stroke is shown in Diagram XLVIII. red ball is doubled into the middle pocket, while you cannon on the white and roll into the corner after it. This requires a little screw and 'side,' and is one of the Ten-strokes most frequently presented; as it can be made from any corner of the table, you have four Ten-strokes out of the sixty. Middle-pocket Stroke (shown in Chap. VIII. p. 83) gives you two more; and the Stroke 2, Diagram XLIX., four more. last stroke is easy enough after you have once acquired facility in pocketing the red in the corner. You strike your ball high on the in-side, pocket the red, fly down to the cushion in one or other of the lines marked, make the Cannon on the ball over the middle pocket, and run your ball in after it. When the balls are close together without quite touching, this stroke is by no means difficult; but if you do not strike your ball almost on the top, you will fail to pocket the red.



Ter. stroke



I Canon without touching the custion - 2 The same with a hard servi

Another very good stroke is the Wide Screw Cannon shown in Diagram L. This may be made with a slow twist either from the baulk, or from the extremity of the baulk-line. Of course it is easier from the last position. In the diagram the balls are pretty close together, but a little practice will enable you to make the Cannon with half the width of the table between them.

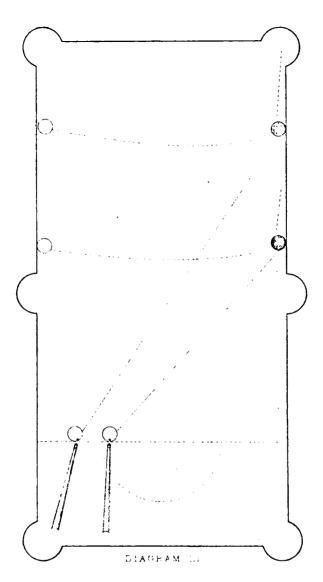
Another pretty Cannon is that shown in Diagram LI. Both balls hug the cushion, and you are playing from the baulk, or near to it. What you do is to strike cushion and ball at the same moment with a sharp in-side. This will cause your ball to fly across the table and cannon; or you may strike the ball full, which causes the two to 'kiss,' and forces your ball across the table. This stroke may be made in a variety of ways, and from many positions; but one example is as good as a thousand, when the pupil has his eyes open and his head clear.

A good Eight-stroke is shown in Diagram LII., fig. 1. The red ball touches the cushion with your own just in front of it, and a white ball over the pocket. You push, not strike, your ball, and by this means force the red into the pocket, make the Cannon, and hole your own ball. A decided push, slow but rather high, on the out-side is necessary; but the stroke requires practice and nerve, for if you strike by ever so slight a blow you will fail. This is a famous stroke in Pool or Pyramids, and seldom fails when once acquired. Or by a gentle push on the in-side, you may make the Losing Hazard. Distance from the pocket is no great matter, provided the two balls are close together, and the Object-

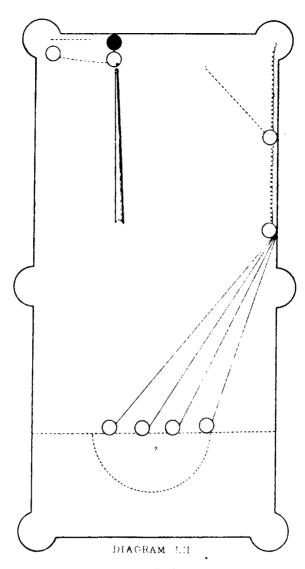
ball touch the cushion. A similar stroke may be made at either corner.

The last stroke is a modification of one which often occurs, when the Object-ball is close to the cushion, and your ball is in hand or at a distance. You play full at it, 'kiss,' and come back in almost a straight line to your starting-point. I recollect winning a game of a noted professional by this stroke. The red ball was close to the top-cushion, and his ball nearly opposite it under the baulk-cushion, while I was in baulk. I knew the stroke would come all right if the ball were properly hit; and as I was playing an uphill game, everything depended on my scoring. I could not play at the white, as I was in hand; so I took my Cue firmly in my grasp, and with sudden force struck at the red. The two balls 'kissed,' when back rolled mine, and made the Cannon. A good opening break presented itself, and I won the game!

Another Cramp-stroke is shown at fig. 2 Diagram LII. This is a stroke that often presents itself on one or other of the cushions. What you have to do is to cannon and pocket your own ball, or to cannon and pocket the white, or to cannon and pocket both balls. This is done by a high, sharp, sudden in-side-stroke, causing the red to fly towards the centre of the table, and your own ball to hug the cushion to the Cannon, when both will roll together to the pocket. In Pool many a player makes this stroke without intending it. By striking the in-side of the Object-ball, and putting on a strong Side-stroke, your ball hugs the cushion all the way; but if you 'kiss' against the Object-ball and cushion together, both balls will fly towards the centre.



Cramp Strokes Canons across the table similar tothose shown in Diagram XXX



Crainse Direken. L'Ennon and pecket the red system own ball, an eight stroke. I lanon & pooket.

A very favourite Ten-stroke (Diagram LIII.) is made by placing the red over the middle pocket, and the white over the end pocket. You then play from baulk at the red, with a low and decided in-side, pocket the red, cannon, and follow into the pocket after the white. This Ten-stroke may be also made on either side; so that out of the proverbial sixty, I think I have described about a third. The clever amateur will make for himself such modifications of the strokes mentioned as will give him another score.

ADVICE TO YOUNG PLAYERS.

In playing the regular game of Billiards it is bad policy to pocket the white, except when you want to keep the baulk or finish the game, as you have only one ball left to play at.

When you make a Winning Hazard, either at Pool or Billiards, play sufficiently hard to bring your ball away from the pocket, in case you fail.

Measure the distance with your eye between your ball and the pocket, and put on 'side' or divide the Object-ball sufficiently to accomplish the stroke before you.

Make sure of your Hazard or Cannon, in preference to trying risky experiments.

Safety is the grand thing to aim at in Pool. The good player attempts few doubtful Hazards, and never 'goes in for luck' while there is anything else to play for.

Keep your Cue well in hand, and beware of raising it too high. It is a good plan in 'smashing' at the Pyramid, to take the Cue underhand, and drive full at the foremost ball. But I need not tell you it is very risky.

Do not use Side-stroke when plain hitting will make the Hazard or Cannon equally well. Jewels are not intended for morning costume.

Before you play on a strange table try the strength of the cushions and the balance of the balls. Look well to the tip of your Cue and see that it is fast on, and dry. I remember a noted sharper winning a game of a well-known statesman by a very dirty but, unfortunately, common expedient. He placed his wet finger on the tip of his opponent's Cue, when it lay for an instant against the side of the table! The noble Viscount failed in his next stroke, and the sharper, having the advantage, won the game!

When you get the 'Spot-stroke' make all you can off it, without reference to what your opponent may do when it comes to his turn to play.

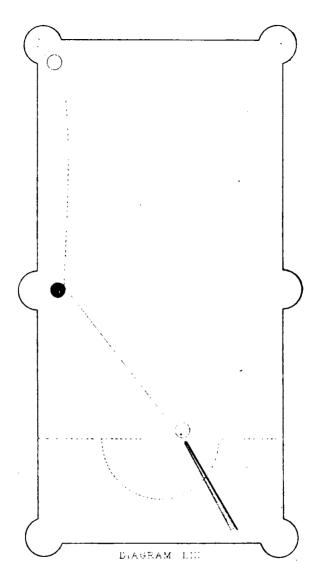
Hard hitting may give you luck, but it seldom wins a game against judgment and care.

It is not good policy to vary the strength of your play too often; regularity in strength and good calculation are among the grand secrets of successful Billiards.

Never dispute with the marker, but accept his decision as final; and if you discover him 'playing tricks with the score,' or betting on the game, mark for yourself.

Keep the balls well before you, and make your stroke in such a way as to leave another Hazard after you have pocketed a ball or made a Cannon.

When you are ahead of your opponent, and the red is safe.



Ten Stroke Canon and pocket all the balls The direction of the cue shows the postum of the player.

and he in hand, give a Miss in baulk: a judicious Miss often saves a game.

Do not disturb the red when it lies under the cushion, and you can make a Hazard off the white. In like manner, when your opponent is comfortably laid-up under the cushion, leave him there, and play at the red.

The Side-stroke enlarges the pocket for the Losing Hazard, and not for the Winning Hazard.

Practise in your leisure hours, but never play when your mind is distracted with business or 'affairs of state.'

Make the most of every break, and use the Rest as seldom as may be.

Play coolly and discreetly, and do not be tempted to venture upon doubtful Hazards when an easy Cannon is before you.

An open game is generally more successful than a cramped and cautious one.

Always strike the ball with an object: failure is the parent of success.

Good execution cannot be attained without a thorough knowledge of Strengths.

Do not bet with strangers, or accept offers from clever markers to 'play for just half-a-crown to begin with.'

Beware of the man who wants to show you a few fancy strokes, and carries his chalk in his pocket!

Do not play for high stakes unless you can afford to lose without grumbling.

Keep your temper!

CHAPTER XII.

THE GAMES AND THEIR RULES.

Now to your games these altered rules apply; No merit theirs but pure simplicity.—WHITEHEAD.

Billiards, Pool, and Pyramid. Foreign games have been occasionally introduced, and for a while have been popular; various adaptations of Pool have been received with more or less favour; and, from time to time, the so-called American and Russian games have had their little run of success; but after the éclat of novelty has worn off, players have invariably gone back to Billiards proper.

Originally Billiards was played with two white balls; twelve or twenty points being made from Winning Hazards only. This is now known as the White Winning Game. To it succeeded a game equally simple and monotonous, the White Losing Game, in which the score was made by Losing Hazards only. It was played twelve, fifteen, or twenty points, each Hazard counting for one. Some happy genius united the two games, made each Hazard count two points, enacted certain penalties for misses and foul strokes, and called it the Winning and Losing Hazard Game. Then

probably some travelled player brought the Cannon game from France—where it was universal, and where it is even now the popular *Billard* of the *Cafés*—and added it to the Winning and Losing Game; and hence made Billiards, as we play it now all over the world.

Without troubling ourselves further about the simple games that amused our ancestors, let us proceed to describe *English Billiards*; that is, the Winning and Losing Carambole game, or, as it is generally called,

BILLIARDS.

This game is played with three balls, two white and one red. The white balls are easily distinguished from each other by one of them having a minute black spot inserted on one side. This ball is called the Spot-ball. The Game is made up of Winning and Losing Hazards, Cannons, Misses, and various penalties for foul strokes. It is played 20, 30, 40, 50 or 100 up—the ordinary game being fifty points. For every Losing Hazard off the red, and for a Winning Hazard made by pocketing the red ball, three points are scored; for every White Winning or Losing Hazard, and for every Cannon, two points are scored. Every Miss counts one against the player, every Coup three; and all foul strokes are subjected to forfeits, according to the rules which are here given.

The red ball is placed on the Spot at the commencement of the game. The players then string for lead and choice of balls; and he who loses the lead either begins playing by striking the red ball, or by giving a Miss in baulk. If the first player give a miss, or fail to score off the red ball, the second player goes on and tries to score by making a Hazard or Cannon. If he succeed, he goes on scoring till he miss a stroke. And so the game proceeds, each player making as many as he can off his break till the allotted 50 (or 100) points be reached—he who first makes the required number winning the game.

Stringing for the Lead is done in this way: each player places his ball within the baulk semicircle, and strikes it with the point or butt-end of his Cue to the top-cushion; and the player of the ball which stops nearest to the cushion at the baulk-end of the table wins the lead, and chooses his ball. It is generally considered a slight disadvantage to lead off, as there is only one ball, the red, to play at. But between equal players, the advantage is so hitle that either of them start without stringing. Where points are given, the receiver of the points usually leads off; but this is not imperative, as the points are given to equalise the game.

The following Rules are revised from those furnished by Messrs. Burroughes and Watts. I have endeavoured to simplify and arrange them, so as to get rid of much of the verbiage usually employed, and so render them plain to the minds of beginners. The remarks and bye-laws, in smaller type, are principally explanatory. As now altered, these Laws are recognised at most of the Clubs, and by nearly all the professional players.

LAWS OF BILLIARDS.

I

The game commences by stringing for the lead and choice of the balls.

[This rule applies to the White Winning Game, the White Losing Game, and generally to all English Billiard-games. In stringing for the lead the feet of the player should be behind the baulk, and not at the side of the table. If one ball in stringing strike the other, the players must string over again.]

II

The red ball must be placed on the Spot, and replaced there when it is holed, or forced over the edge of the table, or when the balls are broken.

['The Spot' is the one nearest the cushion at the end of the table, opposite the baulk. 'Breaking the Balls' is the replacing them as at the beginning of the game—the red on the Spot, and each player's ball in hand—when he who has to break the balls, plays at the red, or gives a Miss. The balls are said to be broken when the first player has struck the red or given a Miss.]

Ш

The player who makes one stroke in a game must finish that game, or consent to lose it.

[This law is intended to meet cases of dispute, when he who refuses to continue the game, loses—and pays for—it.]

IV

The striker who makes any points continues to play until he ceases to score, by missing a Hazard or otherwise. V

If, when the Cue is pointed, the ball should be moved without the striker intending to strike, it must be replaced; and if not replaced before the stroke be played, the adversary may claim it as a foul stroke.

[That is to say, a ball moved accidentally must be replaced as nearly as possible. This law is intended to meet cases in which a ball is under a cushion, or angled in a corner. It is often of importance that the precise position of a ball should be retained. The Marker, when appealed to, must state whether the stroke be foul or fair. If the ball be moved more than three inches, it is generally considered a stroke. If the striker miss his own ball, he can make the stroke over again.]

VΙ

If a ball spring from the table, and strike one of the players, or a bystander, so as to prevent its falling on the floor, it must be considered as off the table.

[This is contrary to the practice of some Clubs, but I consider it a very fair rule, as without the ball struck somebody, it would have fallen to the floor. The penalty is the loss of the three points if the Striker's-ball has not first struck a ball on the table; but if a ball has been so struck, no forfeit can be claimed.]

VII

When a ball runs so near the brink of a pocket as to stand there, and afterwards fall in, it must be replaced, and played at, or with, as the case may be.

[The challenging a ball, as in Bagatelle, is not allowed in Billiards. If the ball roll into the pocket before the striker makes his next stroke, he claims it, and the points made by it must be scored. The Marker, when appealed to, must decide as to the fairness of the stroke, or (when a Marker is not present) any person mutually agreed to by the players; such umpire not being interested, by wager or otherwise, in the issue of

the game. While any motion remain in the ball, it is considered to be in play. Therefore the striker should not go on with his stroke till all the balls are perfectly at rest. This explanation does away with a rule usually given.

VIII

A ball lodged on the top of a cushion is considered off the table.

[This can scarcely happen on modern tables, but the law is necessary to meet possible cases; but if the ball roll back from the top of the cushion on to the table, it is again in play. No person has any right to take up a ball so placed till it either rests dead on the top of the cushion, or falls to the ground.]

IX

When the player's ball is off the table (in hand), and the other two balls are in baulk, the possessor of the ball in hand cannot play at the balls in baulk, but must strike his ball beyond the semicircle, or play at a cushion out of baulk.

[In such a case, the player may use a Butt, or play with the butt-end of his Cue, and strike at a cushion out of baulk, so that his ball on its return may hit the balls in baulk for a Cannon or Hazard.]

X

A line-ball cannot be played at by the striker whose ball is in hand.

[A line-ball is when the centre of the ball is exactly on the line of the baulk, in which case it is to be considered in the baulk, and cannot be played at, except from a cushion out of the baulk. The Marker must decide, if requested to do so.]

ΧI

All Misses must be given with the point of the Cue, and the ball is to be struck only once; if otherwise given, the adversary may claim it as a foul stroke, and enforce the penalty—make the striker play the stroke over again—or have the Ball from where it was struck the second time.

[It is usual, however, to allow the player to give a Miss in baulk, with the butt-end of his Cue, when he plays his ball to the top-cushion.]

XII

No player can score after a foul stroke.

[The following are foul strokes:—If the striker move a ball in the act of striking and fail to make a stroke; or if he play with the wrong ball; or if he touch his own ball twice in playing; or if he strike a ball while it is running; or if he touch his opponent's ball with hand or cue; or if his feet be off the floor when playing. The penalty in all these cases is losing the lead and breaking the balls. Enforcing the penalty for a foul stroke is entirely at the option of the adversary.]

XIII

If the adversary neglect to enforce the penalty for a foul stroke, the striker plays on, and scores all the points that he made by the foul stroke—which the Marker is bound to score.

[Thus, if a foul stroke be made, and not called, it cannot be enforced after the next stroke is made.]

XIV

Two points are scored for every White Hazard, two for every Cannon, and three for every Red Hazard.

[In order that no mistake may be made by young players, I give the following explanations of the manner in which the points are scored:—
If the striker pocket the white ball (called a White Winning Hazard), or if he pocket his own ball from the white ball (a White Losing Hazard), he gains two points; if he pocket both balls, he gains four points.—If he pocket the red ball (a Red Winning Hazard), he wins three points; and if by the same stroke he pocket his own ball from the red (Red Losing

Hazard), he wins three more-six in all.—If he play at the white ball first, make a Cannon, and pocket his own ball, he gains four points: two for the Cannon, and two for the White Losing Hazard.-If he play at the white ball first, and pocket his own ball and the red one, he gains five points.-If he play at the white ball first, make a Cannon, and pocket the red and white balls, he gains seven points.—If he play at the white ball first, make a Cannon, and at the same time pocket his own and his adversary's ball, he wins six points: two for the Cannon, and two for each White Hazard.—If he play at the white ball first, and pocket all the balls without making a Cannon, he gains seven points.—If he play at the white ball first, make a Cannon, and pocket all balls, he gains nine points. -If he play at the red ball first, and pocket it and his own ball, he gains six points.—If he play at the red ball first, make a Cannon, and by the same stroke pocket his own ball, he gains five points: two for the Cannon, and three for the Red Losing Hazard.—If he play at the red ball first, make a Cannon, and pocket the red and the white ball, he gains seven points.—If he play at the red ball first, make a Cannon, and at the same time pocket his own and the red ball, he wins eight points: two for the Cannon, three for the Red Losing, and three for the Red Winning, Hazard.—If he play at the red ball first, and pocket his own and the white ball, without a Cannon, he gains five points.—If he play at the red ball first, and pocket all the balls, without a Cannon, he gains eight points. -If he strike the red ball first, make a Cannon, and by the same stroke pocket his own and both the other balls, he gains ten points, the greatest number that can be gained by one stroke.]

$\mathbf{x}\mathbf{v}$

When the red ball is pocketed, or off the table, and the spot on which it should stand is occupied by the white ball, the red must be placed in a corresponding situation at the other end of the table; but if that should also be occupied by the other white ball, the red must be placed on the spot in the centre of the table, between the two middle pockets; and wherever it is placed, there it must remain, until it be played, or the game be over. [It is the custom in some Billiard Rooms, if the Spot be occupied by the white ball, to place the red ball in the centre of the table; but it is more common to place it at the baulk-end, which situation is more uniform with the regular way of playing the game.]

XVI

If a ball be moved by the striker in taking aim, such moving of the ball must be considered a stroke.

[This appears to be a contradiction of Law V, but there, it will be remembered, the player did not intend to strike the ball moved: here he is in the act of striking; and if, while in the act of striking, the ball be moved ever so little, it must be considered a stroke; except, of course, that your opponent may allow you to replace your ball and amend your stroke. This applies equally whether the striker's ball be in hand or not, and whether it goes out of baulk or remains in the semicircle.]

XVII

If the player miss striking either ball he loses *one* point; and if by the same stroke his own ball run into a pocket, he loses *three* points.

[That is to say, his opponent scores the points forfeited by the Miss or the Coup. All Misses count towards your adversary's game. See Note to Law V.]

XVIII

If the striker force his own or either of the other balls over the table, after having struck the Object-ball, or after making a Hazard or Cannon, he neither gains nor loses by the stroke, and his adversary plays on without breaking the balls.

XIX

If the striker wilfully force his ball off the table without

striking another ball, he loses three points; but if the ball goes over by accident, he loses one point only for the Miss.

[This would appear a harsh rule, with a heavy penalty annexed to it; but, perhaps, the adverse party may have laid his plans with skill, and must not, therefore, be unfairly frustrated with impunity. Besides, care must be taken that the adversary be not a sufferer by the unfair play or blunders of the striker. The Marker, or a disinterested looker-on, must decide as to the wilfulness of the act. It is not very difficult to force your ball off the table, after contact with an Objectball. It is done by striking your ball high, with a downward blow. This has the effect of causing your ball to rise after contact. There is no penalty attached to striking an Object-ball off the table in Billiards. The rule is varied according to the custom of the Club or Room.]

$\mathbf{x}\mathbf{x}$

If the striker play with the wrong ball, and a Cannon or Hazard be made thereby, the adversary may have the balls broken; but if nothing be made by the stroke, the adversary may take his choice of balls for the next stroke; and with the ball he chooses, he must continue to play till the game is over.

XXI

The fact of playing with the wrong ball must be discovered before the next stroke is played; otherwise no penalty attaches to the mistake, and the player goes on and scores all the Hazards he makes.

[This is a very fair rule; though it is difficult sometimes to know when the balls were changed. In such a case, the players must continue to play with the balls so changed.]

IIXX

No person, except his adversary, has a right to inform the player that he has played, or is about to play, with the wrong ball. Nor has any person authority to inform one player that the other is playing, or is about to play, with the wrong ball.

XXIII

If the adversary do not see the striker play with the wrong ball, or, seeing it, do not choose to enforce the penalty, the Marker is bound to score all the points that may have been made by the stroke.

XXIV

If the striker's ball be in hand, and the other two balls within the baulk, and should he, either by accident or design, strike either of them, without first playing out of the baulk, his adversary has the option of letting the balls remain as they are, and scoring a Miss,—of having the ball so struck replaced in its original position, and scoring a Miss,—of making the striker play the stroke over again,—or of calling a foul stroke, and making the player break the balls.

[This penalty may appear rather heavy, and in ordinary play it is not commonly enforced; but as the one player may have considered it beneficial to his game to pocket his opponent's ball and then to run into baulk with the red, it would be very unfair to allow the other player to disturb his plans by any mistake or wrong play. Breaking the balls is supposed to place both players again on an equality.]

XXV

If the striker's ball be in hand, he must not play at a cushion within the baulk, in order to strike a ball that is out of it.

[Should he do so, his opponent can insist on his playing the stroke over again.]

XXVI

When the striker plays at a ball near to his own with the point of the Cue, the stroke is fair: but if he play it with the butt-end, the Marker must decide whether the stroke be foul or fair.

[All strokes are fair with the point of the Cue. The principle which ought to govern the decision of the Marker in such a case is this, namely, that the striker's butt must quit his ball before it comes in contact with the Object-ball. In pushing-strokes, the point or butt of the Cue must only touch the ball once. If the ball be touched and the Cue be withdrawn by ever so little, and the ball be again touched, pushed, or struck, such stroke is foul.]

XXVII

When a ball is on the brink of a pocket, if the striker in drawing back his Cue knock the ball into the pocket, he loses three points, as for a Coup.

XXVIII

In giving a Miss from Baulk, should the player fail to strike his ball out of Baulk, his adversary may either let it remain so, or compel him to play the stroke over again.

[The Law applies to balls in-hand. If the player's ball be already within the baulk-line, he can play it, with the point of his Cue, to any part of the baulk; and such ball cannot be struck by the other player, if his ball be also in-hand, except he first play at a cushion out of baulk Intentional Misses can be played either in baulk or out of it. The Miss may be either played from the end or the side cushion. The usual way is to play at the side-cushion with a Side-stroke, as shown at page 60.]

XXIX

When the striker, in giving a Miss, makes a foul stroke, his

adversary may claim it as such, and enforce the penalty. In such a case, the point for the Miss is not scored.

[See note to Law XII. for foul strokes.]

XXX

No person is allowed to take up a ball, during the progress of a game, without permission of the adversary.

[The player who illegally takes up a ball that is in play during the progress of a game, loses the game. In fact, neither player is allowed to touch a ball except it be in-hand: that is to say, he may not touch it in order to alter its position, though he may lift it to ascertain whether it be the spot or the plain ball, when any doubt exists as to its identity.]

XXXI

A ball in play that is moved by accident by either of the players, or by a looker-on, or by the Marker, must be replaced, as nearly as possible, to the satisfaction of the player's adversary.

[The Marker, or a disinterested bystander, may decide as to the proper replacing of the ball. If a ball be moved from under a cushion, either by accident or design, it must be replaced before the player make his stroke. If, in the course of the game, a player or any other person take up a ball, supposing it to be in hand, the adversary may break the balls, or have them replaced to his own satisfaction. If the Marker, or a bystander, touch either ball, whether it be running or not, it must be placed as nearly as possible in the position it occupied, or would apparently have occupied. The meaning of these rules is that no ball in play must be touched except with the point or but of the Cue.]

IIXXX

The striker loses the game if, after making a stroke, and thinking the game over, he removes a ball that is in play from the table.

[This Law applies equally to all kinds of strokes. The striker can only take the ball from the pocket, or from the hand of the Marker, after the ball has been pocketed.]

XXXIII

The player may have the balls replaced if his adversary accidentally take up a ball that is in play; or he may insist on his adversary breaking the balls.

[In some rooms the penalty of losing the game is enforced upon the non-player who takes up his adversary's ball when it is in play, whether it be running or not.]

XXXIV

The player or non-player who wilfully removes a ball that is in play from the table loses the game.

[In the last three rules I follow the general custom of the Clubs.]

XXXV

Neither the player nor his adversary is allowed to obstruct the course of a ball in play, under the penalty of a forfeit for a foul stroke and the breaking of the balls.

[The Rules as given in the printed sheet are these; but the whole sense of them is conveyed in Laws XXXIV. and XXXV.:—

If, after the striker has made a Cannon or a Hazard, he take up the ball, thinking the game is over, the adversary has the option of breaking the balls, or having them replaced.—If, after the striker has made a Miss or a Coup, he take up a ball, supposing the game to be over, he loses the game.—If, after the striker has made a Miss or a Coup, the adversary, thinking the game is over, take up a ball, he (the last striker) may have the balls replaced as they were, or break the balls.—If, after the striker has made a Cannon or Hazard, the adversary, thinking the game is over when it is not, takes up a ball (whether running or not), he loses the game.—If, after striking, the striker should obstruct or accelerate the running of the balls in any way, it is at the adversary's option to make

it a foul stroke, and break the balls, or have them replaced.—If, after the striker has played, the adversary should obstruct or accelerate the running of the balls in any way, he (the striker) may claim the right of breaking the balls, or having them placed to his own satisfaction.

XXXVI

If the striker's ball touch his opponent's ball or the red ball, no score can be made, and the latter must break the balls.

[The striker in this case may run his ball into a pocket, or make a Cannon by playing it on to the third ball. If he do either of these, the balls must be taken up, and the red placed on the Spot, when the adversary plays from Baulk, as at the beginning of the game; that is to say, he breaks the balls. But if the striker fail to cannon or pocket his own ball, all the balls remain, as they are when they cease rolling, and the other player goes on as usual. It is necessary that the Marker or some disinterested person should determine as to the balls touching, for they may be very close together, and yet not actually touch each other. But the fact is easily discoverable by placing the hand over the balls, and looking at them in the shade so produced. If the red ball and the adversary's ball touch each other, they may be played at by the striker.]

XXXVII

No person has a right to offer advice to the players during the progress of the game.

[But if the Marker or a bystander be appealed to by one of the players, he has then a right to give an opinion, whether he be interested in the game or not; and if a spectator sees the game marked wrong, he has a right to mention it, provided he does it in time for it to be rectified, but not afterwards. When the decision is once given, no further appeal is allowed, under penalty of forfeiture of the game.

In the above thirty-seven Laws we have the whole substance and intention of the sixty-two Rules usually printed. I venture to add another.

XXXVIII

The decision of the Marker shall be final on all points of

dispute, except when he is interested in the game by wagers, &c. In such case, the decision of the majority of the lookers-on must be taken.

[Markers who are paid for marking should not be allowed to bet.]

RULES FOR VISITORS.

- 1. Listen for the stroke before entering the room.
- 2. No person is allowed to walk about the Billiard Room during the game, talk loud, make a noise, or otherwise annoy the players.
- 3. When silence is demanded, it is expected all persons will comply therewith, or leave the room.
- 4. It is expected that all persons in the room, whether they are playing or not, will conform to the foregoing Laws, in so far as they relate to them respectively.

ADVICE TO YOUNG PLAYERS.

It is generally considered bad play to pocket your adversary, except when you want to keep the baulk or finish the game. There are, of course, positions in which it would be good policy to pocket the white ball; but as, by so doing, you leave only one (the red) to play at, you reduce your chances by just one-half. When, however, you can at the same stroke make a Cannon and pocket the white, or when you can make a four-stroke by a double hazard, then I should say—do not allow any scruple of its being, or not being, the game deter you from

adding to your score. My plan is to leave no chance to my opponent that I can fairly prevent.

If you are uncertain about your Side-stroke, do not attempt to give the Miss from the side-cushion, but play at the red, and endeavour to bring your own ball into baulk. Place your ball on one of the end-spots of the baulk semicircle, and strike the red by a half-ball; the blow being given to your own ball just above its centre. This will bring your ball back again into baulk, and leave the red under the side-cushion, just above the middle pocket. You must practise this stroke, as it depends entirely on the strength of your stroke whether your ball will stop in the baulk, or rebound from the baulk-cushion again. It is by no means difficult to bring both balls into baulk. A half-ball on the red, pretty swiftly, will send each ball against opposite side-cushions after contact, when they will cross each other's lines at about the centre of the table, and drop quietly below the baulk-line.

Many players endeavour, at the beginning of the game, to score off the red—either by cutting it into the corner, or going in off it with a heavy side-screw. If your opponent is your equal in play, the experiment is risky, as you are pretty sure to leave a Cannon if you miss the Hazard.

Every stroke should be made with a definite object, and if there is no Hazard or Cannon apparent, play to leave yourself safe. Never strike at the balls at random.

When you play back from the top-cushion, to strike a ball, or to make a Cannon in baulk, remember the axiom—the angles of incidence and reflection are equal to each other. This is shown in Diagrams III., IV., and V. You may either play

at the top-cushion by a single passage of the ball from Baulk to the top-cushion and back again, or you may play with sufficient strength to make your ball travel twice up and down the table. Sometimes a little 'side' may have been unconsciously placed on your ball, which will cause it to diverge a little to the right or left after striking the cushion; and as the angle widens, you may get the Cannon or Hazard. Always look well to the position occupied by your opponent's ball before making a stroke of this kind, so that if you fail your own ball may be safe.

It is often good policy, when you cannot score, to gently strike your opponent's ball, or the red, so as to leave it under the cushion.

With your opponent's ball off the table, it is generally advisable, when there is no probable score off the red, to run your ball into baulk off the red, and if possible lodge the red also within the baulk-line.

When your opponent's ball is close under the cushion, play at the red for a Cannon or Hazard. Many a game is lost by playing at the wrong ball. As a general rule, play at the red when you are behind in the game, and at the white when you are ahead. But 'general rules,' you know, will only serve for 'general purposes.' Every stroke must be governed by the particular position of the balls; and in the mode of play much must be left to the judgment of the player.

Be careful how you vary your style: without there is obvious reason for a high or a low stroke, a side-stroke or a screw, play an ordinary stroke, and divide the Object-ball. Do not experimentalize without a direct purpose. 'Slow and steady

often wins the race,' they say; though I cannot but think that the hare must have been very stupid to have let the tortoise beat him.

It is generally believed that there are at least fifteen points gained by luck in every game of fifty-up. Pay no attention to general belief, but always try to do your best; and then if luck comes, accept it as you would an unexpected legacy. It is the weakest of weak hopes, however, to put faith in flukes. Nevertheless, no game is lost till it is won.

An advantageous Miss when you are under the cushion may save your game. I remember many a time being at forty-eight when my opponent has been at forty-nine with a doubtful Hazard: I give a Miss, and he plays at the red, and generally fails to score; when I make a Cannon and win.

Remember that it is not only the Hazard before you that you have to make, but the Hazards that will be left after your stroke. Good judgment in anticipating the consequences of your stroke is therefore a primary cause of success. White Winning Hazards should be played gently, so that, should you fail to make them, your opponent's ball may be left under the cushion. Red Winning Hazards should, on the contrary, be made with strength enough to bring the ball away from the cushion, if you do not succeed in lodging it in the pocket. Knowledge of Strengths, as I have already said, is half the battle at Billiards.

After what has been written, it is perhaps hardly necessary for me to warn you:—not to bet with the Marker if you do not want to lose, or to make him your equal—not to play for heavy stakes with strangers, unless you have more money than wit—not to keep your cue without chalk, unless you wish to lose the game—not to be seduced into ordinary conversation during play, unless you have a particular desire to pay for the game—not to run extraordinary risks for the sake of ordinary chances—not to give up a game when there is the slightest hope of retrieving your position—not to try showy strokes when plain ones will do as well (a man does not usually put on white kids and patent-leathers for a morning walk in the fields)—and especially, not to lose your temper and dispute the score! Nothing shows the tyro so soon as that.

THE MATCH OF FOUR.

This is ordinary Billiards played by four players in sides of two each. It is usual either for each player to go on in turn, so soon as the one fails to make a Hazard or Cannon: or for a player on each side to continue playing till he is put out by a Winning or Losing Hazard; by giving two Misses without an intervening Hazard or Cannon; or by running a Coup. Of course the player must make a stroke before he can be put out, notwithstanding the length of his opponent's break. The rules are the same as in Billiards, except that each partner may advise the other, so long as he does not touch or place his ball, or either of the others. For four persons this is a more lively game when each takes his turn, without waiting for the player on the other side making a Hazard.

'A LA ROYALE'-THE GAME OF THREE.

This is Billiards played by three persons, each scoring his own game. The Rules are the same as in Billiards; all forfeits by Misses, Coups, &c. being added to the score of each adversary. He who first gets the allotted number of points, wins the game; when the other two either play on, or forfeit a game each, as may be agreed at starting. When two of the players are so near each other as that a forfeiture from a Miss or Coup by the third player would make up their scores, the one whose next turn it is to play wins the game in case of such a forfeit being scored.

The manner of playing the game is this:—All the players string for the lead, and he whose ball is nearest the cushion after stringing, has the choice of position. Of course the most advantageous place is second or last of the three, as then he has two balls to play at; the next nearest has the second choice, and the farthest leads off. The red ball is spotted, and the player whose chance it is to break the balls, either plays at the red, or gives a Miss in the usual way. The next player goes on with the other ball, and scores as many as he can; and then the third plays with the ball the first played with, the first with that of the second, and so on, each playing in turn, and the ball being changed alternately-each player making as many as he can by Hazards and Cannons during his turn. When the players are of unequal strength, they can be handicapped, by allowing the best to play 50-up, the second (say) 40, and the third (say) 30. The game can be played for any number of points agreed on; 50 is the usual number.

HANDICAP SWEEPSTAKES.

For a mixed party of ladies and gentlemen, or for players of various strength, Handicap is a capital game. It is regular Billiards, each player having his own score marked on the slate of the marking-board. Having determined on the number to be played up, each player has placed against her or his name the number at which he starts. Suppose half-a-dozen or eight play, and the points are 100-up; the board would be marked thus:—

1.	Hon. Miss Ponsonbye				•	65
2.	Lord Pimlico	•				60
3.	Miss Rose Earlybird		•			55
4.	R. H. Skevington .					50
5.	Colonel Harkaway .					40
6.	Sir James Travailler					35
7 .	G. T. H. Wynter .	•				25
8.	Captain Crawley .					0

The red ball is spotted, and the Hon. Miss Ponsonbye breaks the balls. Lord Pimlico follows and scores a Hazard or Cannon, when 2 are marked against his name. He ceases to score, and then No. 3 goes on, followed by No. 4; and so on alternately, each score being marked at the end of each player's break. The one who first reaches the appointed 100 wins the game. In case of Misses or Coups, one point or three points, as may happen, is deducted from the player's score. In some companies the forfeit-points are added to the scores of all the players, but this is troublesome and unnecessary. When two white balls touch there can be no score made, and the player

may run into a pocket without forfeit, when the next must break the balls. All the rules of ordinary Billiards govern this very amusing game. Handicap Sweepstakes is very popular in some clubs and public-rooms, but of course the handicapper should be acquainted with the relative strengths of the players. I have seen the game played in some country-houses with as many as a dozen competitors, for a sixpenny stake for each player. It is astonishing what excitement and speculation it occasions, as the chances rise and fall, and some favourite player gets a good break. Where ladies contend, the game is a delightful one—as what game, indeed, is not in which they join?

THE WHITE WINNING GAME.

This game is played with two balls, and consists simply of White Winning Hazards. It is usually played 12, 15, or 20-up. It is dull and uninteresting, but in order to make my book complete, I give the rules by which it is governed:—

RULES OF THE WHITE WINNING GAME.

T

The players string for the lead, and he who loses the lead places his ball on the middle spot.

[The usual rules that govern the stringing for lead are observed:—If the second player, in stringing, make his ball touch that of the other player; or if he follow it with Cue or Butt beyond the middle pocket; or if he run into a pocket, the string must be made over again. But all trouble in stringing for lead may be avoided by the simple and elegant expedient of 'head or woman!']

ΙI

The player loses one point by missing the Object-ball, and two points for every Losing Hazard.

[Of course if he miss the ball and run into a pocket he loses three points—one for the Miss, and two for the Hazard.]

III

The player scores two points by pocketing his opponent's ball, or by forcing it over the table.

[I think the points for forcing the balls over the table should be abolished, as on some old tables it is easy to accomplish this not very dexterous feat.]

IΫ

If the player pocket both balls, or force them both over the table, he loses *two* points.

V

The player who touches his own ball by accident must replace it; but if he move his ball in the act of striking, and miss his opponent's ball, one point is scored against him for a Miss.

[The whole art and mystery of the game lies in this—that every Winning Hazard counts two to the player's side, and every Losing Hazard counts two to his opponent. It is, in fact, Single Pool, with twelve Lives instead of three, and, except it be played for money, is very slow work indeed. All you have to do is to play straight at the ball, by 'aide' or division.]

۷I

Each ball, after it is pocketed, must be placed on the middle spot, the player with the other ball going on from Baulk.

VII

The Baulk is extended to the whole Baulk-line, and is not confined to the semicircle merely.

[This Rule is generally observed at the Clubs, but it has never before been given in print.]

VIII

If the player force his own ball over the table, without first striking that of his opponent, he loses two points; but if his ball go over the table after striking the other ball, no forfeit is demanded, and his ball is spotted as before.

[This also is a Rule not given in the printed sheets.]

THE WHITE LOSING GAME.

This is the reverse of the preceding game, and is equally uninteresting. It is played with two balls, the points being reckoned by Losing Hazards and Forfeits. It is played 12, 15, or 20-up. As a game for practice, it is useful perhaps, but I never play it. The following are the

RULES FOR THE WHITE LOSING GAME.

I

String for the lead, as in the other games.

II

The player loses one point for every Miss, two for every Winning Hazard, and two for a Coup.

[Thus you may lose four by pocketing both balls. In Kentfield's book he says you gain four points for a double Winning Hazard; but this is an evident mistake.

III

After every Hazard the ball must be placed on the middle spot, and the next player goes on from Baulk.

IV

The player wins two points for every Losing Hazard.

[Thus if you make the double Losing Hazard, you gain four points.]

V

If the player pocket the Object-ball, and force his own off the table, he loses *four* points; but if his own ball goes off the table without that of his opponent being holed, no forfeit is exacted. Both balls forced off the table is a loss to the player of *four* points.

VI

The Baulk is within the line, and not the semicircle merely.

THE RED WINNING CANNON GAME.

This game is played with three balls, and the points are made by Winning Hazards and Cannons; all Losing Hazards, Misses, Coups, &c. counting against the player. It is played by two or four players, 25, 30, or 40-up. Much more judgment is required in this game than in the last two described. In principle it is precisely the same as Billiards, the

object of the player being to make Winning Hazards and Cannons, and to avoid forcing his own ball into a pocket. As an exercise for Winning Hazards it is very useful, though as a game it is much inferior to the Winning, Losing, and Cannon Game (Billiards). Much use may be made of the Doublet in this game, and also of the Side-stroke and the Division of the Object-ball. Care and good judgment are requisite for regulating each stroke, and a good break may be made at starting, from the fact that the red is spotted in the centre of the table. Knowledge of the angles and a proper regard for the 'side' may make this a very interesting game. If you happen to get near the middle of the table, you may make a succession of Winning Hazards into either of the six pockets, for they are all open; and you may so manage with a series of Stop-strokes, hit low with a good drawback, as to accomplish ten or a dozen Hazards. In this respect the game offers advantages superior to Billiards, or even to the American Game. In the latter the red is spotted on the lower of the two spots above the middle pockets. The art of making Winning Hazards depends a good deal on the suddenness of the stroke. Do not pause long over a Winning Hazard, or you will miss it. Take a sharp look at your ball and the pocket, and make the stroke with a decided and full impetus, low upon your ball, without the slightest Following action. Young players usually succeed better with Winning than with Losing Hazards, for the simple reason that they are fearless of consequences, and full of their newly-acquired skill. I have seen young players also strike a ball well into the pocket, and fail when they attempt to 'drop' it in. This arises from want of accuracy in striking the slow ball, whereas in the hard stroke the force employed sends the ball straight to the pocket. It is only after long practice that this 'dropping' action can be fully acquired. It is necessary to hit your ball rather below its centre with a decided aplomb, but not too hard. It is the degree of strength necessary for the Hazard that is difficult to learn. And then so many circumstances may arise to defeat your intention. An extra glass of wine, a little over-excitement, a slight degree of nervousness, too much haste, the temperature of the room, a damp cue, or an imperfect or ill-chalked tip-any of these may cause you your failure. Any uncertainty of action, or the frequent pause between the taking of the sight of the ball and the delivery of the Cue, may be fatal to success. Indeed, there is so much affinity between Billiards and Rifle-shooting, that I can only recommend to the player the ordinary advice given by the volunteer instructor—'Take your sight and fire at once, without hesitation, fear, or doubt.'

But I must avoid the literary sin of digression and repetition, and so I give you the

RULES OF THE RED WINNING CANNON GAME.

I

The stroke and the choice of balls must be strung for.

H

The red ball is to be placed on the middle spot.

III

The white or player's ball is to be played from the baulk semicircle.

IV

After the first player has played, his adversary is to play next, and so on alternately; or the striker is to follow his gaining stroke, as may have been previously agreed.

٧

If the player miss both balls, he loses one point; if by the same stroke he strike his own ball into a pocket, he loses three points.

VΙ

If the player hit the red ball and his adversary's ball with his own ball, he wins two points for a Cannon.

VII

If the player hole his adversary's ball, he wins two points.

VIII

If the player hole the red ball, he wins three points.

IX

If the player hole his adversary's ball and the red ball by the same stroke, he wins *five* points—two for the white, and three for the red ball.

X

If the player make a Cannon, and at the same time pocket his adversary's ball, he wins *four* points—two for the Cannon, and two for holing the white ball.

XI

If the player make a Cannon, and at the same time hole the red ball, he wins *five* points—two for the Cannon, and three for the red ball.

XII

If the player make a Cannon, and by the same stroke hole both his adversary's and the red ball, he wins *seven* points—two for the Cannon, two for the white, and three for the red Hazard.

IIIX

If the player force either his adversary's or the red ball over the table, and by the same stroke hole his own ball, he counts nothing, but makes no forfeit.

XIV

If in playing a stroke the striker should make his Cue touch two balls at the same time, it is a foul stroke, and if discovered by the adversary, he wins nothing for any points he may have made by the stroke; and his adversary may break the balls, and play from the Baulk on the red ball, as at the beginning of the game. But if upon the foregoing stroke, which is deemed foul, his adversary does not break the balls, or play from the proper spot, &c., then the striker reckons all the points he made by the stroke.

XV

If the player make a foul stroke, and at the same time hole his own ball, he loses two or three points, according to which ball he struck first—three for the red, and two for the white.

XVI

After a red ball has been holed or forced over the table, the player is bound to see the ball placed on its proper spot again, before he strikes; otherwise he can win no points while the ball is out of its place, and the stroke he made is foul.

XVII

After the player has made either a Cannon or a Hazard, if he should touch either of the balls with his hand, Cue, or person, he gains no points, and the stroke is foul.

XVIII

If the striker play with the wrong ball, the stroke is foul.

XIX

If the striker play with the wrong ball, and his error be not discovered by his adversary, he reckons all the points he made by the stroke.

$\mathbf{x}\mathbf{x}$

If the striker is about to play with the wrong ball, no one has a right to discover his error to him, except his partner, if they are playing a Four-match.

XXI

If the striker play with the wrong ball, and at the same time make a Losing Hazard, he loses either two or three points, according to which ball he struck first.

XXII

If the striker play with the wrong ball and miss both the remaining balls, he loses *one* point; and if the ball should go into the pocket by the stroke, he loses *three* points.

The other Rules and Regulations are the same as in ordinary Billiards.

THE RED LOSING CANNON GAME.

This game is the reverse of the last—the Losing Hazards and Cannons counting for the player, and all the Winning Hazards counting against him. It is played 25 or 30-up, with three balls, either by two or four players. Perhaps, of the two, this requires more judgment than the Winning Hazard Game. A good defence is necessary, and in order to avoid pocketing your own ball or that of your opponent, it will be well to play with less strength than is usual for Winning Hazards. Here it will generally be found best to strike your ball rather above than below its centre, in order to cause it to travel in the direction intended. The remarks made in the chapters devoted to Losing Hazards and Cannons apply particularly to this game. Especial attention should be given to the angles from the cushion, and also to those between the Striker's-ball and the Object-ball. This game is frequently played by professors against amateurs, the former giving to the latter the advantage of the Winning Hazards. Between ordinary players it is by no means an uninteresting game,the frequent forfeits adding to its excitement and amusement.

RULES OF THE RED LOSING CANNON GAME.

I

The red ball is placed on the Middle Spot, and the players string for the lead.

[In some rooms the red ball is placed on the regular Winning Spot, as in Billiards; but I think the Centre Spot is preferable—as then the player may make a Hazard at starting, instead of giving a Miss.]

H

If the player miss both balls, he loses one point; and if he pocket his own ball by the same stroke, he loses three points.

Ш

If the player pocket the red ball, he loses three points, and the red ball must be replaced upon its proper Spot.

ΙV

If he pocket the white ball, he loses two points.

V

If the player, by the same stroke, hole both the red and the white ball, he loses *five* points—two for the white and three for the red ball.

۷I

If the player make a Cannon, he wins two points.

VII

If the player make a Cannon and pocket either of the Object-balls, he wins nothing for the Cannon, and loses either two or three points, as he may have struck the red or the white ball first.

VIII

If the striker play at the white ball first, make a Cannon, and at the same time pocket his own ball, he wins *four* points—two for the Cannon, and two for his Losing Hazard.

ΙX

If the striker play first at the red ball, make a Cannon, and also pocket his own ball, he wins *five* points—three for the Losing Hazard off the red ball, and two for the Cannon.

X

When the player's ball touches either of the others, no score can be made, and the next player must break the balls.

[The rest of the Rules and Regulations are the same as in Billiards. Each partner, in a Game of Four, may advise the other. Each player takes alternate strokes, and two consecutive Misses, without an intervening Hazard—not a Cannon—put him out. Each player continues his break till he fails to score. This game and also the Winning Cannon Game may be played as a Handicap by any number of ladies and gentlemen, in the manner described on p. 151.]

POOL.

Next to Billiards, Pool is the most fashionable game at the Clubs and in private houses. Of late it has somewhat fallen off in popularity in the public-rooms of London. And for a very simple reason: the sharpers and flat-catchers are so good

at Winning Hazards, and so clever at making wagers, that ordinary players stand but small chance with them. I have noticed, too, that they not unfrequently favour each other. This was so much the case at the rooms taken by a celebrated player, not a thousand miles from the Alhambra, that the company broke up, and the renting of the rooms failed as a monetary speculation. If two or three players determine to assist each other and to make common cause against the remaining four or five, why it is but a poor look-out for the latter. When you observe any indication of this sort of thing, it will be time for you to recollect your engagement with a friend to dine at his club, or the absolute necessity of fetching your wife or your cousin from the opera! I do not mean to say that sharping and flat-catching are universal in publicrooms: on the contrary, I know some West-end and City houses where professional players are not allowed to play, except in regularly-made matches; but I do mean to say that in some public-rooms I could name, a stranger is looked upon as fair game for the regular frequenters. Of course if you are a good Winning Hazard-striker, you have little to fear; but, equally of course, if you are only an ordinary player you must expect to pay rather dearly for your amusement if you take a ball at Pool in public-rooms with persons of whose strength of play you are necessarily ignorant.

Pool is played in various ways:—as with two balls, each striker playing in turn; playing at the nearest ball; playing at any ball the striker chooses, as in Pyramids; and playing at the last player, each striker having a coloured or numbered ball. This last is the most popular and scientific game, and

the one which needs fullest description. It is known universally in Great Britain as Pool, and may be played by two or more persons: I consider seven or eight the best number.

When the amount of the stake to be played for is determined, each player has given to him a ball which is distinguished by a colour or number—usually a colour; and at starting he has three chances or 'Lives.' The balls are given out from a bottle-shaped basket or bag by the marker or umpire, who also takes from the players their several stakes. In public-rooms the Pool is usually three shillings, and the Lives one shilling each; though, of course, both Pool and Lives may be increased or decreased at the pleasure of the players. The charge for the table is deducted from the sum-total of the stakes at the end of the game: threepence a ball is the usual charge for the table.

Each player being provided with a ball, the white is placed on the Spot at the end opposite to the Baulk, and the red plays at it from the Baulk Semicircle. If the player pocket the white he receives the price of a Life from the owner of the white; but if he fail to make the Winning Hazard, the next player, the yellow, plays upon him; and so on alternately, till there are only two players left in the Pool, from the rest having lost all their Lives. These two players may either, if they have each an equal number of Lives, divide the stakes, or play out the Pool till one wins the whole sum staked. It is usual for the last player, if he has an equality of Lives with the one who precedes him, to claim a 'division;' the latter then ceases to play; and the stakes are divided between them, minus the charge for the table. The order of the balls and the players

is generally as follows; I give a long game of fourteen players for the sake of illustration:—

The WHITE BALL is spotted.

. WHITE. RED BALL plays upon YELLOW RED. . YELLOW. BLUE Brown BLUE. GREEN . Brown. BLACK . GREEN. SPOT-WHITE BLACK. SPOT-RED SPOT-WHITE. SPOT-YELLOW ,, SPOT-RED. SPOT-BLUE SPOT-YELLOW. SPOT-BROWN SPOT-BLUE. SPOT-GREEN SPOT-BROWN. SPOT-BLACK SPOT-GREEN; and SPOT-BLACK. WHITE

It is not common for a greater number than eight or ten to play Pool, as the waiting for the stroke is tedious. Each player should remember the order of his play; but it is usual for the Marker or Umpire to call the game thus:—'Red plays upon White, and Yellow's your player;''Yellow plays upon Red, and Blue's your player.' And when a ball has been pocketed, and the next striker has to play upon the ball next in order, the Marker states the fact thus—'Green upon Brown, and Black's your player, in hand;' and so on throughout.

When a player takes a Life—that is, pockets the ball he plays upon—he then plays at the ball nearest to his own ball, when it has ceased to roll; and if he also pocket that, he plays again upon the nearest ball; and so on as long as he can continue to score. The player loses a Life, to the player whose ball he aims at, if he run into a pocket and make a

Losing Hazard after contact, or if he make a Coup, or force his own ball off the table; and he wins a Life for every ball he legally pockets. The price of each Life is paid by the player losing it, immediately the stroke is made. When any player has lost all his Lives, he may Star, or purchase as many Lives as is possessed by the player lowest in number. Thus, if the smallest number on the Marking-board be one, the purchaser of the Star has one fresh Life given him; and for this Star he pays an amount equal to his original stake. If the lowest number be two, the Star has two Lives. In the regular Pool Marking-board, there is a distinguishing sign for the Star, as well as white and coloured spots corresponding with the several balls.

With this much of explanation, I may now give you the Rules regularly authorised and acknowledged at the Clubs. The remarks within brackets are, as before, intended to assist the amateur in fully comprehending the game:—

THE LAWS OF POOL.

I

When coloured balls are used, the players must play progressively, as the colours are placed on the Pool Marking-board, the top colour being No. 1.

[I give this Law as I find it; but in practice, coloured balls are almost invariably employed; the old plan of numbering white balls for Pool went out of fashion long ago.]

H

Each player has three Lives at starting. No. 1 places his ball on the 'winning and losing' spot; No. 2 plays at No. 1, No. 3

at No. 2, and so on—each person playing at the last ball: unless the striker's ball be in hand, when he plays at the nearest ball.

[I have already explained this. The white ball is spotted, and the red plays at it from the baulk semicircle; the yellow plays on the red, and so till it comes to the white's turn to play upon the last striker. If it should happen—as it often does—that the white or any other ball is pocketed before it has had a stroke, it is played from baulk, when its turn comes, at its proper ball; or, if that is in-hand, at the ball nearest to the centre spot on the baulk-line.]

Ш

When a striker loses a Life, the next in rotation plays at the ball nearest to his own. But if this player's ball be in hand, he plays at the ball nearest to the centre of the baulk-line, whether it be in or out of baulk.

[Of course the player whose ball is in-hand can place it where he chooses, so long as it is within the semicircle.]

١V

When any doubt arises as to the nearest ball, the Marker measures the distance, and the player strikes at the ball declared to be nearest his own.

[This Law is usually given in rather involved terms. For the sake of those who prefer diffuseness to brevity, I add it in the words of the printed sheet:—Should a doubt arise respecting the distance of balls, it (the distance) must (if at the commencement of the game, or if the player's ball be in hand) be measured from the centre spot in the semicircle; but if the striker's ball be not in hand, the measurement must be made from his ball to the others, and in both cases it must be decided by the Marker, or by the majority of the company; but should the distance be equal, then the parties must draw lots as to which ball shall be played at.]

V

The Baulk is no protection.

[The meaning of this is, that the player whose ball is in hand, may play from the *semicircle* at any ball within the *baulk-line*, supposing such ball to be nearest to the centre spot.]

VI

The player loses a Life:—by pocketing his own ball off another; by running a Coup; by missing the ball played on; by forcing his ball off the table; by playing with the wrong ball; by playing at the wrong ball; by playing out of his turn; by striking the wrong ball; or by having his ball pocketed by the next striker.

[Except he be wrongly informed by the Marker or Umpire as to his turn to play: in such a case he would not lose a Life.]

VII

Should the striker pocket the ball he plays at, and by the same stroke pocket his own, or force it over the table, he *loses* a Life, and not the person whose ball he pocketed.

[The ball so pocketed remains in hand till the striker's turn to play arrives.]

VIII

Should the player strike the wrong ball, he pays the same forfeit to the person whose ball he should have played at as he would have done if he had pocketed himself.

[That is to say, the player whose ball ought to have been struck, receives a Life of the striker who makes the mistake; always excepting a case in which he has been wrongly informed as to the proper ball to play at.]

IX

If the striker miss the ball he ought to play at, and by the same stroke pocket another ball, he *loses* a Life, and not the person whose ball he pocketed; in which case the striker's ball must be taken up, and both balls remain in hand until it be their several turns to play.

[In all cases in which the striker is misinformed by the Marker, or other person having charge of the game, as to the right ball to play at, or the right turn or time to play, no Life is lost by the striker. But when so wrongly informed, no Life can be claimed of the player whose ball is pocketed or forced over the table.]

X

If the player inquire as to which is his ball, or if it be his turn to play, the Marker, or the players, must give him the information sought.

[It would be manifestly unfair to allow a striker to play at, or with, the wrong ball.]

ΧI

If the striker, while taking aim, inquire which is the ball he ought to play at, and should be misinformed by the Marker, or by any of the company, he does not lose a Life. His ball must, in this case, be replaced, and the stroke played again.

[The more common plan is for the ball so played to remain in-hand till the striker's turn arrive. In many rooms, however, the balls are replaced, and the striker is allowed to play his stroke over again. This must be arranged by mutual agreement.]

XII

When a ball, or balls, touch the striker's ball, or are in line between it and the ball he has to play at, so that it will prevent him hitting any part of the Object-ball, such ball or balls must be taken up until the stroke be played; and after the balls have ceased running, they must be replaced.

[When a ball is required to be taken up, it is the business of the Marker to mark the precise spot occupied by each ball removed. This is done with a wet finger, or with the point of the chalked Cue.]

XIII

If a ball or balls are in the way of a striker's Cue, so that he cannot play at his ball, he can have them taken up.

[This is a wide direction. The plan in practice is to allow any ball to be removed which interferes with the free action of the striker's hand or arm, or which prevents his making a full stroke upon the Object-ball. 'Any' ball of course means 'every' ball that may so interfere with the free play of the striker. Thus, if his ball be angled, he may insist on the removal of any, or every, ball which prevents him playing from a cushion on to the Object-ball. In some Clubs and public-rooms an angled ball is allowed to be removed an inch or two from the corner; but with a ball so removed the striker cannot take a Life.]

XIV

When the striker takes a Life, he continues to play on as long as he can make a Winning Hazard, or until the balls are all off the table; in which latter case, he places his own ball on the Spot as at the commencement.

[The player wins a Life by pocketing the Object-ball, or forcing it off the table. In some Clubs it has been decided—of course by agreement of all the players—that the forcing a ball off the table shall not entitle the player to a Life; but as any one trying to do so stands a chance of his own ball following after the one so struck, I think the Rule had better be allowed to remain undisturbed.]

XV

The first player who loses his three Lives is entitled to purchase, or Star, by paying into the Pool a sum equal to his original stake, for which he receives Lives equal in number to the lowest number of Lives on the board.

[Thus, if the Pool is half-a-crown each, the player who Stars pays half-a-crown for the privilege.]

XVI

If the player first out refuse to Star, the second player out may do so; but if the second refuse, the third may Star; and so on, until only two players are left in the Pool, when the privilege of Starring ceases.

[In practice, when three players are left in the Pool, the first out always Stars, when by so doing he obtains an equal number of Lives to the others; but if he be a good player, he Stars one Life to the two each of the other players; and if one have two Lives, and the other one, he would probably Star, especially if he has to play upon the ball with the higher number.]

XVII

Only one Star is allowed in a Pool.

[In family games, however, I have seen two or three Stars allowed, just to give greater zest to the Pool.]

XVIII

If the striker move his own or any other ball, while in the act of striking, the stroke is foul; and if by the same stroke he pocket a ball, or force it off the table, the owner of that ball does not lose a Life, and the ball so pocketed must be placed

on its original spot. But if by that foul stroke the player pocket his own ball, or force it off the table, he loses a Life.

[A ball moved by accident is generally considered foul, and the striker does not lose a Life; but he is not allowed to take one by that stroke. The Marker must decide, when called upon, as to foul strokes. Otherwise than when appealed to, the Marker is not allowed to give advice or make observations on the game. His duty is to call and mark the game, not to interfere with its progress. No paid Marker should be allowed to bet on the game.]

XIX

If the striker's ball touch the one he has to play at, he is at liberty either to play at it, or at any other ball on the table, and such stroke is not to be considered foul; in such a case, however, the striker loses a Life by running his ball into a pocket, or forcing it over the table.

[If the striker play at the ball which touches his own, he may simply move it by playing gently at his own ball, or he may play his ball away to the cushion without forfeiting a Life. When balls are believed to touch, the Marker should be appealed to before the stroke is made, in order to prevent any after-question as to the correctness of the stroke.]

XX

If, after making a Hazard, the striker take up his ball, or stop it before it has done running, he cannot claim the Life for the ball pocketed.

[The reason for this Law is that the ball so stopped or taken up might have run into a pocket. This Rule applies more particularly to cases in which two players only are left in the Pool. Suppose a player to have two Lives to his opponent's one, and after pocketing the one Life to stop or take up his ball, the player with the single Life may insist on a division.]

XXI

If before a Star, two or more balls, each having one Life, are pocketed by the same stroke, the owner of the first ball struck can Star; but if he refuse, the other player whose ball was pocketed may Star.

[Of course this means that the ball properly played at shall be pocketed, even though it run into a pocket, after the others have been noted. The Law is to determine the priority of the players to the privilege of Starring.]

XXII

Should the striker's ball stop on the place from which a ball has been taken up, the ball which has been removed must remain in hand until the Spot is unoccupied, when it is to be replaced.

[This will not often occur. The Marker must be careful to mark the place of each ball removed.]

XXIII

Should the striker's ball miss the ball played at, no person, except the striker, is allowed to stop the ball till it has ceased running, or struck another ball.

[Of course the striker, having lost a Life, may stop his ball as soon as the Miss is made; but no other person may stop it, as it might possibly hit the Object-ball before it had ceased running.]

XXIV

Should the striker have his next player's ball removed, and his own ball stop on the spot it occupied, the next player must give a Miss from Baulk, for which Miss he does not lose a Life.

[In some rooms the player may have the ball taken up, and place his own on the spot so occupied, the next player replacing his ball when the spot is unoccupied. This appears the fairest plan. The player whose ball has been so removed, and his position occupied, would generally give a Miss under a cushion at a distance from the ball next to play upon his.]

XXV

When a ball has been taken up, and any other than the next player's ball stop on the spot it occupied, the ball so taken up must remain in hand till it can be replaced. But if it be the turn of the ball in hand to play before the one occupying its proper place, the latter must be taken up till there be room to replace it.

[I am not sure that this is quite plain. The old Law is this:—'If the striker has a ball removed, and any other than the next player's ball should stop on the spot it occupied, the ball removed must remain in hand till the one on its place be played—unless it should happen to be the turn of the one removed to play before the one on its place, in which case, that ball must give place to the one originally taken up; after which it may be replaced.'—I have endeavoured to make this understandable; but the motif of both the old Law and the new is, that any ball removed, to allow a striker to play, must be replaced as soon as its spot is vacant.]

XXVI

If the corner of the cushion should prevent the striker from playing in a direct line, he can have any ball removed for the purpose of playing at the Object-ball from a cushion.

['Any' includes 'every,' if need be, except the player's ball and the Object-ball, as already explained in my note to Law XIII.]

XXVII

When three players, each with one Life, remain in a Pool, and the striker make a Miss, the other two divide without a stroke. [This Law is intended to meet a possible case of two players combining to take advantage of the third. If the ball belonging to C were over a pocket, B might miss A, in order to allow him to play upon C, and so claim the whole Pool. But with the Law as I give it, such an unfair proceeding is impossible.]

XXVIII

Neither of the last two players can Star; but if they are left with an equal number of Lives each, they may Divide the Pool; the striker, however, is entitled to his stroke before the Division.

[It is at the option of the striker to divide when he is left with an equality of Lives with one other player only; but both may agree to play out the Pool, when he who takes the Life wins. After the striker has made his stroke upon the remaining ball, the owner of the latter may insist upon a division of the stakes, and cannot be obliged to play out the game.]

XXIX

All disputes are to be decided by the Marker; but if he be interested in the game, by bets, &c., they shall then be settled by a majority of the players.

In public-rooms the charge for the Table is deducted from each Pool before the stakes are paid over to the winners.

GENERAL OBSERVATIONS.

Play for safety, unless there is a direct or probable Hazard on the table. Look well to your position with regard both to the ball you have to play upon and the ball that is to play upon you. When your player is in the middle of the table, and there is no easy Hazard, play upon your Object-ball with just sufficient strength to carry you well under a cushion, as far distant from your player as possible. But you must also beware of laying yourself under a cushion in such a position as to give your player an opportunity of pocketing you with a fine cut. Some players, poor at a direct straight Hazard, are excellent at a cut. I would not advise too much caution, however, or the game is likely to be slow and uninteresting. But as not even the best player can provide for all chances, or calculate upon every position his ball may assume, no absolute rules for play can be given. What you must do, is to accommodate your style to the exigencies of your game; to play cautiously when you have a first-rate Winning Hazard-striker behind you, and to play boldly when you have no particular fear of your player. I have many a time cleared the table of half-a-dozen or more balls by means of a succession of Hazards arising out of one bold stroke. You will always find that early in every Pool the players are most cautious in saving Follow their example, and husband your their Lives. strength till its employment is needed. But do not be afraid of losing the first Life. I have often seen the man who does so divide a Pool, because he is then more serious over his game than before. When you can give your player a good wide berth, and at the same time strike your ball with such strength as to be pretty sure of the place at which it will stop; when you can play at a distant ball and stop your own at or about the point of concussion; when you can cut a ball clean into a pocket, and so play your ball that after taking one Life you are prepared to take another, then you will be able to hold your own against all-comers. But this is only to be done

by dint of steady practice. Read carefully what I have said about Winning Hazards, and try the various positions given in the Diagrams. When your player lies safely under a cushion, then you may try to pocket the ball you play at without much fear; but, as a rule, play so as to leave your own ball after your stroke as far from the next player as you can. Learn to play at your ball with a Stop-stroke, rather under than above its centre. The Side-stroke is not much required at Pool, though occasions will arise in which it may be judiciously employed: Division of the Object-ball rather than 'side' will generally be found most useful. In playing at the White on the spot, either hit your ball low, so as to make it stop at the end of the table, or gently, so that it may roll towards the cushion between the middle and top pocket. When your ball lies in the midst of several others, and there seems no easy plan of getting away with safety, play boldly for a Hazard; and when you have taken a Life, play either at the nearest ball for a Hazard, or run off it gently to the cushion.

Pool is often played for large sums; but, as a rule, I set my face against high stakes and heavy wagers. There is sufficient amusement to be obtained at all the Billiard-games, without adding to them the excitement of bets. Never venture upon a speculative stroke for the sake of a doubtful Hazard; but when you are favoured by Fortune, let not overcautiousness lead you to neglect the favours of the blind goddess. The secret of success at Pool lies in the nice adaptation of means to ends; and in that, indeed, we find the secret of success in every transaction in life. Calculate the probable chances of a Hazard before attempting it, and when you do attempt it, put

all your determination and power of mind into the stroke. Do not be content to simply save your Pool: make up your mind to divide, and let nothing interfere with your resolve. Of course, you will fail occasionally; but the very essence of success is eliminated from frequent disaster. The man who gives up because he does not succeed immediately, is not the man to become a winner at Pool. Play your best always; and if you are unlucky, don't be moody and give up; but try again, and again, and again, till you rob unsuccess of its power to irritate, and snatch prosperity out of the fangs of failure.

But in my endeavours to imbue my readers with the spirit of Billiards, I must not allow my pen to wander into the region of mere declamation. So I pass on to the next game.

SINGLE POOL.

This is simply the White Winning Hazard-game played by two players, each with a ball,—the white and the spot-white. The player who loses the toss, spots his ball; the other strikes it from the baulk semicircle. The game may be played for three or more Lives, at so much per Life, and a stake—say a two-shilling Pool and shilling Lives. For each Winning Hazard the striker receives a Life, and for each Miss or Coup, or for forcing his ball over the table, he pays a Life to his opponent. The taker of the last Life of the three wins the game. The great art of Single Pool is to keep as far away from your opponent as you can, and when there is no Hazard on the table, to leave his ball as close as possible to the cushion. The players

strike alternately, and when either pockets a ball, the other ball is placed on the Spot. The Baulk is no protection to the non-striker's ball. Single Pool is rather a dreary game for indifferent Hazard-strikers; but I have played at it with some of the best players in England, and found it provided plenty of excitement both for the players and the lookers-on. All the Laws with regard to foul strokes, &c. are the same as in Pool.

NEAREST BALL POOL.

This game may be played by any number of players with the ordinary coloured balls, in the succession observed at Pool; or as the balls are given on the Marking-board. All the usual rules of Pool, except the following, are observed; for in this game the players strike at the ball nearest to the outer side of the baulk-line. When any balls lie inside the baulk, they are out of play, and can only be struck by bricole from the top-cushion. The baulk, therefore, is a protection in this rather slow game. The following are the exceptional

RULES.

Ī

If all the balls be in Baulk, and the striker's ball in hand, he must lead to the top-cushion, or place his ball on the Spot.

H

If the striker's ball be within the baulk-line, and he has to play at a ball out of the baulk, he can have any ball taken up that lies in his way, or that impedes his stroke. CHAP. XII.7

Ш

If all the balls be within the baulk, and the striker's ball not in hand, he plays at the nearest ball.

EVERLASTING POOL.

This is an amusing game, lately introduced. It is played in the same way as ordinary Pool, with the exceptions denoted in the Rules given below. Each player has a coloured ball, and the succession of the players' turn is the same as before. No stake is made up of the subscriptions of the players, as in Pool; but the payments consist entirely of Lives, the price of each Life being determined before starting.

LAWS OF EVERLASTING POOL.

T

At the commencement of the game a black ball is placed in the centre of the table, at which the first striker plays.

11

Any player having pocketed a ball (other than the black ball) may, if he choose, play at the black ball, and if he pocket it, he receives the value of a Life from each player; but if he pocket his own ball from it, miss it, force it off the table, or go off the table from it, he pays the value of a Life to each player.

H

If the player pocket the black ball, in any manner whatever, having first struck his proper Object-ball, he receives a Life

from each player; but if he pocket himself off the black, in any manner whatever (having first struck the proper Object-ball), he pays a Life to each player. After making a Hazard, the player is to declare, if asked, whether he is playing at the nearest or the black ball.

IV

The striker *loses* a single Life by playing with the wrong ball, at the wrong ball, or out of his turn.

v

No ball can be removed to enable the striker to play at the black ball, except to allow room for the player's hand on the table; but the black ball may be removed to enable the striker to play at the proper Object-ball.

٧ſ

The balls are to be given out again on the expiration of a certain time, to be agreed upon.

VII

A player may join the Pool at any time, but cannot play in that round (the first round excepted); and may leave it at the end of a clear round (until which time his ball is to remain on the table), by giving notice of his intention to do so before the round begins.

In public rooms the game is played for a small stake on each Life. The charge for the table is usually sixpence per hour for each player—any part of an hour being counted as an hour. The Marker gives notice of a clear round as the expiration of each hour approaches.

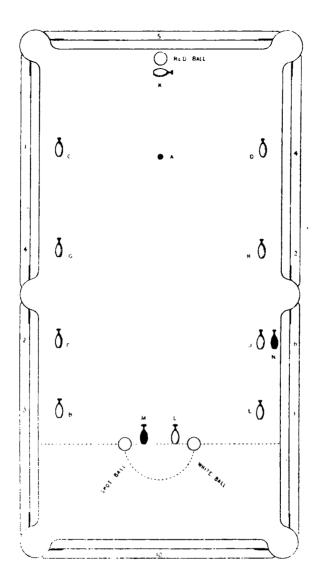


Table arranged for Skattle Pool.

SKITTLE POOL

This game was introduced some few years since, and for a while was very popular. As a public-room game, however, players soon discovered that the table was the greatest winner, and hence it has fallen somewhat out of repute. But for a mixed party of ladies and gentlemen, Skittle Pool has many attractions, since no particular skill is required to enable the player to win a Pool. It is played, by any number of persons, with three Billiard Balls—two white and one red—and twelve Skittles, ten of which are white and two black. The Skittles and Balls are arranged on the table as in the diagram here given. The game is played for a small stake from each player, and the charge for the table is deducted from the Pool before it is handed over to the winner. Thirty-one or sixty-two up is the ordinary number of points, but these may be increased or decreased according to the pleasure of the players.

Before giving the Rules, let me show you how to set the table; as in the diagram.

DIRECTIONS FOR PLACING THE SKITTLES AND BALLS.

The white pins (or Skittles) at B and E are to be placed nine inches from the Baulk-line; those at c and D on the intersecting line, as explained below. They are to be placed the same distance from the cushion as the others hereafter described.

The remainder of the pins are to be placed at a distance equal to their own height from the cushion and baulk-spots,

Draw a line across the table to intersect the Pyramid spot A, and place white pins at B, C, D, E: then divide the spaces between B and C, and D and E, into three equal parts, and on the four points thus obtained place white pins—F, G, H, J. Place one white pin at K, and another on the baulk-line at L, a black one at M, also on the baulk-line. The distance for these two pins is to be measured from the spots in baulk. Place the remaining black Skittle at N, at an equal distance between the cushion and pin at J.

The Billiard Balls are also to be placed as follows,—viz., the white and spot-white balls on the spots in baulk, and the red ball at an equal distance between the cushion and pin K.

After the position of the pins have been obtained, the places can be marked by black-plaister spots on the cloth. The number opposite to each pin shows the number of points that it counts.

Now then, having arranged the table, we can play the game, according to the following

RULES AND DIRECTIONS FOR PLAY.

1

The rotation of the players is decided by numbered counters drawn from a bag, one by each player.

11

Each player has one stroke alternately, according to his rotation.

Ш

No 1 plays either the white ball out of baulk, aiming at the red ball, which he *must* strike before hitting a Skittle, or he cannot score. No 2 plays with the spot-white at either of the other balls—unless the white ball has been pocketed by the first player; in which case No. 2 (as well as the following players) plays at, or with, either of the three balls at discretion.

۲V

The player scores the number which is placed opposite the Skittle he displaces, except it be a black one; in which case he loses his Life, and any points he may have made. But he can purchase another Life by paying the same amount into the Pool as at first. This he can do as often as he pleases during the game, if he signify his intention before the next player makes his stroke. No points he may have previously made are to be reckoned to his score.

v

Any player who knocks down a black pin (after making his stroke), with a ball, cue, or otherwise, loses his Life, and can only join in the game again by purchasing, as in Rule IV.

VI

Any Skittle or Skittles having been knocked over by a player, must be replaced before the next player makes his stroke.

VII

Any ball occupying the place of a fallen Skittle must be

placed on its own proper spot, as at the commencement of the game; unless another ball occupies that position, in which case each ball must be placed on its own proper spot.

VIII

A Skittle is considered to be down if it is entirely off its spot, or is leaning against a ball, cushion, or another Skittle.

ΙX

The striker who plays out of turn cannot score any points he would otherwise have made, and the following player takes his stroke without replacing the ball. But the former has the right again to play in his turn, if he has not lost his Life by knocking down a black Skittle.

\mathbf{x}

Foul strokes are made by the following means:—by pushing a ball instead of striking it; by knocking down a white pin without first striking a ball; by playing before the balls have ceased running; by playing out of turn; or when all the Skittles are not in their places; or when the three balls are not on the table. Running in the pocket, or jumping off the table, is not foul. No player making a foul stroke can score.

XI

If by mistake the black and white Skittles are wrongly placed, and a stroke is made, the white scores, and the black counts as dead; but the Skittles must then be placed in their proper positions.

$\mathbf{x}\mathbf{H}$

Should the three balls be so covered by the pins as to prevent their being played at, the red ball can be spotted after one Miss has been given; and if they are again covered the Spot-ball can be spotted. A Miss cannot be given to benefit the next player.

XIII

Anyone not being present at the commencement of the Pool, may join in it, provided no player has then made more than one stroke.

XIV

Anyone purchasing a Life and not making a stroke, is to have his purchase-money returned.

PENNY POT.

I invented this easy and amusing variety of Pool many years ago, and have now the pleasure of knowing that it is played in country-houses all over the kingdom. It is played in the same way as ordinary Pool, with the same order of balls; only, instead of a stake and three Lives for each player, there is a penny paid by the owner to the taker of each Life. The game goes on as long as the company choose to amuse themselves with it—Winning Hazards receiving, and Losing Hazards, Misses, and Coups paying; each player taking his or her turn to strike. All the rules as to Forfeits, &c., which are common to Pool, are observed at Penny Pot. I have seen as many as twenty ladies and gentlemen play at this game

on a wet day in a country-house; much real fun, and very little loss of either temper or money, being the pleasant results. Every taker of a Life plays at the nearest ball, and goes on as long as he can score. If he is fortunate enough to clear the table, he spots his ball, and the next player goes on as before. Any person can join in or relinquish the game at pleasure.

PYRAMIDS.

This popular and excellent game is played by two or four persons; in the latter case the players are divided into sides, two and two. Fifteen or sixteen balls are arranged in a Pyramid, thus—



The ball with which the striker plays is white when coloured balls form the Pyramid, or any colour when white balls are employed to make the Pyramid. The object of the players is to pocket the Pyramid-balls; he who succeeds in taking the greatest number wins the game. Pyramids, like Pool—or Pyramid Pool, as it is sometimes called—is entirely a game of Winning Hazards. The Pyramid is made by placing the first

ball on the spot midway between the winning and centre spots. When an even number of balls is used, the last Hazard counts for one point, when an odd number two. The player who makes the last Hazard but one keeps the original playing-ball, and his opponent plays with the remaining ball. There should always be a proportion of three and one between the Pool and the Lives—as eighteenpenny Pool and sixpenny Lives, threeshilling Pool and shilling Lives, &c. The first player breaks the Pyramid, and should he fail to pocket a ball, his opponent goes on. When a player has made a Winning Hazard, he plays at any other ball he chooses, and continues his break till he ceases to score, the eventual winner being he who has taken the greatest number of balls. Then the Pool, after deducting the charge for the table, is paid over to the winner, who also receives from his adversary the sum due for Lives. The player wins a Life by pocketing a ball, or forcing it over the table; and loses a Life for each Losing Hazard—that is, by pocketing his own (the striking) ball, making a Miss, running a Coup, or forcing his own ball off the table, either before or after striking a ball. There are various other forfeits, as will be seen by reading the rules; but it may be said, generally, that the foul strokes are the same as in Billiards. The Baulk is no protection at Pyramids; the player whose ball is in hand or within the baulk being entitled to strike any ball he may select. Both players use the same Striking-ball, until there are only two balls left on the table (vide Rule XVI.)

With regard to the way in which the first player should break the Pyramid, there are various opinions among players. Cantious men usually play at one of the side-balls, so as to

bring back the playing-ball into baulk, after it has struck the top or side cushions. Others are more venturesome, and play boldly at the first ball of the Pyramid, so as to scatter all the balls, and take the chance of one of them flying into a pocket. The way to make this stroke with the greatest chance of success, is to hold the Cue with the thumb above—the contrary method to that ordinarily observed-and drive full and hard at the apex-ball of the Pyramid. This is called the Smash, and is sometimes very successful. I have seen as many as three or four balls pocketed by this plan; but if your opponent is a good Hazard-striker, and you do happen to fail in pocketing a ball by the stroke, your chance of the game is rather small, as there are sure to be several Hazards left on the table. For the benefit of the venturesome few, I give an illustration of the position and manner of holding the Cue for the Smash. Be sure that you do strike the apex-ball full in the centre. with a free, hard, Following-top-stroke, without the least 'side' Throw the whole force of your arm and on your ball. shoulder into the stroke, and you will most probably see a ball or two run madly into a pocket, or topple over the table. But then you must be prepared sometimes to see your ball fly into a pocket, or to follow one of the others over the table to the floor; in which case, of course, you lose all the Winning Hazards you may have made, and incur the penalty of a Miss in the bargain. You will then 'owe one,' and the first ball you pocket will be replaced on the table in payment of your debt. In the illustration on the next page, you have the



POSITION AND MANNER OF HOLDING THE CUE FOR 'THE SMASH.'

THE LAWS OF PYRAMIDS.

I

This game may be played with any number of balls; generally sixteen—viz., fifteen red and one white.

[Where there are not a regular set of Pyramid balls, the Pool balls may be used instead; one white ball being employed by both players.]

H

In 'setting the balls' at the commencement of the game, they are to be placed on the table in form of a triangle or Pyramid; the first ball to stand on the winning spot.

[By placing the balls thus, the apex-ball of the Pyramid will face the baulk, and be in front of the player. Where only fifteen balls form the Pyramid, the base will be a straight line. It is usual to have a triangular box for the balls. This box has a sliding bottom, which, when the Pyramid has been placed on the table, is removed from beneath the balls. A mere triangular frame of wood will, however, serve to adjust the Pyramid.]

III

If more than two persons play, and their number is odd, each plays alternately—the rotation to be decided by stringing. The player pocketing the greatest number of balls, to receive from each of the other players (a certain sum per ball having been agreed upon) the difference between their Lives and his.

[In general practice, Pyramids is played by two persons; or by four, in sides of two each. In this case, each partner may advise the other.]

IV

If the number of players be even, they may form sides,

when the partners either play alternately, or go out upon a Hazard, Miss, &c. being made, as previously agreed.

[In any case, the player goes on with his break as long as he can score.]

V

The players string for choice of lead; then the leader places his ball (the white) within the baulk semicircle, and plays at the Pyramid.

[Of course, the player may start from any part of the semicircle. If he succeed in making a Winning Hazard, he plays at any ball he may select, and so on as long as he can score.]

VΙ

The next striker plays the white ball from the spot on which it rests after his opponent has made his stroke: but if the ball should be off the table, it must be played from baulk, as at the commencement.

[Whenever the playing-ball is pocketed or forced off the table, it is in hand, and must be played by the next striker from baulk.]

VII

None but Winning Hazards count towards the striker's game; one point or life is reckoned for each Winning Hazard, and he who pockets the greatest number of balls, wins.

[The rules with regard to foul strokes, &c., are the same as in Pool.]

VIII

The player *loses* a point if he pocket the white ball, or force it over the table, give a Miss, or run a Coup.

[In such a case, one point is taken from the player's score, if he have

made any, and a ball is replaced on the table; but if he has made no points, he is said to 'owe one,'—or two as the case may be—and the next ball he takes is replaced on the table.]

IX

For every Losing Hazard, Miss, or Coup made by the player, a point is to be taken from his score, and a ball replaced on the Pyramid Spot; but if that spot be occupied, the ball must be placed immediately behind it.

[When two or more balls be wrongly pocketed, it is usual to place the first on the Winning or Pyramid Spot, and the others in a line behind it.]

X

If the striker pocket his own ball, or force it over the table, and by the same stroke pocket one or more of the Pyramid balls, or force them over the table, he gains nothing by the stroke; the Pyramid balls so pocketed must be replaced on the table, together with one of the balls previously taken by the player.

[The penalty in this case is the loss of a point and the replacing of the bulls pocketed. The next player then goes on from baulk.]

XI

Should the striker losing a ball not have taken one, the first he pockets must be placed on the table, as in Rule IX.; should he not take one during the game, he must pay the price of a Life for each ball so forfeited.

[This has already been explained in the note to Law VIII.]

XII

If the playing-ball touch a Pyramid ball, the striker may

score all the Pyramid balls he pockets, but he cannot give a Miss without forfeiting a point.

[Balls touching each other are not deemed foul, as in Billiards; and the player in such case may play at any ball he chooses.]

XIII

Should the striker move any ball in taking aim or striking, he loses all he might otherwise have gained by the stroke.

[It is a foul stroke, and the next player goes on. The penalty for moving a ball, either with cue or person, is that the striker cannot score.]

XIV

If the striker force one or more of the Pyramid balls over the table, he scores one for each, the same as if he had pocketed them.

[In some Clubs and public-rooms, a ball purposely forced over the table does not count. But generally Law XIV. is adhered to. Any departure from this Rule must be by agreement among the players.]

XV

If the game be played with an even number of balls, the last Hazard counts one; if with an odd number, it counts two.

[This is to prevent a Tie between the players.]

XVI

When all the Pyramid balls but one are pocketed, the player who made the last Hazard continues to play with the white ball, and his opponent with the red; each playing alternately, as at Single Pool.

[If the last player give a Miss, a point is taken from his score, not added to that of his opponent.]

XVII

When only two balls remain on the table, with two persons playing, should the striker pocket his own ball, or make a Miss, the game is finished; if there are more than two players, and they not partners, the striker places a ball on the spot.

XVIII

The baulk is no protection to the non-striker's ball. The player whose ball is in hand can play from the semicircle at any ball on the table.

XIX

All disputes are to be decided by the Marker; or, if he be interested in the game, as a player or wagerer, by the majority of the company.

XX

The charge for the Table is to be deducted from the Pool before handing it over to the winner.

ADVICE TO YOUNG PLAYERS.

Brilliant Hazard-striking is quite useless in Pyramids, if the player has not a due regard for safety. This he will acquire, perhaps, after losing a score of games; but I would impress upon him the necessity of examining the probable effect of every stroke before he attempts it. But when—as often happens—a good opening occurs, the player should be prepared to take advantage of it. I have often seen the table cleared by a player who chances to find his ball in the middle of a ruck of others after a Smash; and, on one occasion, I remember pocketing the whole fifteen balls without my opponent having a single stroke. To play well requires constant practice, and

no slight amount of nerve and temper. It is not every man who can coolly see the game sliding away, while he knows, at the same time, that his opponent is an inferior player to himself, and that his score owes more to flukes than to judgment. such a case, the player must be wary, and never throw away a chance. When he has a Hazard before him, let him make it; but if he cannot fairly calculate upon scoring, his best plan is to lodge his ball well under a cushion, so that his opponent may have to play from a cramped position. There is this, however, to be said, that luck seldom stays by a man for a whole evening, and that steady play generally breaks the back of it before long. The Pool and Pyramid-player must accustom himself to deliver his ball with sudden and determined aplomb; generally hitting below the centre, and always playing for a well-defined object. Play, too, with such strength as to bring your ball away from the centre of the table; and when there is a Cut, or a Straight Hazard that may be safely tried, try it, especially if the remainder of the balls are at the other end of the table. The good Pyramid-player makes his own game, and endeavours to mar that of his opponent—for all stratagems that are not contrary to the Laws are fair at Pyramids.

In my first Treatise on Billiards, I gave some hints to young players as to wagers. I cannot in this place do better, perhaps, than repeat the passage:—

'My advice to amateurs, when invited by strangers in a public-room to "just play a little Pyramid for sixpence a ball or so," is—to refuse. For Pyramids is a game much patronised by billiard-rooks, who make its various points their

special study, and never lose an opportunity of plucking any young pigeon who, with more money than wit, thinks he can play a "decentish Winning Hazard." These clever professional thieves (I cannot dignify them by the term players) practise daily; and to such perfection have some of them arrived, that they can place the playing-ball safe under the cushion after almost every successful stroke. As the game is seldom played in a public-room for less than sixpence or a shilling a ball, with eighteenpence or three shillings for the Pool, it is possible -and, indeed, very likely-for the tyro to lose eight or ten shillings in a single game. Nor is this all—the rooking gentry have a clever knack of betting or taking odds on the game; and, while apparently offering a fair wager, contriving to fleece the gentleman-player who is unfortunate enough to be caught in their traps. I recollect an instance. A certain Mr. Wido was playing a game of Pyramids with a friend of mine. The game was merely for sixpence a ball and shilling Pool; and the score standing at nine to two in favour of my friend, the game was consequently lost to Mr. Wido. There were four balls left on the table; when says Wido, "I will bet half-a-sovereign on each of those balls." My friend, flushed with success, took the bet, and the game proceeded thus:-Wido played in an extremely cautious manner till there was a Hazard left. he made immediately, winning the first half-sovereign. Instead, however, of going on with the next stroke, he gave a Miss close under the most distant cushion, and the ball just taken was replaced on the Spot. My friend was thus under the necessity of playing hard at the ball in order to be certain of strikinga plan that could not be otherwise than favourable to his adversary. As soon as another easy Hazard presented itself, Wido never failed to make it; and then he gave another Miss. In this way, alternately taking a ball and giving a Miss, the game went on for about half-an-hour—every such manœuvre winning Wido half-a-sovereign, minus sixpence for the ball missed—till my friend threw up the game in disgust, with the loss of nearly five pounds and the empty honour of winning the game. He has been more cautious since then of betting with a billiard-sharp!'

This anecdote, which many readers will recognise as the relation of an actual fact, ought to carry with it an unmistakable moral—Don't bet with strangers! I have seen hundreds lost in this way, to the detriment of a capital game, and damage to the pocket and temper of many a good honest simple fellow, who cared less for the money than for the mortification of being 'done.'

Pyramids need not be played for money; though I must confess that when it is played for 'love' merely, it is not equal in interest to Billiards. Moreover, there is this danger to regular players at the Pool-games—always playing Winning Hazards is apt to unfit them for regular Billiards. For I need scarcely observe that a very peculiar style of play is required in a game consisting entirely of Winning Hazards; and when the player, after a month or so at Pool, comes to try his hand at Jennies and other fine Losing Hazards, he discovers that he has lost the neatness and finish on which he once prided himself. Therefore, the amateur should vary his game, and not devote himself entirely to any one particular style of play.

LOSING PYRAMIDS.

The Losing Pyramid is now seldom played, though it is by no means an uninteresting game, and is of comparatively modern introduction. The Pyramid is made of fifteen or sixteen balls, as before; and each player uses the same strikingball. Points are made by Losing Hazards, off any ball of the Pvramid, and every Winning Hazard, Miss, or Coup scores against the player. The first striker plays from baulk, which after the first stroke is no protection. For every Losing Hazard he can make into any pocket, he takes a ball from the Pyramid. By this I mean that, when the Pyramid is broken, he can remove from the table any ball he chooses. The rules as to foul strokes, &c. are the same as in the regular Pool games. This game may be played by two or more persons, and the one who makes the greatest number of Losing Hazards, wins. It is generally played for a stake on the Pool and a small sum for each Life. When two balls only remain, the game is played out as a Single Losing Hazard Pool.

SHELL-OUT.

This is a simple and amusing way of playing Pyramids, especially in a large party. The balls are placed on the table in the usual way, and the players make alternate strokes according to their order, as arranged previous to the beginning of the game. All play with the same ball. The first player strikes at the Pyramid from baulk, and if he succeed in pocket-

ing a ball, he continues his break by playing at any other ball he may choose, till he fail to score. The next player then makes his stroke with the ball from the place where it was left by the previous striker. Should he be successful in making a Winning Hazard, he continues his break as usual, and so on with all the players while any balls remain on the table. When only two are left, the balls are changed as each player makes his stroke; the striking-ball becoming the object-ball, and vice versa. All the players remain in till the last Hazard is made, which concludes the game. There is no subscribed Stake or Pool; but for every Winning Hazard he makes, the player receives a penny from each of the other players; and for each Losing Hazard, Miss, or Coup, he pays a penny to each of the other players. Thus, suppose ten persons play at Shell-out, the player receives or pays ninepence for every Winning or Losing Hazard. Of course the stake per ball may be increased; though for all purposes of amusement -especially when ladies play-a penny will be found quite enough; as even at that, a careless player may lose eighteenpence or two shillings a game. In practice, however, the game is harmless enough, so far as the coppers go; as the taking of a single ball furnishes the player with sufficient cash to pay for several other Hazards. The rules with regard to foul strokes, &c. are the same as in Pyramids. The Baulk is no protection; the player whose ball is in hand being allowed to play at any ball on the table, whether it be within or beyond the Baulk-line.

CHAPTER XIII.

FOREIGN GAMES.

Aye, marry, now my Cue hath elbow-room !-SHAKESPEARE. (Qy.)

What a cheap purchase of pleasure is made by the strength of fancy! Thus he who plays at a poor game, which another would avoid; yet if he play it well and relish it heartily, it is as good to him as though it were the best.—Erasmus In Praise of Folly.

HERE are few Foreign Games which possess much attraction for English players; but as 'The Billiard Book' would be incomplete without the mention of at least the best of them, I proceed to explain their peculiarities. Most of the Foreign Games now played aim at greater variety than belongs to our Billiards; and some few of them—as German Pyramids, for instance—abound in difficulties which are fatal to their popularity with Britons, who 'never, never, never will be slaves,' even to their amusements! On the other hand, the American and the Russian Games are full of pleasant excitements and surprises, and are, moreover, very easy to play—no slight recommendation for amateurs. We will begin with

THE AMERICAN GAME.

Some few years since this game was very popular. It was introduced into this country by Mr. Stark, a fine New York

player; and at first he beat all-comers. He made great scores, and was for a while the talk of the Clubs and the little world of billiard-players. But our native professors soon learned the secret of his success; and before he had been three months in England, he met his rival and conqueror in, I think, Mr. Roberts, of Manchester. I may here mention—par parenthèse -that Roberts afterwards came to London, and took the rooms formerly occupied by Mr. Green in Savile House, Leicester Square; but, from some cause or other, he failed to establish himself in his new quarters. Though confessedly the finest player in the world, Roberts was unfortunate in his endeavours to attract respectable people to his rooms; and on the eventual failure of his speculation, he went to Australia. Perhaps the real reason of his non-success lay in the situation of his rooms. Had he started a Billiard Club in St. James's. he would doubtless have found abundant support. Leicester Square is not a fashionable locality; and the consequence was, that Roberts soon found himself surrounded by a lot of raffish players, whose little game was not Billiards but plunder! The place having once acquired an ill-name, the usual results followed, which not all the reputation of the great Manchester player was powerful enough to withstand.

The American Game consists entirely of Winning Hazards and Cannons. It is played with four balls, usually 62-up, by two players; or by four, in sides of two each; or by six, in sides of three each. As many balls as may be pocketed by one stroke count, in addition to Cannons upon two or three balls; while Losing Hazards, Misses, and Coups are scored against the striker. The rules as to foul strokes, &c. are the

same as in Billiards; but the baulk from which the ball in hand is played extends not merely to the semicircle, but to all the space within a baulk-line drawn higher up the table than the ordinary line. The red ball is placed on the Pyramid Spot, which is the lower of the two spots above the middle pocket; and the pink ball on a spot midway on the baulk-line, at the same distance from the lower cushion as the red spot is from the upper one. The players lead off from any part of the baulk; and the fact of the coloured balls being severally in the centre of four pockets gives numerous chances for the making of Winning Hazards. Stark, Roberts, Hughes, Bowles, Dufton, the Oxford Jonathan, and other professional players, think nothing of a break of sixty or eighty from the two coloured balls; while the fact that there are three balls, instead of two, on which you may cannon, gives infinite variety and excitement to the game, and provides no small amusement for the lookers-on.

LAWS AND REGULATIONS OF THE AMERICAN GAME.

1

The game is played with four balls—two white, one red, and one pink.

[The colours of the balls are of no consequence; but, for the sake of uniformity, red and pink are usually chosen.]

11

At the commencement of the game, the red ball is placed on the Pyramid Spot in the centre of the upper half of the table, and the pink in a similar position at the lower or baulk end; the pink ball is considered in baulk, and therefore cannot be played at when the striker's ball is in-hand.

[This placing of the balls, or 'setting the table,' is generally adopted; but in some rooms the usual baulk-line is used, and the pink ball placed on the midway spot on the line. The plan as above directed is best, as each ball is then more fairly in the centre of the four pockets.]

111

The Baulk extends as far as the pink ball, and a ball in hand may be played from any part within that line.

[This gives the player a great advantage, as he may play upon the red on the spot for an easy Hazard in either top pocket.]

ΙV

The players, at starting, string for the lead, the winner having choice.

[The string is made in the usual way, by playing the ball to the topcushion. The ball nearest to the bottom cushion, after reverberation, has the choice of lead.]

v

The player who leads must give a Miss (which does not count) anywhere behind the red ball; or, failing to leave it behind, he has the option of putting it on the 'winning and losing' spot.

[In practice, the first player gives a Miss as near to the top-cushion as he can, and in as direct a line as possible with the red, so as to lessen the chance of his opponent making a Cannon. But as the latter may play from any part of the baulk, there is often a Cannon left. By this it will be seen that the second player has a slight advantage at starting. In some rooms, this advantage is balanced by the leader receiving three points—a very fair arrangement, in my opinion.]

VI

The second player must then either play at the white ball, or give a Miss, which does count; and should he first strike either of the coloured balls, his opponent may either have the ball played over again, or score a Miss.

[The second player usually plays at the white for a Cannon upon the red or the pink; but if there should not appear to be a Cannon on the balls, he gives a Miss anywhere out of baulk.]

VII

The game is scored from Cannons and Winning Hazards; Losing Hazards count against the player making them, with the loss of any Hazard or Cannon he may have made by the same stroke.

[Thus if he pocket the red and cannon on the white, he gains five points; but if, after cannoning on to the white, his ball should run into a pocket, he loses three points for the Hazard off the red, and does not count the five points previously made by the Winning Hazard and Cannon.]

VIII

Points.—For every White Winning Hazard the striker scores two points; for every Red or Pink Winning Hazard, three points; for every Cannon off the white to a coloured ball, or from a coloured ball to a white one, two points; for every Cannon from one coloured ball to the other, three points.

[Thus it is possible to make thirteen points by a single stroke—five for a double Cannon, and eight for pocketing the two coloured balls and the white.]

ΙX

Penalties.—The player loses two points if he make a Losing

Hazard off the white, and three points if he make it off either of the coloured balls.

X

If the player make a Cannon off the white, and afterwards pocket his own ball, he loses *two* points; but if he first strike a coloured ball and cannon, and then pocket his own ball, he loses *three* points.

[Mr. Roberts gives the Law thus—'If the player makes two and loses his own ball, he loses two—that is, if he strikes the white ball first; but if he strikes the red ball first, he loses three.' Some thought is required to understand this confusion of terms, but its meaning is substantially shown in Law X., as above given.]

ΧI

The player cannot score from foul strokes. If a foul stroke be made, the balls remain as they have run, and are not placed on the spots and broken (as in the Three-ball Game); the next player goes in and takes advantage of whatever Hazard or Cannon may be left.

[All strokes considered foul in Billiards are also foul in this game.]

XII

If the striker's ball touch another he cannot score.

[In such a case the striker may play his ball into a pocket, or to a distance, without incurring the penalty of a Miss. The next player then goes on at the balls as they stand.]

XIII

The player loses one point for every Miss (except the first, as explained in Law V.), and three points for every Coup, or

for forcing his ball off the table, either with or without first striking a ball.

[If the player's ball fly off the table after striking a ball, the penalty is enforced, as for a Losing Hazard, and he does not score the points made by the same stroke. The next player then goes on as before.]

XIV

The coloured balls, after being pocketed, must be placed on their respective spots, as at the beginning of the game; but in case either spot is occupied, the ball must be held in hand till the spot is vacant, and then spotted.

[For instance, suppose the player's ball stop on the Pyramid Spot, after he has pocketed the red, he must play at either of the other balls; and when his ball has ceased running, the red must be spotted; and so, also, of the pink ball.]

χv

In games of four or six players, each partner may advise the other; but he must not touch his ball, or place his cue.

[This last Law I have added to meet a frequent case; it being manifestly unfair for any non-striker to interfere with the player's ball or cue.]

XVI

All disputes must be decided by the Marker; or by the majority of the company, if the Marker be interested in the game, either as player or better.

CARLINE.

Carline, or Caroline, is a Russian game of not dissimilar character to the American Game, of which it was probably the

progenitor. It is played with three coloured balls (generally black, blue, and red) and two white balls—white and spotwhite. It may be played by two, four, or six players, either singly or as partners. The player's score is made up entirely of Winning Hazards and Cannons, while Losing Hazards, Coups, and Misses count for his opponent. The ordinary rules as to foul strokes are the same as in Billiards.

In setting the table the black ball—which is called the Carline—is placed on the centre spot, between the two middle pockets, the red ball on the 'winning and losing' spot, and the blue ball on the centre spot on the baulk-line. The players strike from any part of the baulk semicircle, and the baulk is no protection to any ball lying between the straight line and the bottom cushion. The players string for lead, and when there are more than two they follow in the order in which their balls fall, whether they play singly or in sides. The winner of the lead has choice of balls. Each player must strike the red ball first, and if he succeed in making a Hazard or Cannon, he continues his break as long as he can score. The points are reckoned thus:—the player reckons three for pocketing the red or the blue in either of the corner-pockets—six for holeing the black in either of the middle pockets; but if he pocket the red or the blue in either of the middle pockets, he forfeits three points for each Winning Hazard so made, while if he pocket the black in either of the corner-pockets, he forfeits six points. All forfeits, as at Billiards, are added to the score of the player's opponent. Each Cannon from a white to a coloured ball, or from a coloured ball to a white one, counts two points; and each Cannon from one coloured ball to another counts three.

Successive Cannons count:—Thus, if the player make a Cannon from the white to the red, and from the red to the blue or the black, he scores five. Or if he first play at a coloured ball, and cannon on to another coloured one, he scores three; then if the ball cannon on to the other coloured ball, he scores three more: and if afterwards on to the white, he scores two more in all, eight points. He also counts all the Winning Hazards properly made. By this mode of reckoning, the whole game is frequently scored off the balls in a single break. Sixty-two or a hundred and one—as the game may be between two or four players—is the number of points usually set; though of course the points may be increased to any extent. Suppose a player begin by striking the black, and pocketing it in a middle pocket, he scores six; then if the same ball cannon on to the red (say), and that ball is pocketed in the corner, he scores six more—three for the Cannon and three for the red; then if the same ball cannon from the red to the blue, and the blue be pocketed, he scores six more; and then if the ball cannoned from the blue to the white, and the White Winning Hazard followed, he would score four more—two for the Cannon and two for the Hazard: in all twenty-four points. This is of course a nearly impossible case; for it must be a very lucky stroke indeed, to say nothing of any kind of calculation on the part of the player, which would make four Winning Hazards and three Cannons! I give it only to show what might be done in the game. But as a Losing Hazard causes the forfeiture of not only all the points made, but of two, three, or six, according to whether the ball first struck was white, red, blue, or black; so, after having made this extraordinary Twenty-four-stroke,

suppose the player's ball to run into a middle pocket, he would then forfeit thirty points—the twenty-four already made, and six more for a Losing Hazard off the black in a middle pocket. These consecutive Cannons and Hazards, however, frequently occur, though to a smaller extent than our supposititious case. While the Winning Hazards count six for the black (in the middle pockets only), and three each for the red and the blue (in the corner pockets only), the same numbers are forfeited by the player if he make a Losing Hazard in the respective pockets, and two points are added to his opponent's score for every White Losing Hazard he may make in either of the six pockets, in addition to any previously-made Winning Hazard or Cannon. All balls forced over the table count the same as if they had been pocketed—six for the black, three for the red or the blue, and two for the white; but forfeits of the same number of points are paid by the player who forces his own ball off the table, after contact with a ball or balls.

From this it will be seen that Carline is a lively game for young players; and though it is seldom played by adepts at Billiards or Pool, it presents numberless opportunities for the display of science and skill. Indeed, I think it only needs to be better known—and this it will probably be through the medium of my Book—to obtain considerable patronage in country-houses and public-rooms.

This is my way of playing Carline; but other players have other ways, as the game is capable of much variation. Losing Hazards, for instance, may count for the player, and Winning Hazards against him; the Following Cannons may not

be allowed, &c., &c. I append the method adopted in some of the Clubs, and also, I understand, in St. Petersburg—though a friend tells me that the game is rather German than Russian. This is, perhaps, not unlikely, as the Teutons are to the modern nations what the Egyptians were of old—inventors, classifiers, civilisers! The following is given to me as

KENTFIELD'S METHOD OF PLAYING CARLINE.

'The game is forty (or more) in number, and is made up of Winning Hazards, Cannons, and Forfeits. The balls used are two white ones, a red, a blue, and a yellow. The balls at the commencement of the game, and after every Hazard, are placed on the table thus—the red on the spot, the yellow on the centre spot, and the blue on the centre of the baulk-line. This ball is considered to be in baulk, and cannot be played at by a ball in hand.

'The red ball may be pocketed in any pocket, and scores three; the blue ball may be pocketed in any pocket, and scores four; the white ball may be pocketed in any pocket, and scores two; the yellow ball must be pocketed in the middle pockets only, and scores six. A Cannon scores two, but there are no compound Cannons—that is, you cannot count more than one Cannon at a stroke. The striker, in leading off, or when the ball is in hand, is not confined to the half-circle, but may play his ball anywhere within the baulk-line. In leading off, the striker may play his ball out of the baulk, to any part of the table he chooses, so that it be made to pass beyond the yellow ball; and his adversary must play the first stroke at

the white ball. The leader's endeavour, therefore, should be to lay his ball as close behind the yellow ball as possible. If the striker pocket his own ball, he loses according to the ball he strikes—namely, four for the blue, six for the yellow, two for the white, and three for the red. The striker, by pocketing his own ball, loses all the points he made by the stroke; so that it would be possible for him to lose twenty-one points by one stroke—that is, if he played at the yellow ball, made a Cannon, and pocketed all the balls. If the player, in giving his lead, touch either one of the three balls, he loses one point; if two, two points; if three, three points—and the balls so touched must be replaced; and if the player's ball occupy the place of any of the three balls, he must take it up and lead over again.

'If the striker force his own ball off the table after making a Cannon or a Hazard, he loses all the points he would otherwise have gained by the stroke. If the striker force his adversary's ball over the table, he gains two points; if the yellow, he gains six; if the red, three; if the blue, four.'

All the other points of the game are governed by the usual Laws of Billiards. I am not aware of any authorised laws having been made for the game; but by aid of what I have written and what I have quoted, I fancy that any lady or gentleman will be able to play Carline without any particular trouble.

THE FRENCH WINNING GAME.

This French Game, like our White Winning Game, consists entirely of Winning Hazards. The player, however, is not confined to the baulk semicircle, but when his ball is in hand he may play from any part of the baulk within the straight line. He is bound, however, to stand in such a way that neither foot is beyond the limits of the table. The non-player's ball, at the commencement of the game, is placed on the Winning Spot, not on the Upper Spot, as in Billiards; and every time a ball is pocketed it is replaced on that spot. Two points are scored for a Winning Hazard, and two forfeited for a Losing Hazard or Coup, and one for a Miss.

But the game formerly fashionable in France is called

THE DOUBLET GAME.

This is played with three balls, and consists entirely of Losing Hazards and Cannons. The red ball is placed on the winning spot, and the nonplayer's ball on the spot midway on the baulk-line. The player starts from anywhere within the baulk-line; and must first play at the red ball, the other being considered in baulk. Every Cannon and every Losing Hazard must be made by a Doublet from the cushion after striking the Object-ball, and no stroke scores to the player without it is so made. Losing Hazards made without Doublet score against the striker, while Winning Hazards, whether made with or without the Doublet, do not score at all. The regulations as to foul strokes, &c. are the same as in Billiards.

The Doublet Game is also played with two balls only, no Hazard counting to the player unless it is made by a Doublet. Sometimes it is played by a good player against an amateur, the latter having the advantage of Winning and Losing Hazards, made in the usual way. When both players have to make the Doublet, it is a rather slow game. But then it must be recollected that the established French Table is smaller than ours, while the balls are much larger, and the Cues much wider at the tip.

THE FRENCH CANNON GAME.

This game, consisting entirely of Cannons, is played with two white balls and a red one. This latter is termed the Caramboler, and at starting is placed on the 'Spot,' and the second player's ball on the spot midway on the baulk-line. As it is the object of the player to cannon, and not to make Hazards, all balls pocketed either count for nothing, or else count against the striker. The players string for lead in the usual way, and then place the balls on the spots as already mentioned. Whenever a ball is pocketed, it must be replaced on its proper spot, so that there are always two balls on the table, from which the player may cannon. The game is usually played 24-up—that is, twelve Cannons, each counting two.

LAWS OF THE FRENCH CANNON GAME.

1

The players string for lead and choice of balls.

H

The red ball is placed on the Spot, and the non-player's ball on the middle spot on the baulk-line.

ш

The ball on the baulk-line cannot be played at by the player whose ball is in hand.

IΥ

One point is scored against the striker for a Miss, and three points for a Coup.

V

Two points are scored for every Cannon.

٧I

The player who makes a Cannon off a white ball and pockets his own ball, loses *two* points.

[That is, he loses two for the Hazard, and gains nothing for the Cannon.]

VII

The player who makes a Cannon off the red and pockets his own ball, loses three points.

VIII

The player who cannons and pockets his adversary, loses too points.

IX

The player who cannons off either ball and pockets the red, loses three points.

X

The player who cannons, and pockets both his own and his adversary's ball, loses four points.

XI

The player who cannons off the white and pockets his own ball and his red, loses five points.

XII

The player who cannons off the red and pockets both it and his own balls, loses six points.

XIII

The player who cannons off the white and pockets all the balls, loses seven points.

XIV

The player who cannons off the red and pockets all the balls, loses eight points.

[By the above Laws it will be seen that all Hazards, whether Winning or Losing, count against the player, when they are preceded by a Cannon; but Hazards which are made previous to, or without, a Cannon, are subject to no penalty whatever. The pocketed ball is then spotted, the next player going on as usual.]

XV

The player continues his break so long as he can cannon without pocketing a ball; two points being scored in his favour for each Cannon so made.

[Foul strokes—as balls touching, the player's feet being off the table, &c.—are the same as in Billiards.]

REMARKS.

The Cannon Game, as usually played in England, is governed by these laws, but it may also be played without forfeitures for Hazards,—the better plan, in my opinion. The game as here

described is French Billiards as played in France; but many of the French tables are made without pockets, entirely for Cannons; which renders the game much more simple, especially as the balls are larger, and the cues broader than ours. On a regular English table French Billiards is often played by a good Cannon-striker against his opponent's Cannons and It is astonishing how much may be done by simple Cannons. Indeed, the main dependence of every first-rate billiard-player is upon Cannons. He appears to make Hazards only when they are so easy and so evident that they can scarcely be missed. In his hands, the Hazard seems to serve but as an introduction to a series of Cannons. Kentfield's fame rests greatly on his Cannons, some of which used to be considered very wonderful. And they doubtless were, especially those made 'all round the table.' But the player could calculate upon making his Cannons with greater truth and exactness upon tables with list-cushions, than he can now with the fast India-rubber ones. In fact, the India-rubber cushion is subject to variations of temperature, which had no effect whatever upon the list-stuffed pads. The substitution of India-rubber for list in cushions has, nevertheless, done much to improve the general style of play: it has taught young players that they can no longer depend upon any regular and orthodox manner of making certain strokes, but that every Hazard and every Cannon must be considered by itself. It is of little use now-a-days to mark the course of a Cannon on the cushion with a piece of chalk; for the modern player has to discover the precise condition of the India-rubber, and vary his play according to the best of his judgment.

Every table has its own special peculiarities, and a certain stroke upon one table is a failure upon another. It is necessary to understand this, in order to account for the surprising feats some players and markers can accomplish on their pet tables. They learn every secret of the cushions—just as a rider gets acquainted with every trick and fancy of his horse—by dint of study and intimate acquaintance. Thus it is that players, who consider themselves 'pretty good at Hazards and Cannons,' are surprised when they find an opponent who beats them with Cannons alone. In a match between even players, Cannons against Cannons and Hazards, the odds are not greater than about twenty in fifty. And when we consider that the Cannon-player has the advantage of being able to leave the balls wide apart at the finish of his break, so that Hazards are at best but difficult, we cease to wonder at his success.

And what is the moral of all this? Why, that tyros should be cautious in accepting from strangers the odds of Hazards and Cannons against Cannons alone. One of the most common of the billiard-sharp's proposals is, to play his Cannons against all you can score by any kind of stroke. Sometimes, indeed, the Admirable Crichton short of half-crowns will offer to play with his walking-stick, or the unleathered end of the Butt. Amateurs, beware of such geniuses! or, if you do play with them, play for Love, and the Table; when they find you unwilling to stake anything on your game, they will soon cease to play. But some fellows, who haunt certain publicrooms, will not be put off by a simple refusal. If they see any disposition in their adversaries to become elated by success, they will disguise their play, and even lose a few games and a

few shillings, in order to recover themselves by a grand coupde-main!

What the player of French Billiards has particularly to attend to is safety. After he has made his last Cannon he should be careful to divide the balls, so as to make the succeeding stroke as difficult as he can for his adversary. Of course, I am presuming that the game is to be played as well as each player can play it. Careless and indifferent people, who play without any desire to excel, will probably smile at my earnestness. Well, let them; I can well afford to be laughed at now and then. What I contend for in Billiards, is what every teacher in every art and science desires to see in his pupils—intelligent earnestness and a desire to improve.

THE SPANISH (OR SKITTLE) GAME.

I have not often seen this game—which the Germans call Kugel-Partie—played in England, but in Vienna and Berlin it is very popular. It is played with three balls, one red and two white, and five Skittles of wooden pins. The Skittles are set up in the centre of the table in a diamond square, about two inches apart, thus •••. The red ball is placed on the spot, and the first player strikes at it from one of the corner-spots in the baulk semicircle. The game is made by Winning Hazards, Cannons, and by knocking over the Skittles. It is usually played 21-up, though the number of points may be increased at the pleasure of the players. The following are the

RULES AND REGULATIONS.

I

The player who knocks down a pin after striking a ball, gains two points; if he knock down two pins, he gains four points; and so on, scoring two points for every Skittle knocked over. If he knock down the middle pin alone, he gains five points; but should he topple them all over at one stroke, he wins the game.

Ħ

The player who pockets the red ball gains three points, and two for each pin knocked over by the same stroke.

III

The player who pockets the white ball gains two points, and two for each pin he knocked down by the same stroke.

IV

The player who knocks down a pin or pins with his own ball before striking another ball, loses two for every pin so knocked down.

V

The player who pockets his own ball from another ball loses all the points he would otherwise have made by the stroke.

[For instance, if he play at the red ball, pocket it, and make a Cannon, and at the same time knock down two pins, and hole himself, he loses twelve points—three for the red, two for the Cannon, two for each pin, and three for his own ball going in off the red.]

VI

The striker who forces his own ball off the table loses three points, and if he do so after making a Cannon or Hazard, he loses as many points as he would otherwise have gained.

[The Rules as to foul strokes, &c. are the same as in the English Game. The players make alternate strokes, after each has scored as many off his break as he can without missing a Cannon or Hazard.

Sometimes this game is played with seven or nine Skittles, when the number of points played for is proportionally increased.]

GERMAN PYRAMIDS.

The German Pyramid Game (Pyramiden-Partie) is played in the following manner:—'Twenty-one balls are arranged close to each other in the form of a triangle, by means of a triangular wooden frame. The frame is removed, and the balls stand on the part of the table of which the spot forms the centre, and with the base of the Pyramid about a foot from the cushion. The object of the game is to make a succession of Winning Hazards without once failing, and without making a Losing Hazard till the balls are all in the pockets.

'The player first breaks the mass of balls with his own ball. This may be effected either by a strong stroke on the point of the triangle, or (in cases where the player is allowed to miss once) by a Bricole taking the small end of the mass angularly, after which he may drive the remainder of the mass before his Cue, pocketing as many as he can, except the ball he plays with. Much depends on the manner in which the balls are

broken, to ensure a succession of winning strokes into the different pockets, and for this purpose it is best for the balls to be spread well over the table. The player selects any ball he pleases, to play at any other ball so as to make a winning stroke each time. He is not limited in his choice of ball either to play with or at—only he is bound to make a Winning Hazard every stroke, and never to pocket the ball he plays The first failure forfeits the stroke, and the balls have with. to be replaced for another player. It is also necessary that three balls should be holed in each pocket, leaving two others to be disposed of at pleasure. The last stroke of all should be made with the player's original ball, pocketing the last ball and at the same time losing the other, either by a Following-stroke or Pyramid, or by any other mode of obtaining a Losing Hazard. Should all these conditions be fulfilled, and the table be cleared in twenty successive strokes, with at least three balls in each pocket, the player obtains the highest degree of success, and scores 398. Should he not succeed in losing his own ball at the last, as well as pocketing, only half (199) is scored. If he miss a stroke, so that the game is up before all the balls are pocketed, the score is determined by the number of balls in the pockets, provided each pocket is found to contain at least one ball. The score is then in proportion to the number distributed: as each ball of three in a pocket counts for more than if it were only one of two, if any pocket has only one ball, it lessens the value of each of those, however numerous, in the other pockets; and a single pocket remaining empty renders the whole void, and nothing is scored for the game, whatever number of balls may have been made in other pockets. The Marker walks round the table during the play, and warns the striker how many balls are already placed. The adversary is perfectly inactive during the alternate games. It is, in fact, a sort of *solitaire* for each player in turn.

'When the first game is over and the score marked, the balls are replaced for the second player; and after he is out the first player resumes, and so on in succession. The scores of the game on each side are added up at the end of the match, and he who has scored most wins, bets being regulated by the number of points.

'Odds are given by allowing the inferior player to make one, two, or three faults in the game: i.e. missing his ball, or his stroke, or losing his own ball so many times in the game.'

The Baulk is no protection in this game for the non-striker's ball.

'There is less difficulty' (says the writer I quote) 'in playing the Pyramid on a German table than on ours, the pockets being cut into the table, instead of being bags extending beyond it; so that in the case of two cushioned balls, either might pocket the other by a straight stroke, which on our tables is next to impossible. Indeed, very great skill would be required to complete the game of 398 on an English table. The great art consists in varying the stroke, from one pocket to another, so as to fill all; the player usually keeping the ball he plays with nearly stationary, by striking it very low, so as to place it for the next stroke, and avoid the risk of a Losing Hazard.'

THE SAUSAGE GAME.

Wurst-Partie, the German Sausage Game, is so called from the balls being placed in a row across the centre of the table, between the middle pockets. Twelve coloured balls are so arranged, and the object of the player is to hole two in each pocket. By means of two cues the balls are easily placed straight across the table. The adept, playing from the baulk semicircle, strikes the outermost ball of the Sausage, so as to force at least one ball in the centre pocket. He who succeeds in pocketing all the balls in the fewest number of strokes, so as to leave two only in each pocket, wins the game. players take strokes alternately, as soon as each fails in making a Winning Hazard (as in our Pyramids); and he who loses his own ball in a pocket, gives a Miss, or runs a Coup, forfeits two points for each. Two points are scored for each ball pocketed; but if the striker succeed in placing two balls in one pocket by two successive Hazards, he scores four points. Thus he may score the entire game, forty-eight points, without his adversary making a stroke: a rather unlikely achievement you will say, but I understand that there are players who occasionally do this. After his first stroke the player may select any ball he chooses to play at any other ball; but he must be careful not to lose the ball he plays in a pocket, as thereby he not only forfeits two points, but loses his break. The baulk is no protection in this game, the player with the ball in hand being entitled to play at or with any ball on the table. Some players insist upon the thirteenth ball being pocketed at the last

stroke, by a Double Hazard, under the penalty of the loss of four points. All the Rules observed in the English Game, as to foul strokes, &c., are common to Wurst-Partie.

These are all the Foreign Games with which I am acquainted. I was in some doubt whether the American Game should be placed in this chapter; but as it is founded on Carline, I thought it right to do so.

I have refrained from adopting the terms used in some Foreign Games, as my book is intended principally for English readers.



CHAPTER XIV.

CRAMP GAMES.

Musing I lean upon my Cue,
And dream of some past day,
When I made Cannons fast and true.
And Cramp Games oft did play.—The POET CLOSE.

usual to give the latter some notable advantages—as thirty points in fifty, seventy in a hundred, four balls at Pyramids, and so on. But there are a variety of curious games which appear to have been invented for the special behoof of tyros when they find themselves opposed to firstrates. As some of these are worth knowing, I append descriptions of the best among them. It is, perhaps, hardly necessary that I should again warn youngsters against the manœuvres of the men who make their living by Billiards; but I may say that it is these gentry who are generally most fond of Cramp Games. As an amusing instance of the Games so called, perhaps the most common is

THE GO-BACK GAME.

This is ordinary Billiards played by we persons in the usual way, with Winning and Losing Hazards, Cannons, Misses,

Coups, foul strokes, &c. It is usual to play all Cramp Games sixteen points up, but of course this number may be increased or decreased at the will of the players.

The peculiarity of the Go-back Game is this: the inferior player scores all the points he makes, but his opponent must either win in a single break, or in the interval of the other's score; that is to say, when the superior player has made (say) ten points, his adversary scores a Winning or Losing Hazard. The first then goes back to Love, or nothing, and must begin again when his turn comes. The player giving the odds must of course be able to make a good break when a favourable opportunity occurs, and he should also know how to leave the balls 'safe' when he ceases to score. He goes back when his opponent makes a Hazard, not when he makes a Cannon merely; though some fine players can give their adversaries the advantage of the Cannon in addition to the Hazards. It is impossible to calculate the odds at this game, as so much depends on the relative strength of the players: Kentfield, however, reckons it as equal to six points in sixteen. But as all who play the Go-back Game are not Jonathans, the odds vary with the capacity of the player to score sixteen at a single break. The player who takes the odds—that is, he who counts all his points—breaks the balls; and then, if a Cannon or Hazard is left on the table, there is no particular difficulty in a good player making sixteen. I have seen this game played 20, 30, and even 50-up: for it must be remembered that the superior player may score ten or fifteen points, and then, if his opponent fail to score at all, or make only a Cannon, he goes on again, and adds (say) another dozen

229

to his score, and leaves the balls safe. The amateur plays, and again fails to make a Hazard. The good player has now a capital chance of completing the allotted number of points and winning the game. It may happen, indeed, that he goes back half-a-dozen or more times, before he succeeds in calling 'game'; but, as a rule, I prefer the player who gives the points. It is said that Mr. Kentfield has played the Go-back Game with only one pocket to five, and succeeded in winning half-a-dozen matches in succession. But, then, I should say that his opponent must have been a very thorough amateur!

ONE POCKET TO FIVE.

In this game the superior player chooses a single pocket (generally a top-corner one), and engages to make all his Hazards in that particular pocket; while his opponent has the other five pockets in which to score, in addition to his Cannons. It would seem that the advantage was wonderfully in favour of the five pockets, but with a really good player this is not really the case. He cannons as often as he can, and often scores the game right off without making a Hazard at all; or he is careful to drive the ball towards his own particular pocket as often as he can. All the balls holed in his one pocket count for the superior player, while all Hazards made in the other five pockets go to his adversary's score. But if either player chance to make a Hazard in the prohibited pocket or pockets, the points so made are reckoned against him, together with a Cannon, if one has been made by the same stroke. I have

played hundreds of games of this kind, and have generally endeavoured to make as many as possible by Cannons. One of my old adversaries—you would all know his name if I were to mention it—was so very clever in avoiding my pocket, that my great and almost my only chance of winning lay in making Cannons; but with ordinary players the odds are equal to about fifty points out of a hundred—half the game, in fact. All the rules of Billiards are observed in this capital Cramp Game.

TWO POCKETS TO FOUR.

This game is played in precisely the same way as the last, except that the one player has four pockets instead of five, and the other two pockets instead of one. All the rules of Billiards are observed. Cannons count as usual. The odds between even players is reckoned to be about ten points in fifty.

THE LIMITED GAME.

The table is divided down the centre, longitudinally, and any Hazard or Cannon made on the side prohibited is forfeited to your opponent. It is a slow, stupid, and unscientific game!

SIDE AGAINST SIDE.

Between equal players this is not an uninteresting game. One player takes the three pockets on one side of the table, and the other the pockets on the opposite side. Cannons count as in Billiards, and all Hazards made on the player's own side of the table, add two or three points each, as they may be red or white, to his score. But if he pocket a ball on his opponent's side, the points made are reckoned against him. The ordinary rules of Billiards are observed, with these exceptions:—

1

If the striker has made the last Hazard in the game, and his adversary take up a ball off the table, the game is over, and the striker wins it, although his ball should afterwards go into his adversary's pocket.

II

If the striker, after having made the last Hazard in the game, should take up or move the balls when running, so as to prevent them going into his adversary's pocket, he loses the Hazard.

Ш

If the striker make a Hazard in his adversary's pocket, and at the same time force his ball off the table, the Hazard scores against him.

THE STOP-GAME.

The peculiarity in this game is that the player's ball must not touch a cushion, either in making a Hazard or Cannon, with a single exception—that of playing Bricole at a ball in baulk. The game is generally played by allowing one player all the advantages of ordinary Billiards, while the other is debarred from touching a cushion with his own ball under penalty of forfeiting one point, and not being allowed to score the Hazard or Cannon he makes.

RULES OF THE STOP-GAME.

T

Should the player's ball touch a cushion he loses one point; but no more, even though it touch it several times.

П

Should the player make a Cannon or Hazard, and his ball afterwards touch the cushion, he loses *one* point, and does not score the Cannon or Hazard.

Ш

In playing for a Hazard, if the ball go into the pocket it scores even though it touch the edge of the cushion, which forms the shoulder of the pocket, provided it does not double upon both sides of the pocket.

17

In playing back at a ball in baulk, the striker is allowed to touch one cushion only with his ball: if his ball touch two cushions he loses *one* point.

All the other Rules of ordinary Billiards are observed in this game.

THE NOMINATION GAME.

This is ordinary Billiards with a difference, and it may be played any number of points up. The exception is that each player is obliged to name his stroke before making it; and if he fail to make the stroke named, any Cannon or Hazard made

by that stroke is reckoned towards his adversary's game. It is commonly played by adversaries who cannot agree about the proportion of luck that may fall to the share of each. Except among good players it is uninteresting. In naming a Cannon it is required that the player shall say whether he intends to make it direct, or off the cushion.

THE COMMANDING GAME.

This is the regular game of Billiards played by two persons, one of whom has the advantage of all he makes, while the other is only allowed to make the stroke named by his adversary. The points are reckoned to be about equal to twelve in sixteen. In addition to the ordinary Laws of Billiards, the following are the generally-accepted

RULES.

I

The striker who plays at a different ball from that commanded, must replace the ball so played at.

II

The striker who misses the ball he is commanded to play at, and strikes the other, loses *one* point for the Miss, and the balls must be replaced; and should he make a Hazard or Cannon, it does not count.

ш

If the striker's ball be so situated that he cannot get at the ball he is commanded to play at, so as to score, he must give a Miss, or endeavour to hit it by Bricole from a cushion.

IV

If the striker's ball touch one ball, and he is commanded to play at the other, he may, if he can do so without moving the ball in contact with his own, score all the points he makes by the stroke.

V

If the striker is commanded to play at the ball that touches his own, it is a foul stroke, and cannot be made.

CHOICE OF BALLS.

In this game, either player may strike at or with either of the three balls. It is commonly played against an adversary who plays in the usual way, or against one who scores from Hazards only. When the three balls are close together in the form of a triangle, the number of Cannons that may be made, by playing first with one ball and then with another, is incalculable—provided, of course, that the striker play with ordinary caution and skill.

WINNING AGAINST WINNING-AND-LOSING HAZARDS AND CANNONS.

The name of this game sufficiently explains itself. The game is usually played by a professor against an amateur, when the odds in favour of the latter depend on the relative strength of each player.

THE BAR-HOLE GAME.

One pocket is closed to each player, and all Hazards made in it count against the player. Between equal players, of course there are no odds; but if the inferior player has the advantage of all the pockets, then the game becomes simply five pockets to six. It is an uninteresting game, and is now very seldom played. All the usual Laws of Billiards are observed.

THE BRICOLE GAME.

This game has been already explained in the Doublet Game (pp. 214, 215); but as it differs somewhat from that, I may as well describe it, and so conclude my list.

Playing Bricole is playing a ball against a cushion so as to make it return or recoil upon a ball on the opposite side or in another part of the table. It is sometimes played against the Winning-and-Losing Cannon Game, when the odds in favour of the latter are very great—perhaps equal to seventeen out of twenty-five. When both players play Bricole ten points make the game. The points are made only from Bricole Hazards and Cannons, all points not so made being reckoned against the player.

RULES OF THE BRICOLE GAME.

1

The player who strikes his adversary's ball, without pre-

viously making his ball rebound from the cushion, forfeits one point.

H

Should the player, after striking his adversary's ball without a previous rebound from the cushions, pocket his own ball, or force it over the table, he forfeits three points.

If, after playing Bricole, and striking his opponent's ball, the player pocket his own ball, or force it over the table, he forfeits *two* points.

The other Rules and Regulations are the same as in ordinary Billiards.

Here I conclude my account of the games usually played upon the Billiard Table. And here also I conclude my directions for playing, which I hope you have not found tedious or unprofitable. I might go on for another hundred pages or so, and amuse you with a variety of anecdotes about all sorts of players; how Lord A. made and won his great match against the celebrated Peter Botherum, making the last eight points by a wonderful Sidestroke-following-screw; how Lord B. paid all his college debts with the proceeds of one night's play at the United University Club; how the Marquis C. got rooked and plucked when he played Single Pool with Dufferton, the well-known Marker at the Promenade Billiard Rooms, Sandandshelton-and so on through the rest of the Peerage. I might tell you how many a scion of a noble house made out his income by Billiards; and how scores of wellborn cadets and fine gentlemen disdain not to descend to ungentlemanly tricks for the sake of loose half-crowns and stray sovereigns. But I shall do nothing of this sort; for if I did, you would probably set it all down as bunkum and fanfaronade, got up for the sole purpose of showing you what excellent company I kept, and how thoroughly I was hand-and glove with the aristocracy. You know what thorough humbugs those writing fellows are, and therefore it is pure waste of time to attempt to bamboozle you with such nonsense! But a good deal of truth might be told in this way, nevertheless; and perhaps, some day, I may sit down seriously and prepare my Diary for publication. But just now I have other fish to fry, as the old adage has it. To sum up the moral of my book in a few sentences, I may say that no man can become a good Billiard-player who lacks docility and application. Not that any special genius is requisite for the making of a good player. The quality which distinguishes players from tyros is perseverance—real assiduous practice, and not simply the knocking about the balls for amusement. How, think you, did Roberts acquire his astonishing facility of execution, but by constant practice? The 'Spot-stroke,' for instance, may be learned in an hour; but to enable a man to repeat that particular stroke for an indefinite number of times requires almost as much application as the learning of a new language, or the solution of a difficult mathematical problem. I do not expect you to rival the professors, who, it is well known, think nothing of half-a-dozen hours' practice at a single Hazard. Good knowledge of Strengths and Angles is the main assistant to the first-rate player. You must accustom yourself to study the specialties of the Table, the Cue, and the Balls; and to profit by every 'coign of 'vantage' that presents itself; never allowing a momentary failure to discourage you, but persevering till you accomplish your object. The great art and beauty of modern Billiard-play lies in the making of long scores from a succession of Hazards and Cannons: and these long scores can only be made by players who thoroughly master the theory of Strengths and Angles.

Enough! If what I have written be carefully read—if each separate diagram be well tested on the Table—if you follow the directions given for the proper handling of your Cue, and the nice application of the Side-stroke and the Division of the Object-ball, you will soon be a good player: but if you peruse my book as you would a novel, for mere amusement's sake, you can hardly hope to hold your own against the Dons of the Clubs!



CHAPTER XV.

HOW TO FIT UP A BILLIARD ROOM.

By Jove, a noble room—well lighted too!—Byron.

LLIARDS is never so pleasantly played as in a country-house, where friends meet friends, and a game goes on as merrily in the morning as at night. Many persons are deterred, however, from fitting up a Billiard Room from a notion that the thing is awfully expensive. But this need not necessarily be. You can have an excellent table, seats, lights, cues, marking-board, and all complete for any sum between a hundred and two hundred pounds. A good large apartment, or a dry stable or outhouse, can be converted into a Billiard Room, at comparatively small expense. The room for a full-sized table should be not less than 15 feet 6 inches wide by 21 feet long; but 18 feet by 24 would be a much better size. The floor should be perfeetly free from vibration. This can be secured by bracing the joists, or by laying them on piers. A ground-floor is best; but when an upper floor is used, two parallel walls should be built underneath the joists; and the table should be so placed that its legs rest on these walls, or on a floor affixed to them. When the table is placed, its horizontality is tested by a

spirit-level; and then, if it be once made straight and even, it may not need levelling for years, for the weight of the table will keep it in its place. A skylight affords the best light; but where that is not possible, there should be windows on each side of the room. In order to avoid shadows, the skylight should be rather longer than the table. The cushions for the tables of club-houses and public-rooms are always of the best native India-rubber; but as this requires a constant temperature of at least 50 degrees in cold weather, native rubber is not well adapted for private houses where such a proportion of heat is not easily obtainable. Vulcanized rubber is therefore substituted, as it is almost unaffected by heat, cold, or frost. But vulcanized rubber cushions are rather less lively than those made of native caoutchouc, on account of the manner in which it is prepared. Stuffed lounges, or sofas raised on a dais, are a great improvement to the look of a room, and they enable spectators to witness a game with ease, and without incommoding the players. To be thoroughly lighted at night, the table should be furnished with six burners, so placed as to throw an equal light all over the play. The burners should be fitted with shades, green outside and white within. absence of gas, belmontine, colza, or sperm oils are used. The first-mentioned gives, I think, a light nearly equal to, but less intense than, gas.

Every well-appointed Billiard Room should possess a Cuerack and a couple of dozen Cues, in addition to a Rest, a Half-butt and Rest, a Long-butt and Rest, and a Spider for Pyramids. The Marking-board should be a compound one, for the marking of Billiards, Pool, and Pyramids. In a

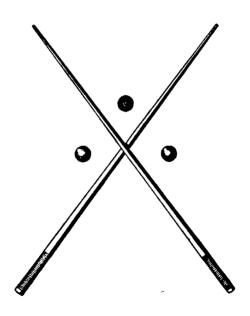
corner of the room there should be a small lavatory, fitted with looking-glass and toilet apparatus; and the Marker should be furnished with two brushes and a solid iron, with which to keep the table in order. At night, and at such other times as it is out of use, the table should be covered with a holland cloth, without weights, to keep it free from dust. The proper complement of balls is—two sets of three each for Billiards, a dozen of the proper colours for Pool, and a Poolbasket; with a full set of Pyramid-balls, in a triangular box. The Russian and American Games can be played with the Pool-balls. The Frontispiece shows my idea of what a Billiard Room should be in a gentleman's house.

An ingenious contrivance, entitled 'Vaile's Patent Combined Dining and Billiard Table,' has been made public since the first sheet of this volume was sent to press. It is admirably adapted for houses in which space cannot be found for a regular Billiard Room. The slate top is made to rise from the bed of the table by means of a compound screw, which holds it in position, and renders it perfectly rigid and steady. Any unevenness in the floor is remedied by a simple levelling apparatus; and when not in play, the whole can be easily and quickly converted into a dining-table. This useful combination is manufactured by Messrs. Herring, Son, and Clark, of 109 Fleet Street, in various sizes and styles.

A good Billiard Table in a private house is a real luxury, and when once purchased costs little in the way of repairs. The Cloth lasts from three to four years without turning, after which, if it be not torn or much stained, it will stand two years' more wear. The Balls and Cues are almost indestruc-

tible; indeed, a favourite Cue may be re-tipped and kept in repair for any length of time.

A lad can soon be taught to mark the game and keep the Table in order. He will quickly acquire such a knowledge of the various games as will serve to make him, in the absence of a better, a tolerable opponent for all purposes of practice. But where there are ladies in the house, you never need be in want of a game; for I have always found that ladies make excellent Billiard-players—graceful, courteous, and invariably good-tempered.



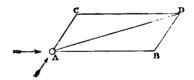
APPENDIX (A).

On the Law that Angles of Reflection are equal to Angles of Incidence.

EWTON'S second law of motion states, that if any forces act upon a body, at rest or in motion, each force produces the same effect as if it acted alone upon the body at rest. Thus, if an impulse in direction AB were

given to a particle, which would cause the particle to move with a velocity represented by AB, if it acted alone; and if another impulse in direction AC would, if acting alone, cause the particle to move with velocity represented by AC; then, completing the

parallelogram ABCD, Newton's law allows us to assert that, supposing these two impulses simultaneously communicated, the particle would in consequence move in the diagonal AD, with a velocity

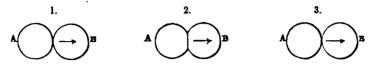


represented by AD on the same scale as before. All the predictions in Astronomy depend upon the truth of this law, which is therefore an experimental fact, established upon as firm a basis as any fact which is known to science.

2. Newton's third law of motion states that action and reaction are equal and opposite. This law, which has the same basis to rest upon, allows us to assert that, if a ball A overtake a ball B, both moving in the same direction, the momentum which is taken from A is exactly equal to that gained by B during the impact, the momentum being measured by the mass x velocity generated or destroyed: so that in Billiards, where

the balls are equal in mass, the velocity added to B is equal to that taken away from A.

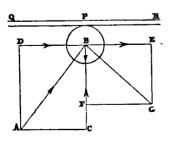
3. The whole action between two balls impinging directly may be represented by the three figures:—



Between the states (1) and (2) the balls are being compressed from the first contact, until A's velocity has been diminished, and B's increased sufficiently to make them at the instant of greatest compression move with equal velocities; between the states (2) and (3) the balls are recovering form until the final contact, A's velocity being continually diminished and B's increased. If the elasticity is what is called *perfect*, the velocity gained by B during compression, from (1) to (2), is exactly equal to that gained during restitution of form; and the same is true, of course, for the velocities lost by A.

If the elasticity be imperfect, the velocity gained during restitution is always less in a fixed ratio than that gained during compression, the ratio being fixed for each substance—for glass balls amounting to nearly 15ths, and less for ivory. The whole action takes place in too short a time to be appreciated, but these results have been deduced from a series of careful experiments of various kinds.

4. In order to understand clearly the effect of friction, consider first the effect of impact in the simplest case of oblique incidence



upon a cushion supposed smooth, in which the size of the ball does not enter into the consideration. Let AB be the direction of motion of a ball obliquely incident on a cushion QR, P being the point of contact. If AB represents the magnitude of the velocity, at the instant of striking, this

velocity is equivalent to two velocities represented by D B parallel to the cushion, and CB perpendicular to it. Consider therefore

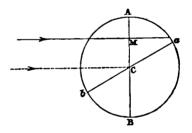
separately, by Newton's second law, how these velocities will be affected by the impact, on reflection: D B, the velocity before impact, will be unaltered; take B E, equal to D B, to represent this velocity; the velocity perpendicular, represented by C B, is destroyed during compression, and during restitution a velocity less than B C is generated in the opposite direction; this velocity, represented by B F, bears a fixed ratio to B C, for example 5: 7, if this be the measure of elasticity. Complete the parallelogram B F G E, and B G represents the magnitude and direction of the velocity of the reflected ball, the angle F B G being greater than A B C.

This is the complete case for a cushion imagined to be smooth and imperfectly elastic.

5. In order to explain the effect of friction, it is necessary to give the results of certain calculations made in Dynamics relating to

angular velocity, or twist given to a spherical ball by a stroke given to it, whose direction does not pass through the centre.

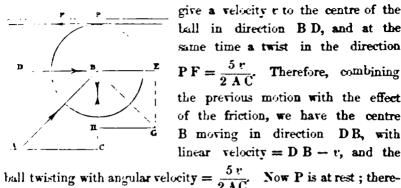
Let ACB be a diameter perpendicular to the direction of the blow whose line of action meets it in M, and let v be the velocity which an



equal blow whose line of action passes through C would give to the ball; then degree of twist is measured by $\frac{5 v \times C M}{2 A C \times A C}$; for example, if $C M = \frac{1}{2} A C$, while the ball advanced through a space equal to A C, it would in the same time have twisted through an angle A Ca, such that $A\alpha = \frac{5}{4} A C$.

6. Suppose now a ball to move in the direction A B and to impinge at P on a rough cushion, *i.e.* so rough as to prevent all sliding at P; and, for example, suppose the elasticity to be $\frac{5}{7}$ between ball and cushion. The velocity BC, as before, is reversed into velocity BH = $\frac{5}{7}$ BC.

The effect of friction is the same as a blow given to the ball at P. Such a blow applied to the ball at rest (by Newton's second law) would



give a velocity r to the centre of the ball in direction BD, and at the same time a twist in the direction $PF = \frac{5 r}{2 A C}$. Therefore, combining the previous motion with the effect of the friction, we have the centre B moving in direction DB, with linear velocity = DB - v, and the

fore, its advance D B-v, by linear velocity, is equal to its regression $\frac{5v}{2}$ by the twist, so that $DB-v=\frac{5v}{2}$; whence $v=\frac{2DB}{7}$, \therefore the velocity of B resulting from friction is DB- $v = \frac{5}{7}$ DB, represented by BE; hence BG in this case must be drawn in such a direction that BE, BH are both less than BD, BC in the same pro-With this elasticity therefore, not an unlikely one in a billiard-table, the angle of reflection is exactly equal to the angle of incidence; so that, in spite of the imperfection of the elasticity, the law of equality of angles of incidence and reflection holds, the compensation having been made by the roughness of the table, and the resistance to a twist caused by the inertia of the ball, which has

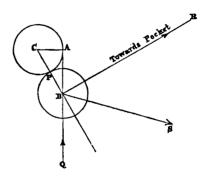
A slight modification of the elasticity assumed and of the degree of roughness of the cushion will not be sufficient to make any practical difference, but it is absolutely necessary to enter into all the considerations given above, if any reason is to be given for this law of equality.

been estimated in the expression for the amount of twist given above.

7. The same kind of reasoning would hardly establish the law approximately, with respect to a ball striking a ball instead of a cushion, even if the ball struck were fixed in its position, in which case it would act like an ivory cushion on account of the small friction between balls; but the establishment of any law with respect to a moveable ball is a much more serious affair. I think, however, that I can show, by a diagram in a very common case, that there is no approximation whatever to the law of equality of angles of incidence and reflection when one ball strikes another which is not fixed.

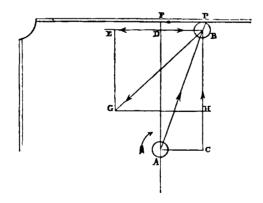
For a common corner-hazard, in which you wish to use a stroke without 'side' and a half-ball division: QBA is the direction of

motion of the striker's ball passing through the edge of the object-ball, so that the line B C, joining their centres when in contact, is double of A C; hence the angle of incidence is one-third of a right-angle, and if the angle of reflection were equal to that of incidence, B S would be the direction of reflection instead of



B R, which makes the angle of reflection about three times as great as the angle of incidence.

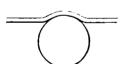
8. Supposing beginners to want an explanation of the effect of 'side,' it is not hard to give an account of any particular case, such as



the elementary one of bringing the ball back into baulk by a stroke from the baulk to a point of the cushion some little distance out of baulk.

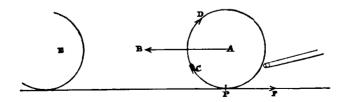
The velocity, as before, is equivalent to two—one represented by CB, and the other by DB; CB towards is turned into BH from the cushion. The twist given, in direction of the arrow, to the ball A in baulk, about a vertical diameter, makes the point P in the ball at the instant before contact move much quicker than if there were no twist, in the direction FP; consequently the reaction of the cushion in PF is much greater, and is in fact, if the twist be strong enough, sufficient to change the velocity DB into a velocity BE in the opposite direction greater than DB; the consequence is, a motion BG is the diagonal of the parallelogram EBHG.

9. It is generally admitted, that increase of the velocity at impact on a cushion diminishes the angle of reflection; but all my readers may not feel equally certain of the explanation of this experimental fact, in which most billiard-players will agree, but I think it may be accounted for. Supposing that the check in direction PF (see fig. Art. 6), by which the motion of the point of contact P was arrested, is more perfect in consequence of the bite of the cushion being increased, by a greater portion of the surface of the ball being exposed to the



action of the cushion, so that the velocity D B is more diminished with the greater blow than the small one, then, BE being less, the angle CBG is smaller.

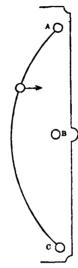
10. The cause of the return of the ball in the case of the screw is very distinct. By the underneath stroke the ball receives a velocity onwards in AB, and at the same time an angular motion in direction CD, causing the point P to scrub on the cloth; and so the friction in direction PF is brought into play,



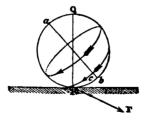
which tends to continually diminish both the velocity AB and the angular velocity CD, which it has not time entirely to destroy; so

that when the ball E is struck, what remains of AB may be destroyed, and the remaining angular velocity causes the ball to return by the action on P in direction P F.

11. The parabolic motion of the ball in the case of a heavy side, by which A passes round B and strikes C, is caused by the friction



in PF, brought into play by the revolution about an axis ab, inclined the vertical PQ, by which the point of contact is scrubbing in

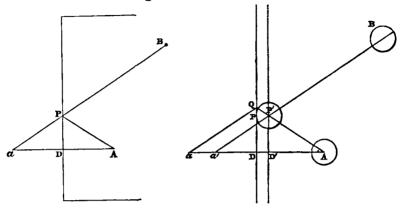


direction of the arrow c, i.e. in direction FP, friction acting contrary to the motion in PF.

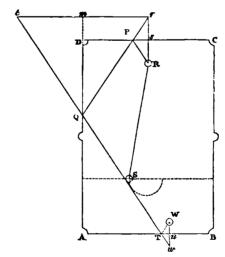
12. The billiard-student may test the equality of angles of incidence and reflection by measuring the direction in the following way:—

To strike B by one reflection at a cushion DP, make Aa perpendicular to DB, and take aD = AD; join aB, cutting the cushion at P, which will be the point of contact to be aimed at.

More accurately, in consequence of the breadth of the balls, D'P' ought to be drawn parallel to the cushion, at a distance equal to the ball's semidiameter, and a'd' = AD'; P' is then the point to be aimed at, or Q a little higher than P.



Or to cannon from 3 cushions, from red on spot to W in baulk. Draw Rsr perpendicular to CD, sr=sR, rm perpendicular to AD,



and tm=rm, Www perpendicular to AB, uw=uW; join wt, meeting AB in T and AD in Q, join Qr, meeting CD in P, join TW.

RPQTW is the course of the ball, so that he places his ball at S so as to strike P, and the rest follows.

APPENDIX (B).

On the placing of the Striker's Ball in Baulk in a proper position to secure a succession of Middle Pocket Hazards, &c.

ET us suppose the Object-ball placed in a convenient position for a middle pocket hazard, and the striker's ball in hand. The intention of the striker is twofold:—

To secure the losing hazard, and to make the Object-ball return to the same position, for a second hazard.

No definite rule can be given which will enable a player to carry out this intention, suggestions are all that can be offered. You must first determine the strength necessary to bring the Object-ball back to the same or an equally convenient position, and then obtain a measure of the 'angle of deviation' of the striking-ball after impact with the Object-ball, for a particular strength, viz. that which you have determined, and for a particular division of the Object-ball. By 'angle of deviation' I mean this. Let ABA' be the line of aim of the striker's ball, BP its course after impact with the Object-

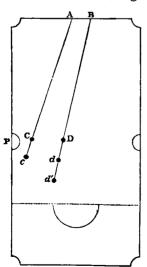
ball. Then A'BP is the angle of deviation, the ball being made to deviate from its original course ABA' into ABP through the angle A'BP. You may, if you prefer it, take a measure of its supplement, the angle ABP.

The particular division I spoke of is different with different players, some preferring a half ball, and others a fuller or a finer ball. The advantage is with the half-ball, because a

slight error of aim produces with this division, the least corresponding error in the angle of deviation; it is also a more definite division, and, therefore, easier to effect, only you should endeavour to keep always to the same division in simple strokes. I should say that no side or screw is yet to be used. Ordinary strength sufficient to bring the ball

back, and your particular division produce what is called your a natural angle of deviation, and this is what you have to obtain a measure of, which continual practice and accurate observation alone can secure. Having determined it you must draw, in your eye, through the Object-ball B a line ABA', so that the angle A'BP may be equal to your natural angle. The point where this line meets the baulk line, or indeed any point of it that lies within the baulk semicircle, is the spot required where you are to place your ball. It may happen, however, that this line does not fall within the baulk semicircle at all; the stroke is then more difficult; you must place your ball as near as possible to the line you have drawn and then make a proportionate change in your strength, or division, or both, or apply side or screw, as you may think fit. This happens, of course, when you have failed to bring the ball back to the proper position.

I have as yet said nothing about the direction taken by the Object-ball, in fact I have supposed it to be originally in the most favourable position, where a half-ball division and a certain strength will bring it again into position. Let us now go a step further. It is easy to see that if you allow the Object-ball to approach too near to the side cushion, a greater nicety of strength is required.

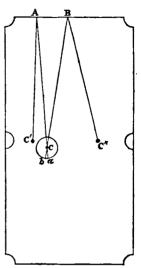


Let ACc, BDdd', be the lines in which the ball returns in two different cases. C and D being the most favourable positions for a hazard into the pocket P. If a slight error Cc be made in strength, no losing hazard can be made without a difficult following stroke, whereas in the other case an equal error, Dd, or a greater error, Dd', will but slightly increase the difficulty of the hazard. You should, therefore, endeavour to prevent the ball from coming within a certain distance of the side cushion. To do this you must narrowly watch the direction it will take after it is struck, remembering that this

direction is the line joining the centres of the balls when they

are in contact. Let us examine a case. Let C be the centre of the Object-ball in a favourable position for a losing hazard into

the middle pocket. C' C'' limiting positions to which the ball may return to secure a second hazard, and let A, B, be points on the cushion, which the ball will hit in order so to return. Join AC, BC, and produce them to meet the circumference of the ball in a, b. Then if the ball be struck at any point within the arc ab, it will return to a favourable position. You may then within the limit ab choose your own division, if the half ball 'division falls within that limit it is an easy stroke, if not, you must change your division and consequently your angle of deviation, and the stroke is more difficult. All that I have said applies to a great extent



to losing hazards in the corner pockets, except that a different strength is required. It is also advisable to endeavour to bring the Object-ball into position for a middle pocket hazard rather than for a second corner pocket hazard, as the latter are usually found more difficult. The same suggestions may be offered with regard to Cannons, P being supposed to be the second ball instead of the pocket. Your great object should be to obtain and carry in your eye a correct measure of the natural angle of deviation. Your next step is to observe the change produced in it by a change of strength or a change of division, by application of side or screw or by any combination of any or all of these, you will thus be able to make Hazards or Cannons, when you cannot move your own ball at all or sufficiently to make the necessary angle of deviation a 'natural' one.





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