OUT-DOOR SPORTS FOR BOYS

(AND GIRLS)

EDITED BY LYNDS E. JONES

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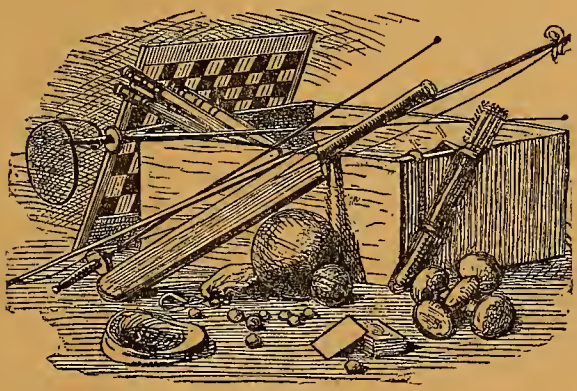

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PREFACE.

It is, perhaps, needless to say that no attempt has been made in this volume to include *every* form of out-door recreation with which boys and girls amuse themselves during vacation or in play-time. Only such games as have proved their popularity, and only such sports as seem especially adapted to the taste of young Americans, have here been described. To have attempted more than this — to have endeavored to make it a complete manual of open-air pastimes — would have resulted in a volume so bulky and unwieldy as to have destroyed its real usefulness and defeated the main purpose of its preparation. No amusement, however, of assured merit, or which would be naturally looked for in such a book has, it is believed, been omitted, and a few games have been included which are but little known in this country, though they are favorites in other parts of the world.

In making the selection the wants of every age have been considered, and the youngest child as well as the oldest has been regarded. Different dispositions and temperaments have also been provided for, and the weaker ones will find that they have not been passed by in favor of those who are stronger. The aim has been to afford healthy out-door recreation for *all*, whatever may be their sex, age, or robustness.

As it is not to be supposed that any one person could understand all games equally well, different authorities have been consulted and freely quoted in the various descriptions here given. This especially applies to sports of foreign origin. By this means greater exactness has been obtained, so that the rules and conditions of play here laid down can in every case be implicitly and absolutely relied upon.

LYNDS E. JONES.

Brooklyn, N. Y., 1890.

CONTENTS.

OUT-DOOR SPORTS FOR BOYS

BASE-BALL.

THERE is probably no game played throughout the world which affords as much pleasure to so great a number of people as the game of base-ball. It is the national game of America and there is scarcely a city, town or village in the United States in which cannot be found at least one club. Though heretofore less known abroad it has of late steadily been growing more popular in other countries, and when American teams now visit foreign lands their games are witnessed by constantly increasing crowds of visitors. Boys and men both play it and are equally absorbed in watching finely contested matches. This interest is not confined to the young, but is shared as well by older persons, who are often found among the most enthusiastic spectators of the sport. Nor are ladies absent from the field when pennants are to be striven for or championships decided, though naturally, as it is a game in which they take no part themselves, they ordinarily form but a minority of the on-lookers.

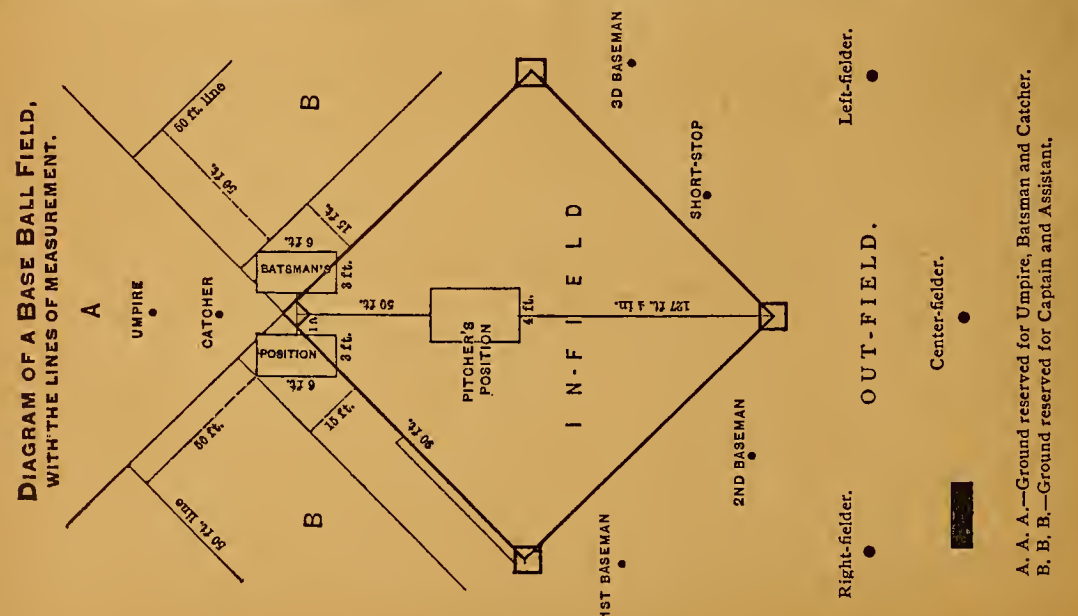
One reason for its great popularity is the quickness with which it is usually played, thus preventing weariness in either actors or audience. Another reason for the favor in which it is held is the ease with which its general principles are mastered, thus enabling even the inexperienced with but little coaching to intelligently follow the progress of a game. Then the players for the most part are so scattered over the field that the spectators can readily see what each one is doing, and thus appreciate every point that is made. Above all, it furnishes so many opportunities for spirited and brilliant play that in a well-matched game the excitement does not flag for an instant, but is maintained at fever-heat from start to finish.

While a great deal of money can be spent (and is spent by professional and some amateur clubs) in preparing elaborate grounds, in purchasing costly equipments and on the salaries and travelling expenses of players, plenty of amusement can be had from it at a very trifling outlay. The only absolute essentials for the game are a bat, a ball and the use of as level a tract of ground as can be obtained. The larger this tract is (within reason) the better. On it should be marked off (with chalk, lime or in any other convenient manner) a square, the length of each side being just ninety feet. At each corner of this square there should be securely fastened a flat stone, metal plate or canvas bag, prominent enough to be easily seen from any part of the "diamond" (the popular name of the square). These four stones, plates or bags are called respectively the first, second, third and home bases, the regulation size of each of the first three being fifteen inches square and that of the home base a square foot. (It is not necessary that the bases should be these exact dimensions excepting for professional clubs or when amateurs prefer to play a very strict game.)

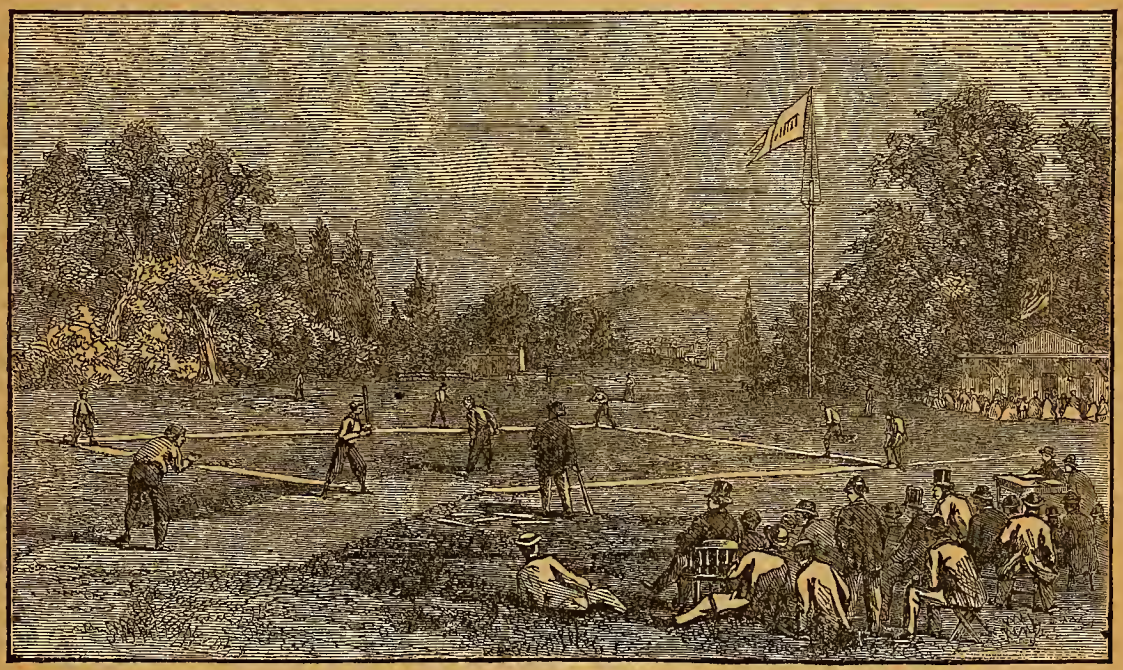
Eighteen players are needed for a game, and they are divided into two sides of nine each. When two clubs are playing against each other the nine on either side are of course all members of the same club. One of each side is appointed captain, and he directs the playing of his men, decides in what order they shall go to the bat and (unless their positions have previously been determined upon, as is generally the case in clubs) the place each shall

occupy in the field. Besides these eighteen players there is ordinarily an umpire to settle all disputes and doubtful points that arise during the game, and two scorers (one for each side) whose duty it is to keep the record. Before a game commences the two captains arrange, by tossing a coin (or in any other chance way), which side shall first go to the bat and which to the field. When three batsmen have successively been put out (in the manner to be described further on) their side changes places with those in the field, the latter taking their turn at the bat, or their "innings" as it is termed. This rotation continues until each side has had nine innings (or had three of its men put out nine times), which ends the game.

The game begins by one of the batting side taking his bat and placing himself a little to the left (or to the right if he is left-handed) of the home base and facing the centre of the square. The captain decides which player this shall be. The others on his side have for the present nothing to do but to await their turn at batting, though customarily the captain and perhaps one other stand near at hand to advise or coach the batsman. The fielding side arrange themselves as follows: one (the catcher) stands just behind the batsman; another (the pitcher) about fifty feet in front of the batsman and of course in the square; a third (the first baseman) near the first base, but outside the square and with the base between himself and the batsman; a fourth (the third baseman) takes a similar position behind the third base; a fifth (the second baseman) stands near the second base and usually to the left of it as he faces the batsman (and outside the square); a sixth (the short stop) stands between the second and third bases (but a little nearer to the former than to the latter), just outside the square; the seventh (the right-fielder) at some little distance back (and to the left) of the second baseman; the eighth (the centre-fielder) directly back of (but at a considerable distance from) the second base; and the ninth (the left-fielder) behind (and to the right of) the short stop. These places are not fixed ones, but are simply given as the best (and usual) ones for the men to occupy. The players can all move freely about as they judge advisable during the game. The pitcher, however, must always be at the specified distance from the batsman when throwing the ball to be batted. A glance at the accompanying diagram of a base-ball field will make this description of the positions much clearer. It will also serve to show that the first base is the one to the right of the batsman as he stands at the home base facing the pitcher and the third base the one to his left. The second base is of course directly (and diagonally) opposite to the home base. In popular language the pitcher and catcher are known as "the battery;" the three basemen with the short stop as "the infield;" and the right, left and centre fielders as "the outfield."



Every one having taken his place, the game is actually opened by the pitcher throwing the ball to the catcher. In doing this he must throw it directly over the plate, or whatever is used to mark the home base, and at the height asked for by the batsman. As the ball passes over the plate the batsman (if he thinks he can hit it) strikes at it with his bat, and, if he succeeds in hitting it and the hit is a "fair" one (*i.e.*, not a "foul," defined further on), he drops his bat and runs to the first base, another batsman from the same side succeeding him at the bat. If the one who hit the ball reaches the first base without being put out he then strike at. When a batsman has struck at the ball three times without hitting it he is obliged to run for the first base just as he would have done if he had hit it, but he is usually put out before reaching the base. Moreover if he makes no attempt to hit the ball when it comes fairly over the plate and at the height he requested a "strike" is called on him by the umpire the same as if he had tried to hit it and had failed, and on the third of such "strikes" he must run for the base. (The three "strikes" may consist of two unsuccessful attempts to hit and one failure to try, or vice versa; or they may all consist of failures to try or all of unsuccessful



HOW TO PLAY THE POSITIONS.

runs (as opportunities offer) to the second base and from there to the third base, and thence home (*i.e.*, to the home base), which scores one "run" for his side; and the side on which the greater number of "runs" is made during the nine innings wins the game. While the first batsman is running from base to base, or is waiting on any of them for chances to run, the second batsman is attempting to hit the ball thrown by the pitcher to the catcher in the same way the first one did. Should any batsman, on his first strike, fail to hit the ball the catcher returns the ball to the pitcher, who again throws it over the plate for the batsman to again attempts.) On the other hand, when the pitcher does not send the ball over the plate at the height asked for, a "ball" is called on him by the umpire, and when four such "balls" have been called the batsman is allowed to go to the first base without being out, and if there is a player already on that base the latter is similarly advanced to the second base. (This is done because base-ball rules do not allow two men to be on one base at the same time. Consequently if all three-bases are filled when the fourth "ball" is called, each man moves forward one base without being liable to be put out, the one who had been on the third base thus reach-

ing home and scoring a run. If the second base is vacant, however, a man on the third base can only advance at the risk of being put out, and if the first base is vacant the men on both second and third bases run a similar risk in moving.)

PITCHER.

In hitting the ball the batsman is permitted to strike it so as to send it in any direction in *front* of him, but he must not send it behind him or too much to either side. If the ball on being hit falls outside of the lines connecting the home base with the first and third bases (and the extensions of those lines), it is called a "foul" hit or a "foul" ball and no runs or bases can be made from it by either the batsman or men on bases. With this exception the batsman is allowed to send the ball wherever he chooses and as far as his strength of arm will permit. Frequently a heavy batter will drive the ball so swift and far that before any of the outfield can get it and send it back to infield or battery the batsman will have made the complete circuit of the bases and so have scored a "home run"—one of the most coveted distinctions of the game. Two-base hits and three-base hits (*i.e.*, hits on which the batsman can reach second or third base before the ball gets back into play) are also considered highly creditable to a player. A good batter will often do his side the greatest service and materially aid it in winning the game by judiciously sending the ball to the part of the field furthest removed from bases occupied by his fellow-players, thus enabling them to advance themselves and perhaps to get home and so score. If, to do this, he sacrifices his own chances of making bases or a run the hit is called a "sacrifice hit," and good ball-playing consists as much as in anything else of a willingness on the part of individuals thus to subordinate themselves and to help their associates for the common good.

But a man may be a good batter and yet, even if he does not make sacrifice-hits, not score many runs, as there are various ways in which he can be put out. In the first place if the ball is caught, before it touches the ground, either after it has been hit by the batsman or on his third "strike" (whether the "strikes" are unsuccessful attempts to hit or failures to try), he is out. (This applies to all hits, foul as well as fair. In some associations he is also out on a foul hit if the ball is caught on its *first* rebound from the ground.) The batsman is also out if the first baseman gets the ball before the former reaches that base after his hit or third "strike." This constantly happens even to good batters when the opposing sides have expert fielders, for a ball can be thrown with much greater speed than any man can run, and if it can be picked up quickly enough on touching the ground after being hit it can often be gotten to first base ahead of the runner.

The troubles of a batsman are by no means over even if he reaches the first base in safety. He is now called a "base-runner," because he has to run successively to the second, third and home bases before he can score for his side. He has to do this, of course, without being put out on his way, and it is his object to do it as quickly as possible both in order to have the bases free for other players who may follow him and also so as to get home before three of his fellow-batsmen are put out, for, if he is left on a base (even if it be the third base) when this happens, the hit and bases he has already made off it count for nothing. These considerations prompt him to steal a base whenever he thinks he has a fair chance of gaining it. If, in attempting to do this, he is touched by the ball held in the hand of an opponent where no part of *his* (the base-runner's) body is on a base, he is out. Good base-running is nearly (if not quite) as desirable a qualification in a ball-player as heavy batting, and it decides many a close contest. The situation not infrequently oc-

BATSMAN.

curs when three bases are filled at a time that two men are already out. In such a case the man on the third base must take every risk to get home at the earliest possible moment, so as to free his base for the others (who cannot advance until he gets out of their way), and also so as to score before his opponents have a chance to put out the player at the bat. When running bases the player must touch each base in regular succession, and he is not allowed, when trying to avoid an opponent who is endeavoring to touch him out with the ball, to diverge more than three feet from the line connecting the bases. It is, perhaps, hardly necessary to add that an opponent must not needlessly obstruct the path of a base-runner: the only circumstances under which he has the right to remain in the way are while attempting to touch the runner out or when trying to catch the ball.

So much for batting and base-running. Now as to field-work.

Of course the two great requisites in base-ball—the two things which nothing else can take the place of—are skill in catching and skill in throwing the ball. A man who can get hold and *keep* hold of every ball which comes anywhere within his reach, whether by a running catch or a leaping one, by hurling himself recklessly forward on his face or with no less indifference over on his back—who can do this whether the ball comes whistling through the air three feet above his head or spinning near the earth scarcely as many inches above the ground, and who is equally ready to take the ball whether it is swift or slow, straight or curved—such a man will become a great player. If, besides this, he can throw a ball with unerring aim and with a lightning velocity to just the spot where it is wanted and at just the moment it is needed, he may become a very great player. And if, in addition to these qualifications, he has the coolness and the judgment to know always what is the best play to make, he will become an almost invaluable player.

BATSMAN.

Every one in the field should be able to catch well. Every one should also be able to throw well. But the highest skill in throwing is expected of the pitcher, for it is on account of his exceptional ability in that respect that he is given the position. He must have such complete control over the ball that he can send it exactly over the plate at the precise distance above the ground that each batsman successively calls for. He should be able to constantly vary his method of throwing from swift to slow, from straight to curve, and from one style of curve to another style as will most effectually puzzle his opponents. At the same time he must ever be on the alert to prevent base-runners from stealing bases, by promptly sending the ball, at the first indication of such an attempt on their part, to the nearest infielders that the runners may be touched out. If the ball is hit by the batsman he must always be prepared to catch the man out if the ball comes at all near him or to receive it from the most distant outfielder and at once pass it to basemen or catcher to prevent runs or bases being made from the hit. When an inning is once fairly under way the pitcher cannot for an instant afford to relax his utmost attention to every part of the diamond. Upon him rest the greatest strain and the chiefest responsibility, and to him as well go the largest credit and the highest reward.

CATCHER.

Next, in popular estimation at least, to the position of pitcher ranks in importance that of the catcher. He has perhaps a greater number of opportunities than any other player to put men out both by catching the ball on third strikes and fouls and when base-runners are attempting to get home from the third base, as he is the only player on the fielding side at the home base. He can also often greatly assist the first baseman in putting men out by getting the ball to that base ahead of the bats-

man. Naturally he should catch remarkably well so as to hold all the balls from the pitcher, however "hot" (swift) or curved they may be, as well as those sent him by fielders to check home running.

The particular qualifications of the other players hardly need a very extended description. The special task of the infield is to stop base-running; that of the outfield to get balls which have been batted to distant parts of the field back to the battery and infield in the briefest possible time. It follows from this that the outfield should be particularly expert in throwing speedy and sure balls and the infield in catching them. All, however, should be equally quick on the feet and equally ready to catch a batted ball on the "fly" when the chance comes to them. While positions on the battery are usually considered the most enviable ones, a player can make as desirable a reputation as second baseman, short stop or in other fielding work as the most noted pitcher or catcher.

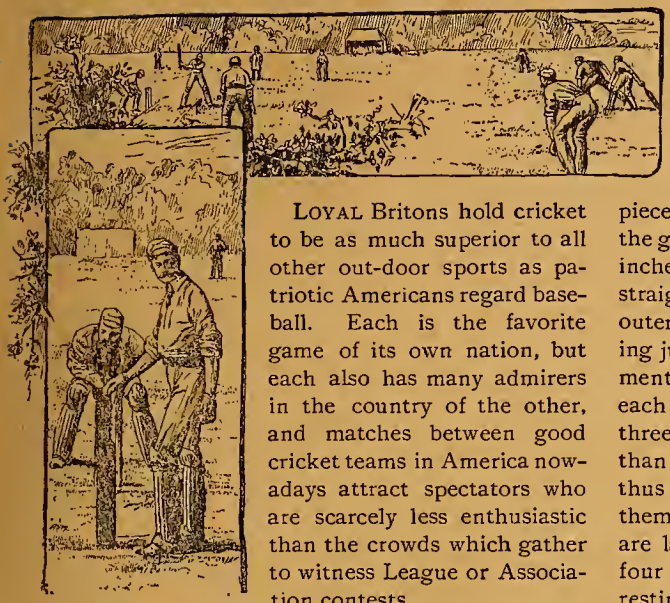
Good all-round work and even playing are the qualities most to be striven for in base-ball. A fair batter who is also a fair fielder can do more for his team than a heavy batter who is weak in his fielding, and while sometimes a man who is a very superior pitcher or catcher will be retained in pennant or championship games even if he is not effective at the bat, he is at any time liable to be replaced by one who is his inferior in pitching or catching but who excels him in batting. Aspirants for distinction in base-ball, therefore, should aim to improve and perfect themselves in every branch of the game.

One or two points in conclusion. The order in which the men on each side are first sent to the bat must be maintained throughout the game. This is done irrespective of innings. For example, if in the first innings only five men have been to the bat when the side is put out, then in the second innings the other four take their turn before the first five bat again. After these four have batted it is again the turn of the man who first batted at the beginning of the game. This order of batting is decided by the captain, who has absolute authority over his men during the game, subject only to the decisions of the umpire. In clubs the captaincy is usually a permanent position, but among amateurs (not formally associated as a club) he is elected by his fellow-players for each game. He is not necessarily the best player on his side, though ordinarily he is one of the best. He should be one of the most experienced and one possessing the coolest judgment —a good general and an able manager. He should occupy whatever position in the field he is best fitted for, it by no means following that because he is captain he should also be pitcher or catcher.

The bat to be used must be round in shape and made entirely of wood. It should not exceed three and a half feet in length nor two and a half inches in diameter at the thickest part. (These are the regulation dimensions.) The proper ball is one made of woolen yarn, covered with leather, and with a small piece of rubber (not weighing over an ounce) in the centre. In circumference it may be from nine to nine and a quarter inches and in weight between five and five and a quarter ounces.

CURVING THE BALL.

CRICKET.



LOYAL Britons hold cricket to be as much superior to all other out-door sports as patriotic Americans regard base-ball. Each is the favorite game of its own nation, but each also has many admirers in the country of the other, and matches between good cricket teams in America nowadays attract spectators who are scarcely less enthusiastic than the crowds which gather to witness League or Association contests.

The essential materials for cricket are as simple as those for our own national game. A ball, two bats, two "wickets" and the use of a level piece of ground fill all the requirements; though in matches gloves for the "wicket-keeper" and pads and gloves for the "bowler" are desirable. The ball is about the same size as a base-ball, weighing between five and a half and five and three quarters ounces with a circumference from nine to nine and a quarter inches. But the bat is quite different from that used in base-ball. Instead of being round it is rather flat-shaped excepting at the handle. Its total length must not exceed thirty-eight inches, of which the blade (striking part) is usually twenty-five and the handle thirteen inches. The width of the blade cannot be more than four and a half inches, and in thickness it (the blade) should be about one inch at the edges and an inch and a quarter in the centre. The back of the blade is slightly rounded.

GLOVES AND PAD.

Each of the wickets consists of three round pieces of wood driven a few inches into the ground and projecting twenty-seven inches above it. They are placed in a straight line, the distance between the outer edges of the two extreme ones being just eight inches. By this arrangement the space between the middle and each of the other "stumps" (as these three uprights are called) is a little less than the diameter of the ball, which is thus prevented from passing between them. Across the tops of the stumps are laid two "bails" (pieces of wood four inches long), one end of each bail resting on the middle stump and the other end on one of the outer stumps. The bails are not in any way fastened to the stumps, but simply lie lightly upon them (usually in notches or grooves cut on the tops of the stumps), in order that they may be easily knocked off when stump or bail is hit by the ball; for one of the great objects in cricket is to get a "wicket down" by knocking off one of the bails. The second wicket is placed opposite (and parallel) to the first one and at a distance from it of twenty-two yards.

BAT.

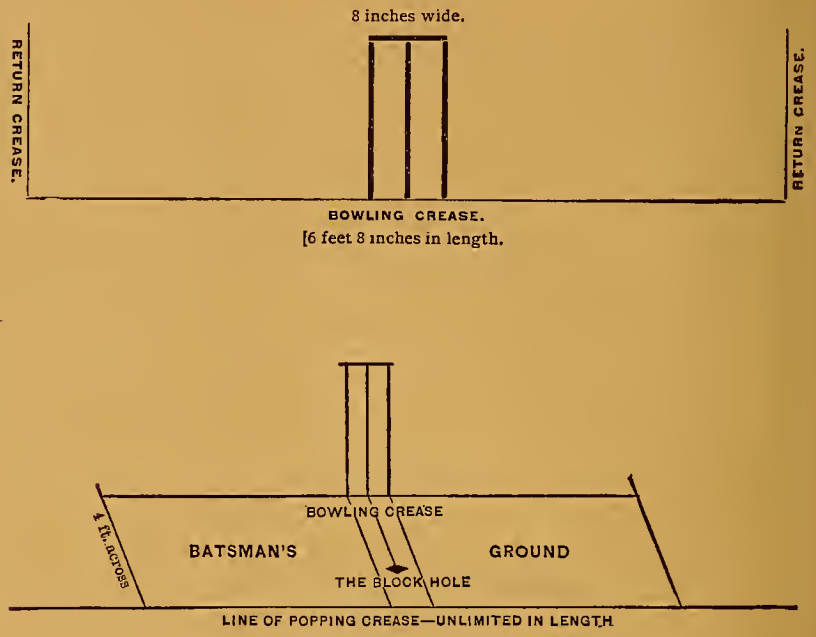
Connecting the stumps a line should be drawn (marked in any convenient manner) extending three feet beyond each end of the wicket. This is called the "bowling crease." At each end of the bowling crease (and crossing it at right angles) lines (known as "return creases") should be drawn to the "popping crease," which is another line extending indefinitely across the field four feet in front of (and parallel to) the wicket. These various lines bound the "batsman's ground," and he is liable to be put out at any time when neither one of his feet nor his bat (held in his hand) is touching the ground

within their limits. The different ways in which he can be put out will be shown presently. (In speaking of the *front* of a wicket the side nearest the other wicket is of course meant.)

The contest at cricket is between two sides of eleven men each, with two umpires (one near each wicket) to decide disputes and to take general charge of the game. There are two innings (or turns at the bat) for each side in rotation; an innings lasting until all the eleven have been to the bat and until ten of them have been put out. As

himself behind one of the wickets with one foot (when delivering the ball) back of the bowling crease and between the return creases; another (the "wicket-keeper") behind the opposite wicket ready to receive the ball if the batsman fails to hit it; a third (the "long stop") back of the wicket-keeper, to field balls passing both the batsman and wicket-keeper; and the other eight at "short-slip," "long-slip," "short-leg," "long-leg," "point," "cover-point," "mid-off" and "mid-on"—the *off* side being at the right-hand of the batsman as he faces the

WICKET.

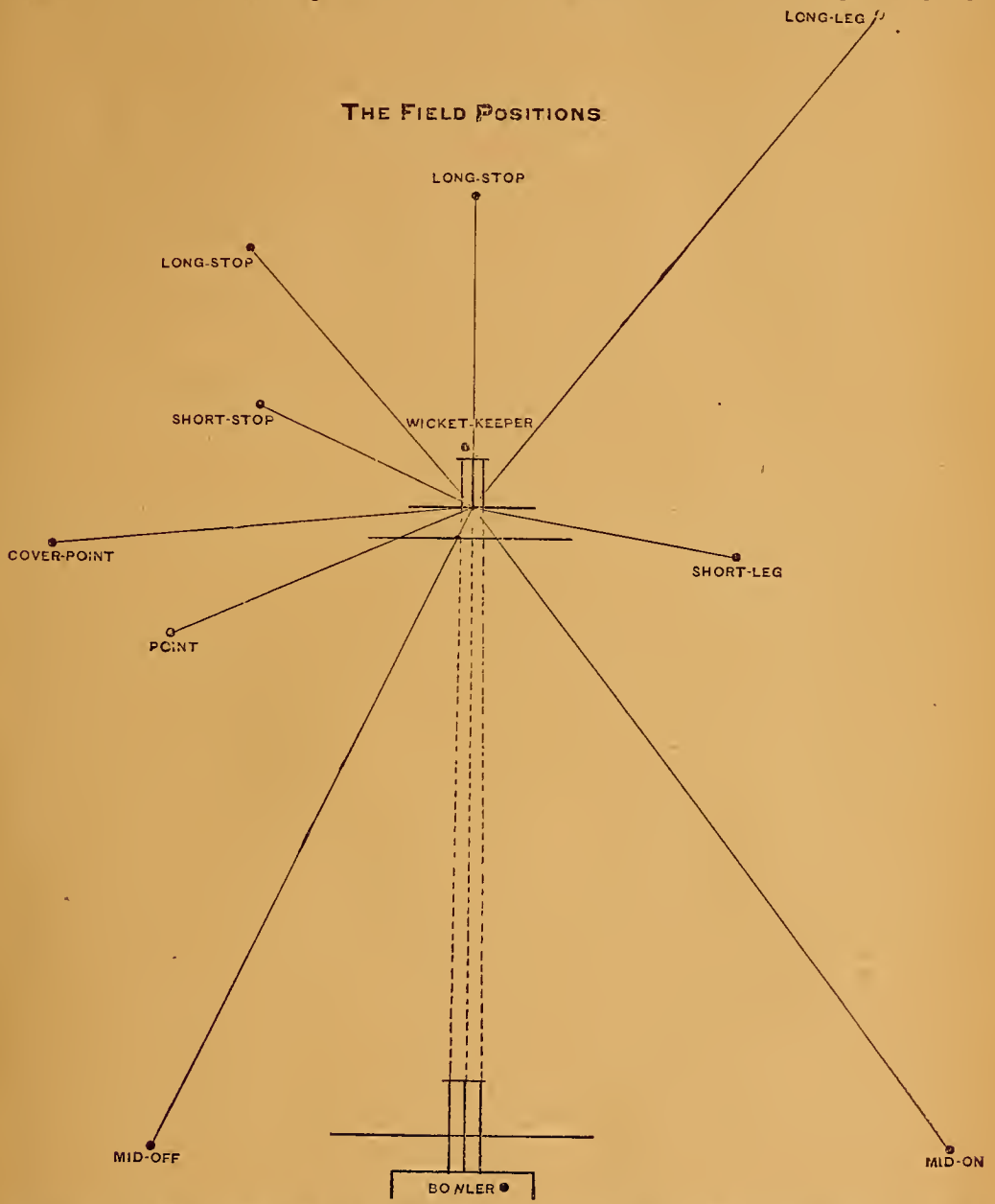


in base-ball the playing of each side is directed by a captain, chosen from among his eleven, and, also as in that game, the two captains decide by a toss-up the choice of innings. When this is settled the captain of the team which is to have the first innings sends two of his men to bat and they accordingly place themselves within the "crease" lines, one at each wicket. They face each other and, of course, are both between the two wickets, standing usually a little to one side so that their bodies will not be in the way of the ball as it is bowled from wicket to wicket. The other nine of their side are only spectators of the game until summoned to take the place of batsmen who have been put out.

On the fielding side one (the "bowler") places bowler and the *on* side at his left-hand. It is the duty of each fielder to catch (if possible) any batted ball that flies near him, and to get the ball whenever it comes his way back to bowler or wicket-keeper as speedily as he can. The positions of the fielders will be found on the cricket diagram (see page 9). It should be remembered, however, that the places as marked are only *relative* to each other; the exact spot each man occupies depending upon the peculiarities of the players who are bowling and batting at the time. For instance if the batsman is known to be a heavy hitter and likely to send the ball a considerable distance, the fielders should stand further off than they otherwise would. Or if the bowler is able to deliver swift, curved balls

such as a batsman would have difficulty in hitting squarely, the fieldsmen should draw in closer so as to increase their chances of catching the striker out.

the return creases, "no ball" is called by the umpire; and "no ball" is also called if he jerks or throws the ball instead of bowling, tossing or pitch-



When everything is in readiness the bowler begins the game by bowling, tossing or pitching the ball at the opposite wicket, so as, if possible, to knock off one (or both) of the bails. If in doing this neither one of his feet is behind the bowling crease and within

ing it. He can run with the ball from any distance he chooses behind the bowling crease, provided that, when he delivers the ball one foot at least is behind that crease and within the return creases. If he delivers the ball so high or so much to one side that,

in the opinion of the umpire, it is beyond the reach of the opposite batsman (when the latter is in his ground), a "wide ball" is called. After bowling the ball at the same wicket four times (under some rules five and under other rules six times), exclusive of "no balls" and "wide-balls," an "over" is called by the umpire and the ball is then bowled an equal number of times to the other wicket. This alternation of wickets bowled at is kept up during the innings and throughout the game. At each over, of course, the fielders have to shift their ground, so that similar positions will be held relative to the wicket to be bowled at that had previously been occupied relative to the former one. It is not essential, however, that the individuals shall all retain the same actual *positions;* in fact it is quite customary for many of them to exchange positions on the alternation of overs ("long-leg" with "mid-on," "long-slip" with "mid-off" for examples), in order to economize the time which would otherwise be used in frequent crossings between distant points of the field. The same player generally serves as wicket-keeper throughout the game, but the bowler is usually changed with every over; in fact the rules do not permit of his bowling more than two overs in succession, nor can he change ends (*i.e.*, wickets at which he bowls) oftener than twice in one innings. He can, of course, bowl every other over, thus alternating at the wicket and in the field with cover-point, long-stop, or any other player, so that all the bowling during the game *may* be done by two men from each team.

During the first over, or until a run is made, the batsman at the bowler's wicket has nothing to do but to keep within his ground, stand at whichever side of the wicket the bowler directs (so as not to interfere with the bowling), and be on the look-out for opportunities to make runs. It is his fellow-batsman that has the real work to do. The latter has, in the first place, to guard his wicket from being put down (that is, having one or both of the bails knocked off) by the ball bowled at it. This is always his first and greatest duty. If he fails in it he is "bowled out" and his hopes of distinguishing himself in that innings are over. Nothing is left for him to do in that event but to retire to the rear and to applaud (with whatever heart he can) the play of the others. Such a catastrophe he is ever on the alert to prevent by interposing his bat between the stumps and the ball and so diverting its course away from the wicket—or "blocking the ball," as it is termed. If the ball is bowled straight he can easily accomplish this by placing his bat upright with one end on the ground at a point called the

FIELD POSITIONS.

"block-hole" (about the length of a bat and its handle in front of the middle stump). But if the ball comes with a curve or a twist it is not always so easy to stop it, and a batsman then needs to be quick and cool if he would save his wicket.

In turning the ball from the wicket the batsman has to be very careful to do it only with his bat, for if the ball should touch any part of his body he would be out—in a "leg before wicket" style as it is called. This, however, only applies if the ball is bowled in a straight line and when it would (in the umpire's opinion) have hit the wicket had it not been obstructed by the person of the batsman. But not only has the batsman to take care that the ball does not strike either him or the wicket, he must be at equal pains that he does not hit the wicket himself with foot or bat, for if the bails (or either of them) should get carelessly knocked off in this way a "hit wicket" would put him out as effectually as a "leg before wicket" or being "bowled out." Or again, if unguardedly he steps entirely outside of his ground (that bounded by the four crease lines) without either one foot or his bat (held in his hand) touching the earth within it, the wicket-keeper can "stump" him out by knocking off one (or both) of the bails with the ball or with his hand which holds the ball. There are thus four ways in which a batsman while guarding his wicket can be put out unless he shows the utmost watchfulness and caution.

THE RIGHT WAY TO CATCH.

Protecting his wicket, however, is only a part of a batsman's work—the most necessary part undoubtedly, but by no means the most glorious part. While it certainly prevents his opponents from getting a chance to score, it not less certainly scores nothing for him or for his side. To score he must make "runs," and to make runs he must exchange places with the batsman at the other wicket. He is at liberty to try to do this whenever he chooses, but always at the risk while doing so of being "run out;" that is, of having a wicket put down (when he is out of his ground) by any of the fielding side knocking off a bail with the ball or with the hand holding the ball. Naturally, therefore, he does not often attempt to make many runs when the bowler or wicket-keeper has possession of the ball, but on "wide balls" which pass the wicket-keeper and long-stop he sometimes can safely run and also on swift balls which similarly are not stopped in time.

BOWLING.

WICKET-KEEPER.

When one batsman runs of course the other must do so as well in order to take the former's place at the wicket which he leaves. Either wicket can be put down when the batsmen are running (and while they are off their ground) and either runner can be put out. If a wicket is put down *before* the two men have crossed (*i.e.*, passed each other in running between wickets) the one who left the wicket which has been put down is out, but if they have passed each other when its bails are knocked off it is the one running towards it who has to give up his bat.

CAUGHT AND BOWLED.

But for most of his runs the batsman must rely upon his batting. If he can hit the ball with his bat as it is bowled towards his wicket and drive it to a distant part of the field he can perhaps make a number of runs before the ball is gotten back to bowler or wicket-keeper. And this is where the highest skill (or at least the skill which counts the most) in cricket comes in. For unlike base-ball (where at the best a batsman can make only one complete run on a single hit ball) cricket permits a striker to score as many runs (pass as many times from one wicket to the other) off one batted ball as he is physically capable of. He cannot, however, make any runs if the ball is caught on the fly (*i.e.*, before it touches the ground) by an opponent after it has been hit, for then he is "caught out"; and, of course, both he and his fellow-batsman would render themselves liable to be run out if in their ambition to pile up the score they should allow the ball to get back to either wicket when they were out of their ground. It would be well to note here that a batsman is at perfect liberty to strike at "no balls" and that runs made from them count equally with those made off fair balls. But he cannot be stumped out or bowled out on such balls, nor can he be stumped out on "wide balls." A striker is never *obliged* to run when he hits the ball, as running is always optional with him; but it is to his advantage to do so whenever he thinks he can get safely to the other wicket. His fellow-batsman generally gives the cue for running, as he is freer to watch for chances than is the striker.

At the end of the first over, provided no runs have been made during it, the second batsman becomes the striker; and at the end of that over, still supposing that no runs have been scored, the first batsman has his turn again. But if during an over one run should be made then the other batsman becomes the striker for the remainder of that over. This applies also to three, five or any *odd* number of runs. On an *even* number of runs (two, four, six, etc.) the same batsman remains striker throughout the over. The reason for this is that the batsman at the wicket bowled *at* is always the striker. Hence, after an odd number of runs the batsmen find themselves at the opposite wickets from which they were at before, while even runs

leave them in the same places. It follows from this that as the wicket bowled *at* is invariably changed with each over and as the batsmen only change wickets on an odd number of runs, that at the end of an over they may, or may not, be in front of the same wickets they were at the start, —this depending entirely upon their runs. They might interchange wickets during every over for many overs in succession (which would happen if in each case there was an odd number of runs), thus causing the same batsman to serve continuously as striker for quite a length of time, and this not infrequently occurs.

Either batsman having been put out, another man is sent by the captain of the team to try his luck at scoring. This continues, each batsman as he is retired being replaced by another one, until ten of them have been put out and one solitary man is left in front of the wickets, who, for lack of a companion, has "to carry his bat out" without having had, perhaps, the chance to make a single run. One batsman may remain at the wickets much longer than another; he may (and, in fact, often is) able to keep his place while player after player on his side is successively retired; and he can thus sometimes roll up a score greater than that of all the others combined.

Besides the runs (between wickets) actually made by a batsman, he can score for his side in other ways. On every "no-ball" and "wide-ball" bowled to him his team is allowed to add one to its score, provided he does not attempt to run. If he chooses to run, then only the runs actually made are counted.

BATTING.

Should the fielders at any time be unable to find the ball after it has been batted and one of them should call "lost ball," running is then stopped and the batsman is credited with six runs—unless he had really made more than that number before "lost

RUN OUT.

ball" was called, in which event he counts what he had made. He is also given five runs whenever a fieldsman intentionally stops the ball with his hat or any other article.

In keeping the score of a batsman, a separate record is made of the runs off batted balls, "wide balls," "no-balls," "byes" and "leg-byes." Byes are runs obtained from balls which pass close to the wicket without touching the striker and which the umpire had not previously called "wide" or "no-balls"; and "leg-byes" are runs on similar balls which do touch the striker. (Runs of course can only be made on "leg-byes" when the ball is not bowled straight, as otherwise the striker would be out, "leg before wicket.") Though the records of these various kinds of runs are kept separately, they all count equally in making up the score of a side; but the batsman personally only gets the credit of runs made off batted balls.

Should the side that went to the bat second be eighty or more runs behind its opponents at the end of the first complete innings, it goes first to the bat in the second innings. If then it fails to gain a lead its opponents do not take their second innings, as they have won the game without it. This regulation helps to save a needless waste of time when the first innings discloses much disparity between the opposing teams. For a similar reason, when the side that bats first fails to make as much in its two innings as its opponents made in their first innings, the latter win the game without batting a second time. With these exceptions, a full game of cricket always consists of two innings for each side. By mutual agreement, however, it can be shortened to one complete innings, and sometimes bad weather or want of time renders this absolutely necessary. As a full game of cricket often lasts two (and not seldom three) days, accidents will frequently end it before it can be played entirely out,

PITCHING.

and then only the score of the first innings is counted.

When it is impossible or difficult to muster twenty-two players for double-wicket cricket, boys will find the single-wicket game an excellent substitute for the regular one, and it will moreover afford them capital practice in training to become expert cricketers. Any number over two can play, but at least five are desirable. One of these bowls, another keeps the wicket, the third is batsman, and the others (if there are any) act as fielders. Should six or more be playing they can be divided into two teams; but with a smaller number it is best for all to unite against whoever is batsman for the time

being, and each score independently of the others. In such a case, the batsman when he is put out becomes wicket-keeper (or goes to the field); the wicket-keeper takes the place of the bowler, and the latter has a turn at the bat; all the players thus rotating in the various positions. A stump is driven into the ground where the second wicket is usually placed, and the bowler delivers the ball from this stump. Another stump is placed half way between the bowler's stump and the wicket (but a little to one side, so as to be out of the way of the ball as bowled), and the batsman must run to this stump, touch it with his bat and return to his own ground in order to score. Generally the same rules apply in single-wicket cricket as in the full game, except that with less than five on a side "byes" are not allowed, the batsman cannot be stumped out, and bounds are set (twenty-two yards each side of the wicket) within which a struck ball must land to entitle the batsman to make runs.

THE BOYS' GAME

FOOT-BALL.

If cricket is the game of Great Britain and base-ball that of the United States, foot-ball belongs equally to both countries, and is as great a favorite with the students in American colleges as among those in the English schools. There are a few differences in the way it is played on the two sides of the Atlantic, but they are only minor ones, the essential principles remaining everywhere the same. What is here described is the American game.

At each of the two further ends of a field, three hundred and thirty feet long and one hundred and sixty feet wide, are erected two posts, eighteen and a half feet apart, and at least twenty feet high. Ten feet above the ground a cross-bar is fastened to the posts, the whole forming what is known as a "goal." Each goal is in the centre of its "goal-line" (the name of the shorter boundary of the field), and consequently distant a little over seventy feet from the "touch" (or side) lines, as the longer boundaries are called. Across the field at intervals of five yards white lines (parallel to the goal-lines) are marked for the purpose of determining distances and positions. There should of course be some little space outside of the boundary (goal and touch) lines, to allow room for play. That back of the goal-lines is called "in goal" or "goal ground"; that outside of the touch-lines "in touch ground"; and that at each corner beyond the intersection of the goal and touch-lines "touch in goal."

Two sides of eleven men each face each other in this field with a soft egg-shaped ball (its greatest circumference about twenty-eight inches) between them, and the struggle in foot-ball is to get possession of this ball so as to kick it (under certain restrictions) over the cross-bar and between the posts of the *opposite* goal, that is, of the goal which the side faces at the opening of the game. Five points are credited to a team whenever one of its men thus kicks a goal *from the field*. Four points are made when a player touches the ground *back* of his opponents' goal with the ball, or makes a "touch-down," as this is termed. After a "touch-down," the side making it has the privilege of a "try at goal" without interference from its opponents. This is done by carrying the ball back into the field (any distance desired, usually about twenty paces), on a straight line (*i. e.*, one crossing the goal-line at right angles) from the point where the touch-down was made, and then attempting to kick it over the goal. The best kicker on the side makes this attempt, as it is not necessary that it should be done by the same player who made the touch-down. Should he succeed in kicking

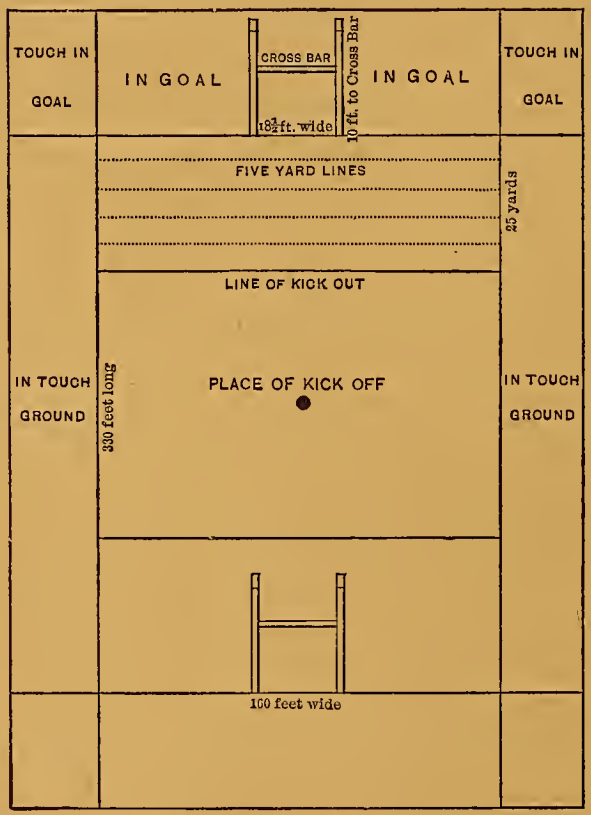


DIAGRAM OF FOOT-BALL GROUND.

it over the goal, two points are scored in addition to the four from the touch-down. (Another way of "trying at goal" from a touch-down is by a "punt

out," which will be described further on in this article in connection with "fair catches.") Besides these three ways of scoring (a touch-down, a goal obtained from a touch-down, and a goal obtained from a field kick), there is a fourth way, called a "safety touch-down," made by a player touching the ground back of *his own* goal with the ball in order to protect it from the enemy. This counts two *against* the side making it.

Unlike most other field sports, a game of foot-ball always lasts a fixed length of time, and it is the side that scores the most points during this period that wins the match. One hour and a half is the time set (exclusive of all unavoidable delays from settling disputes, accidents, intermission, etc.), divided into two equal periods of forty-five minutes each, and at the end of each half time play has to stop as soon thereafter as the ball becomes "dead" in any of the ways to be described further on—unless a "touch-

down" has just been made, when a "try at goal" can follow. At the opening of the game the two captains decide by a toss-up which side is to have the choice of "kick-off," or first chance at the ball. When a goal is made, the side losing the goal has the following "kick-off." But in the second half, the "kick-off" always goes to the side which did not have it at first. Goals are exchanged at the end of the half, the choice in the first place commonly being given to the team which did not have the kick-off.

When the game begins, the ball is placed on the ground exactly in the centre of the field, and each of the two teams (in its own half of the ground) range themselves in four lines in front of their goal. Nearest to the ball are the "rushers," seven in number, stretched across the field in a line parallel to the goal-line, the two end men usually hanging a little behind the others, so as to the more readily tackle any opponent who may break through the

COLLARED.

middle of the line. The heaviest work in the game comes upon the rushers, and they should therefore be the largest and strongest players on the side, but they need speed and agility as well as weight and muscle. From his place in the line their leader, who should be their most powerful man, is often called "centre rush." Directly back of the centre rush, in a line by himself, stands the "quarter-back," usually of smaller build than the rushers, but an active, alert player, who can quickly pass the ball to the "half-backs" who are stationed (at some distance apart) behind him. Occasionally the quarter-back will stand actually in the rush line, making as it were an eighth rusher. The half-backs (two in number) form the third line of each side, and they ought to be the best runners and dodgers in their team, as either is expected when he once gets hold

of the ball to be able to carry it well forward into the enemy's territory. But, above all, they should be

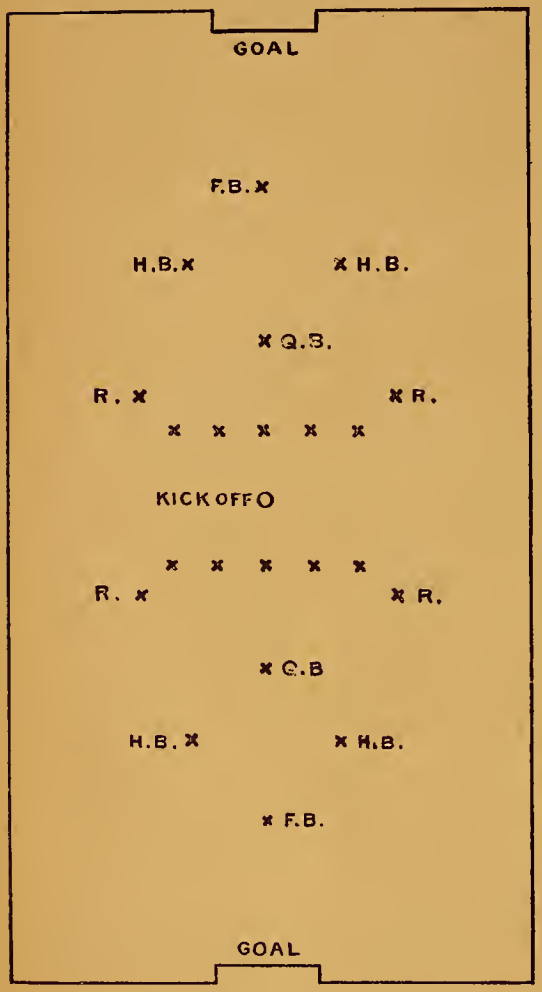
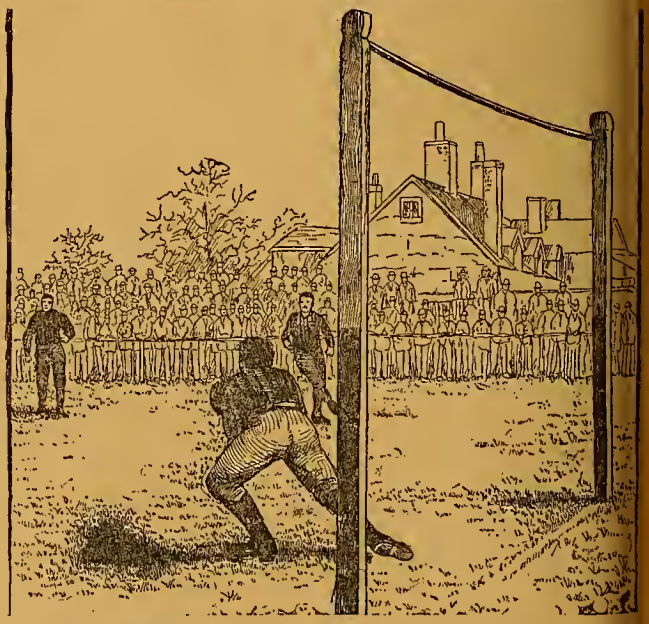


DIAGRAM OF FOOT-BALL POSITIONS.

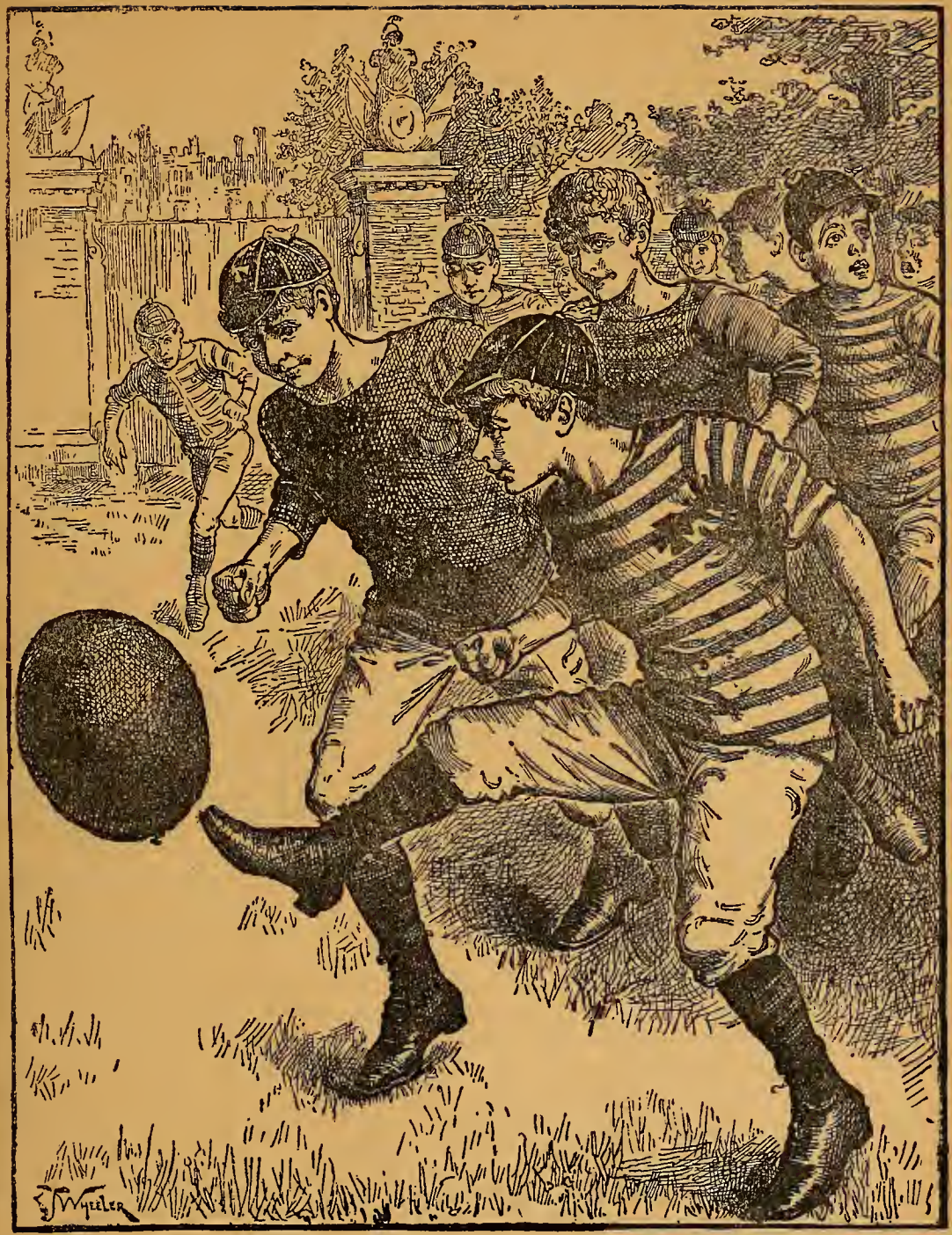
strong and expert kickers, as the chances of making a goal come to them oftener than to any other players. The fourth line comprises only one man, the "full-back," who stands closest to the goal in the rear of all the rest. His especial duty is to guard the goal by driving the ball back into the field whenever it comes uncomfortably near his goal-line. These various positions are only held at the beginning of each half, or after a goal has been kicked, or at certain other stages of the game when it is necessary for the players to re-form their lines and to begin as it were afresh. Most of the time the men are surging back and forth over the field, struggling to get control of the ball and to keep it away from their own goal and to carry it towards the opposite goal. To an uninitiated spectator they seem almost continuously to be in a hopeless tangle.

Three kinds of kicks are defined in foot-ball: a "place-kick," when the ball is lying on the ground at the time it is kicked; a "punt," when the ball is dropped and kicked before it touches the ground; and a "drop-kick," when the ball is kicked as it rebounds from the ground after being dropped. (As a matter of fact, the ball in a place-kick, instead of actually lying on the ground, is held a very little above the ground by another player until the kicker is ready; it is then put down by the one holding it, and instantly kicked by the other.) The kick-off must be a place-kick, and as it is not allowable (nor would it be very easy) to make a goal from a kick-off, the captain of the team who won the toss-up usually starts the game by kicking the ball gently back ("dribbles" it, as it is called) to his own side, so as to give one of his half-backs an opportunity, if possible, to run with it through or around the opposing rushers towards the enemy's goal. If the captain, instead of thus sending the ball back, should vigorously kick it forward, it would probably at once come into possession of his opponents, and thus



DEFENDING THE GOAL.

the advantage of the kick-off would quickly be lost to the side which had won it. The kick-off need



FOOTBALL.

not be made by the captain of the team; in fact it is usually made by the centre rush, who may or may not be the captain; and instead of actually kicking

HEADING.

the ball back, he may (and often does) give it a very slight kick forward, and then seize it himself and pass it to half-back. The opposing side must remain at least ten yards away from the ball until it has been kicked, and then they are at liberty to rush forward to get the ball if they can. The rushers of the side having the kick-off can stand close up to the ball.

Should the half-back (or other player) who gets the ball on the kick-off succeed in stealing through or past the opposing rushers—and he may dodge or elude them in any way he chooses (by doubling, by running forward or back or to one side or the other) provided he stays within the touch-lines—he can take his chances either of securing a goal by a place- or drop-kick (but not by a punt), or of making a touch-down and then of obtaining a goal from that. It is very probable, however, that before he can do either one of these things he will be intercepted and caught ("tackled") by some opponent, who may grasp him anywhere between shoulders and hips, but who must not attempt to catch him by head, neck or legs. When the runner sees his danger and that he cannot escape, he can pass (throw) the ball to any one else on his side who is *back*, or at either side of him (he is not allowed to pass it forward), and the latter can try his luck at running with it, or in turn can pass it to some one else (not in front of him), who is a better runner or is at the moment better placed for running. But if the runner is fairly caught with the ball in his possession, he can only retain exclusive control of it and be freed from the tackler by dropping it, marking with his heel the spot where it fell and crying "down"—that is, the holder of the ball is *supposed* to do all this. In reality he generally keeps the ball and simply calls "down." Then results what is known as a "scrimmage." The ball is placed on the spot where it fell, or where down was called, and the two sides form lines (parallel to the goal-lines) close to the ball, each with the ball between itself and the opposite goal. The centre rush (termed in a scrimmage the "snapper-back") of the team whose runner called "down" then quickly "snaps" (kicks) the ball back to one of his side, his opponents throw themselves forward to seize it and the ball is again in play. All of the men are massed so closely together in a scrimmage that it takes very sharp work to get or to retain control of the ball. The men, however, have to show great care that they keep on their own side (back of the ball) until it is snapped back, for if they are detected by the umpire with even their heads or shoulders over the line they are "off side." They are also "off side" whenever in the course of the game the ball is kicked or touched by any of their side between them and their own goal-line. While off side they can take no part in the game until (1) the ball has been kicked by an opponent, (2) or until it has touched an opponent, (3) or until one of

A NASTY JAR.

their own side runs in front of them (*i.e.*, between them and the opposite goal) either with the ball or after having kicked the ball from some place be-

hind (*i.e.*, between them and their own goal). Any one of these acts puts them "on side," and they can resume play. The theory of "off" and "on" side is that men must only play *behind* the ball, and that when they allow themselves to get in front of it, their privileges are suspended until some one of the events mentioned above occurs to restore their rights. No man, however, can become off side in his own goal ground (back of his own goal-line). Players are so constantly forced to be at times off side in a sharply contested match, that often it is practically impossible to keep track of their movements, and to determine whether or not they are on side. If a man attempts to take part in the game while off side, a foul is declared, as is also done when one intentionally delays the game or takes hold of an opponent who has not the ball in his possession. The penalty for a foul is a "down" for the opponents if they have not the ball; if they have it they are allowed to advance with it five yards.

If an opponent tackling the holder of the ball can get control of it before its guardian cries "down," he can similarly pass it to one of *his* fellows, or run with it, or kick it, or in any other lawful manner seek to advance it towards the *other* goal. His own side can materially aid him sometimes in this task, not only by holding themselves in readiness to receive and pass the ball, but also by conveniently getting in the way of opponents who are trying to tackle him. All striking, pushing, pulling, kicking and running against others, however, are strictly forbidden, and as already stated, only the one with the ball can be grasped or caught. The rushers of a team can on occasions greatly help their half-back who is carrying the ball, by partly surrounding him and running with him, thus forming a sort of body guard which their opponents may not find it easy to break through. If a player, tackling the holder of the ball, can get his arms around it or otherwise secure an actual grasp of it with both hands, he can cry "held," and then a scrimmage follows, the same as if "down" had been called by his opponent—the side which had the ball, however, snapping it back. Held is generally called when the tackler finds himself unable either to wrest the ball from its possessor, or to prevent the latter from advancing with it; down being called when the one with the ball fears it will be taken from him, or when he finds his further progress stopped.

Care has to be constantly taken that the ball is not thrown or kicked over a touch-line, or that the man running with it does not step with even one foot outside the touch bounds, for if either of these things occurs, the ball at once becomes "in touch" and is "dead." (A ball is dead whenever for the moment it is out of play, as when down is called, or a goal kicked, or a touch-down made.) Thereupon the player who secures (or has) the ball when it goes into touch brings it back to the point where it crossed the line. He can then (1) throw it into the field at right angles to the line; or (2) he can bound it in or touch it in with both hands (always at right angles to the line), and then run with it, or throw it, or kick it back; or (3) he can carry it into the field any distance not over fifteen yards (still on a line at right angles to the touch-line), and then put it down for a scrimmage. If he does not throw it out at right angles the first time, he must throw it again. If he fails on three attempts, the ball goes to his opponents. Sometimes the scrimmage takes

A FAST FORWARD GAME.

place close to the touch-line. In such a case the lines have to be formed extending from the ball into the field, as the men cannot play outside of the touch bounds. The centre rushers stand at the end of the line with the ball between them, and the snapper-back sends it along back of his men, being careful that it does not get "in touch" again while doing so. In no scrimmage is either the snapper-back, or the opponent opposite to him allowed to seize and run with the ball until it has touched another player after being snapped back. Should the snapper-back be off side in snapping back the ball, he must to the touch-lines. His opponents must come no nearer to him than the spot where the ball was caught. A "fair catch" may also be made from what is known as a "punt-out." When a touch-down has been secured in the opponents' goal, instead of bringing the ball out into the field for a "try at goal" from a place-kick, it can be kicked out with a punt by any player of the side which touched it down, and from any spot behind the point where it crossed the goal-line, provided it is not nearer to the goal than this mark on the goal-line. The object of the punter-out is to kick the ball

A COLLEGE GAME.

try again; and on a third repetition of the offence the other side takes the ball. (Bringing the ball into play after it has been "in touch" is called "a fair.")

At any time during the progress of the game a man catching the ball directly from the kick of an opponent (and before it has touched the ground, or the body, or dress of any other player on his side), can, on crying "fair catch" and marking with his heel the spot, have a free kick at the ball. This can be either a drop-kick, a punt, or a place-kick, and can be taken from any point back of the mark he made (termed "catcher's mark"), on a line parallel so that one of his own side (who must all stand at least fifteen feet from the goal-line) may make a fair catch, and hence secure a free kick, and, if possible, get a goal. Until the ball is punted, the opponents must all remain on their goal-line, leaving, however, a clear space of five feet on each side of the mark where the ball crossed the line. If a fair catch is made from a punt-out, the mark on the goal-line serves as the catcher's mark, and the catcher takes his free kick back of it in the field in the same way he would have done had he caught the ball on an opponent's kick. Should the touch-down be made

in a "touch in goal" (the corner spaces outside the field bounded by the touch- and goal-lines), the punter's mark is the point of intersection of the boundary lines.

When a safety touch-down is made the side making it is obliged to kick the ball out into the field from some point between its goal-line and its twenty-five yards line, its opponents meanwhile approaching no closer than the twenty-five yards line. Should the ball on the kick-out go into touch before striking a player, it must be kicked out again under the same conditions, and on the third occurrence of this it passes into the possession of the other side and is treated as if it had gone into touch twenty-five yards from the goal where the safety had been made.

Every goal kicked necessitates placing again the ball in the centre of the field and re-forming the lines of players as they were when the game began —the kick-off, as was said before, going to the side which lost the goal. At the commencement of the second half the same thing is done, but the kick-off is then given to the team which did not have it at the start of the game, irrespective of which won or lost the last goal.

For violation of the rules (in addition to offside play and other fouls already spoken of) various penalties are imposed. Tripping a man or catching him by the neck or legs is punished by giving the opponents a free kick or advancing them twenty-five yards, as they may prefer. (If, however, the twenty-five yards would carry the ball across the goal-line the advance is limited to half the distance between the spot where the offence was committed and the goal-line, and the option of a free kick is not granted.) Unnecessary roughness and hacking (*i.e.*, kicking another on the shins) or striking with the closed fist disqualifies a player from remaining in the game. No one can take part in any match who wears shoes with projecting nails or which have iron plates on them; nor shall any sticky or greasy substance be used on the person of players. While foot-ball at the best must always be rather a rough game, there is no reason why it should be a brutal one or that those who take part in it cannot safely do so without risk of serious bodily injury.

THE RUGBY GAME, IN ENGLAND.

LACROSSE.

CANADA'S national game is an inheritance from the Indians, among whom it was a favorite sport long before the whites settled in what is now the Dominion. As the principal implement (next to the ball) used in the game was originally shaped somewhat like a bishop's crosier the French (who were the first people to colonize Canada) gave it the name of la crosse, which in English means "the cross." The modern "crosse," however, has very little resemblance to the great religious emblem, and in other ways the game has altered considerably since its adoption by the whites. Though it is far from rivalling base-ball in American popularity it is now quite generally played throughout the United States, and has become a common amusement in many of our schools and colleges.

As in foot-ball the object of the game is to get the ball through either of two goals situated at opposite ends of the field. The distance between the goals must be one hundred and twenty-five yards, and each goal consists of two poles, which must be at least six feet high and which are planted in the earth six feet apart. There is no cross-bar over which the ball must be sent; it is sufficient for it to pass between the posts. The ball is of sponge rubber about eight inches in circumference, and the great peculiarity of the game is that this ball must not be touched by the hand during the progress of the match, but only by the crosse. (The few trifling exceptions to this rule will be duly noted in their proper place.) There is no limit set for the width of the field or for the space to be used back of the goals; that depends upon the size of the tract of ground available for the purpose. But it is important before a game begins to mutually agree upon "bounds" beyond which the ball is to be considered out of play.

The crosse is a piece of light wood (any length desired), one end of which is crooked, or bent in a curve. Across the crooked end a net is made by lacing it with catgut from the tip of the crook to a point about two and a half feet from the bend. In its widest part this net should not be over one foot. The lacing ought not to be tight as in a tennis racket, but sufficiently loose to sag a little so as to form a slight pocket for the ball when it rests upon the net. On the other hand the lacing must be tight enough to prevent its bagging and to cause the net to lie flat when the ball is not on it. The reason for this is that the crosse is used both for throwing the ball and for carrying it, hence it is necessary to have the netting firm enough to give the ball an impulse when thrown from it, but not so taut as to render it impossible for a skilful player to carry the ball on it while running. No metal whatever (screws or nails) can be used in making a crosse, and to prevent one crosse from getting entangled with another a string should be drawn from the extreme outer end of the crook to some part of the handle. This string is also of assistance in aiding a player to carry the ball on the crosse. The meshes of the net should be close enough together to avoid any chance of the ball slipping (or becoming

caught) within them. If, notwithstanding this precaution, the ball should get caught in the netting during a game, it must not be removed by the hand, but only by striking the crosse on the ground.

Each side in a lacrosse match consists of twelve players scattered over the field in pairs, every man of one team (excepting only the goal-keepers) being stationed by an opponent. In the middle of the field, with the ball (at the outset of the game) on the ground between them, are the two "centres," each with his right side to his own goal. Near each goal stands "point," and a little way off "cover

DIAGRAM OF A LACROSSE FIELD.

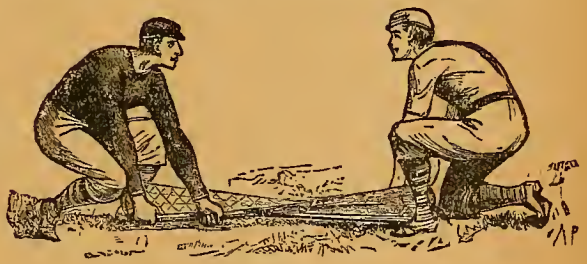
The marks ● and ○ represent players of the respective sides.

point," each accompanied by an opponent. These with a "goal-keeper" (who stays close to his goal to defend it) for each team fill the principal positions —the other players comprising "the field." The opponents (companions) of point and cover-point are known as "home" and "second home" (or "inside home" and "outside home") and sometimes the remaining twelve men are designated as "first defence," "second defence" and "third defence," and "first attack," "second attack" and "third attack" of their respective sides, but more commonly they are described simply as fielders. On the diagram here given of a lacrosse field the

THE TUSSLE.

goal poles are represented with flags attached. These are a great convenience in the game as they show more clearly the goals to the players. It is also well for the men of each team to all wear alike some marked color about their dress in order to enable the umpire and the spectators to more easily distinguish between contestants. Similar caps or blouses will answer as well as elaborate uniforms.

When the men have all taken their places, the two centres kneel, and each, holding his crosse in both hands, lays it with its back close to the ball (its wood side on the ground), as shown in the following cut. The umpire then calls "play" or "go," and both men tussle for possession of the ball. In doing this neither of them must grasp the person or crosse of his opponent, nor must he touch the ball with his hands, nor can he catch the other's crosse under his arms or with his legs, nor is he allowed to strike, kick or trip the other. He may, however, strike his opponent's crosse with his own crosse, so as to



PLAY.

try to dislodge the ball, and shouldering (from the side only) is also permitted. (These rules apply

generally to personal conduct in all stages of the game.) The object of the tussle is to pick up the ball with the crosse, so as to run with it (on the crosse) towards the opposite goal, or to throw it (only with the crosse always) towards that goal. Each of the centres while trying to do this is also striving to prevent his antagonist from doing the same thing, two working for opposite goals. The other players in the meanwhile should keep their places, waiting for the ball to come near them. If it should be pushed, thrown or dropped so as to land close to another pair of opponents, then these two similarly struggle for its control. There is, however, no obligation on the part of the players to remain at their stations; but it is good play for them to do so, as crowding around the ball does

CHECKING.

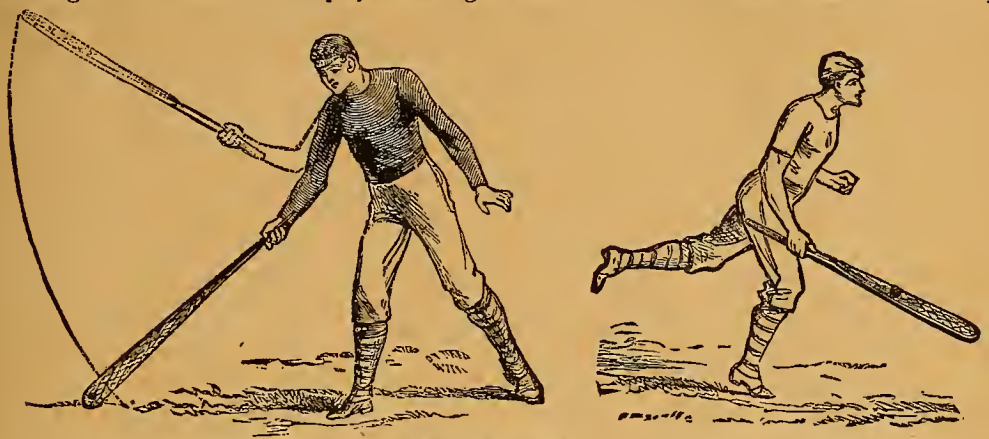
not help a side, and desertion of a post (unless one has the ball) makes a weak spot in the defence or attack which may cost a side the game. Whenever the ball passes between the poles of a goal (from its field side), whether carried on a crosse or thrown from a crosse, it scores a game, and the team which scores the greater number of games during a given time (agreed upon in advance, usually an hour and a half) wins the match. If a player accidentally sends the ball through his own goal, it counts a game for his opponents—unless it passes through from behind the goal, when it counts nothing for either side. Goals must be exchanged at the end of every game, the choice in the first instance being decided by a toss-up.

Under two circumstances only can the ball be touched by the hand: the first is when it gets lodged in some place inaccessible to the crosse. It is then taken out by the hand, placed on the ground, and the nearest pair of opponents "face" each other and tussle for it, as the centres did at the opening of the game. Should the ball be thrown out of bounds, it must be brought back to the spot in the field nearest the point it went out, and similarly "faced" by two opponents, the other men remaining in their places until the umpire sees that everything is in readiness, and until he calls "play" (or "go"). The other instance in which the ball may be touched by a player is when it gets within six feet of a goal, and then the goal-keeper is permitted to pat it away with his hand, or block it in any manner he chooses with his body as well as with his crosse. This six feet line in front of each goal is called the "goal crease," and no opponent can cross it unless the ball has already passed cover point's position on that side of the field. Though players are not permitted to touch the ball with the hand (except in the cases just mentioned), they are allowed to kick it with the foot when contesting its possession with an opponent.

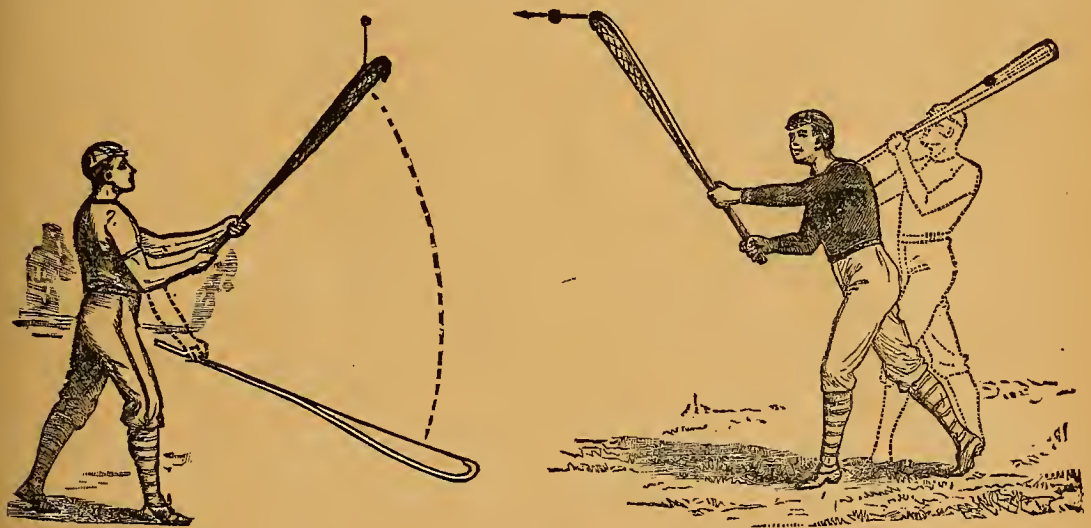
Violations of rules in lacrosse constitute "fouls," and are punished by giving the man aggrieved his choice of either a free run or a throw. For this purpose, all of his opponents within ten feet of him must stand back that distance, the others retaining their places. No one must stir until the player has started to run or to throw the ball (always, of course, with his crosse) after the umpire has called "play" (or "go"). But if the foul is allowed within twenty yards of the goal, the man must go back that far before taking his run or throw with the ball. Fouls are granted to a player whose crosse is grasped or held, or who is struck, tripped, or kicked, or who is shouldered from behind by an opponent, as previously noted. They are also allowed him if any opponent (when more than six feet from the ball) runs in front of him, or in any way seeks to interfere with him and keep him from the ball until another opponent can reach it; or, if he is interfered with by one opponent when pursuing another having the ball; or, if he is shouldered even from the side by an opponent who is not at the time within six feet of the ball; or, if he is "charged into" by an opponent holding his crosse in both hands, so as to strike the body of the former with it; or, if he is charged into by an opponent after throwing the ball. It is not a foul, however, if a player is accidentally hit by the ball, as it is his business to keep

out of its way. More serious offences, where the intent is to injure another, are punished by excluding the player from the field and compelling his side to finish the game shorthanded. No player wearing spiked shoes should ever be allowed to enter a match. The umpire, of course, is the sole judge of all offences and of all fouls and penalties. Instead of one, there are sometimes two umpires and a referee, the former placed one at each end of the field to decide whether the ball passes between goal poles, and the latter stationed near the players to see that the men "face" properly at the opening of the game, etc., and that the rules are observed. The final decision on all questions that arise is with the referee.

Lacrosse is a game full of life and snap, a little rough, perhaps, but not dangerously so. It is quickly played, and chains the attention of actor and watcher from first to last. Its theory and rules are simple, and can be readily learned in a very brief time. While it takes practice to master the handling of the crosse so as to promptly pick up and throw the ball with it, the skill is of a kind which any one with a little patience can acquire. Strength, agility and speed are the three principal requisites for successful playing, in addition to the even temper and good judgment which are as essential in all amusements as they are in the more serious occupations of life.



PICKING UP THE BALL.



CATCHING.

LAWN TENNIS.

THUS far the games described have been intended exclusively or principally for boys and men. The one next in order is equally adapted to both sexes and can be played with as much propriety by girls and women as by their masculine friends and relatives. It might be difficult to determine with which it is a greater favorite or among which it has a larger number of adherents, for certainly there are few amusements which have so wide spread a popularity among American and English people of all ages and classes as has lawn tennis.

Either two, three or four persons can take part in the game, but an even number is better than an odd one. Each player must be provided with a racket, and two balls are required for common use. (It is as well to have extra balls always at hand in case the first two should get lost in the course of a "set.") On a level piece of ground there should be marked off (with white paint, slaked lime or marble dust) a rectangle seventy-eight feet long and twenty-seven feet wide. Across the middle of this a net is stretched extending three feet beyond each side. The ends of the net are fastened to upright posts driven into the ground, and the top of the net should be three feet above the ground at its centre and three and a half feet at the posts. (A few inches space between the bottom of the net and the ground is a convenience in rolling "dead" balls back across the field to the server.) The erection of the net divides the rectangle into two spaces of equal size, thirty-nine feet long and (of course) twenty-seven feet wide. These in turn should be divided by a line running from the centre of the net (and at right angles to it) to each of the further boundaries, making four rectangles, each thirty-nine by thirteen and a half feet. Twenty-one feet each side of the net other lines should be drawn parallel to it. There will then be four divisions on each side of the net, two of which will be thirteen and a half by twenty-one feet, and two thirteen and

a half by nineteen feet. The whole forms a tennis-court for two players. By increasing the width four and a half feet on each side (the length remaining the same) a court for three or four is made, the total dimensions of which would be seventy-eight by thirty-six feet. Sometimes courts are constructed only for single (two-handed) play and sometimes only for double (three-or four-handed) play, as illustrated by the accompanying diagrams.

If it is desired to have a court which can be used for either two, three or four players then the interior side lines (as marked on the diagram of a double court) should be extended to the base line at each end.

As the net must always project three feet beyond the side-lines, the total length of one required for double-court tennis is forty-two feet. This size can also be used in the single court game as there is

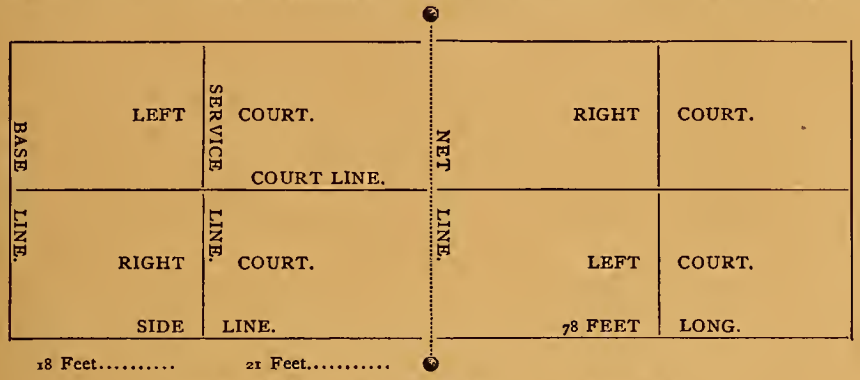


DIAGRAM OF FIELD FOR SINGLE-COURT LAWN TENNIS.

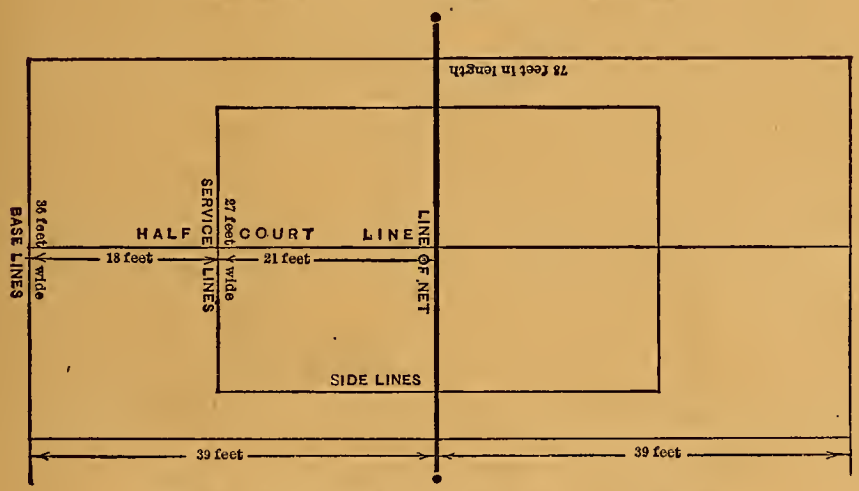


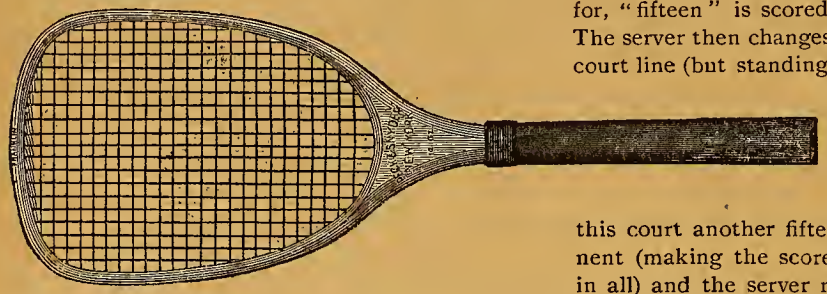
DIAGRAM OF FIELD FOR DOUBLE-COURT LAWN TENNIS.

There is no real necessity of extending what in the first diagram is called the "court line" (and in the second diagram the "half court line") beyond the "service lines" (*i. e.*, from the "service lines" to the "base lines"), as there is no distinction made in playing between the two spaces or courts adjoining the base lines. But it is necessary to have the middle point of the base lines marked in some manner and it is as convenient to do this by extending the court line as in any other way.

no restriction upon the net's extending more than the distance mentioned outside the lines. One net can thus be made to answer for either style of court.

The balls used in tennis are light and elastic (so as to easily rebound) weighing close upon two ounces with a diameter of about two and a half inches. The size and weight of the racket depends on the fancy of the owner. From eleven to sixteen ounces are as extreme weights as are often found,

with perhaps fourteen ounces for an average. They are shaped somewhat like a battledore, a handle at one end and the other end wide and flat with which to strike the ball. This batting end is made by tightly lacing with catgut a half oval frame of wood. The handle may be of smooth wood, or may be covered with leather, or wound with cord, or

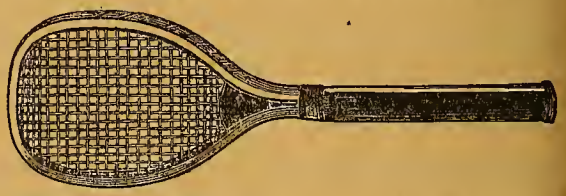


slightly roughened in any way to prevent it slipping when in use.

In a two-handed game one player stands on each side of the net, the choice of positions being decided by a toss-up. The winner of the toss-up, instead of choosing his position, can elect whether he will first "serve" the ball or have his opponent serve it. In that case his antagonist has the choice of courts, as the same player cannot choose both position and the privilege of serving (or not serving) the ball. This choice of courts may be quite important as, owing to the direction of the wind, the position of the sun or inequalities in the ground (when an absolutely smooth tract cannot be obtained), one court may possess a considerable advantage over the other. At the end of each "set" (as a tennis series of games is termed) courts are always exchanged by opponents crossing to opposite sides of the net.

The player who first serves the ball stands back at the extreme end of his court with one foot outside the "base line" (the line furthest from the net and parallel to it) and at the right of the middle (or "court") line. He serves the ball by tossing it lightly in the air with one hand and then striking it with the bat held in his other hand before it touches the ground. In striking it his object is to send it into the court of his opponent adjoining the net and which is at his (the server's) left, that is into the court diagonally opposite to him. (Whether there are two or more playing, the place into which the ball must be served remains the same: it is always into a single-court space. It is for this reason that on the double-court diagram the interior spaces next to the net are of the same size as in a single-court. The outer side lines are not regarded in serving the ball.) Should the server fail to send the ball into the proper court (*i. e.*, should it first touch the ground outside of that court) a "fault" is called, and he must try again with the second ball from the same position. If that similarly fails to land in the court played for, "fifteen" is scored in favor of his opponent. The server then changes his place to the left of the court line (but standing with one foot beyond the base line as before) and serves into his opponent's *other* net court. Should he again not succeed in delivering either ball into this court another fifteen is credited to his opponent (making the score against the server thirty in all) and the server returns to his former place and delivers the balls as at first. In this way the same player continues to serve through an entire game, alternating between his two furthermost courts whenever a point is scored for or against him. Every time he makes two "faults" in succession (that is, misses with both of his balls) his opponents score, and a game is not infrequently lost by beginners in lawn tennis soley by faults in serving the ball. It is to be noted that a served ball touching the top of the net and then falling over into the proper court is counted neither as a fault nor as a good ball; it simply is disregarded and the server delivers the ball over again.

But if the server succeeds in sending either of his balls over the net into the proper court, then his opponent (the "striker-out") must be ready on the first rebound of the ball from the ground to strike it back with his racket over the net. For this purpose he had better stand a little behind his "service line" (the line which is between, and parallel to, the base and net lines). He is not allowed to



strike a served ball before it touches the ground and only then on its first rebound. If he fails to hit it before it touches the ground a second time, "fifteen" is scored for his opponent (the server). Or if he does hit it in time and it strikes against the net, falling back into the court of the striker-out; or if it clears the net and lands outside of the

boundary lines (*i. e.*, beyond the base and side lines) of his opponent's courts it scores the same (fifteen) for the server.

Should the ball be properly returned over the net by the striker-out and the server sees that it is going to land within one of his courts, he must be equally prepared to send it back again by striking it with his racket either on the first bound or before it touches the ground—the prohibition from hitting balls on the fly ("volleying" it is called in tennis) only applying to balls as they are served. On the server's returning the ball over the net the striker-out in turn sends it back again (if he can), and so the ball is struck back and forth over the net until finally it lands outside of the bounds (when it scores against the one who last hit it), or until one of the players fails to strike it before its second rebound or else lands it within his own court-lines (when it scores against *him*). Whenever a score is made the balls become dead, the server takes them again and, returning to his base-line, plays for the court into which he did *not* last serve. This is done whether the point scored had been made by the one side or the other or off the first or second ball previously served, the alternation in courts following the score and not the number of balls delivered.

FIELDING.

As already stated, the first point gained by either player counts fifteen and the second fifteen more, or thirty in all. His third stroke advances him to forty and his fourth wins him the game, *provided his opponent has not yet scored more than thirty.* When, however, both players have each made three strokes and therefore are tied at "forty" the score is called "deuce" and one of them must make two strokes in succession to secure the game. The first who makes a stroke after the score has reached "deuce" is said to have the "advantage" (commonly shortened to "vantage"). If his opponent then makes a stroke the score returns to "deuce;" if the same opponent then makes the next stroke, the latter then has the "advantage;" and if the next stroke is again made by the same player he wins the game; but if it is made by the first player "deuce" is once more the score and the two must again struggle first for the advantage and then for the game. In calling out the score as the game progresses that of the server is customarily named first: thus, "fifteen-forty" means the server has made one stroke (fifteen) and his opponent three strokes (forty); "thirty all" signifies that each has make two strokes (thirty); "forty-love" indicates that the server has made three strokes and his opponent none; "vantage for" shows that the advantage (over deuce) is in favor of the server, and "vantage against" that the stroke beyond deuce was made by the striker-out.

Whichever player first secures six games wins the "set" or contest, which thus may require eleven games to decide it. Sometimes it is agreed in advance that if the score should become five to five "vantage games" shall be played, in other words that one of the contestants must be the winner of two *consecutive* games after the score of "deuce games" (or "games all" as it is generally called) is reached. In such a case the set may necessitate the playing of twenty or more games to determine the

match, as the advantage may swing back and forth between the players for a long time. It is the exception and not the rule, however, to play "vantage games," and it is not commonly done except in contests between clubs or for championships. One player having served throughout the first game, the other serves during the second; in the third the service returns to the one who had it before, and so it alternates until the set is completed. Each player serves from his own side of the net, courts ordinarily being exchanged only at the end of sets.

When four are playing, the partner of the server generally stands well up towards the net on the opposite side of the court-line from which the server is delivering the balls. He is thus in a position to return the ball if the striker-out succeeds in sending it back over the net. The partner of the first striker-out, on the other hand, stations himself back near the base-line also with the court-line between himself and the striker-out. By placing themselves in this way the two sides of each court are protected as well as the front and back. The partners usually arrange in advance whether, after the ball is once in play, one shall look after the right-hand side of their court and the other the left-hand side, or whether one shall have particular charge of the front and the other of the back. Which of these arrangements it is best to make will depend largely upon the style of play of the individuals, and of course it would not be wise to always adhere rigidly to either plan, but to modify it as emergencies in the game arise. The two opponents of the server receive the balls alternately during the game, one those delivered into the right-hand court and the other those played into the left-hand court, the same person not being permitted to act as striker-out for two successive strokes.

In the second game of a four-handed match the one who had been the first striker-out becomes server and the partner of the former server now first acts as striker-out; the latter in the third game becoming server. The partner of the first striker-out serves in the fourth game. This order of rotation is preserved during the set and results in each player's serving in regular turn. At the beginning of a second set in either a two or four-handed contest the first server is customarily the one who was the first striker-out in the last game of the previous set.

Though the ball must be *served* into the same sized space in a four-handed game as in a two-handed one, it can be returned (in the former case) into any part of the enlarged double-court, and the server or his partner can similarly then send it back anywhere within their opponents' double-court. The increased width of a double-court is thus available for every purpose excepting serving balls. But in a three-handed game where one player is pitted against two others the latter can only return balls within the single-court bounds, while the former has the privilege of sending the ball within the double-court limits of his opponents' territory. This is but just as there are two men to cover the ground in one case and only one in the other, and it would be almost impossible for a single player to properly guard so great a tract unaided. The single player serves every alternate game in a three-handed contest.

Should the ball at any stage of a game fall on a boundary line it is considered as within the adjoining court. Any ball which a player strikes at or attempts to return is to be reckoned a good ball even if it would otherwise have landed outside of the court-space. Generally, however, when it is quite evident that the ball will not fall within the boundaries a player, standing on or near his base-line, is allowed to stop it (on crying "fault" or "miss" before he intercepts it) without its scoring against him. This is permitted in order to save a needless waste of time in chasing balls. The server must not deliver a ball until the striker-out is ready, indicated usually by the latter taking his position or responding when the former calls "play." A ball delivered before the striker-out is ready counts for nothing (like a "net ball") and must be delivered over again. But should the striker-out attempt to return it, he cannot then claim it was not a good ball. If a ball when *returned* by either player strikes the net and then falls *over* it, it is regarded as a good ball—though a *served* ball under similar circumstances (as already explained) is not counted. Should a player, however, send the ball against one of the posts of the net, or allow it to touch himself or anything he wears or carries, excepting his racket in the act of striking, it scores against him; as it also does if he hits the ball twice or more, or if he touches the net or posts with his racket while the ball is in play.

Perhaps as useful a conclusion to this description as any that could be written will be the decisions which Mr. James Dwight, a well-known English authority on lawn tennis, has prepared on a few doubtful cases such as are most likely to arise in the experience of any one when learning the game.

Case 1. Can a player follow a ball over the net with his racket, provided that he hits the ball on his own side of the net?

A GAME AT TENNIS.

Decision. Yes. The only restrictions are that he shall not volley the ball until it has crossed the net, and that he shall not touch the net or any of its supports.

Case 2. A player is standing outside of the court and volleys the ball; he then claims that the ball was out.

Decision. The ball is in play until it touches the ground outside of the court. The player's position is of no consequence whatever.

Case 3. A player, standing outside of the court, catches the ball, and claims that it was certainly going out. Who wins the stroke?

Decision. His adversary. It is a very common thing for a player to stop a ball in this way, and score the point, but it is by courtesy only that he is allowed to do so. He loses the stroke if his opponent claims it.

Case 4. The service is delivered before the striker-out is ready. He tries to return it and fails. Is he entitled to have it played over?

Decision. No. If he attempts to return the service, he is deemed ready.

Case 5. A ball having been played over the net bounces back into the court from which it came. The player reaches over the net and plays it before it falls. Has he a right to do so?

Decision. Yes, provided he does not touch the net. He has a right to play the ball at any time from the moment it crosses the net into his court, until it touches the ground a second time.

Case 6. A ball is played into the net; the net player on the other side, thinking that the ball is coming over, strikes at it and hits the net. Who loses the stroke?

Decision. It is simply a question of which happened first. If the player touched the net while the ball was still in play, he loses the stroke. Hitting the net after the ball is dead can make no difference.

Case 7. A player is struck by the ball served before it has touched the ground, he being outside of the service court. How does it count?

Decision. The player struck loses the point. The service is presumably good until it strikes in the wrong court. A player cannot take the decision upon himself by stopping the ball. If it is going to be a fault he has only to get out of the way.

Case 8. A by-stander gets in the way of a player; the latter attempts to return the ball and fails. Has he a right to have the hand played again?

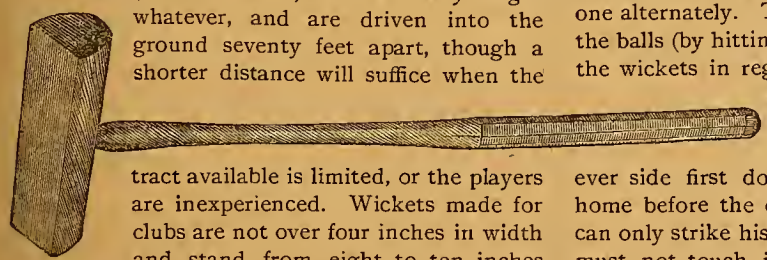
Decision. Not if he attempted to return the ball. But if he makes no such attempt, and, in the umpire's opinion, the bystander was distinctly in the way, he shall then have a right to have the hand played over.

CROQUET.

PERHAPS not even lawn tennis is more popular than croquet as an out-door game for boys and girls or for men and women—for either sex by itself or for the two playing together. It is a less active game, requiring not nearly as much exertion as any of those hitherto mentioned, and for this reason it can be enjoyed by those who have less endurance than the followers of ball or tennis require. While it is easily understood and quickly learned, real proficiency in it needs a practised and skilled hand, a sure eye and cool and clear judgment. Properly played it is one of the most scientific of all amusements.

Two, four, six or eight persons can take part in a game of croquet—or even an odd number (from three to seven), though the latter would make unequally divided sides. One of the smaller numbers is best, however, as six or eight cause a game to be tedious and slow. Each player is provided with a ball and mallet marked alike with some distinctive color, blue, black, white and red being those generally used in two- or four-handed games. The balls are made either of wood, celluloid or solid rubber (the last now being preferred by most skilled players) and their regulation size is three and a half inches in diameter. The mallets can be of any weight and size desired. The handles are of hard wood and range in length from eight to thirty-two inches, with cylindrical heads of boxwood or amaranth which sometimes have hard rubber ends screwed on. Instead of being cylindrical the heads occasionally are cubical. Formerly all players used the long handled mallets, but now experts in the game usually choose the shorter ones. The striking end of the head of the mallet is always flat.

In addition to balls and mallets, two stakes and nine wickets are required for the game. The former (made of wood) can be of any length whatever, and are driven into the ground seventy feet apart, though a shorter distance will suffice when the tract available is limited, or the players are inexperienced. Wickets made for clubs are not over four inches in width and stand from eight to ten inches above the ground, but larger (especially wider) ones can be obtained for younger players. They are made of iron or steel, bent into a u-shape like



an arch. The first wicket is placed seven feet in front of the starting stake; the second seven feet in front of the first; the third fourteen feet to the right (and one foot in advance) of the second; the fourth on a line with the first and second and twenty-one feet in advance of the second; the fifth in a line with the third and in the same relative position to the turning (second) stake that the third is to the starting stake; the sixth and seventh fourteen and seven feet respectively from the turning stake; the eighth and ninth in similar positions to the third and fifth, but on the opposite (left) side of the field. There will thus be five wickets in line between the stakes and four wing wickets. (These measurements are given for a full-sized field where the stakes are seventy feet apart and will need to be proportionally reduced when a smaller ground is used.)

Should the contest be between four or more players each has a single ball; should it be between two each takes a couple of balls, playing with each one alternately. The object of the game is to drive the balls (by hitting them with the mallets) through the wickets in regular order to the turning stake and after touching that (with the balls) to drive them similarly back to the starting stake. Whichever side first does this, bringing all of its balls home before the other, wins the game. A player can only strike his own ball with his mallet, and he must not touch it with anything else (except to place it in position under certain circumstances to

be noted in their proper place), but he can cause his own ball to strike other balls and in the doing of this is the science of croquet, as he can thus greatly assist his partner (or himself if he is using two balls) and bother his opponents.

Whoever is to open the game (chance as usual deciding which that shall be) places his ball on the ground half way between the starting-stake and the first wicket. He then strikes it (once only) with his mallet, endeavoring to send it through that wicket. If he succeeds, he can strike it again, trying to send it through the second wicket. If he is again successful, he strikes it once more, this time playing for the third wicket off at the right-hand side of the field. Whenever he makes a wicket he is entitled to another shot, provided his ball goes through in the right direction, that is from the side nearest the starting-stake. (After reaching and touching the turning-stake, the balls must pass under the arches from the side nearest that stake.) The order in which the wickets must be passed through is (1) the one next the starting-stake, (2) the one in front of that, (3) the nearest one on the right-hand side, (4) the centre one, (5) the distant right-hand one, (6) the second one from the turning-stake, (7) the one next to that stake. Then the turning-stake must be touched and after that the order is (8) the wicket nearest the turning-stake, (9) the second one from that stake, (10) the distant left-hand one (as looked at from the place of starting), (11) the centre one, (12) the near left-hand one, (13) the second from the home stake and (14) the first wicket again. Each ball on a side must also touch the home-stake after making all the wickets to secure the game. It will be seen that all the wickets have to be made twice, with the exception of the four wing ones. Including the two stakes that must be touched, every ball has virtually sixteen points to make. A wicket made out of its regular order or from its wrong side does not count.

It is very likely that the first player will miss on the third wicket, as that is a difficult shot to make when there are no other balls in the field on which he can play and so assist himself. But whether it is that wicket he fails to make, or the next one, or the first of all, he must leave his ball on the field exactly where it stopped after his miss. His opponent then has a turn and places his ball on the ground where the first had been. He can not only play for the wickets but he can also play for his opponent's ball. Should he hit it he makes what is called a "roquet," and he is then entitled to a "croquet." This consists in placing his own ball (which he can touch with his hands for this purpose) in contact with the one roqueted (as soon as the latter stops rolling after being hit), and on whichever side of it he chooses, and then striking his own ball with his mallet, so as to move both of them, either in the same or in different directions according as they were placed and as the blow was struck. This is sometimes termed a "loose croquet" or a "roquet-croquet" to distinguish it from what is known as a "tight croquet,' or striking the ball when the player's foot is pressing it down. In this case the impulse from the blow of the mallet is communicated to the roqueted ball and the latter moves, while the ball actually struck remains still. The loose croquet is now oftener employed than the tight croquet, and in some associations the latter is no longer allowed. Each player can roquet and croquet every other ball in the field once (and only once) after every point (wicket or turning-stake) he makes. But of course this does not absolve him from making any of the wickets, it only enables him to get an opponent out of the way or to advance his own ball or that of his partner. After roqueting a ball the player is entitled to another shot, the same as if he had advanced a point. A ball roqueted or croqueted through the wicket for which it is in play (*i.e.*, the wicket it ought next to pass) makes that wicket whether it be accidentally done by an opponent or purposely done by a partner. This, in fact, is the way that partners most help each other, and one of the secrets of good play in croquet is not permitting one ball of a side to stay too far behind the others; it is often better for the player who is ahead to use his turn at times in helping forward laggards than to further advance himself.

When the second player has got on as far as he can and misses, the partner of the first brings out his ball as his predecessors did; or, if the game is between only two, then the first starts his second ball. There are already two balls in the field for him to play on as well as the wickets and hence he has a better chance of making points than the others had had. Of course the player of the fourth ball when his turn comes has a still better opportunity at his start than had any of the others, but after that (in a two or four-handed game) each will have whatever aid he can obtain from three balls.

After a ball has make the circuit of all the wickets, but has not yet touched the home-stake, it becomes a "rover," and its duty then should be to assist its partners until they all likewise are rovers, when one of them can first put the others "out"

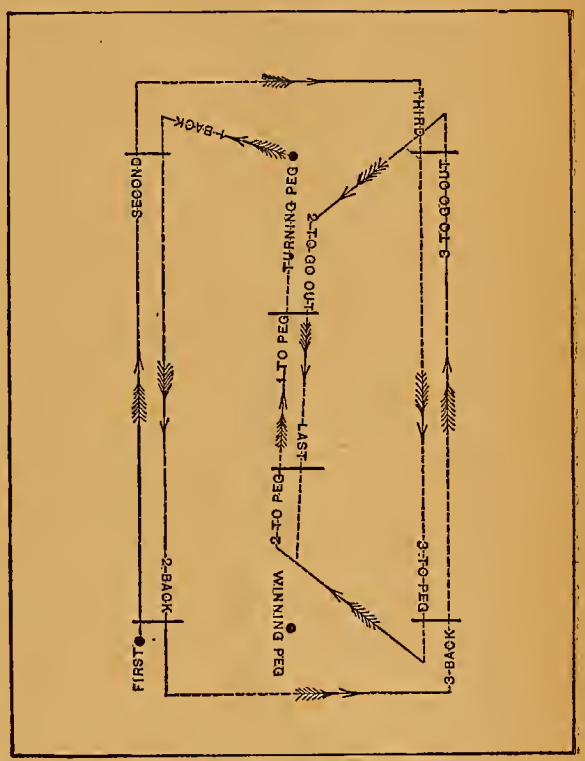
by causing them to strike the winning-stake and then similarly go out itself. This is better than for each to go out as it becomes a rover in its turn, as the latter course would not only deprive players of the assistance of their roving partners and remove a hindrance that might be offered to the enemy, but it would also be needlessly giving the enemy a further advantage by leaving them a greater number of balls in the field with which to keep *their* opponents away from the home-stake and help one another on. As the turns of some of their balls in that case would immediately follow each other, they could play into one another's hands and so perhaps advance themselves more quickly than if an opposing ball came in between. As soon as a rover touches the winning-stake (whether made to do so by friend or enemy) the ball is out and can take no further part in the game, and its turn of course is lost to its side. Sometimes it is good play to get rid of a troublesome opposing rover by thus sending him to the stake.

Clips, which may be made of patent clothes-pins, colored (on one side only) to match the balls and mallets, are very useful in indicating the wicket any ball is played for. They prevent mistakes and save confusion. As each arch is passed by a given ball the corresponding clip is taken from it and placed on the wicket next in order, its colored side showing from which direction the ball is bound.

Sometimes, instead of the usual style, a cage wicket is substituted in the centre of the field. It is made by placing two ordinary arches eighteen inches apart and at right angles to the others.

When a player on a single shot roquets two or more balls he can croquet the first one only. If he roquets a ball and then (on the same shot) makes a point, he must disregard the point and croquet the ball. But if he made the point and *afterwards* his ball touched another ball he can both count the point and croquet the roqueted ball. He does not, however, get another extra shot by doing so, or by making two points on a single stroke; he only has the one shot after making two wickets (or after making a wicket and a roquet) that he would have had after making one wicket. In other words a ball has but the same privileges on gaining two points that it has on gaining one. To make a wicket the ball must pass entirely through it, so that a straight edge laid against the wire (on the side through which the ball passed) will not touch the ball.

As will be readily seen success in croquet depends in the first place upon sureness of aim so as to be able to send the ball in just the direction desired, whether it be for the purpose of making a point, of roqueting another ball, or of gaining a coveted position. In the second place it depends upon accurately measuring the force of blow needed to send the ball the precise distance wanted, so that it



THE SIX-HOOP SETTING.

will neither fall short of the proper spot nor on the other hand overshoot it. And in the next place it depends upon a knowledge of the different effects produced on croqueted balls by varying their positions and the character of the stroke of the mallet. No satisfactory description of these effects can be written; knowledge of them must be acquired by practice.

GOLF.

GOLF is an ancient Scottish game which of late years has become very popular in many English-speaking countries. It requires, perhaps, a greater space of ground to play it on than any other amusement, and possibly occupies more time in the playing than most other out-door sports, excepting always cricket; but it is a healthy active game, exercising all the muscles of the body and fully engaging the attention of the mind, so that as great a benefit can be derived from it as from any of the many forms of open-air recreation.

POSITION FOR THE DRIVE.

Either two or four persons usually take part in a match. A larger number may play and often do, but the single or double ("foursome") game is the better one, especially for beginners. The length of the course should be at least three miles and one five miles long is better—still a shorter one will suffice if no suitable long one can be obtained. Of course such an extent of territory cannot be laid out in the careful way a base-ball ground, a cricket field or a tennis court is prepared—nor is any attempt ever made to do so. A region is selected where the natural conditions are already fairly favorable, and the preparations are then confined to the starting-place and to certain points along the course where the "holes" are to be made—these holes being the great and distinguishing feature of the game. If feasible the course should describe more or less of a circle like a race-track, as then returning players would not interfere with outgoing ones, but if this is not possible a straight course will answer the purpose, and players after going from one end to the other can then work their way back from the further end home. The course has no designated width, as the further description of the game will show that to be unnecessary.

As to the nature of the ground desirable for a golf course that of an undulating character is by far the best. A wooded mountainous tract would make play impossible; a dead level would take all interest from the game. But a grassy country with frequent risings and depressions, an occasional sand-bank, small streams, and a little underbrush once in a while gives the greatest sport by presenting difficulties ("hazards" as they are here called) to be overcome, and the conquest of such difficulties is the life of the sport and is what attracts its worshippers.

Along the course at distances varying from one hundred to five hundred yards (according to the length of the course) there should be made, for the ordinary regular game, eighteen holes. If, however, the course must be limited in length and cannot be full size, it is better to have a smaller number of holes (and to go around the course twice) than to place the holes too near one another. The distance between the holes should be *about* the same but need not be exactly uniform, as it is more important to have them at suitable spots than at a specified number of feet apart. A piece of clear and level greensward about twenty yards square offers the most favorable location. At the centre of this greensward a circular hole should be dug with a diameter and depth each of four and a half inches, and it should be lined with an iron tube to prevent its sides from caving in, etc. The turf around the hole should be thoroughly rolled and the grass cut short so that the whole tract of twenty yards becomes almost as smooth as a billiard table. These turf tracts around the holes are known as "putting-greens" and should always be kept in perfect order.

In each of the holes is placed a rod of iron, or

wood bearing a flag as a guide, indicating from a distance the place where the hole exists. Whether the course be undulating or flat, the necessity for such an indication is apparent. But sometimes the surface of the country may be so uneven that it is impossible to see from flag to flag so placed. In that case it is necessary to employ besides what are called guiding flags. These are mounted on staves to whatever height may be required, and are placed at certain convenient places to show in what direction the hole lies. On arriving at the putting-green, and while playing thereon, the small flag is removed from the hole, until the hole is scored, when the flag is again replaced for the guidance of the oncoming players. These flags, too, vary in color, but only to the following extent. As far as the ninth hole going out, the flags should be white, and for all holes coming in, the flags should be red. On some greens, however, this order of things is reversed.

Near to each putting-green another important spot must be chosen as a starting-point from hole to hole. This is called the teeing-ground, which should be tolerably level, or inclined in the slightest degree. This ground is indicated by paint-marks on the turf. The starting-point at the beginning of the game is called the tee. Within the limits of the paint-marks the ball must be placed, or as it is called "teed." To tee a ball for driving, it is usual to place it on some small eminence on the surface of the turf. Some players put it directly on the ground; others on a few blades of stiff grass; but the more common practice is to mould a minute hillock with a pinch of damp sand on which the ball can lightly rest. When the ball is driven from the teeing-ground it cannot be touched again by the hands (excepting under certain conditions) until the next hole has been scored or given up.

So much for the course on which the game is played; now for the game itself.

Each player, if there are but two, provides himself with a small light ball. If more than two are in the match then each pair of players (partners) has a ball. Each player has also a set of clubs which will be described further on. These clubs are used in striking the ball, and they vary in style and number to suit the fancy of each player. In a "foursome" (four-handed) game the two partners strike their ball alternately. In a single (two-handed) match each man strikes or touches only his own ball.

Chance, as usual, having decided the order of play, the man having the lead places his ball (which he can touch with his hands for this purpose) on the tee at the starting-ground and drives it with one of his clubs in the direction of the first hole. As that hole on a full-sized course is about five hundred yards distant, and on any course should be at least one hundred yards away, he naturally will not reach it on a single stroke. Leaving the ball of the first player where it landed, his opponent (or either one of his opponents if it is a "foursome" match) puts his ball on the tee and in turn gives it a drive towards the same hole. Of course he cannot reach that hole on his first blow any more than could his predecessor. If, however, he does not send his ball as far as the first ball went, he (or his partner if he has

BEGINNING THE HIGH LOFTING STROKE.

one) must strike it again and continue striking it until it passes the first ball—keeping careful record of the number of blows struck. As soon as the first ball is passed its owner (or his partner in a four-handed game) strikes it again towards the hole and the stroke is repeated if the first attempt did not place it ahead of the point where the second ball rested. And so the game is continued, each ball in succession being hit a sufficient number of times to drive it ahead of its opponent, partners (in foursome matches) invariably alternating in the strokes, until the balls have landed in the first hole. The player or side which gained the hole with the *fewer* number of strokes wins the first point in the match.

Should both sides make the hole on an even number of strokes each is credited with half a point.

The start from the first hole is made by the winner of that point and he places his ball on the adjacent teeing-ground and gives it a drive towards the next hole. He is followed as in the first instance by his opponent and the contest for the second hole is similar in every respect to the preceding one. Each hole as it is made gives a point to the side accomplishing it with the smallest number of blows, and when the round of eighteen holes has been completed the one credited with the most points has won the match.

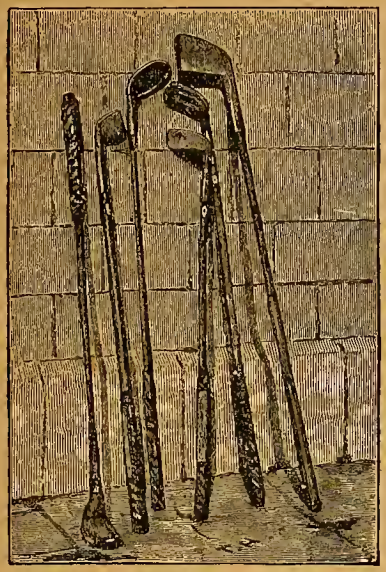
AT THE TOP OF THE SWING.

Instead of "hole play," as the foregoing method of counting is called, matches are sometimes decided by what is termed "score play," in which the number of strokes required to make the entire eighteen holes is reckoned together and the one whose total score is lightest is pronounced the win ner of the game. By this method of counting a player manifestly might win a majority of the holes and yet lose the match; as for instance he might gain ten holes on a score in each case of (say) four to five; and lose the other eight on a score of (say) seven to five. His total number of strokes in this example would be ninety-six against ninety for his adversary, although he has ten holes to his opponent's eight. Score-play is to the advantage of the skilled golfer; while hole-play is better for the inexperienced one, as it prevents his becoming too easily discouraged by ill-success at the start. In medal contests score-play is nearly always adopted.

All of this sounds very simple, and the principles of the game *are* easily enough learned to permit a beginner's getting plenty of amusement from golf without much preliminary instruction. But skill in it is quite another thing and requires fully as much practice as in any other sport. To strike a ball on the teeing-ground so as to send it the greatest possible distance and in just the right direction; to get it out of a sand-bank ("bunker") in the fewest number of strokes; to successfully hole it when on the putting-green with a single blow—a mastery of these and of many another point in the game does not come "by nature" but only by hard, constant and careful work. But with persistence they all can be acquired and reasonable expertness obtained by any one who will give time and attention to the necessary practice. Fortunately a player can be as deliberate in his strokes as he chooses and so cultivate the habit of carefulness as he learns the game.

Besides handling the ball for teeing it may be also similarly touched under the following conditions: when the two balls lie within six inches of each other the one nearer the hole to which the parties are playing should be lifted up till the other is played, then placed as nearly as possible in its original position; if a ball lie in water its owner can take it out, change it (*i.e.* substitute another for it) if he pleases, drop it behind the hazard and then play it, but an extra stroke is marked against him if he does this; a ball stuck fast in wet ground or sand may be taken out and replaced loosely in the hole it has made; a ball falling on the personal property (*e.g.* clothing) of the owner or occupant of the land over which the golf course extends can be lifted and dropped behind the article without penalty, provided the property would be injured if the ball were struck where it lay; a broken or cracked ball may be replaced by a sound one, and a lost one by another one (in the latter case the hole is counted against the loser; the ball is considered lost if not found in a ten minutes' search). Before striking his ball a player is entitled to remove any loose impediment within a club's length of his ball, unless the ball lies within a bunker, on sand, on a mole-hill, on a road, or other hazard, or touches a growing bush, etc.; but everything on a putting-green can be removed excepting only an opponent's ball. Whatever completely covers or hides a ball can be sufficiently moved to permit a player seeing his ball before striking it.

Formerly the balls used in golf consisted of feathers stuffed in a leathern case, but now they are usually made of gutta-percha, the surface roughened and painted before put into play. They vary in

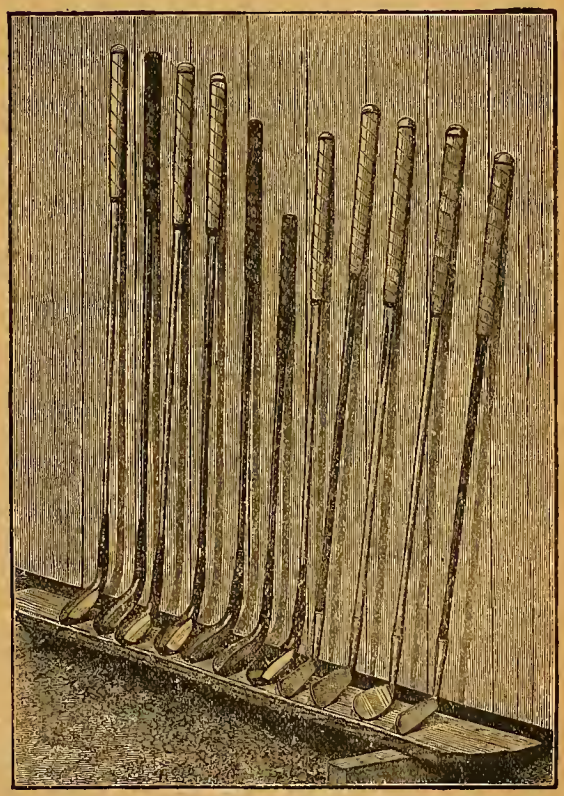


OLD STYLES.

weight and size according to the taste of the golfer, averaging, perhaps, a little under two ounces in weight and a trifle under two inches in diameter.

As to the clubs used in striking the ball, the principal one is known as the "driver" and is employed for long distances and always in starting from the tee. Like all the other clubs it consists of a wooden handle or shaft, terminating in a head of peculiar shape. The peculiarity of the shape of the driver is supposed to aid in keeping the ball, after being struck, lower than any other club. The "grassed driver" differs from the driver in having a face that will give the ball an elevation when struck; and the "long spoon" is intended for use when a still greater elevation is desired. When a ball is lying in a small hollow the wooden "niblick" or the "brassey" comes into play as they have smaller heads than the ones previously mentioned. In approaching a putting-green which has a bunker, burn or other hazard before it the "lofting-iron" is employed as it lifts a ball well without sending it too far. To extricate a ball from bunkers, cart-ruts, etc., the "iron niblick" is the best club. The usefulness of the "cleek" is shown on long approaches over hazardous ground and also in playing a ball out of long grass and sandy soil. And the "putter," as its name suggests, is intended for holeing the ball after it has reached the putting-green. These are but a few of the clubs which may be used, but they are sufficient for a learner to begin with. A complete list of all the clubs which have been employed in playing the game would comprise the following:

Wooden Clubs.	The Driver, or Play Club. Grassed Driver. Long Spoon. Middle Spoon. Short Spoon. Baffing Spoon. Niblick. Brassey. Bulger. Putter. Driving Putter.
Iron Clubs.	Iron Putter. Cleek. Driving Iron. Medium, or ordinary Iron. Lofting Iron. Niblick. President. Mashy.



MODERN CLUBS.

It is hardly necessary to say that no player would think of using *all* of these clubs. In Great Britain it is customary for each player to have an assistant (called a "caddy") to carry his clubs.

When more than four play a match the third couple (of partners) follows the second and must of

AT THE END OF THE SWING.

course continue striking their ball until it is placed ahead of the other two balls; and similarly the fourth couple, if so many are playing, must in their turn keep at it till their ball is in the lead. But more than four players make a game tedious and confused. It is better for the golfers to organize separate matches, one set of players following the other over the course. This can easily be done as the course is so extensive, the only precaution needed being that the two sets of players keep at least one hole apart.

Experienced players often give beginners odds of a stroke a hole, or one every other hole (called a "half"), or one every third hole (a "third"), etc., or even two or more strokes a hole. That is, so many strokes are deducted from the number actually made by the beginner in deciding the winner of the successive points. Sometimes the odds are given in the form of so many strokes in the entire match, to be counted whenever the recipient of the odds chooses. This is called a "bisque" and is greatly to the advantage of the beginner as he can use them just when they will do him the most good. When odds of a "half" or a "third," etc., are given, no option is allowed as to their use: they must be taken at *every* second or third, etc., hole irrespective of whether they are needed at just those times or not.

In medal playing each golfer is paired with one opponent and each keeps a record on a card of the other's play (unless a marker accompanies every couple of contestants). When all have completed the round the cards are compared and the award made to the one who scored every hole with the smallest total number of strokes. If two should be tied then they must make the circuit again playing against each other. Medal contests, as already stated, are almost invariably decided by "score play" and not by "hole play."

CURLING.

CURLING is the great winter sport of Scotland, and in principle greatly resembles the game of quoits. It is played with "curling stones" on a field of smooth ice which should be about fifty yards in length and some ten yards wide. On this field of ice the lines of what is called "the rink" are laid out.

A rink consists of a rectangular space forty-six yards long and four yards wide, near each end of which a circle is drawn having a radius of seven feet. The centre of each circle is termed the "tee" and the two centres must be just thirty-two yards apart. The object of the players of each party is to slide the curling stone within this circle as near the "tee" as possible. There are four players on each side, making eight players to each rink, and each player plays two stones alternately with an opponent; and if all the eight stones of one side are sent within the circle, and none of those of the opposite party, then the former score eight shots for the "end" — the end in question being equivalent to an inning in cricket or baseball. Should one of the stones of the opposite party, however, be within the circle, and also be the second stone nearest the "tee," then the party having the stone nearest the "tee," count one only, even though all the eight stones of their side are in the circle. In other words each side counts one point for every stone left within the circle nearer to the "tee" than any stone of its opponents. In sliding the stone all the players stand at the opposite end of the rink from the "tee" played for and with both feet within a smaller circle (the radius of which is eighteen inches) drawn to the left (when facing the "tee" played for) of a line connecting "the tees." These circles should be four yards back of the "tees" and their circumferences should just touch the line passing through the "tees." (A left-handed player can have the circle at the right of the line.) The following diagram will best show how a rink should be drawn.

The stones used in curling are circular blocks of Scotch granite, rounded on the sides, and having an iron bolt through the centre, on which is screwed the handle in such a way as to admit of the upper part of the stone being made the lower part by changing the position of the bolt. They are polished so as to glide over the ice easily, the under part of the stone being smoother than the upper, the latter being used for very glassy ice. The stones used by men weigh from thirty to fifty pounds, and measure thirty-six inches in circumference, that being the limit, though they may be made smaller. The heavier the stone the more polished its surface needs to be; and the best quality of granite for the pur-

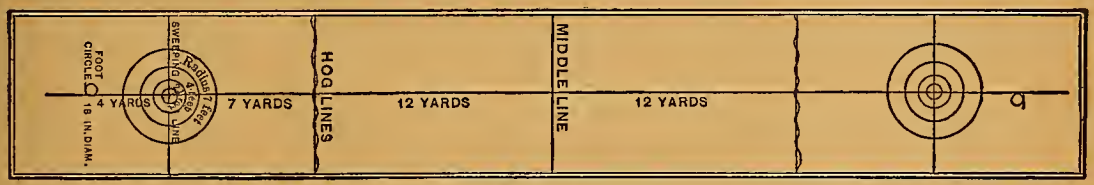
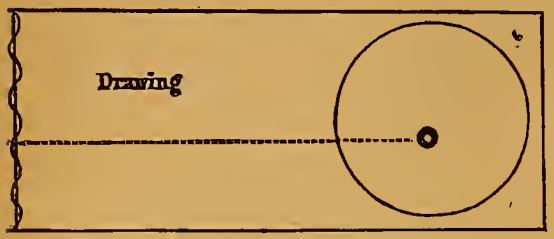


DIAGRAM OF A CURLING RINK.

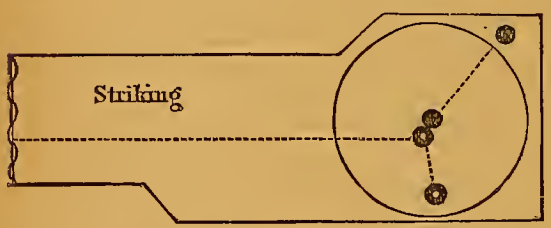
pose is that which admits of the finest polish. In Canada some of the clubs use iron as the material instead of stone, as the severe cold at times makes the granite too brittle. These irons are heavier than



the stones, as their surface is necessarily smoother, but they must not exceed seventy pounds in weight. Curling stones suitable for boys' clubs weigh from fifteen to twenty-five pounds.

In addition to his two curling stones each player should also be provided with a broom to sweep the rink clear of obstructions, especially of the fine ice which the stones are apt to chop from its surface as they slide along.

Supposing the rink to be in readiness for commencing a match, the players and captains—technically called skips—chosen, and their order of playing appointed. Side No. 1, having won the toss, begins play by sending player A to "cast the first stone."



The skip, having taken his position at the end, directs the player to "draw" in to a certain spot within the circle—that is, to slide his stone as close to the place pointed out as possible. Player A, of side No. 2, now takes his position, and the skip of his party, taking his stand at the end, directs A, No. 2, to strike his adversary's stone out of the circle, and in such a manner as to leave his own inside the circle; as he fails to do this, A, No. 1 takes his place to play his second stone, and by the direction of the skip, tries to send it so as to rest on the line directly in front of his first stone lying within the circle, thereby "guarding" the "winner" from being struck out of the circle by the players to follow. The object of side No. 2 now is first to remove this guard, and having done that, to send the stone lying within the circle outside of it, leaving the stone striking it out within; and then, if succeeding in this, to guard its own stone left in the circle. After the first player (A), from each side has cast his two stones, another couple of opponents (B) step forward and alternately try to dislodge the stones of their respective adversaries (A), and place their own closer to the

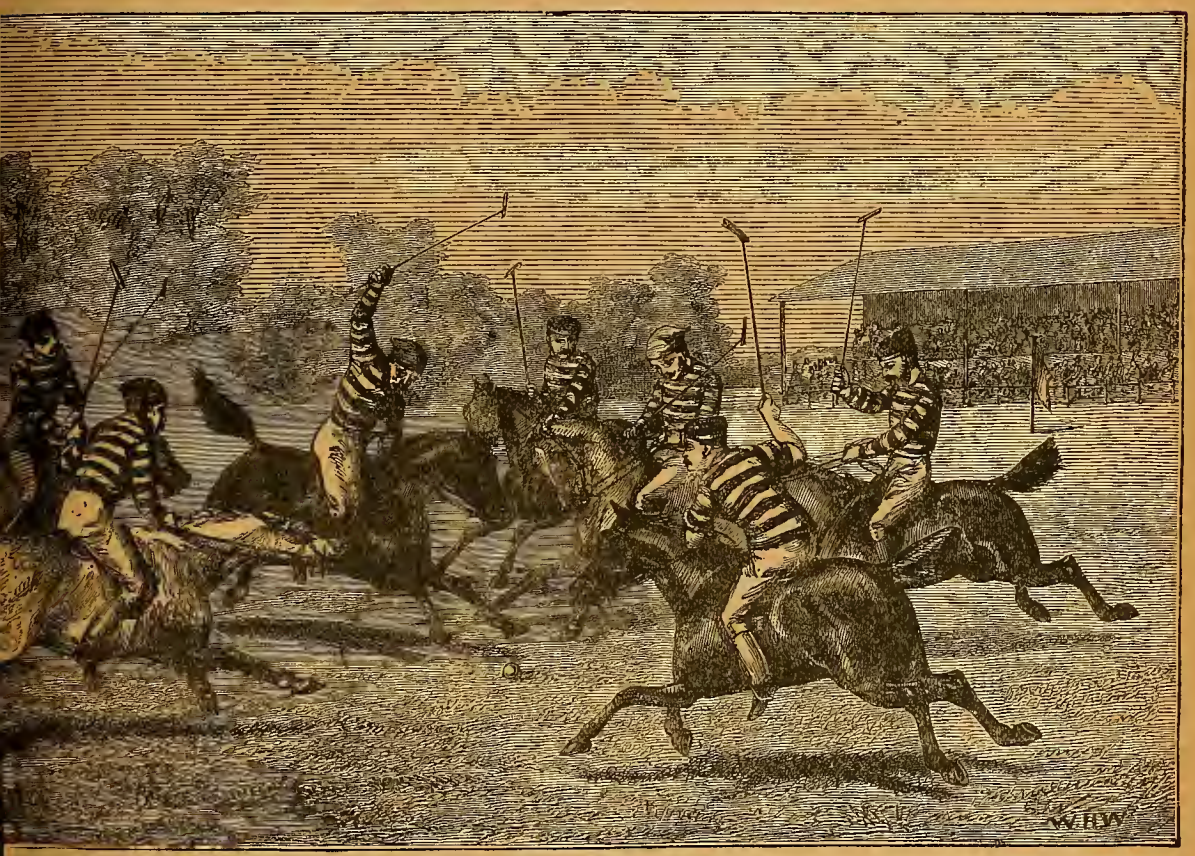
"tee" than the others. So it continues, a third couple (C) following the two B's and being in turn succeeded by the last couple (D).

It will be readily seen that in the course of a game like this an ample field is afforded for a display of a great deal of strategic skill, and as a matter of course the captain of each side has his hands full of business in directing his players how to send their stones to the circle and outmanœuvring his adversary.

The side which makes the greater number of points in either a given time or in a certain number of shots (to be agreed upon in advance) wins the match. Both sides, of course, play for the same "tee" until all eight have each cast their two stones; then they all reverse and play for the opposite end.

POLO.

THE game of polo is simply "hockey" played while on horseback. It is, of course, a sport only available for wealthy people, as the ponies or "mustangs" trained for the game are expensive animals, and each player requires to have two at command, not only to relieve one animal from over-fatigue in a match, but also in case accidents happen—and



POLO.

accidents do happen in it frequently, for it is a rather dangerous amusement. The ground required for this sport must be larger in size than a field which would do for "hockey"; and it should be of level turf, without swampy places or intersecting roads. A space of 120 yards in length and 70 in width is the smallest that should be used; and it is far better if a ground can be secured of double that size. In the middle of it, at each of the two ends, will be placed the goals, as at football; and it is, of course, the object of each side to drive the ball between the posts marking the adversary's goal.

The great attraction of polo, which has made it popular among those who can afford to play it, is to be found in the horsemanship which is required of the players, as well as in the difficulty met with in hitting the ball. The stroke is made with a long club like a mallet, whereas in hockey it is hooked and projects only on one side, so that the ball may be either driven forcibly forward or partly drawn and partly pushed along the ground. Polo is, in short, almost diametrically opposite in its

system to hockey, in which dribbling is the most important part of the game, and proficiency in keeping with the ball and following it all over the field is the chief qualification of a first-rate player. There are two strokes common in polo—the forward and the back-handed, and the latter is extremely useful when the ball is flying towards the goal, and a defender thereof, galloping after it, overtakes it in time, and by one clever back-hit sends it away far behind his back towards his friends. The rules of polo do not usually include any restrictions as to off-side, and thus a skilful player will so place his ball as to elude the enemy, and find its way toward one of his own side. There are generally eight players on each side; and they should be distinguished by a contrast of color in their costume, as it would be otherwise impossible in the heat of action to know friend from foe.

As for the ponies used in polo, the chief requisites are that they should be swift, both in a straightforward course and at the turn, afraid of nothing, and obedient to the slightest movement of the rider. These, it may be thought, are rather heavy demands to make; and, in effect, a good polo pony ought to be worth a handsome price—a much more handsome one than he generally fetches in the market. For an animal which is really good for polo must be good for almost everything else, and more especially for teaching a person how to ride, and how to become in all respects a good horseman.

BADMINTON.

Of all games of skill badminton is perhaps the least-known by the public at large. It has come to us from India, where for more than a dozen years it has been a favorite pastime of the English officers, and is now fast gaining a strong foothold in America. Though it may be played within the house its proper place is out of doors, where there is more room for vigorous action than within a parlor or hall. It calls for nearly as much agility and quickness as tennis, and, although the exercise required is not violent, the enjoyment experienced by the players in a closely contested game is just as keen as in the more widely-known sister game. For an indifferent player, badminton is much the better form of sport, and the girls and women who go in for it are more enthusiastic in its support than the most confirmed players of tennis.

The game is played in a court laid out somewhat similarly to a (single) lawn tennis court. Its dimensions must depend, of course, upon the space available, but twenty-eight feet by twenty feet makes a fair average sized one. The net is from two feet to two feet six inches in breadth and, instead of being set upon the ground or floor, is on long poles, and is hung at a distance of from five feet six inches to six feet from the surface of the court. Instead of balls, shuttlecocks, or "birds," as they are technically called, are used. The racquets or bats with which they are knocked about are generally of a lighter weight and somewhat smaller than the ordinary tennis racquet, although the tennis racquet can be and is often used. For in-door playing a "bird" weighing half an ounce is used, but out-doors, on account of the wind, one weighing an ounce and three-quarters, loaded and covered with rubber, to prevent injury from moisture, is preferable.

From one to four persons play on a side, and the shuttlecock or "bird" must in all instances be returned on a "volley" or before it touches the court surface. The "birds" are served and returned in the same manner as in lawn tennis, except that if the shuttlecock falls to the court surface it is counted a miss to the player who fails to return it and to his side. The service is from the outer corners of the service courts, the player standing with both feet within a section of a circle drawn two feet and six inches from the corner. The divisions of the courts are only observed on the serve, and the players can stand where they please on their own sides after it. The shuttlecock must be served so that it falls within the lines of the service court as in tennis, and clear of the net-ropes and posts. If the net is touched in the service and the "bird" falls over, the stroke is called a "let" and does not count against the player.

In play, however, the touching of the net by the shuttlecock when it goes over counts as a good stroke. If the net is touched by the racquets of the players, or if they reach over the net with their racquets, the stroke counts against them. Two "faults"

put "hand out," and in all cases "birds" falling upon boundary lines are regarded as "faults," both in service and in play. Fifteen points constitute the game. No overhand stroke is allowed on the service. In judging whether a player has reached over the net, it is always noticed if the "bird" is struck before it has crossed the net and merely been followed over by the racquet of the player. In this case it is a good stroke, but if the racquet itself touches the net the play is counted a miss.

ARCHERY.

THE great drawback to archery is apt to be the expense attending it, as a good bow with suitable arrows cannot be bought for a trifle, to say nothing of the other fittings considered desirable and which add to the comfort and convenience of the marksman. But after the first outlay is made and one is supplied with what is needful, future expenses can be made very small and the archer can get a great deal of healthful amusement, either by himself or in company with others, at little additional cost unless, indeed, he belongs to a high-priced club, in which case he may find his pleasure by no means cheaply purchased.

Standing in front of a circular target thirty yards distant, and watching the movements of a practised archer as he grasps his bow, places an arrow in position and then with comparative ease sends it flying into the centre of the "gold," the whole movement with its final result looks so simple, so easy of attainment, that a casual observer would be apt to think the sport rather too much of boy's play for men to engage in. But when the novice tries his hand at this apparently simple act, and realizes, by practical experiment, what difficulties beset him and what a number of things he has to learn to do before he himself can hit any part of the target at all, his respect for the sport is very apt to increase in the ratio of the obstacles he meets with in his test of its merits.

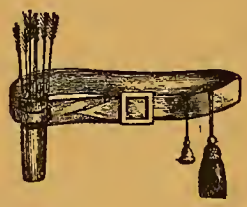
To aim with a bow is very different from aiming with a gun or a rifle. In the one case you shoulder your rifle, and running your line of sight along the barrel, you literally take deliberate aim. In doing this, the steadier your nerve the truer your aim; but "the mind intent" has little, comparatively, to do with it. It is a combination of keen sight, steady nerve and straight aim. But with the bow it is different. Here the mental work to be done is everything. In archery the word aim, in the familiar sense of the word as applied to a rifle, is inapplicable. Experience teaches the practised archer to aim with his mind, as it were. You intuitively feel that you have your bow in the right position to send the arrow flying to the centre of the target. Moreover, you look solely at the "gold" centre of the target, in shooting with a bow, and never at your bow or the arrow, as it lies on your hand with bow arched ready for the final "loose." It is this *feeling* your aim, instead of *seeing* it, that is a peculiarity of the art of archery. This comes only by the familiarity of continuous practice.

To hold the bow firmly with the left hand, as if it were in a vise, is the first letter of the archer's alphabet. The second is to bend the bow to the arrow's head properly, and the third, to "loose" the cord from the finger of the right hand at the right moment. This is the A B C of archery. Then comes the placing of the arrow in position; seeing that it is "nocked" in the right place on the string; that the "cock-feather" is uppermost, and that the tips of the fingers are proper-

ly on the string, etc. When the familiarity of constant practice has made the proper form for all these details a regular habit, then one will be prepared for the mental study of the situation, and then comes "the headwork of archery," so to speak; and just as you are able to excel in this will you become a skilful archer.

Another important matter is the position of the body when drawing the bow and shooting the arrow. One should not directly face the target as is done when firing a rifle, but should stand with the side of the body toward the target, the face turned so as to look over the left shoulder.

QUIVER.



BELT.

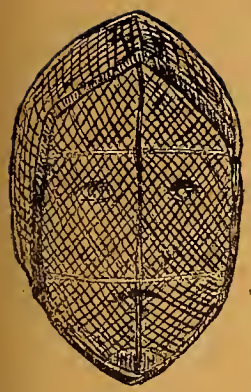
BRACE.

GLOVE.

To stand firm and steady is the object, so as to avoid any varying of the steady position of the left arm when it is extended. At first the novice will naturally find this position an awkward one, but practice will render it familiar. The left arm, too, when extended and when first called upon to resist the pull of the right arm in bending the bow, will be apt to shake and be unsteady. To avoid this one should practise holding out at arm's length a weight equalling that of the bow. Any exercise, too, which will strengthen the muscles of the wrist of the left arm will be found advantageous. This arm is the lever on which one depends for a correct delivery of the arrow. As it is raised or lowered so will the arrow fly high or low. Also if the arm is bent the power to draw the bow to the arrow's head is lessened. All these little details have to be borne in mind in practice. Not one of them must be forgotten. By this means only can a regular habit—a correct form—be attained. Then comes the matter of the using of the right arm. Here, too, new muscles come into play, especially those which are brought into action in pulling the bow-string back as far as the length of the arrow admits of. At first it will feel like a very constrained position and be painful; but as the arm becomes trained to its new work all that disappears. To girls who are accustomed to weak muscles of the chest and arms from their unemployment this new exercise may come hard; but its advantage repays all that they may temporarily suffer from. When one has learned to "pull the string" correctly, he will have to attend to the comparatively simple matter of letting the cord slip from his fingers. Any one practising with a bow, unless the cuticle of his fingers is as thick as that of a day laborer, will have to wear leather finger-tips, and the face of these should be sufficiently soft and pliant to let the cord glide from them easily. In holding the cord, too, there is but one right way, and that is to let the end of the arrow, as it lies on the cord, be between the first and second fingers, the tips of those fingers being held on the cord. To let go the cord at the right time is an important point, a good "loose" being essential in aiding the correct flight of the arrow.

Stand steady, hold the left arm out straight and firm, look at the "gold" as you bend the bow, and the moment the eye is on the centre of the target and the bow is bent to the arrow's head, loosen the hold on the cord with a quick, easy motion. As the arrow leaves the bow, if all the movements have been correct and in harmony, with the thought in your mind that the arrow ought to go right to the gold, ten to one but it will go there, and just as often as the thought and motion harmoniously correspond.

FENCING.



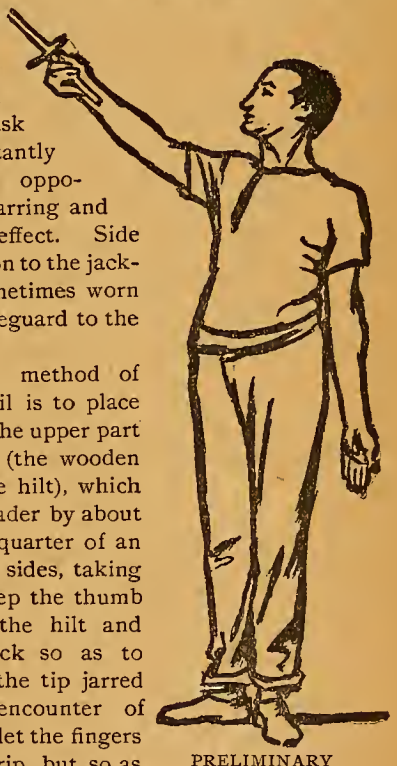
MASK.

THOUGH the practice of duelling has happily gone out of fashion all over the civilized world, the art of fencing, originated by it, is not by any means to be despised as a thing whose usefulness passed away with the barbarous custom which gave it birth. For a knowledge of fencing is not only still of service to the soldier, and even to the civilian in teaching him how to defend with the sword his life and the lives of others when in danger, but it is also of the greatest use in imparting confidence to the mind, in giving grace to the bearing, in rendering the wrist more flexible and supple and in training the eye to see quickly and accurately. It is in every way a thoroughly manly accomplishment and a most delightful and healthful exercise.

First in importance in connection with it is the "foil," the modern instrument which takes the place of the more deadly sword once employed. If one can learn to handle the foil effectively he need not fear, should occasion arise, to use the sword—as the two are essentially alike in all respects save only point and edge. The blade of a foil should be thirty-three or thirty-four inches long, four-sided and tapering gradually toward a blunt point (if a point may ever be called blunt) which should be covered with a button to prevent any risk of accidents. The part of a blade (about one-third its length) nearer the hilt is called the 'forte" and the remainder the "foible." The hilt (or handle) is usually five inches long and is shaped so as to fit the hand. It should be covered with wood, and should end in a weighted 'pummel,' slightly bent, so as to balance the foil and make it come up well in the hand.

Next to the foil in relative importance comes the mask which covers the face to protect it from any possible mischance. It should be made of stout wire and should always be carefully inspected before use to see that none of the links are loose or falling and that the top bar across the front does not interfere with the sight. The fit of the mask is important as it is impossible to watch an adversary closely if the mask shifts about uneasily with every motion of the head.

A slightly padded glove, flexible and close-fitting, is an essential in guarding the hand wielding the foil. The thumb, particularly, needs to be protected as its tip is apt to be jarred and so the grasp of the foil become impaired. A stiff jacket is of value in offering some resistance if a foil should happen to break. The jacket should have a high collar so that no part of the throat be exposed between it and the mask. The high collar also saves the fencer from thrusting his head forward to protect his bare throat which both spoils his attitude and subjects his mask to being constantly struck by his opponent's foil, a jarring and disconcerting effect. Side pads, in addition to the jacket, are also sometimes worn as a further safeguard to the body.



PRELIMINARY POSITION.

The proper method of holding the foil is to place the thumb on the upper part of the "grip" (the wooden covering of the hilt), which should be broader by about an eighth or a quarter of an inch than the sides, taking care not to keep the thumb too close to the hilt and bending it back so as to avoid getting the tip jarred in a harsh encounter of blades. Then let the fingers close on the grip, but so as in no case to trespass on the part appropriated by the thumb. All the play, in fencing, is restricted to the fingers and wrist, the arm acting a subordinate part. Therefore the right way of holding the foil, which develops the nervous strength of the fingers and gives free scope

to the wrist, is essential; and though it is painful to most persons to acquire, as at first it makes the fingers stiff and the thumb ache, these drawbacks must not be allowed to stand in the way.

Of what are called "positions" in fencing the

ON GUARD.

first in order is known as "on guard." As a preliminary to this the foil should be taken in the right hand, with the finger-nails up, the point turned towards the ground, and the elbow in line with the hip; the body should be erect, the left arm close to the side, its hand turned palm outwards, and the heels together, the right foot pointing straight to the front and the left foot to the left. The body should be turned as far as possible to the left, head and eyes to the front. Then the foil should be raised (pointing upwards) to the front to the full extent of the arm.

As far as possible using only wrist and fingers, and turning the nails down so long only as to enable you to execute the curve, drop the point of the foil, and bring it round towards the body in a circular sweep, ending with the point on a level with, and directed towards, the mask of an imaginary opponent; the hand should be on a line with your left breast, and the elbow just clear of the right hip.

While you are executing the curve, raise the left arm up until it is on a line with the shoulder, arching the wrist so as to let the fingers droop forward unconstrainedly. Then, still keeping the body erect and firm, lower it by bending the knees; advance the right foot in a straight line twice its own length, as nearly as may be; and this will bring you into the position of "on guard." (Strictly speaking this is only one of the "guard" positions. But the others are only variations of it.)

The next thing to learn is to move easily forwards or backwards, as occasion may require, without losing correctness of position and disarranging the balance. The "advance" is performed by advancing the right foot a short, firm step, and following it up smartly by bringing up the left foot a like distance. The "retreat" is effected in a similar manner, by stepping back with the left foot first, and following it up by a like step with the right. The object in each case is to maintain, on the new ground to which you have advanced or retired, the same relative position as the one in which you were on the ground you have quitted.

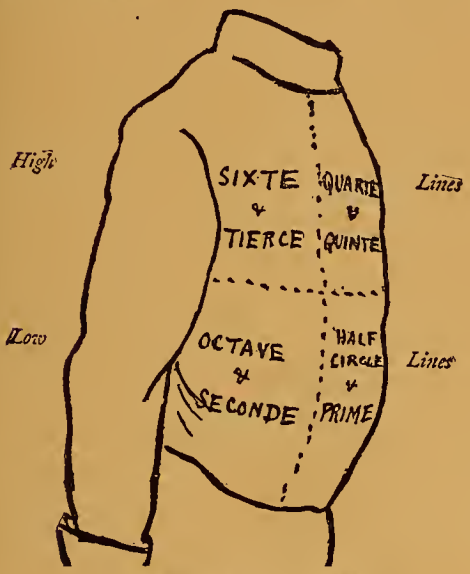
As the basis of every attack in fencing is the "thrust," the position now to be described, its exact performance is of the highest importance. It is, however, a very simple movement and is made by dropping the point, more or less, according as the spot you wish to threaten is higher or lower, and straightening the arm. The thrust serves in two capacities; the one as an end, when the opponent has come to close quarters and can be hit by straightening the arm without any forward movement of the body on your part, which is called the

LUNGE.

"riposte;" the other as a means, when it is an indispensable prelude to every attack on the move. The two rules to be borne in mind are that the arm must be absolutely straight and the point lower than the hand.

Having given the thrust with the full extent of the arm, shoot out the right foot about twice its own length, at the same time driving the body forward by straightening the left leg, and dropping the left arm smartly to the side with the palm of the hand outwards. This position or movement is the "lunge." The body should be kept well braced up while making the lunge, and the head be erect.

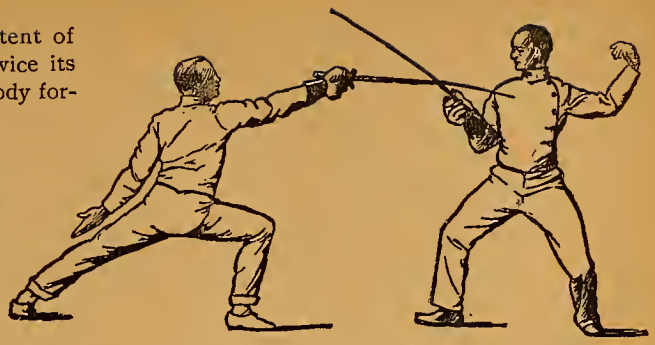
Getting back to the position of guard after making a lunge is known as "recovery" and is executed by drawing back the right foot, bending the left knee, raising the left arm and bending the right, all as in the position of guard.



JACKET SHOWING LINES.

It should be borne in mind that all these positions are relative, and the beginner must be on his guard against thinking that, because each has to be practised at first separately, it stands by itself, and has no connection with the others. A free, powerful lunge is a thing to be greatly desired; but it takes very little to turn aside the point and carry it wide of the mark, in which case, unless you can pull yourself together, you would, in a contest, be at the mercy of your opponent. Similarly on the recovery, do not plant yourself heavily, but be ready, if need be, to dart forward again on the instant.

Therefore, in practice, remember that

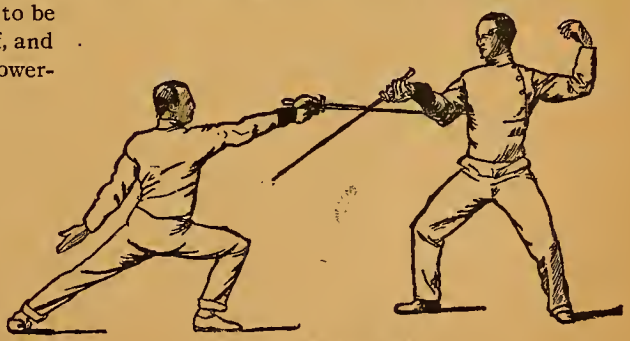


PARRY OF QUARTE.

each movement is one of a connected series, and while you strive to gain in pace and force, this must not be done at the expense of balance and control.

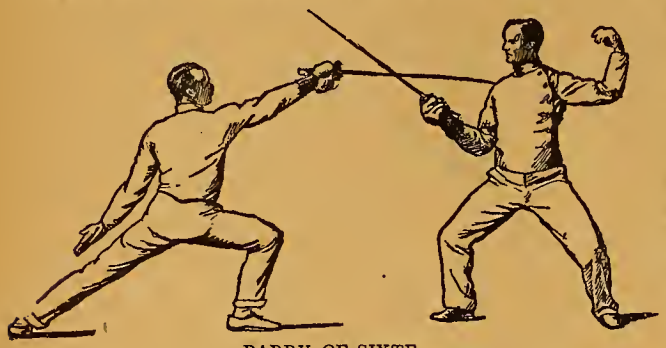
For the purposes of defence and attack the surface of a fencing jacket is mapped out into four quarters, the upper being called "high lines" and the lower "low lines." These lines are again divided into sides, the right or outside, and the left or inside, in order to define as clearly as possible the precise area threatened by the various attacks and covered by the different parries. There are in all eight primary parries, two of which are told off to defend each of the four lines and bear the same names as the attacks to which they correspond. Thus attack and parry in the high lines on the right side are said to be made in sixte, if the hand is in supination (finger nails up), and in tierce, if the hand is in pronation (finger nails down).

Parries should be made as far as possible with the wrist and fingers, and as little as possible with the arm. With few exceptions, they are made with a light, quick tap of the forte of one blade on the foible of the other; and they are invariably made with one or other of the edges of the blade, and not with the flat sides. It must always be borne in mind that it does not require a heavy stroke to turn



PARRY OF SEPTIME.

aside even the most powerful lunge, and that harsh parries are the death of good fencing, inasmuch as they rob it of all fineness and delicacy of touch, and involve an altogether disproportionate waste of time and space. Parries are classified as "simple,"



PARRY OF SIXTE.

in which the opponent's blade is followed into the line of attack, on his change, and there warded off; and "counter," in which the opponent's blade, as he is in the act of changing into another line, is, by describing a circle round it with the point, enveloped and brought back into the line from which it started, and there deflected.

Attacks should be made with the point below the hand and with an absolutely straight arm, and one should be careful always to cover well in the line in which he is attacking. The different forms of attack are divided into:

1. Primary, initiated by oneself with the intention of scoring by pace, fraud or force, and which are therefore subdivided into—

(1) Simple, made on the lunge, the object of which is by superior neatness and quickness to hit the opponent before he can parry, without any attempt to disguise the direction of the attack.

(2) Feints, the purpose of which is to induce your opponent, by some preliminary movement of the hand, to think that you are going to hit him in one particular line, so that on his offering a parry to protect that line, you may deceive it and be free to complete the attack by lunging in another line; and—

(3) Force, by which, finding your opponent covered, you attack his blade with sufficient vigor to turn it aside and make an opening for your point on the lunge; or by which, on some movement of his blade in the direction of one line, you encircle it with yours and, carrying it off in an opposite line, urge your point home with strong opposition.

2. Secondary, intended to out-manœuvre or retaliate upon attacks initiated by the opponent in one or other of their different stages, and therefore subdivided into—

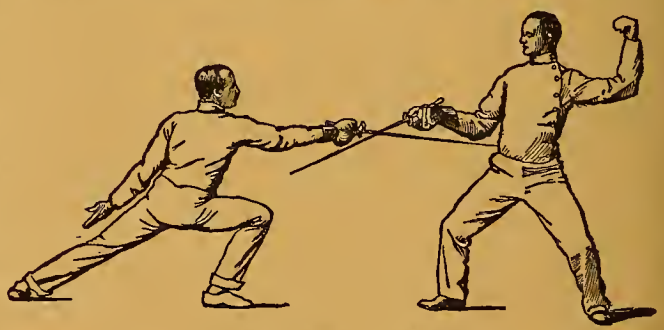
(1) Attacks on the preparation, to arrest his movements before he matures his plans.

(2) Attacks on the development, principally "time" attacks, whereby, having anticipated in what line your opponent's attack will be delivered, you intercept his blade as he gives in his attack, and go to meet it by straightening your arm and delivering in the point with a strong opposition on the lunge or half lunge, according to the distance between you; and—

(3) Attacks on the completion, when the opponent has brought himself within thrusting range on his lunge. These are called "ripostes," and are made from the position of the parry, whatever it may be, which has been used to stop the opponent's primary attack. As the point is delivered in while the opponent is extended on the lunge or in the act of recovering, they are, almost without exception, unaccompanied by any movement of the foot.

Ripostes which are made after parrying a riposte are called "counter-ripostes."

3. Decoy (or false) attacks, not made with the intention of hitting the opponent, but only to lure him on, say, to attack you in some line, in order that, when he does so, you may, for instance, disconcert him by an emphatic parry, and lead up to



PARRY OF OCTAVE.

an effective return. These attacks are, therefore, not made on the lunge, as a slight movement of the foot (if any) is all that is needed.

This is only a general classification of the many

forms of attack known to swordsmen. A list and description of all the variations in the thrust and lunge—the "disengage," the "coupé" (or "cut-over"), the "one-two," the "double," the "graze," etc.—would be tedious to read and would only burden and confuse the mind. Enough has been said to show that fencing is by no means a simple art, and that to become skilled in it requires considerable practice and patience. Coolness and quickness, care and precision are the qualities most needed if one would be an adept. But its exercise is not only beneficial to the body, it occupies the mind as well, for one cannot let his thoughts wander when facing a proficient antagonist. Like most other sports and amusements worthy of their name expertness cannot be acquired by books alone. A few lessons from a master of the foils is absolutely essential to understand their proper use.

SKATING.

In acquiring a practical knowledge of any special art, there is nothing which will aid you so much as confidence in your ability to accomplish what you are about to undertake. Confidence is a great essential in learning to skate. In this respect it is like learning to swim. What the fear of sinking is to the young swimmer, so is the fear of falling to the young skater. Courage and nerve are essential qualifications for a skater. Fear of a fall is a strong barrier to progress in a practical knowledge of the art, and the nerve required to attempt some difficult feat or other, involving risks of a severe fall, is very necessary.

The first thing to be done after putting on a pair of good-fitting skates for the first time, is to learn to walk with them on the ice. After you have learned to preserve your equilibrium on the ice in this way, and you begin to have *confidence*, you then commence the next step in the art, and that is to learn to strike out. To attain the most rapid success in learning to skate you must advance by slow degrees. Attempting to do too much at one time is always a drawback to your progress. In the first place, you will find that the effort to balance yourself on the rather narrow edge of the runner of your skate brings into active and rather painful exercise comparatively unused muscles of the ankles and legs. To go on testing the strength or endurance of these beyond a certain point of fatigue, is to retard rather than advance yourself in the art. The moment the muscles of your ankles or legs begin to feel the effects of the unwonted strain, give them a ten minutes' rest or so. In this way the muscles which are specially brought into play in skating will gradually but surely get trained into doing the work required of them.

After learning to walk well on your skates, the next step to be made is to learn to strike out. In doing this you first learn to propel yourself on the ice on one foot while using the other to push yourself forward. When you can propel yourself on the ice tolerably well with first one foot and then the other, you enter upon the first plain forward movement of the regular skating programme, and begin to strike out in earnest. In accomplishing this second lesson in the rudiments of the art you will see that it is but an extension or variation of the movement of the first lesson—viz., that of propelling yourself with one foot. While in the first movement one skate is kept sliding on the ice while the other pushes it forward, in the second movement the right foot is sent sliding forward on a half circle while the left is temporarily lifted from the ice, leaving you balancing yourself for a moment on the right foot as you move forward, the left foot next becoming the balance foot while the right is lifted.

As you progress by practice and gain confidence you must extend the length of the strokes, making them regular and with an easy motion, not forgetting grace of movement in the very beginning of your practice. Of course in doing even this little in skating, falls are likely to be frequent, and their frequency is generally in proportion to the degree of confidence the skater possesses and the excitability of his temperament—the cool and collected individual invariably preserving his balance on the ice the best.

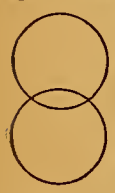
The first movements of the novice on skates are made on the inside edge of the skate runner; but this is only peculiar to the A B C work of the art. The fundamental basis of all expert efforts on skates

is the movement on the outer edge. This once attained, to any degree of skill, the key to all fancy skating is then at command. The great essential in learning to skate on the "outside edge," or to do the "outer roll," as it is called, is once more confidence. If your skate has a keen edge it is just as safe to lean over on as it is to lean on the inside edge in doing the first movement in striking out.

To attain the outside edge movement successfully and with the least risk of falling, you must try the first steps of the cross roll; by this means you are at once obliged to use the outside edge of the skate. To skate the "cross roll," the skater stands as in learning the outside edge, and starting on the right foot, crosses the left over it. But instead of repeating the movement, and so forming a circle, he immediately crosses the right foot again over the left, and so on. Then, instead of making one large circle, he forms a succession of arcs of circles, by which he is carried forward. The legs should be crossed over each other as far as possible, and the skater should not be content until he can even cross the knees. This is a very pretty movement when neatly done, and one of the most graceful on the ice. The hands must hang quite easily and quietly, and the body carried uprightly without being stiffened.

Let it be a rule, without exception, to keep the knees straight when skating. Nothing looks more clumsy or awkward than a skater who keeps his knees bent. And even if he can cut all the rarest figures, the bent knees destroy their effect, and the skater still remains ungraceful.

In figure-skating, which is the fine-art part of the sport, the one first learned is usually "three" or "eight." The latter is really the simpler of the two, and is accomplished by the skater's making an entire circle before he crosses his feet. So that, if his right foot starts on the upper circle, his left makes the lower one. (Always start from the point where the circles cut each other.) At first the skater will find some difficulty in getting quite round the circles, but he will soon accomplish that object if he slightly swing the off-leg round toward the toes of the other. In good skating, the course is entirely steered by the foot that is *off* the ice; that which is on it only serving to sustain the skater.



The figure "three" is made by the skater's starting as before on the right foot as if he were to make an "eight," but doing it as gently as possible. Then, instead of swinging the left foot round so as to make a circle, *he lets it remain at least a foot behind the right foot.* The consequence of so doing is, that when three-fourths of the circle are completed, the off-foot gives a curious sway to the body, and the skater spins round on his right foot, changing at the same time from the outside to the inside edge, and cuts the second half of the "three" backward. When the skater can do this easily with the right foot, he should practise it with the left; and when he can cut the "three" with equal ease with either foot, he should cut two together, as seen in the drawing. Let the reader here refer to the drawing and trace the skater through it. He begins with the left-hand "three," starting with his left foot on the outside edge; when he gets to the twist of the "three" he spins round, and finishes the figure (still with the left foot) *on the inside edge backward.*

When the skater has become familiar with the preceding movements, he should turn his attention to the movement backward on the outside edge. A good method of learning this movement is by starting to cut a "three," and immediately after the twist to place the outside edge of the off-foot on the ice, at the same time lifting the other foot. This is soon acquired, and assists the learner in the movement of the cross roll backwards, one of the most graceful and skilful performances on ice.

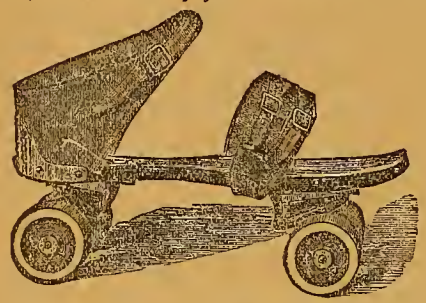
In learning the back cross roll, the skater need not start with any impetus at all. Let him merely stand still, place the left outside edge well into the ice, lean slightly upon that side, and gently swing the other foot round until it has crossed the left foot and is planted with its outside edge on the ice. The left foot is then crossed behind the right, and it will be found that the mere swing of the foot and leg is sufficiently powerful to urge the skater backward. The greatest care should be taken to avoid too great an impetus at starting, and in a short time the skater will find himself able to glide over the ice in this manner with perfect ease.

Expertness in these few movements will render all forms of figure-skating easy to learn and will entitle one to rank as thoroughly proficient in the ice-art—one of the most pleasant and healthful amusements to be found in the winter months.

LEARNING TO SKATE.

ROLLER-SKATING.

ROLLER-SKATING, though often looked down upon by ice-skaters who are apt to regard it as a much inferior amusement, has many advantages not shared by the other. It is not dependent upon the weather; it can be enjoyed under shelter and on

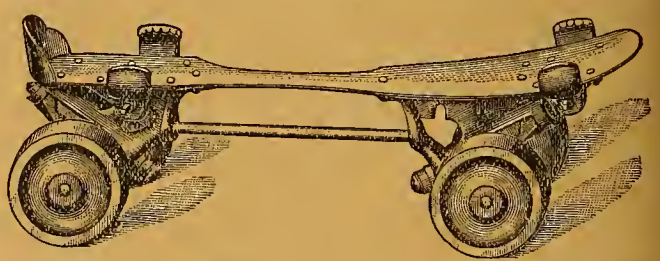


moonless nights; the surface under foot can more easily be kept in good condition; and conveniences for resting, etc., can more readily be provided. There is no danger, moreover, of breaking through thin ice and so causing a wetting or more serious mishap, and girls and young children are not exposed to the severe cold and chills they risk when on the ice.

The roller-skates first used were formed of four hard-wood wheels or hard rubber, placed one after the other on the centre line of the skate. Nothing could be accomplished with these beyond a forward glide and this only with considerable exertion. More recently a skate was invented with two pairs of wheels, one forward and one back, which enable the skater to move in circles by leaning to one side or the other. This was a great improvement, and the amusement which heretofore had only been indulged in by quite young children was immediately adopted not only by their older brothers and sisters but by grown people as well, and soon rinks, as they were called, were fitted up in cities and towns all over the world for the practice of the art.

In putting on roller-skates for the first time the learner will see at once that he can only slip backward and forward, and that side slipping is almost impossible. He should first, therefore, learn to balance himself on them with a view to avoid the forward or backward slide, and this is best done by learning to walk on them; by this means the muscles of the ankles are gradually trained to the work of obtaining command of the feet in the balancing. When he can walk pretty well on them he should begin to slide along easily and slowly, not turning his skate on the floor, but allowing the change of direction to be made by lifting each foot about an inch from the floor. In doing this he should move the body forward and outward, so as to balance well on the foot he moves forward. The outside roll is the key movement for all evolutions on roller-skates; for when this beautiful movement is acquired all the others follow easily. Ice-skaters who excel on the steel runners always make the mistake of trying to do too much when they begin roller-skating. They seem to imagine that all they have to do is to put on the rollers and proceed at once to execute all the difficult movements they are familiar with on ice-skates, instead of first perfecting themselves in the fundamental rules of the new art.

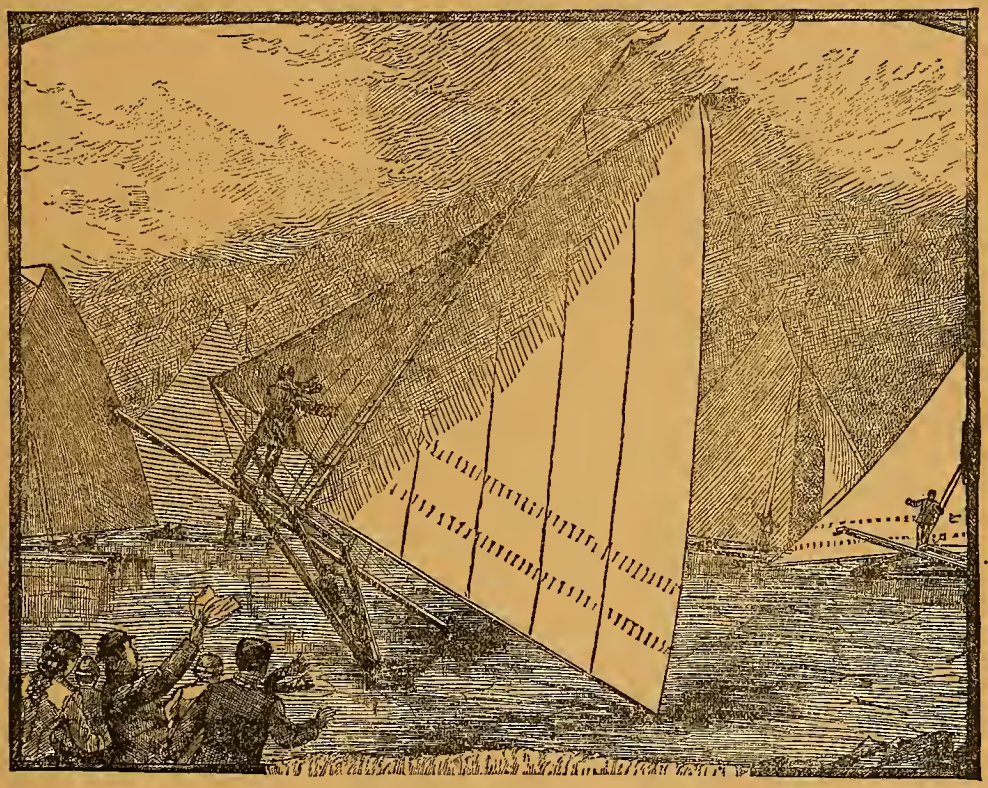
It should be understood, at the outset, that learning to skate on the ice and learning to glide along with ease on roller skates are two different things. In ice-skating not only has the learner to guard against slipping forward and backward, but against side slipping, while he has also to learn to balance himself on a narrow edge, which is, of course, trying to the muscles of the ankles, especially for girls and women. In this latter respect the roller-skate possesses a great advantage over ice-skates, inasmuch as, from its peculiar construction, it supports the ankle in an upright position, and prevents it from turning over beyond a given point;



hence, ladies and children who do not possess strength in the ankles to balance themselves upon the narrow edge of an ice-skate can learn to skate upon the rollers with ease.

ICE-BOATING.

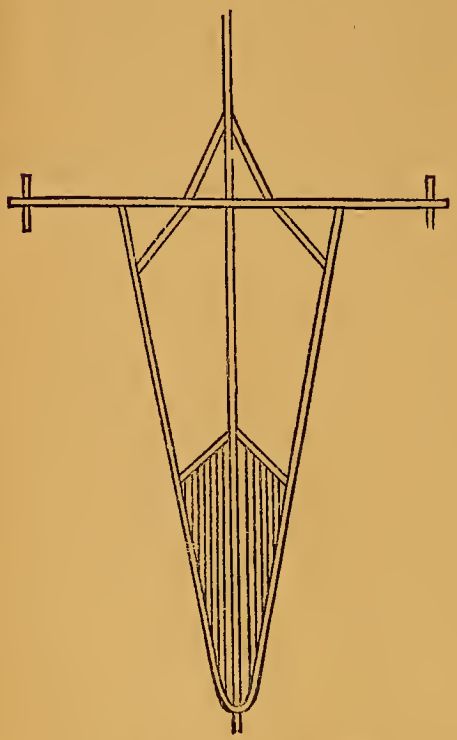
THERE is no winter sport more exciting or thrilling than sailing before a strong breeze in an ice-boat. True it is not without danger to the inexperienced, but such a one should never go in a boat of any kind, excepting as a passenger. To one who is cool-headed and who understands the management of sail-boats there is as perfect safety on the ice as in the water and the most timid can entrust themselves to his care with the absolute assurance that they will suffer no harm and will enjoy the very keenest delight.



Ice-boating is purely an American invention and an American pastime, being scarcely known outside of the United States and Canada. So far has it been carried in our country that very expensive yachts have been built (some over sixty feet long and carrying a thousand feet or more of sail) and a number of clubs have been formed. But the boat need not be large or costly; indeed a very simple and inexpensive one can be made which will give its owner probably as much pleasure as the most highly priced ones do their possessors.

Reduced to its elements an ice-boat is only a frame of wood on runners with one or more sails attached. A simple one can be constructed by fastening two boards together (one about five feet long and the other three and a half feet) in the form of a cross, the top of it (the bow of the boat) extending a foot beyond the cross-piece. Under each end of the cross-piece an ordinary, old-fashioned skate should be firmly secured, and a third skate should be placed under the stern end of the longer plank. This last skate should be attached so that it can be readily turned, as its purpose is to serve as the rudder of the boat. The mast should be stepped where the two boards cross. The boat should be braced by running strips of wood from each end of the cross-piece to the bow and stern.

On this framework other boards can be placed to make the boat more comfortable or it can be used without these additional boards. Such a boat will only accommodate one person, who sits near the



stern on the long plank with his feet resting on the cross-piece. A helm of some sort should be made to control the rudder skate, as the results would be serious if the rudder were unmanageable. This can readily be done by boring a hole at the end of the long plank in which a small post can be placed. The skate is then fastened to the bottom of the post which projects slightly below the plank and a bar across the top of the post with tiller ropes attached will complete the steering apparatus of the craft. Instead of a rudder the steering may be done by the feet, as in coasting; only in this case they should have skates on. If that is done the skate under the stern should be made stationary. The steersman can make himself more comfortable by putting some sort of a seat in front of his helm to sit on instead of on the plank. His feet could then rest on the plank and not on the cross-piece. Any simple sail will answer for such a craft; that used in a cat-boat serves the purpose as well as any. A boat of this kind, if made strong, would cost little money and would give unbounded pleasure to its maker and his friends.

An ice-boat close-hauled sails nearer to the wind than any water-yacht. With wind abeam, the speed is twice that of the wind itself; going free it is nearly four times. It is a peculiarity of the ice-boat that the sheets are always flattened aft, whether by the wind or going free, and both mainsail and jib draw. In running free, if dead before the wind, an ice-boat would soon run out of it, and therefore she has to keep her sails at an angle to the wind by running across and with it. In other words she beats to leeward. Thus, with a wind blowing down the river and a boat scudding before it, her sheets would be flat aft, and she would cross from one side to the other alternately, jibing her mainsail over as she did so. To bring an ice-boat to anchor, the jib has to be lowered and the helm "hard up" or "hard down." To stop the boat temporarily you only have to bring her up in the wind without going far enough over to tack.

SKATING-WINGS.

EVERY skater knows how much easier it is to get over the ice with the wind at his back than in his face, and most boys have probably tried the experiment when skating before the wind of holding their coats wide open and being driven forward by the breeze without any effort of their own. Some perhaps have even opened an umbrella and allowing the wind to catch it have found themselves pulled forward at a most enjoyable rate of speed. Such a motion is almost like flying, and is probably as near an approach to the feeling of a bird in the air as we shall ever experience.

This making a living ice-boat of oneself has many advantages besides the ease and swiftness of the movement. Ice that is too rough for ordinary skating serves very well for this purpose. A light

fall of snow is no drawback in this amusement, but rather a help; whereas it often spoils the ice for the skater. Salt-water ice, which is too soft to afford much enjoyment to the cutter of "figures of eight," is plenty hard enough for this form of skate-sailing. There is absolutely no serious danger attending the sport, unless indeed it is practised on thin ice, and then the risk of breaking through when swiftly skimming over it is far less than when walking more leisurely and slowly on it.

Taking advantage of the hint afforded by the open coat and umbrella, various devices of sails or wings have been made to be attached to the body of the skater to aid him in sailing without a boat over the ice. One of the simplest of these is the "bat-wing." This is made by cutting out of stout cloth a piece large enough to reach from the crown of the head to the ankles and from the wrists of the outstretched arms to head and ankles. It is attached to the body by bands at the forehead, waist, ankles and wrists. By extending the arms when on the ice the wind acts on the entire surface of the cloth and imparts considerable speed to the skater. Folding the arms closes the wings and the effect of the wind is diminished. To spare one the fatigue of his keeping arms continually outstretched, a rod can be carried in the hands and substituted from time to time for the arms.

Sails of various kinds are also used for this purpose. They are of all sizes and shapes — square, oblong, triangular, etc., sometimes large enough to propel two persons, and sometimes intended only for one. Frequently they are made with mast and boom, the mast resting in a socket fastened to the waist, as the standard-bearer carries the colors of his regiment. In other cases they are either carried in the hand or strapped to the body, as their size or the inclination of their users may determine. There is no end to the variety of styles that may be adopted, and an ingenious boy by using his wits can design many novelties that will both amuse and startle his companions and elders. Under favorable circumstances he can travel with astonishing rapidity over the ice in this way. He can literally outstrip the wind and some claim attain a velocity of eighty or even a hundred miles an hour.

TOBOGGANING.

LIKE lacrosse, tobogganing originated in Canada, where it is still the prevailing winter amusement. It is really hillside coasting, but on ice instead of on snow and with a peculiarly shaped sleigh, first used by the natives of that country to bring home the spoils of the hunt. The toboggan now used by Canadians consists of two or three slips of birch or bass-wood, about a quarter of an inch thick and

six or eight feet long, and with one end turned over. There are several cross-bars, and a miniature bulwark runs along each side, the whole frame being strongly bound together by catgut. The remnant of Huron Indians, on their reserve at Lorette, below Quebec, have almost a monopoly of the manufacture of toboggans, and carry on a very profitable trade.

An ingenious boy, however, can make a very good toboggan with a couple of pieces of quarter-inch pine lumber eight or nine feet long and one foot wide. These boards should be placed side by side and fastened together by strips of wood on the top. It is necessary to make these very secure so that they will not become loose when the toboggan is whizzing down a steep hill. Two side-bars should be lashed to the cross-pieces and the front ends of the boards curled over and held back by cords. Unlike sleds and sleighs, toboggans have no runners.

Formerly any hill with a straight road and a good slant would do for the sport. But as the amusement spread and was adopted by a larger number of grown people as a means of entertainment in cold weather, the preparations have become more elaborate and clubs now have "slides" made for them, often at considerable expense. To construct one it is requisite to select a good hillside, with a straight roadway a quarter of a mile long, and then to build a long, slanting scaffold at the top of the hill, fifty feet to seventy feet from the ground at the upper end of the incline, and with standing room at the top for scores of tobogganers and ladies. The inclined front of each of these scaffolds is boarded down to the point at which it meets the earth. Its surface is then divided into three, four or five slides by ridges of snow, and these ridges are continued down the hillside. But snow is only used for these ridges, which serve to keep the toboggans apart and to prevent them from running into one another. The slides themselves are coated with ice, made by pouring or sprinkling water between the ridges. The snow on the hillside is also wet and frozen, so that the whole quarter of a mile of hillside is a sheet of ice. A high ridge of snow separates the slides from the path up the hill, and along this path the men drag their sleds. Once on top of the scaffold, the tobogganer puts his toboggan down upon the flat platform, with its curved front end just over the edge. When all are ready, the passengers having got firm holds upon the little side-rails at the edges of the slender board, the steerer throws himself forward upon the toboggan, so that he rests on one haunch upon it, with one leg free to steer with. The force of his movement and weight of his body send the frail board flying over the edge of the scaffold and down the steep ice-clad planking. The sensation experienced as the sled, with its party, dashes down the steep incline is like falling from the roof of a four-story house. You feel yourself and the strip of birch veneer beneath you loosened from the earth

and flying like a meteor toward the black crowd of spectators far below you at the foot of the hill. The very manner in which the toboggan grazes the

TOBOGGANING IN EARNEST.

slide makes it less reassuring than if it did not touch at all. There is a roar, a blast of intensely cold wind, a flash of the white walls of snow on either side, and then a comforting bump and grating as the less steep ground is touched. After that the supple board bends beneath its load in obedience to every undulation and slight hummock in its path. The quarter of a mile is frequently made in thirty seconds.

SNOW-SHOEING.

BESIDES tobogganing, the Canadians have another winter sport that we have to some extent borrowed from them. Snow-shoeing, however, is not confined to Canada and the United States. It has been practised for many years by the Esquimaux and Laplanders, by some tribes in Central Asia, and by some in Norway, where the shoe is called a "ski," and is somewhat differently shaped from the one used in America.

Snow-shoeing is a cross between sleighing and skating, and yet differs decidedly from both of them. In Canada it was invented by the native Indians to enable them to walk over soft, deep snow without sinking in. The shoe used there is very broad, suggesting perhaps a tennis racket in its general form as much as anything else. The Norwegian ski, on the other hand, is intended to aid one in gliding down a hill or mountain-side quickly, and is really a long runner strapped to the foot. A pair of them can readily be made out of two barrel staves by slightly bending up one end of each and attaching straps to fasten them to the feet. If a couple of pegs, or a small block, is placed just back of where the heel should rest, a single strap will suffice to make the foot secure. It is necessary always to carry a stick to steer with.

The regular Amer can snow-shoe, however, is a more elaborate affair. It is generally made out of light ash, say, half an inch or so thick, bent to a long oval, the two ends fastened closely together with catgut. Across the frame, four or five inches from the larger end, a strip of flat wood is fitted, and other pieces are fastened about two feet from the ends in order to strengthen the shoe and give it a greater spring. Catgut is woven across the frame to enable it to rest on the snow without sinking in. In the centre of the front cross-bar a hole is left (three to four inches square) for the front of the foot when raising the heel. These shoes vary in length from two to six feet, and in width from ten to twenty inches. For club races ten inches is the minimum width, without restriction as to length.

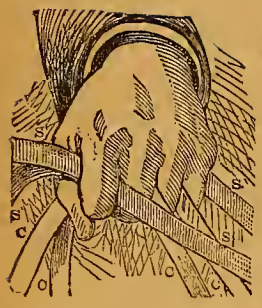
SNOW-SHOEING IN NORWAY.

Of course, in first using either the Canadian or

Norwegian form of shoe, one will find it clumsy work, and his efforts will seem very awkward. But perseverance in this, as in most other things, will conquer the difficulties and soon give one the needed dexterity in managing his foot-gear. A few tumbles do no great harm and the fun derived afterwards from the sport will prove the falls to have been a cheap price to pay for the pleasure. Norwegian children use their snow-shoes in going to and from school and in fact for almost every purpose. They become very expert in travelling in them and frequently jump with them on from a bank even seven or eight feet high. The highest jump, however, ever reported was made by a famous runner, known as "Snow-Shoe Thompson," a Westerner of our own country, who is said to have once leaped into a snow-drift from a height of a hundred and eighty feet!

SNOW-SHOEING IN CANADA.

HORSEBACK RIDING.

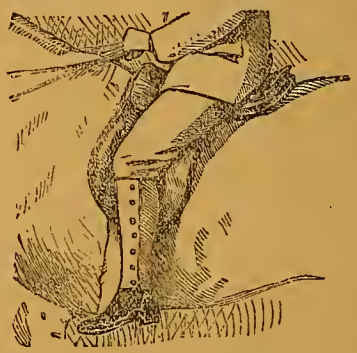


RIDING on horseback is generally allowed to be one of the most cheerful and enlivening of all exercises, whether for youth or manhood; and it is hoped that the following brief remarks upon it will prove interesting to every boy who has it in his power, or, at least, can contrive, to mount a nag.

In mounting, the rider should place himself rather before the horse's shoulder, and turn his left side to it; he must hold his whip in his left hand, take hold of the centre of the snaffle reins with his right hand, and pass the middle finger of his left hand through them, from before, keeping the back of that hand toward the horse's head. He should next place his left hand on the animal's neck, about a foot from the saddle; with his right hand draw the reins through his left and shorten them until he has an equal feeling, with the latter hand, on the horse's neck; and then with his right hand he should throw the end of the reins to the off-side. With the same hand he must next take a lock of the mane, and twist it round his left thumb, and then close his left hand on the mane and reins. After these movements he takes hold of the left stirrup with his right hand, raises his left foot and puts it in the stirrup, turns his face so as to look across the saddle, places his right hand on the cantle, presses his left knee against the saddle on the girth, and keeps his heels back, so as to prevent his toes touching the horse's side; he next takes a spring from his right instep, and raises himself in the stirrup, pressing his knees firmly against the saddle, and keeping his heels together, yet slightly drawn back. In this position the body must be upright, and rather supported by his right hand. From this attitude, he moves his right hand from the cantle to the pommel, passes his right leg over the horse's quarters to the off-side, presses his right knee against the saddle, and his body then comes gently down into it; his right hand, of course, next quits the saddle, and his left, the mane.

The rider being thus mounted, he should hold his left or bridle hand, the wrist bent outward, opposite to, and at three inches from his body, and drop his right hand by the side of his thigh, place his right foot in the stirrup, unaided by either eye or hand, adjust his clothes, then change the whip from his left hand to his right, and hold it inclining toward the left ear of the horse. The whip should always be carried in the right hand, except when in the act of mounting or dismounting. If a groom attends at mounting, he must not be allowed to touch the reins, but merely hold that part of the bridle which comes down the cheek. In dismounting the movements are precisely the same as in mounting, only reversed.

For a firm, correct seat, the thighs, turned inward, should rest flat upon the sides of the saddle without grasping, as the weight of the rider will give sufficient hold without such adventitious aid, which, in fact, only lifts the rider out of his saddle; the thighs, however, must be kept so firm that they will not roll or move, so as to disturb the horse or loosen the rider's seat; but if the horse should hesitate to advance, they may then be slightly relaxed. The knees must be kept back, and stretched down so as to throw the thighs somewhat out of the perpendicular, but no hold or grip should be taken with them, unless the rider has lost all other means of holding on; if the thighs are in their proper position in the saddle, the legs and arms will be turned as they should be—that is, they will be in a line parallel with the rider's body, close to the horse's side, but without touching; they may, however,



sometimes give an additional aid to the seat, by a grasp with the calves, and also assist the aids of the hands in like manner; the toes should be raised and the heels depressed, and kept from galling the

HORSEBACK RIDING.

horse's side. The body should be held quite erect, and the shoulders kept square and thrown back, the chest advanced, and the small of the back bent rather forward. The upper part of the arms must hang perpendicular from the shoulders, close to the hips, and be kept steady yet without rigidity, else they destroy the hand. The hands should be held with the wrists rounded a little outward, about four or five inches apart, in front of the body, the thumbs and knuckles pointing toward each other, and the finger nails to the body.

The balance in riding preserves the body from those inclinations or swervings from side to side, which even the ordinary paces of a horse occasion; it acts and corresponds with every move of the animal, and therefore enables the rider to sit so firmly, that nothing can shift him from his seat. The essentials in keeping the balance are for the rider, when his horse is working straight and upright on his legs, to keep his body in an upright position; when the animal breaks into a trot to incline his body a little back; and in the gallop, leap, or any violent action of the horse, generally to keep his body back. When the horse leans or bends, as he does when turning a corner sharply, or galloping round a circle, the rider must incline his body in the same degree, or else he will lose his balance; indeed, the art of balancing consists in implicitly yielding the body to every movement of the horse, and to acquire it properly, the practice on circles is extremely useful, working carefully and equally to both sides. The rider should never take the least help from the reins in order to preserve his equilibrium, for the bridle hand should always be kept fixed, and the reins held at such a length that they may support the horse, but not the rider.

In trotting, the horse uses two feet at a time—that is, the near fore foot and the off hind foot, and *vice versa;* thus making only two beats instead of four, as in walking. In the trot there is a leading foot, either the right or left, by which that side is a little more advanced than the other. The leading with either foot is extremely useful; for if a horse unused to altering is obliged, through fatigue or chance, to change the leading leg for that which he is not habituated to, his action will be hard, cramped and irregular. During the trot the rider must sit close to the saddle, preserving his seat not by the pressure of his knees, but by a good balance of the body, which must be slightly inclined forward. He should neither stand nor rise in his stirrups, but allow his whole figure to act in unison with the motions of the horse; and in order to preserve a proper degree of correspondence he must keep his hands steady and pliant. If the horse trots too fast, the action should be checked by tightening the hold on the reins; if too slow, he must be animated and encouraged to put his foot out boldly. While giving these animations, the rider must support his fore hand up, and then a touch of the fingers or an animation of the tongue, whip or legs will have its due effect. In road riding—the proper pace for which is the trot—if the horse trots in a disagreeably rough manner, the rider may ease the jolting by rising slightly in his stirrups; and the quicker the horse trots the easier it is for the rider, as he is elevated not by his own movements, but by the action of the horse. Though this is called rising in the stirrups, they are of no great importance to the rider in holding on; indeed, *no dependence* should be placed in such supports, for many persons who have relied on their footing in the stirrups have been thrown by the horse turning suddenly round or shying. The arms and shoulders must not be jerked up and down through the motion of the body, for great steadiness of hand is required to preserve the due degree of correspondence with the horse's mouth; neither should the legs press his sides, as that would most likely cause him to break into a gallop, which pace he must not be permitted to shift into, as it spoils the beauty of the action to be constantly varying from one pace to the other.

In the canter, which is the most difficult kind of gallop, the horse's feet are raised from and come to the ground, so as to mark a regular quick, sharp time of one, two, three, four. To urge the horse into a canter, the rider should press him with his legs or animate him with his tongue, and at the same time slightly raise his hand, to incite him to lift his fore legs. However, should he be inclined merely to perform a quicker trot, the hands must be kept firm and the animations increased until he moves at the desired pace. The gallop is an extended canter, and in both actions it is immaterial with which leg the horse leads off, provided the hind leg of the same side follows it. In galloping to the right, the horse should lead with the inward or off fore leg, followed by the off hind leg; and in turning to the left, he must lead with the near fore and hind legs. When performed in this manner the action is termed united; but if, on the contrary, he leads off with the off fore and near hind legs, and *vice versa*, he is considered disunited; and if in galloping either to the right or left he leads with both near or off legs, his action is reckoned false

If the horse strikes off with the wrong leg, false or disunited, the rider should, by shortening the inward rein, and applying his off leg to the horse's side, strive to make him change, and lead with the proper leg. If the animations are not kept up, and the full action is not supported by the hand, the horse will break into a trot; therefore, the moment the action is felt to be declining, it should be immediately restored by the proper animations. The stop in the gallop should be so timed that it may be begun when the horse's fore feet are coming to the ground, which is the beginning of the cadence, and then when the horse brings his hind feet to the exact distance, and so finishes the cadence. It is useless, however, to attempt making a perfect stop, unless the horse is correct in this pace or time of his paces. The double arrest is the stop completed in two cadences of the gallop instead of one, and therefore is not so distressing either to the horse or his rider. At the first cadence, the body should be thrown gently back, so as to check the horse's movement in some measure, but not entirely; and the finish should be in the second cadence, the rider still keeping his body back.

The movable bar for leaping should not be more than from one to two feet in height at the first, but it may be gradually elevated as the rider perfects himself; however, it should never be very high. The leaps are taken either standing or flying. The former, although practised first, is by far the most difficult to sit; but by being taken slowly and deliberately, it affords the rider time and recollection, and the riding-master an opportunity to render assistance in case of mishaps, and to instruct. As its name implies, this leap is taken from a standing position, without any run before it. When the horse is at the bar the animations of the hand and leg will incite him to rise, and as he does so, the rider should, to preserve his perpendicular position, allow his body to come rather forward, keep his back in, and his head firm; as the horse springs forward he should slip his breech under him, so as to let his body go readily back, and keep his legs close and body back until the animal's hind legs have come fully to the ground. The rider must press his legs, from the knee, so closely to the horse's sides, that the action of the body will not relax them; the toes should be raised so as to keep the spurs from galling the horse's sides; and, if requisite, they may be turned out a little, to strengthen the hold. The position of the hands also must be particularly attended to; at the first moment of taking the leap, the rider must give the rein to the horse, without reserve; and as the horse's hind feet come to the ground, collect the reins firmly, resume his position and proceed at a moderate pace. The hands should be kept low, and at the centre of the body; for if otherwise they confine the horse's head, prevent the rider's body from going easily back, and also throw him forward. If the horse is too much collected, in order to incite him to rise, he will bound over the bar; and if not sufficiently so, he will perhaps not clear it. The animations necessary must be left to the judgment of the rider, as they entirely depend on the temperament of the animal.

The flying leap is much easier than the standing leap, although the movement is quicker. It may be taken from any pace without previously halting, but a moderate pace is the best, as then the horse rises at a proper time, neither too soon nor too late. From ten to fifteen yards is the proper distance for a horse to trot before he takes the leap; if he is well trained, he may be allowed to take his own pace to it; but if he is sluggish, he should be animated with the spur just before his head is turned toward the leap, and pushed into a sort of collected gallop. It is quite useless for the rider, when taking this leap, to bring his body forward as the horse raises his fore legs, because the spring from the hind legs being taken instantly afterward, if the horse checked himself, and refused to take the leap, or did not come fair, he might be thrown over the horse's head through the forward position of his body. The rider should therefore hold on firmly by his legs, and keep his hands down. As the horse springs forward, his body will invariably take the proper movement of leaning back, especially if he, at the moment of the spring, slips his breech under him and brings his waist forward.

The horse requires, in this leap, little support from the hands until he comes to the ground, when the aid of the hands assists in supporting him, and in bringing the rider's body upright.

DRIVING.

THE YOUNG IDEA.

EVERY boy ought to know how to drive. It is not only a great pleasure in itself, it is at times a great necessity as well, and an inability to handle the reins may often prove a decided mortification to the boy when he grows older. It is a more useful accomplishment even than riding, as opportunities for exercising the former in this country are much more frequent than for practising the latter.

A handsome horse, fully equipped in harness, attached to a light, well-made carriage, is one of the finest things to look at in the world. Few boys can safely be trusted to drive a pair; nor have they physical power for the task. If, however, the youthful charioteer can drive a single horse well, he will find no difficulty in controlling a pair, provided their mouths are sufficiently tender for his strength to manage. As to the kind of horse to be selected for boys, it may be either a full-sized harness horse, or a galloway, or a pony; the last two being the best fitted for juvenile driving.

The harness is always composed of the same parts, which consist of three essential divisions: 1st, the driving, or guiding part; 2d, the drawing part; and 3d, that for holding up the shafts. The driving part comprises the bridle and reins. The bridle is made up of a front-piece, a head-piece, two cheek-pieces and winkers (or blinders), a nose-band and a throat-lash. The cheek-pieces are buckled to the bit by means of leather loops, called billets, as also are the driving-reins, and the bearing-rein (or check-rein), which is attached to a separate bit called the bridoon (a plain snaffle), and then is hooked to the pad-hook. This is now generally dispensed with, but for young drivers it is often desirable when they have not strength to check the fall of a horse. The drawing part consist of a padded oval ring fitted to the shoulders, and called the collar, sometimes replaced by a padded strap across the chest called the breast-strap. On the collar are fastened two iron bars called hames, by means of a strap at the top and bottom, and these hames have a ring in the upper part for the reins to pass through, called the hame terret; and nearer the lower part, a strong arm of iron covered with a coating of brass, silver, or leather, which receives in its eye the tug of the trace. The trace is a long and strong strap of double leather, stitched, which runs from the collar to the drawing-bar, and may be lengthened or shortened by a buckle. The part for holding the gig up consists of a pad or saddle,

THE START.

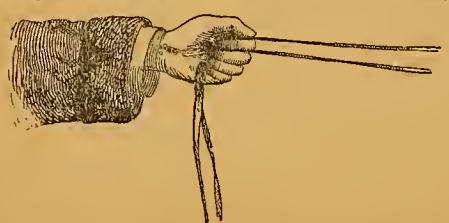
DRIVING.

CHARMING AND SPEEDY TRAVELLING.

which is buckled on to the horse by the belly-band, and from which the shaft is suspended by the back-band and shaft-tug. It is prevented from slipping forward by the crupper, which is slipped over the tail. Besides these parts, some horses have in addition a breechen, which holds the shafts back in going down hill; and when they are addicted to kicking, a strap is buckled over their hips to the shaft which is called a kicking-strap.

Before driving, it is necessary that the horse or pony should be "put to," which is effected as follows: 1st, slip the shafts through the tugs, or, if there are hooks, drop them down into them; 2d, put the traces on to the drawing-bar, either hooking them on, or else slipping them on to the eyes, and being careful to place the leather stops in these, to prevent the trace coming off; 3d, buckle the belly-band sufficiently tight; and 4th, buckle the kicking-strap, or breechen, if either is used. After this, the reins are taken from the terrets, where they were previously placed, and the horse is ready.

In driving, the reins are held differently from the mode already described as used in riding, the fore-finger being first placed between them, and then both the reins are grasped by all the other fingers, and the near-side rein is also held firmly against the fore-finger by means of the thumb. In this way, on an emergency, the near or left rein may be pulled by itself, by holding it firmly with the thumb, and suffering the other, or off rein, to slip through the fingers, or *vice versa*. The most usual way is to pull the left rein with the left hand, and the right with the right hand, by hooking one or two fingers over it while held firmly in the left. In this manner, with the whip also held in the right hand, the horse is guided or stopped. The young driver should take care and keep his feet well before him, with his knees as straight and firm as possible, so that in case of a fall of the horse he may not be thrown forward out of the vehicle he is driving. He should also sit square to his work, with his elbow held easily to his side, and his left thumb pointing to his horse's head, by which, as in riding, his elbow is pretty sure to be properly placed. The bit should not be too firmly pulled against, but a light and "give and take" kind of handling is the best, by which the horse is allowed freedom of action, and yet is checked if he makes a mistake. In meeting other vehicles, the rule in this country is to keep to the right, and in passing them, to leave them also on the right. This should be rigidly adhered to for fear of the accidents which would otherwise constantly happen. In England the custom is reversed and drivers must always keep to the left.



SLEIGHING.

BICYCLING.

THE modern bicycle and tricycle are direct descendants of the velocipede, a toy invented fifty years or more ago for the amusement of younger children. It was a low three-wheeled affair, the seat set a little forward of (and over) the two rear wheels and was propelled by two upright sticks (worked forwards and backwards by the hands) attached to these rear wheels. The steering was done by the feet on the front guiding wheel. Though the machine seems clumsy compared with its present successors it afforded unbounded pleasure to the children of its generation and was considered by them an immense advance upon its predecessor, the rocking-horse.

The bicycles and tricycles seen all over the country to-day offer a marked contrast to the ancient velocipede in their greater strength, grace, lightness and speed. They are propelled by the feet and steered by the hands, thus reversing the older method. The tricycle, of course, is safer for very young children to ride on than the bicycle, as there is naturally less danger of a fall from a three-wheeled machine than from a two-wheeled one—the latter having to be balanced carefully and only staying upright when in motion, whereas the former balances itself when standing still as well as when moving. The actual danger from a bicycle, however, is apt to be very much overestimated. A little practice will give any one skill enough to avoid falls if reasonable care be shown, and even if falls do occur they rarely result in anything worse than a hard knock or a bruise which a few hours will readily heal.

Until quite recently nearly all the modern bicycles were constructed on the general plan of one high wheel and one very small one. The latter more commonly was placed behind the former and served the purpose of a balance-wheel to steady the rider. The seat or saddle was placed directly over the centre of the larger wheel, which was the driving-wheel, worked by pedals attached to its hub. But in some makes the smaller wheel led and in that case served as steering wheel as well as balance, the steering apparatus in all bicycles forming a part of the forward wheel. The size of the large wheels in any of these styles varies in diameter from forty to sixty inches according to the height and weight of the owner. A step was fastened to the rod which connected the saddle with the small wheel as an aid in mounting and dismounting.

Though these styles of bicycles are perhaps still the ones most generally used, another make, quite differently constructed, has been rising in popular favor of late, and the indications are

that it will soon equally divide the patronage of wheelmen even if it does not entirely supersede the others. It is known as "the safety" and its peculiarity consists in having both wheels of approximately the same size. They are much smaller than the large wheel in the other makes, averaging

ON THE ROAD.

about thirty inches only. The seat of the rider is between the wheels, though nearer the back one, and from its being so much lower as well as from the equalization in the size of the wheels the risk of a fall is reduced to a minimum. It is claimed for this machine that it rides as easily as any other kind and that fully as great speed can be obtained with the same expenditure of force, an attachment of cog-wheels compensating for its reduced size.

"Safetys" are used by girls and women as well as by boys and men, being in fact the only form of bicycle that they can well ride. The seat in girls' safeties is usually placed lower than in those intended for boys and men, but it is frequently made saddle-fashion for them to stride. Such machines can be ridden by them in long skirts with perfect propriety and ease and they make a very graceful and attractive sight.

Tandems have two seats placed one behind the other, each with its own pedals so that both riders can work the machine together. Cog-wheels give uniformity of motion and enable the two to aid each other more effectually than they otherwise would. Tandems are intended especially for men and women to ride together and are particularly serviceable for extended tours lasting several days, trips which ardent wheelmen are fond of making and which in pleasant weather furnish great enjoyment.

In learning how to manage and ride a bicycle, a few lessons from a master of the art are better than any number of printed pages. But in the absence of any means of obtaining such practical instruction a few hints here may be of assistance.

Before one can ride he must learn to mount, and mounting is really the most difficult part of the task, for when that is once thoroughly mastered the greatest obstacle is removed and the battle is more than half won. In the first place have confidence in yourself. Do not fear falling, and do not think of falling, and the chances are that you will not fall. But if you should, pick yourself up and try again. A tumble in starting a machine is a trifle, and will not hurt you. Resolve that it shall not happen again and it probably will not.

Familiarize yourself with the bicycle by walking with it a few times around the room or over the road or wherever you are learning its management. Study it carefully, noting just how each part works and what it is intended to do. Then when you feel that you understand it thoroughly get on it as follows: taking hold of the handle, run forward three or four steps with the machine, keeping on its right side; then place your left foot on the step and, balancing yourself well, throw the right foot over the wheel and, at the same time, lift yourself into the seat and place your feet on the pedals, grasp the handle and you are mounted and already riding. All of this has to be done very quickly and while the motion you imparted to it by running a few

steps still lasts; for the instant a bicycle stops it falls. It can only be kept upright by moving. But there is time enough to do it in if one does not lag. ing, a friendly wall at the right is serviceable in saving falls. Once on the machine the pedals must be kept going in order to preserve that uprightness of

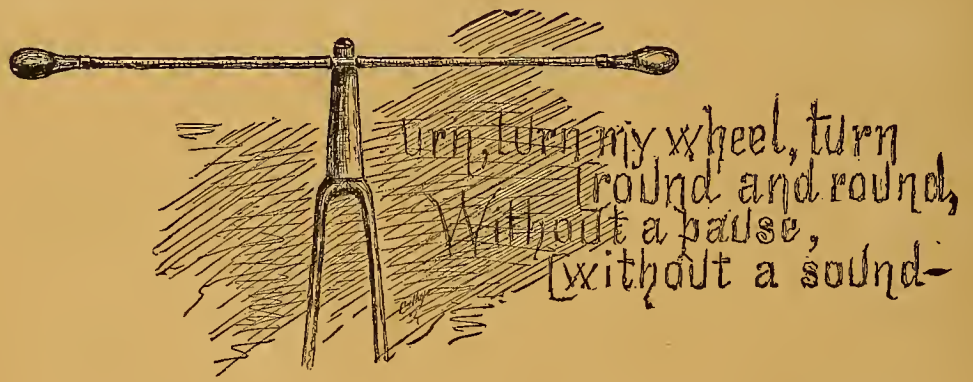
RESTING-PLACE.

Whether or not this sounds easy, it is not so easy to accomplish it successfully the first time it is tried. A few efforts, however, will overcome the difficulties and make it seem a very simple affair. In practis- bearing which is more essential to wheelmen than to any other class of mankind. If, after you are on the bicycle, you feel yourself falling, turn the wheel in the direction of the threatened tumble, and if it

does not check the toppling over, go down with the machine; that is, on the same side as it inclines. By disengaging the leg nearest the ground, and extending it, you will in all probability come down gently on that foot; then disengage the other. To dismount, you must let the machine slow up and then as the left pedal is on the "long throw" (furthest down), step on it, throwing the right leg over the backbone, and you are off.

Any fair, hard even surface is suitable to ride on. In the large cities asphalt or macadamized pavements are the best; in towns and rural districts a good country road will answer very well. Irregular surfaces are to be avoided as the jolts they occasion are apt to destroy the balance and so send rider and horse down. The balance is, of course, the great thing to be preserved. That is easily done, after a few trials, on ordinary occasions, but it is almost impossible to do so when either wheel strikes a small stone or other impediment in the road. When such an obstruction is encountered unexpectedly, and the rider is off his guard, it may send him off his wheel head foremost, the worst and most dangerous fall he can have. But if he has his eyes on the road, and sees his danger in time, he can, even if unable to avoid it, throw himself over sideways, and by extending his leg and landing on his foot prevent any very serious mishap.

Bicycling is so healthful and fine a pastime, and has become so favorite a recreation, that hundreds of clubs of wheelmen have been formed all over the country. They have their own rules, conventions, parades, tours and journals. So proficient have some become and so emulous are many of excelling one another that they have gradually raised the record until it now (1890) stands at two hundred and ten miles for a run of eighteen hours out of the twenty-four—an achievement of which they may well be proud, and which would have been regarded as impossible a dozen years ago.



TRICYCLING.

SWIMMING.

SWIMMING is the most useful of all athletic accomplishments, as by it human life is frequently saved which might have been sacrificed. It is also useful in the development of muscular strength, as well as highly beneficial to the nervous system. The art of swimming is by no means difficult of attainment, and many writers have supplied directions to facilitate its acquisition. Above all things, self-confidence (not rashness leading into danger) is required; for when this is possessed, all difficulty soon ceases. Dr. Franklin, himself an expert swimmer, recommends that at first a familiarity with the buoyant power of water should be gained; and to acquire this, he directs the learner, after advancing into the water breast high, to turn round, so as to bring his face to the shore; he is then to let a white stone fall in the water, which will be seen at the bottom. His object must now be, by diving down with his eyes open, to reach and bring up the stone. He will easily perceive that there is no danger in this experiment, as the water gets shallower, of course, towards the shore, and because, whenever he likes, by depressing his feet, he can raise his head again above water.

The beginner, in this initial experiment—for it is the very first lesson in swimming—will be forcibly struck by the difficulty he experiences in his attempt to get at the stone under water, in consequence of the resistance the water itself offers to his progress. He realizes at once, by actual experiment, that his body will not so readily sink as he imagined; and this important fact inspires him at once with a degree of confidence at the very outset which is of itself half the battle. He becomes aware of the great sustaining power of water, and learns how buoyant his body can become in the water by a slight exertion of muscular force. Having thus learned this truth practically, and also the great importance of always keeping his lungs well expanded with air, he will soon attain a practical knowledge of the other branches of the art.

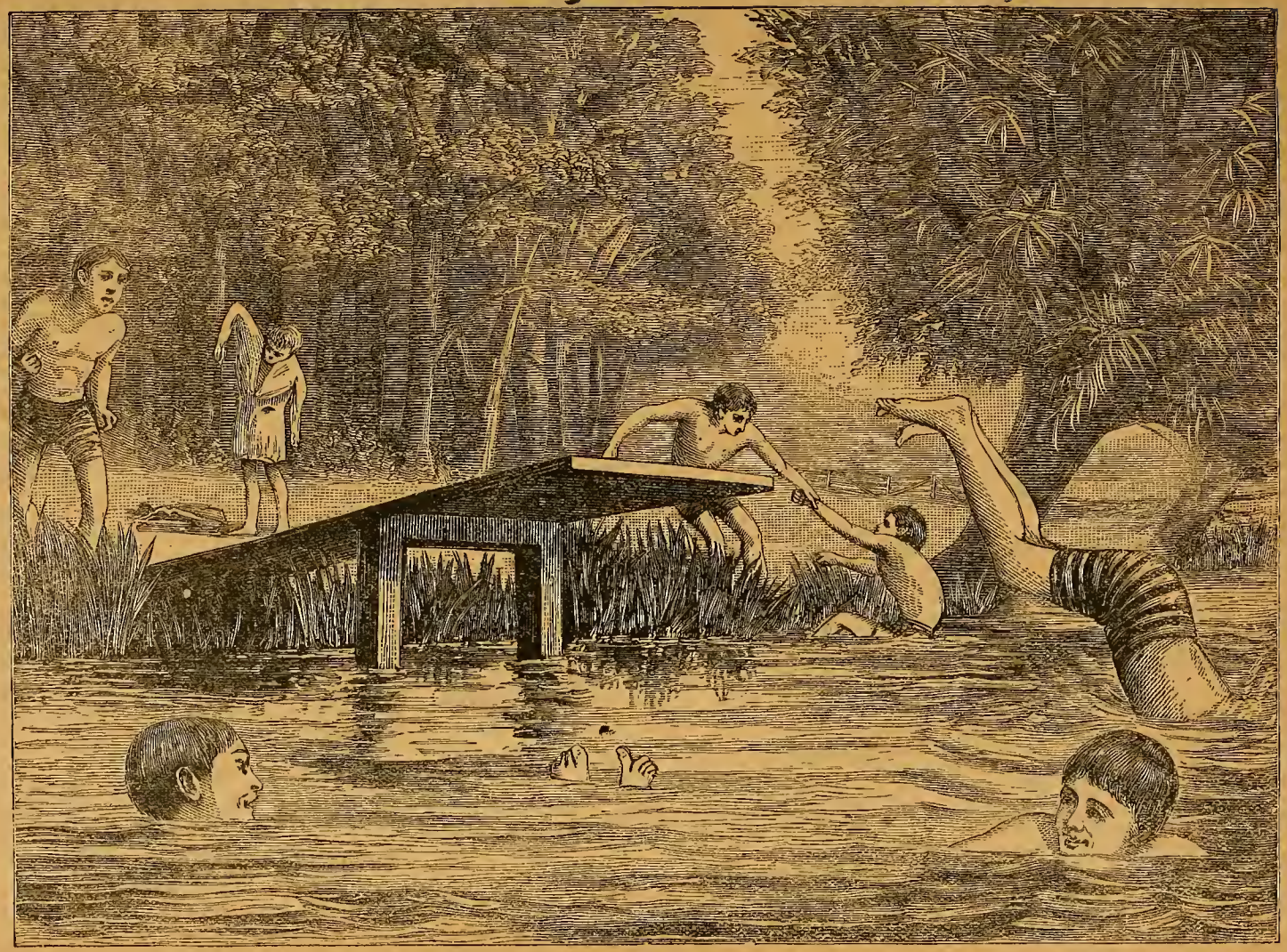
Should a person accidentally fall into the water, provided he retained his presence of mind, a knowledge of the above facts would save him probably from a "watery grave," even if he did not know how to swim. The body being but very slightly heavier than the volume of water it displaces, will, with a very slight motion of the hands under water, float. When the chest is thoroughly inflated with air, it is lighter than water, and floats naturally, having half the head above water; so that the person exposed to danger has only to turn upon his back, in order that that half consisting of his face, with the mouth and nostrils, be above the water line. But to float thus upon the water, the greatest care must be taken not to elevate the arms or other parts above its surface; and it is in remembering this caution that presence of mind in the time of danger confers so much benefit; for in the moment of terror a person, thrown into the water, almost instinctively stretches out his hands aloft to grasp at some object, thereby depriving himself of the very means which would frequently keep him afloat until succor arrived. By elevating any part of the body in this way, we remove it from the support afforded by the water, and thus render sinking inevitable.

So much for floating. Now for swimming.

In the first place, never enter the water within an hour of eating a meal, either before or after, especially after. If you go into the water with a hungry stomach you withdraw from the digestive function valuable heat necessary to digest food; while if you go in too soon after a full meal, digestion is impeded, and still more serious results are likely to follow. Never enter the water when you feel cold or chilly, as you need all the heat of your system to produce the reaction from your first dip in the water.

It is a very mistaken notion to enter cold water after a "cooling off" process. It is even worse than going in overheated. A man can jump into cold water while in a perspiration and experience no ill effects from it, provided he comes out of the water before a reaction is prevented. But to enter the water while he is cold, and lacks the natural heat to produce the reaction so essential to health in bathing, is to lose all benefit from the bath.

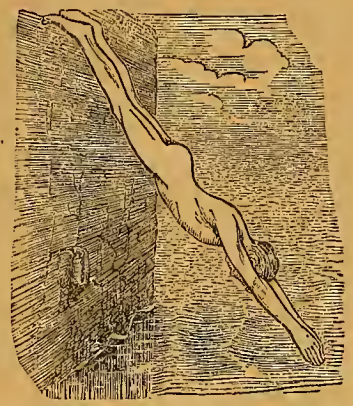
The best aid a learner can have is that of an experienced friend who can direct and criticise his efforts and lend assistance should it be necessary, but if no such friend is at hand let him advance gradually up to his arm-pits in the water, and then, turning about, strike slowly out towards the shore, taking care to keep his legs well up from the bottom. Rigid perseverance in this course will, in a very short time, enable him to feel himself afloat, and



SWIMMING.

moving at "all fours"—a delight equal to that experienced by the child who first feels that he can walk from chair to chair.

In striking off, the learner, having turned himself



to the shore, as before recommended, should fall towards the water gently, keeping his head and neck perfectly upright, his breast advancing forward, his chest inflated; then, withdrawing the legs from the bottom, and stretching them out, strike the arms forward in unison with the legs. The back can scarcely be too much hollowed, or the head too much thrown back, as those who do otherwise will swim with their feet too near the surface, instead of allowing them to be about a foot-and-half deep in the water. The hands should be placed just in front of the breast, the fingers pointing forward and kept close together, with the thumbs to the edge of the fore-fingers; the hands must be made rather concave on the inside, though not so much as to diminish the size. In the stroke of the hands, they should be carried forward to the utmost extent, taking care that they do not touch the surface of the water; they should next be swept to the side, at a distance from, but as low as, the hips; and should then be drawn up again, by bringing the arms towards the side, bending the elbows upwards and the wrists downwards, so as to let the hands hang down while the arms are raising them to the first attitude.

The legs, which should be moved alternately with the hands, must be drawn up with the knees inwards, and the soles of the feet inclined outwards; and they should then be thrown backwards, as widely apart from each other as possible. These motions of the hands and legs may be practised out of the water; and whilst exercising the legs, which can only be done one at a time, the learner may rest one hand on the back of a chair to steady himself, while he moves the opposite leg. When in the water, the learner must take care to draw in his breath at the instant that his hands, descending to his hips, cause his head to rise above the surface of the water; and he should exhale his breath at the moment his body is propelled forward through the action of the legs. If he does not attend precisely to these rules, he will invariably have a downward motion, and, as the boys say, swim furthest where it is deepest.

When under the water, the swimmer may either move in the usual way, or keep his hands stretched before him, which will enable him to cut the water more easily, and greatly relieve his chest. If he observes that he approaches too near the surface of the water, he must press the palms of his hands upwards. If he wishes to dive to the bottom, he must turn the palms of his hands upwards, striking with them repeatedly and rapidly whilst the feet are reposing; and when he has obtained a perpendicular position, he should stretch out his hands like feelers, and make the usual movement with his feet, then he will descend with great rapidity to the bottom. It is well to accustom the eyes to open themselves under the water, at least in those beds of water that admit the light, as it will enable the swimmer to ascertain the depth of water he is in.

To swim on the side, the body should be turned either on the left or right side, while the feet perform their usual motions. The *arm from under* the shoulder stretches itself out quickly, at the same time that the feet are striking. The other arm strikes at the same time with the impelling of the feet. The hand of the latter arm begins its stroke on a level with the head. While the hand is again brought forward in a flat position, and the feet are

contracted, the stretched-out hand is, while working, drawn back towards the breast, but not so much impelling as sustaining. As swimming on the side presents to the water a smaller surface than on the

waist, when rapidity is required, the former is often preferable to the latter.

Treading water is a sort of perpendicular swimming and can be done in two ways. In the first the hands are compressed against the hips and the feet describe their usual circle. The other mode consists in not contracting both legs at the same time, but one after the other, so that while the one remains contracted the other describes a circle. In this mode, however, the legs must not be stretched out, but the thighs are placed in a distended position and curved as if in a half-sitting position.

To swim dog-fashion each hand and foot should be alternately used. The hands, one after the other, are drawn towards the chin in a compressed form, and then expanded and slightly hollowed, with fingers close, and as they strike the water the feet are likewise drawn towards the belly and struck backwards with a kind of kick.

In swimming on the back one should turn over in the water by the combined motion of the arm and leg, and then extend his body, his head being in a line with it, so that the back and upper part of the head may be immersed, while the face and breast are out of the water. The hands should be placed on the thighs straight down, and the legs moved as in forward swimming, taking care that the knees do not rise above the surface in striking them out. Sometimes the hands are used after the motion of a wing or fan, by which a slight progression is also made at the same time that the surface of the body is well lifted out of the water.

To swim on the back without employing the feet, the body is placed in a horizontal position, the feet are stretched out stiffly, and the heels and toes are kept in contact; then the body is to be somewhat curved at the seat, the hands are to be stretched flatly forward over the body, and slowly striking in small circles, the loins are somewhat drawn up at each stroke. This will move the body in the direction of the feet. To go in an opposite direction, the body is placed horizontally, but somewhat curved in the seat, the head in its natural position, the arms are kept close to the body, with the elbows inclined inwards, and the hands describe small circles from the back to the front, at about a foot and a half from the hips. These modes serve to exercise and strengthen the arms in an extraordinary degree without in the least fatiguing the breast.

In the thrust the swimmer lies horizontally upon his waist, and makes the common motions in swimming. He then simply stretches one arm forwards, as in swimming on the side, but remains lying upon the waist, and in a widely described circle, he carries the other hand, which is working under the breast, towards the hip. As soon as the arm has completed this motion, it is lifted from the water in a stretched position, and thrown forward in the greatest horizontal level, and is then sunk with the hand flat into the water; while the swimmer thus stretches forth the arm, he, with the other hand stretched as wide as possible, describes a small circle in order to sustain the body; after this he brings his hand in a largely described circle rapidly to the hip, lifts the arm out of the water, and *thrusts* it forward. During the describing of the larger circle the feet make their movements. To make the thrust beautifully, a considerable degree of practice is required. This mode of swimming is useful where a great degree of rapidity is required for a short distance.

ROWING.

It may be safely assumed that every boy who takes to rowing or sailing for amusement wishes to go fast; now, every fast boat is more or less liable to be upset, even with the best and most skilful management; and when a boat is upset, he who can swim laughs at the adventure; he who cannot swim is not only himself in danger, but endangers others, who feel obliged to risk their own lives in order to save his. Therefore, let every one learn to swim before he attempts either to row or sail in a fast boat; he will then be able to enjoy the amusement, and his friends on shore will feel at ease, and not wish to deter him. Having acquired this art, he may safely proceed in learning to row and with it to learn the general management of a rowing-boat. Boys at school and men at college can often row very well without being watermen—that is to say, without understanding how the boat, the oars, the rudder, etc., ought to be fitted, or how to steer or manage a boat in difficulties, or how to row except in a boat and with an oar fitted exactly as it ought to be; but let the beginner not follow this example—let him determine to learn how to detect and correct any fault in the fittings of a boat, and how to row under difficulties. Of course any one can row better in a properly-fitted boat than in one that is not so; but grumbling at the boat and fittings is the sign of a greenhorn; a good waterman should be able to row anywhere and anyhow, and at the same time should know how to make the best of a good boat and oars when he has got them. These arts are only to be acquired by rowing in all sorts of boats, by listening to what experienced oarsmen have to say on the subject, by always looking out to pick up something new and to learn something every day. And first let the beginner learn the names and use of every part of a boat and of its fittings.

FOUR-OAR.

PAIR-OAR.

It should be borne in mind that in order to become a "first-rate oar" in the light crank boats now used for racing purposes, early hours, moderate diet, regular and vigorous exercise are imperative requirements, and success is only attainable by great perseverance, toil and self-denial. A terrible strain upon the muscular system is inseparable from a closely contested boat-race, and there is no hope of success except as a result of special training for the task. There is one special compensating result for the arduous character of the work, however, and that is that the preparatory process is a sure preservation from the dissipation incident to youth, for excellence in rowing is utterly incompatible with any form of vicious indulgence.

LITTLE ROWERS ON THE RIVER.

PRACTISING STROKE (1).

Rowing-boats consist of the bows; the stem, or entrance; the stern, where are the rudder and the lines for steering; the rowlocks, for giving purchase to the oars; and the thwarts, or seats. At the bottom are the foot-boards, which are easily removed in order to bail out any water which may leak into the boat. Besides these parts there is a board placed across the boat for the feet of the rower, called a stretcher. The whole boat is composed of one or more planks, called streaks, nailed upon a light oak framework, called the timbers, or ribs; and the upper streak, upon which the rowlocks are placed, is called the wale-streak. Boats with two rowlocks opposite each other are called sculling

(2.)

boats, and are propelled by a pair of light oars called sculls, the art being called "sculling." When a boat is fitted with a pair of rowlocks not opposite each other, it is called a pair-oared boat. If with two in the middle opposite each other, and two others, one before and the other behind, but not opposite each other, it is called a *randan*. When a boat has four rowlocks, none of which are opposite one another, it is called a four-oared boat, and so on up to ten oars, which is the utmost limit in common use for any kind of boat but the pleasure barge, which sometimes has twenty-four oars, as in the city barges of London. The rowlock nearest the bow is called the bow rowlock, or No. 1; the next No. 2, and so on; and the oars used in them receive the same number, the one nearest the stern being called the "stroke oar." The rowlocks in river and sea boats are somewhat different in shape, though identical in principle, both consisting of a square space of about the breadth of a man's hand, and both lying on the wale-streak; but in river boats they are generally bounded before and behind by a flat piece of oak or ash called, respectively, the thowl-pin and stopper; while in sea boats they are merely common round wooden pins dropped into holes made in the wale-streak, but

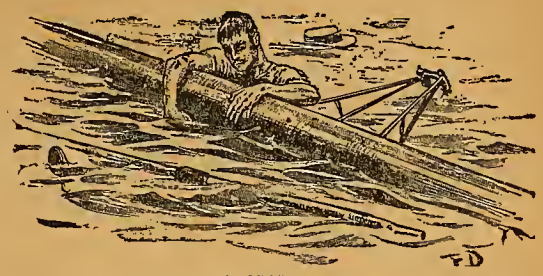
(3.)

still receiving the same names. The thowl-pin is for the purpose of pulling the oar against, while the stopper prevents the oar from slipping forward when the rower is pushing it in that direction after the stroke. When the rower rows with an oar in each hand, the oars are called *sculls*, and are shorter; when he uses only one oar, it is called an *oar*, and is about thirteen feet five inches long.

The rower should, as far as possible, take some good oarsman for his model, and endeavor to imitate him in every respect, which is the only mode of acquiring a good style. Description is useful in putting the learner in the way of acquiring what is to be taught, but it is not all-sufficient for the pur-

(4.)

pose. In the first place, the learner should place himself square on the seat, with his feet straight before him, and the toes slightly turned out. The knees may either be kept together or separated considerably, the latter being the better mode, as it allows the body to come more forward over the knees. The feet are to be placed firmly against the stretcher, which is to be let out or shortened, to suit the length of the individual; and one foot may be placed in the strap which is generally attached to the stretcher in modern boats. The oar is then taken in hand, raising it by the handle, and then either at once placing it in the rowlock, or else first dropping the blade flat on the water, and then raising the handle it may gently be lowered to its place. The hands should both grasp the oar tightly, the thumbs being underneath the handle of the



A SPILL.

are extended, the knuckles will be uppermost. Put the oar into the water *when you have stretched forward as far as you can*, and do this without splashing. Let the blade dip "crisply" and easily into the water. Then throw your shoulders back and pull the hands home close to the body just

A SCRATCH EIGHT ("PEAL OF BELLS").

oar, not above it. Sit straight and upright, not lolling over the seat either forward or backward. When leaning forward to the stroke, separate the knees a little, and keep the arms straight, and do not move your hands at all, so that, when the arms

FEATHER "UNDER" THE WATER.

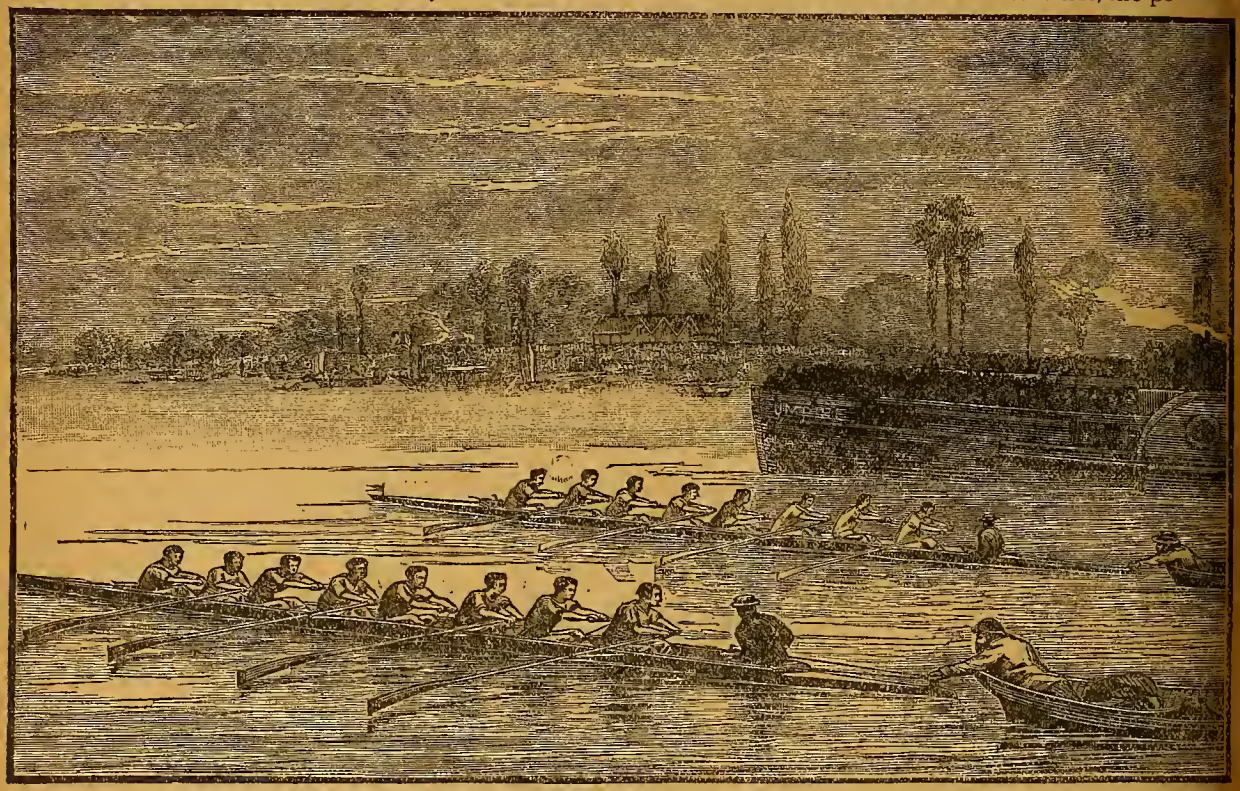
below the waist, elbows close to the sides. By keeping your hands tightly on the oar and pulling back, you will find the knuckles will naturally come down and the finger-tips up. Then by dropping the wrist neatly you will *feather* the oar (slip the blade out of the water edge upwards) without all that excessive wrist action which is so wearisome to a novice. Mind you pull hard from start to finish, and if you can continue the pull with the outside hand close to the side, you will get a longer stroke. Bring the oar out of the water smoothly and "cleanly," but do not jerk it up, or pull in "fits and starts." All rowing should be done regularly, in "time," and no good oarsman will pull himself back with his head in the air. Pull as far back as you can effectively; but if you go too far, you lose "time," and the boat will roll from side to side as you resume your "pull." Rowing is done from the waist; the seat and legs should be firm as possible, else the boat will roll.

In "backing water" the reverse of these actions takes place. The oar is first reversed in the row-lock and then it is *pushed* through the water with as much power as is needed and *pulled* through the air. When the oars on one side are pulled and those on the other are backed, the boat is made to turn on its own water. "Holding water" is effected by the oars being held in the position of backing without moving them.

The essential points in rowing are: 1st, To straighten the arms before bending the body forward; 2d, to drop the oar cleanly into the water: 3d, to draw it straight through at the same depth; 4th, to feather neatly, and without bringing the oar out before doing so; 5th, to use the back and shoulders freely, keeping the arms as straight as possible; and 6th, to keep the eyes fixed upon the rower before them, avoiding looking out of the boat, by which means the body is almost sure to swing backward and forward in a straight line.

Every boat without a rudder is manœuvred in the water, either by pulling both sides alike, in which case it progresses in a straight line, or by reversing the action of the oars, equally on both sides, pushing them through the water instead of pulling them, and called backing water, when the boat recedes; or by pulling one side only, on which the boat describes a segment of a circle, which is made smaller by pulling one oar, and backing the other. By means of a rudder the boat is made to take a certain course, independent of the rowers, called "steering," the chief art in which consists in keeping the rudder as still as possible, by holding the lines "taut," and avoiding pulling them from one side to the other more than is absolutely necessary.

It is not a difficult matter to steer, but there are a few instructions to be attended to. First, the position of the coxswain should be easy with legs crossed at the ankles so as to separate the knees. Grasp the lines firmly so that you can "feel" the tiller; a turn of the line round the hands will give the necessary hold. (It is a good plan to fasten the lines round you in front.) Lean forward a trifle as the boat is pulled. The right-hand line will steer to the right, and left to the left, but in all cases steer "small." Do not by a long pull at the lines turn the boat far to either side. Look well ahead and give room for the oars or sculls near a bank. In going up stream keep out of the current under the bank, and keep inside descending boats.



AN AMERICAN RACE.

permitting towing and following boats to go inside of you. In descending keep the centre of the river where the stream is usually strongest. The greatest pull should be on your "lines" when the oars are out of the water; such a course will lighten the rowers' labor. Due allowance should be made for the breeze by keeping the boat's head out, and put the boat's head up to the "wash" when a steamer has passed.

When a crew are steered by a competent cox-

A GENERAL VIEW OF THE HENLEY REGATTA, LONDON.

swain, they ought to be perfectly obedient to his commands, rowing exactly as he tells them. His orders are communicated by the following words, viz.: when desiring his crew to row he says, "Pull all;" or if wishing any one oar to be pulled, he says, "Pull bow," or "Pull, No. 3," or 4, etc., as the case may be. If they are to stop rowing he says, "Easy all," or for any one oar, "Easy bow," or No. 2. The same kind of order is conveyed when "backing" or "holding water" is desired; the only variation, as before, being between confining his order to any one or more oars, or extending it to all. In this way all the evolutions practicable on the water are managed, and the coxswain has complete control over the boat, being able to cause her to be rowed slowly or quickly, or to be stopped, backed or turned on her own centre.

It is very essential that a boy should be able to scull neatly, and this is only done by practice. The first thing is to pull so that your sculls shall not "jam" your fingers together, and this can be obviated by the beginner by pulling one hand a trifle behind the other, till, when you lean back, you naturally separate the hands; or, better still, shift *the body* an inch or two to either side, and the hands will clear each other. In beginning the pull, lean well forward, dip both sculls at once and to *the same depth*, and not too deep, in the water. The only difficulty is in the meeting of the hands, and this got over, as explained, the sculler will pull his elbows to his hips and his hands just below the chest. Feather by slightly lowering the wrists (if necessary), and by a quick recovery of the body lean forward with straightened arms. Let arms and body work together like machinery all the time. Jerking will never do. Smoothness and steadiness are essential to the sculler as well as to the rower.

SAILING.

ANY object floating on the water will have a tendency to drift before the wind; but a boat, with its scientifically constructed hull, sails and rudder, can be so guided as to sail with the wind on her quarter or abeam, or even close-hauled, as it is called—that is, with the wind meeting her at an angle of about forty-five degrees.

Fig. 1 represents the deck plan of a boat sailing close-hauled under two sails. The sails A and B are drawn aft with the sheets (ropes) till they form an acute angle with the line of the keel. The wind, whose direction is indicated by the arrow W, strikes the sails at a very acute angle, so that they do not shake, but are just full.

FIG. 1.

The result of this pressure on the sails is that the boat is propelled forward and also sideways away from the wind, making leeway, as it is called.

If a boat has a deep keel, her lateral (or *side*) resistance to the water will cause the leeway to be insignificant. If the boat is of very shallow draught and so offers little lateral resistance to the water, she will not go ahead at all, and the entire force of the wind will be expended in driving her bodily to leeward. Lee-boards and centre-boards are fitted to shallow boats in order to obviate this.

The pressure of the wind on the sails, in addition to producing the above effects, heels a boat over. A sailing-boat is so constructed as to resist this tendency to capsize. Either she is made narrow and deep and is weighted with ballast as far as possible below the water-line, or she is shallow but of considerable beam (width). The deep and weighted boat will heel over more readily than the beamy shallow boat, but the further she heels the greater pressure of wind is necessary to make her heel still more, for the leverage of her ballast increases as she heels, and many boats with lead upon their keels are practically uncapsizable. On the other hand, the beamy shallow boat does not heel so readily, but after she has heeled to a certain angle she will capsize.

The pressure of the wind on the sails not only propels, drives to leeward and heels over a boat, but, unless the sails are absolutely balanced, it tends to turn her in one direction or the other.

In Fig. 1 we have a boat with two sails. If the after sail is the more powerful, it is obvious that the wind will drive round that sail and the stern of the boat with it in the direction of the arrow *C*, while the head of the boat will run up into the wind. If, on the other hand, the head sail be the more powerful of the two, the bow will be driven off the wind and the boat will bear away.

The sails of a boat should be so balanced that she has a slight tendency to run into the wind; and to counteract this *weather-helm* as it is called, the steersman will have to keep the rudder slightly to leeward of the line of the keel.

If a boat carrying weather-helm be left to her own devices in a squall she will at once do the right thing, luff up into (point towards) the wind and be in safety; whereas a boat with too much head-canvas and carrying lee-helm will run off her course and put herself in a dangerous position.

A boat should not *gripe*—that is, carry too much weather-helm—for steering will then be very hard and the rudder, forced far over to counteract the helm, will act as a serious drag in the water.

In balancing the sails, it must be remembered that the further out a sail is on an extremity of a boat, the greater its effect in driving that end of the boat off the wind.

Sometimes a vessel's sails are not properly balanced because the ballast has not been stowed in the right place. It is evident, for instance, that if ballast be shifted aft the weather-helm will be diminished, for the stern of the boat will draw more water and so offer more lateral resistance, whereas the stem (bow) of the boat will draw less water and will therefore be more easily blown round. A centre-board, again, is generally placed well forward, as it is found that when this is lowered the weather-helm of the boat is considerably increased.

It has been explained that a boat properly constructed and rigged can sail within forty-five degrees of the wind. Now, if it be desired to sail to some point more directly to windward than this, what is called *tacking* becomes necessary. This consists of sailing a certain distance close hauled

with the wind on one side, and then turning round and sailing close hauled with the wind on the other side. A zigzag course is thus taken, each *tack* being at about right angles to the last.

One diagram of Fig. 2 illustrates the process of tacking with the wind right ahead, and in the other diagram the wind is a point or two off, so that one tack is longer than the other, there being, in sailor language, a short leg and a long leg.

That the action of the rudder, when forced over till it is at an angle with the keel, is to act as a drag on that side and so deflect the boat's course, is plain enough. But it is not so obvious a fact that this action of the rudder in turning the boat is not

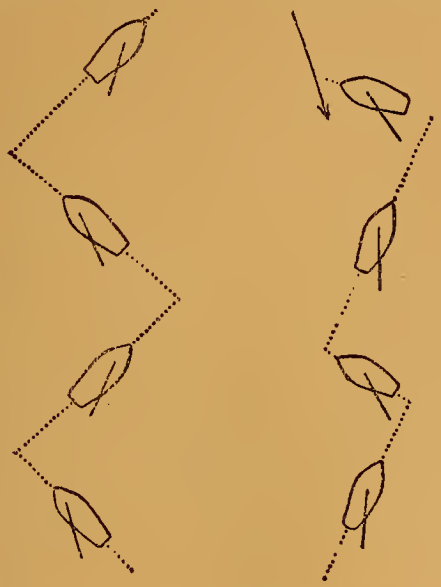


FIG. 2.

to turn her bow round through the water, but to push the stern sideways while the bow is almost at a standstill. For the centre of rotation of a boat—that is, the imaginary pivot on which she turns—is always well forward.

In Fig. 3 A is the centre of rotation. So when the rudder is put over to the right, the boat will revolve on the pivot A till she is in the position indicated by the dotted lines. It will be observed that the stern has moved about twice as far as the bow. The further forward the centre of rotation the greater will this disproportion be.

It is very important to remember this effect when sailing very near any object, such as a buoy, for while steering so as to turn the boat's head away from the object and avoid it, the stern is made to approach the object, and the very action that seems calculated to prevent a collision may become the cause of one.

Having shown what are the relations of the sails, hull and rudder of a boat to the wind and water, and explained how a vessel requires either ballast or beam to prevent the wind from capsizing her, and needs draught to increase her lateral resistance and prevent her from being blown to leeward, it remains to add that the longitudinal resistance to the water must be diminished as much as possible, so that the boat can slip easily through the water and travel with speed.

FIG. 3.

For this reason a sharp stem is put on a vessel, so that she can open a way for herself through the water like a wedge, and she is given what is called a *fine run* aft, so that her stern will not drag heavily.

Again, the larger the area of the boat's greatest cross-section (Fig. 4), the more resistance that results and the slower she will travel. The area of the cross-section is diminished by making a boat of narrow beam, while the necessary displacement is obtained by increased length and depth.

Now, the difficulty arises that most of the qualities that insure *speed* in a boat have a tendency to lessen her *stability* and even her *lateral resistance*. It follows that, while constructing a boat, a compromise has to be made between these three; and the problem of how to produce the fittest craft becomes a very complicated one that has never been solved yet and probably never will be.

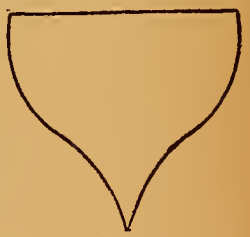


FIG. 4.

Thus a long, narrow, shallow boat will run the fastest before the wind, but she will not turn to windward at all and will capsize with great ease.

As it is recognized that beam is opposed to speed, it has long been the fashion in England to construct racing yachts extremely narrow and of great draught. Such boats do attain speed, but at the expense of all comfort and when a heavy sea is running go through it instead of over it.

To come to the opposite extreme, there is the

flat-bottomed very shallow and very beamy craft, with a deck plan not unlike a flat-iron—a veritable skimming-dish. Provided with a centre-board, such a boat is well adapted for shallow and sheltered waters. The centre-board can be raised while crossing a shoal and the boat will then draw only as many inches as a deep-keel boat of her size would draw feet. She will be very fast in smooth water, but in rough water she will pound heavily into the seas and, having no good hold of the water and little momentum, will lose her headway and soon prove dangerous.

For real comfort and seaworthiness—and some now maintain for racing purposes as well—a boat that is something between these two extremes answers the best; that is, a boat that is moderately beamy and has a moderate draught of water. This compromise between the deep-keel and the centre-board types of boat has long been popular in America, and probably the victories of our yachts constructed on these principles over the English crack deep-keelers will gradually modify British views on this subject. Most Englishmen maintain that a long hole through the bottom of a boat must weaken her; that the great strain of the centre-board, concentrated as it is on one small portion of the keel, must render a large craft thus fitted ill-adapted to buffet with a really heavy sea. American builders, on the other hand, emphatically deny that a centre-board is a cause of weakness and point to our stanch pilot vessels and trading schooners, which are all provided with centre-boards and which are exposed to every sort of weather.

It is unnecessary to dwell on this controversy; for though there is much divergence of opinion as regards large craft, there can be no question as to the advantages of fitting centre-boards into many kinds of small craft, especially in those that are intended for river sailing.

The theory of sailing thus set forth applies to boats with one sail as well as those with two, and to the smallest as well as to the largest. Row-boats are often fitted with a movable mast so as to be used for sailing as well as rowing. Or a clever boy can put up a mast for himself and rig a sail that will answer his purpose as well as a more expensive craft. A block with a hole in it just large enough to rest the foot of the mast should be securely fastened in the bottom of the boat well forward. Directly over this, from gunwale to gunwale, a board should be nailed, with a similar hole for the mast to pass through so as to steady it. This mast and its accompanying sail can thus be easily slipped out and placed in the bottom of the boat during a calm or when one wishes to row, and put up again if a breeze springs up. A rudder can be readily shaped out of any flat piece of board—or the steering at a pinch can be done by an oar. When a sail-boat is thus improvised out of a row-boat, a "false keel" should be attached by fastening a long board edgewise to the bottom of the boat.

It is taken for granted that no boy, or man either for that matter, will start out in such a boat or in any boat until he has learned its practical management from an experienced sailor. One lesson will not suffice; he must have had many lessons before he can safely trust himself alone in a boat. The first time he attempts the management himself his teacher should be with him to aid him by suggestions and to lend a hand if needed. Water is so uncertain an element; storms may arise so suddenly that only a thorough master of seamanship should venture any distance from shore in a sailing vessel of any description.

Not only should one understand how to sail a boat before attempting to do so by himself, he ought also to learn to swim before going on the water at all. The art is so easily acquired that there is little or no excuse for any one's remaining in ignorance of it. However good a sailor the master of the boat may be, it is always possible for accidents to occur, and then a knowledge of swimming may enable one to save the lives of others as well as his own life. Therefore, the two most important rules for the would-be yachtsman to observe are: first, learn to swim before going into any boat; and secondly, learn how to manage a boat before assuming charge of it.

CANOEING.

DESPITE the assertion of even so great an authority as Mr. Macgregor, whose name has now become a household word, canoeing is an amusement that must necessarily involve a considerable amount of danger and ought to be indulged in by no one who has not, according to the school phrase, passed in swimming. Whether or not it is a very comfortable means of locomotion is purely a matter of personal feeling; but in face of the fact that the American and English canoe clubs now number many hundreds of members it is only fair to suppose that those who venture enjoy the mode of locomotion.

In having a canoe built, it is a matter of considerable moment that in certain portions of its framework it should be constructed for and peculiarly adapted to the particular person who is going to use it. The length of the foot decides the height the canoe should be from keel to deck; the length of the legs the space required for the "well;" while the weight, of course, decides the displacement that is to be accounted for, and must receive as much consideration as the baggage that is to be carried. Oak is the best wood that can be used, with the top streak of mahogany and the deck of fine cedar. These were the materials of the *Rob Roy* (Mr. Macgregor's famous boat), and as her weight with all her fittings was only 71 lbs., it would be unreasonable to want one lighter; indeed, for anything like knocking about, flimsy canoes are utterly and entirely useless and only aggravate the labor of paddling. The length over all should be 14 feet; beam, 26 inches; depth, from top of deck to bottom of keel, 12 inches, though towards the gunwale this is reduced to 8½ inches. The well should be 32 inches long and 20 broad, and protected by a combing of oak half an inch in height. If the canoe is intended for travelling purposes, the beam should be 6 inches abaft midships; so that when stores, provisions, sails and so on are stowed away forward it brings the craft to very nearly an even keel. Otherwise, it should only be 1 foot abaft

midships. The boards that compose the floor, and on which you have to sit, resting your back against the backboard, are about two feet long, and are fitted so that the knees just touch the combing, while the heels are against the footboard on the keel, thus obviating the discomfort that would follow on having to keep the legs stretched out straight at full length. As it is taken for granted that no one would think of going to the expense of having a canoe built without securing the services of some one who could supply him with the many minor details that it would be impossible to give here, less important matters need not be entered into; only it should be added that a comfortable backboard, after the following pattern, goes a long way to lightening the labor of paddling. It should be made of two strips of oak, 18 inches long, 2½ inches wide, arched by two cross-pieces, one of which should be grooved, so as to rest on the combing, and work after the fashion of a hinge, it being fastened thereon by a stout cord. The result is that the muscles down the back are supported and rested while the spine is left free. The greatest possible care should be taken in selecting the apron, which is too often left to the last moment and chosen in a hurry. Being intended to prevent the water making its way over the deck into the well, and at the same time to avoid being fastened in any way likely to impede the canoeist in case of an upset, it may readily be understood that it requires nice discrimination and handiwork. It should fit close to him—in short, he should be measured for it as for a coat.

The novice in canoeing should be content with propelling himself by the aid of his paddle for a while—in fact, until he is thoroughly at home in his craft and the way to manœuvre her. Spruce-fir is the best wood of which to have it made, as it combines lightness and durability, two qualities that can be readily appreciated after a day's locomotion. The action, though it may not be violent, except in currents and so on, is very fatiguing, owing to the motion the body takes from side to side. At the same time, practice will prove to the novice that he requires to move but very little from one side to the other. There can of course be no harm in having a mast fitted to your canoe, and as soon as you feel capable of the risk, set it up, hoist your sail and—be prepared to capsize. This latter alternative is only added by way of warning. With caution nothing of the sort need happen, for the stiffness of canoes under sail in a strong wind and heavy weather has been satisfactorily proved on more than one occasion.

In learning the management of a canoe practical instruction is as indispensable as in all other kinds of boats and in most occupations and amusements of life. A few hints, however, may be of service and are therefore given.

First. It is almost absolutely necessary that the canoeist should learn to swim. An upset in a canoe is not a pleasant thing, and at any rate a knowledge of swimming is always useful. Therefore learn to swim.

Secondly. On entering the canoe, be steady. Step into it in the centre, and put the feet down quietly. You can then seat youself slowly, keeping the body as straight as possible, and then straightening the legs.

Thirdly. Hold the paddle *firmly*—a slip may be

fatal; hands not too far apart. A steady stroke is necessary at first; afterwards you can try quick paddling. No nervousness or sudden jerking must enter into canoeing work. Perfect self-possession and movement only of the arms, till practice has made you perfect, are strictly enjoined. Have an attendant at first; it will give you confidence, and his instruction will be of much assistance. Do not overdo your first trials, and look well ahead for snags and other partly submerged obstructions, which to a beginner appear sometimes formidable.

Lastly. Practise. Let the blade of the paddle drop into the water as near the side of the canoe as you can, but not deep in the water, and go ahead with a long and steady "draw."

The true canoeist must not only learn how to paddle and how to sail; for paddling and sailing, to quote the words of an expert "are only branches of canoeing. He must learn to be a boat-builder, for he may at any time have to repair his own canoe himself. He must learn to be a sail-maker, for he will always be trying to make improvements in the rig of his canoe. He must learn to cook—in which science are included the problems of building a fire with wet wood and of finding provisions in a wilderness. He must learn geography with a minuteness with which only the man can learn who personally explores streams on which no boat except a canoe, has ever floated. He must learn the art of running rapids and detecting at a glance where the channel through them lies—an art, which, more than any other art or any known science, develops decision of character. He must learn that wet and cold and heat and damp are of no consequence, and can even be made sources of delight. And, above all, he must learn to bear with the infirmities of the canoeist who cruises in company with him, and never to shirk his rightful turn of duty in connection with scouring the frying-pan."

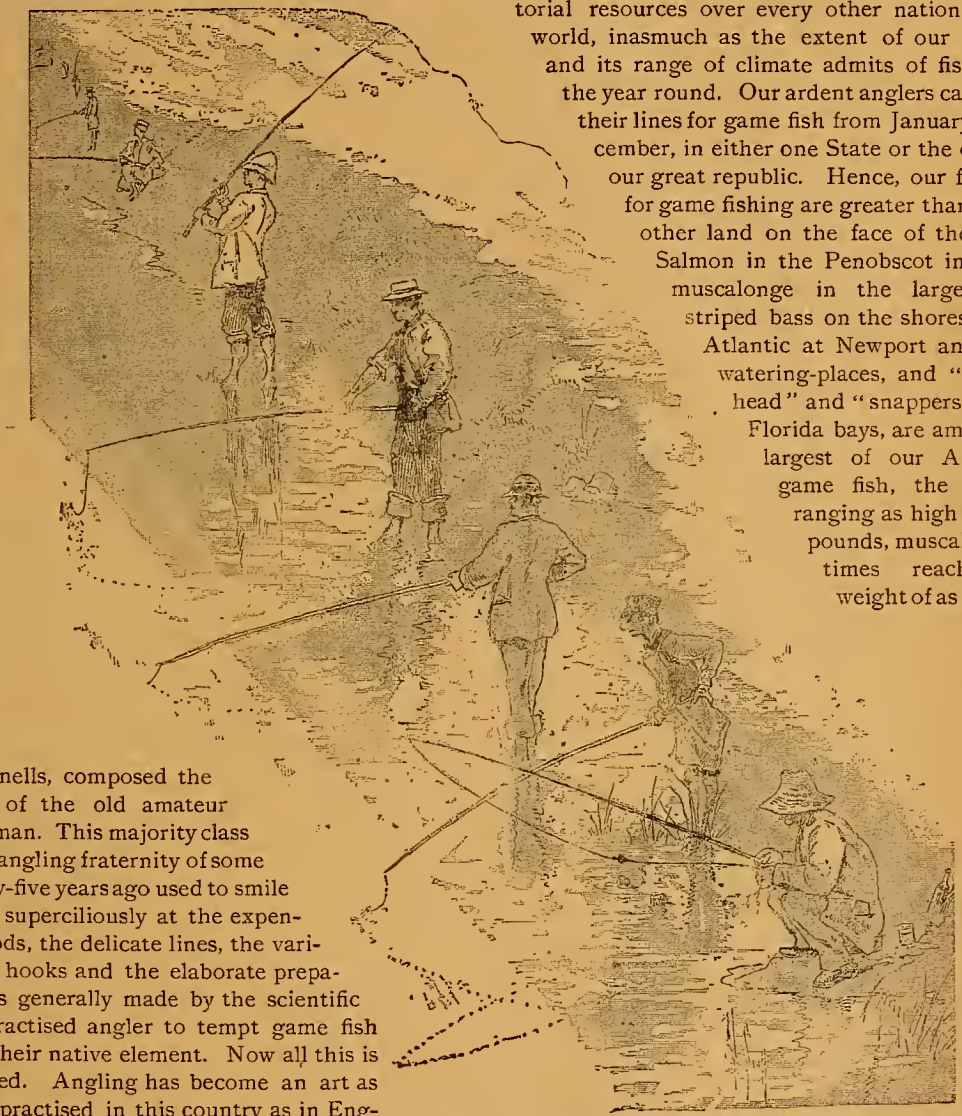
The canoeist is at once the captain, pilot, crew, steward and cook of his little craft all in one. He paddles when not sailing; steers with his feet, trims the sails when not paddling, and, in fact, he is "monarch of all he surveys" from the seat in the centre of his canoe. The sport is a most healthful one and can be enjoyed from May to September in the Eastern States and Canada, and nearly all the year round in the South.

MINIATURE YACHTING.

THE building of miniature yachts, together with the rigging and sailing of them on the park ponds of our large cities, has come to be as favorite a pastime with American boys as it is on the park ponds in London. It affords the most exciting kind of sport to the boys, and in itself is a recreation which presents an ample field for the development of mechanical skill and ingenuity in the construction of the little vessels, besides which it fosters a love of yachting, and it is very instructive in affording information in the building of model yachts and in the method of sailing them. At the Brooklyn Prospect Park the sixty-acre lake is set apart for the use of owners of miniature yachts, and it is surprising how many "old salts" there are, who have for years been to sea in the mercantile marine, and who take interest in these miniature yacht races, teaching the boys how to sail their yachts, besides helping them to construct them. At Conservatory Lake at Central Park, New York, too, these little yachts are allowed to sail. The sport has come from England, where miniature yachting is quite a feature of the sports of London boys. In fact, the little yacht regattas which take place on the Serpentine Lake in Hyde Park each summer are quite important events. The Royal Model Yacht Club is presided over by the Prince of Wales, and the royal family generally have taken great interest in the proceedings on these occasions. Some of the yachts belonging to this club are valued at £1000, and yet they do not exceed five feet in length. The regattas are sailed for twelve guinea cups, and the events are quite exciting at times. There are over a dozen of these model yacht clubs in London, and the leading club, learning of the establishment of a similar organization in New York not long ago, sent a communication over to New York desiring information looking to an international contest with miniature yachts. The subject may seem a trifling one at a cursory glance, but the influence of these miniature yacht associations in cultivating a taste for nautical knowledge, and especially in giving opportunities for testing new models, is such as to make the organizations worthy of support and encouragement.

FISHING.

In days gone by, with rare exceptions, the American angler was a mere novice in the Waltonian art. A bamboo cane, a thirty-foot line, a simple leaden sinker, and a couple of common hooks attached to



cord snells, composed the outfit of the old amateur fisherman. This majority class of the angling fraternity of some twenty-five years ago used to smile rather superciliously at the expensive rods, the delicate lines, the variety of hooks and the elaborate preparations generally made by the scientific and practised angler to tempt game fish from their native element. Now all this is changed. Angling has become an art as much practised in this country as in England. We have our anglers' clubs and our fishermen tourists, who make the sport a specialty. We now also have our regular seasons for the various kinds of game fish, and what was some twenty years ago a boyish sport has become a pastime as popular with the wealthy and cultivated class of American society as it is in England. Here in America we have an immense advantage in piscatorial resources over every other nation in the world, inasmuch as the extent of our country and its range of climate admits of fishing all the year round. Our ardent anglers can throw their lines for game fish from January to December, in either one State or the other of our great republic. Hence, our facilities for game fishing are greater than in any other land on the face of the globe. Salmon in the Penobscot in Maine, muscalonge in the large lakes, striped bass on the shores of the Atlantic at Newport and other watering-places, and "sheepshead" and "snappers" in the Florida bays, are among the largest of our American game fish, the salmon ranging as high as forty pounds, muscalonge at times reaching a weight of as much as fifty pounds, and the large bass frequently turning the scale at seventy or eighty pounds; while the Southern sheepshead will range in the twenties and snappers exceed at times that weight. Then to

these monsters for line fishing are to be added the angler's pets—the beautiful and palatable brook trout and the river bass—together with the weak-fish and the infinite variety of fish for sea-coast anglers; while the lakes provide an abundance of pickerel, black bass, perch, etc. In catching these game fish, rods and tackle of infinite variety are used, from the heavy salmon and bass rod to the delicate, whip-like rod of the trout-fly fisherman.

Fishing rods are made of bamboo cane, hazel, hickory and other kinds of wood. They are of different lengths, some fitted as walking-sticks and others made to pack in canvas bags. The bamboo ones are the best for general angling; but those made of white cane are much superior for fine fishing, being very light in weight and at the same time very stiff.

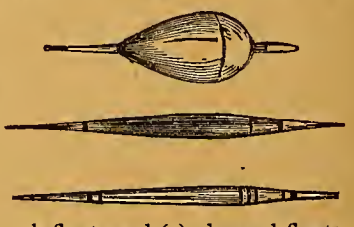
In choosing a rod, observe that it is perfectly straight when all the joints are put together and that it gradually tapers from the butt to the top, and is from twelve to sixteen feet long. A bad rod is likely to snap in striking a heavy fish. Rods fitted with several tops are at once the best and most convenient. Some anglers have one rod for trolling, another for barbel, perch or other heavy fish, as well as one for fly-fishing, but a thoroughly good rod will answer as well for all purposes.

A good trolling rod should be made of the choicest stout and well-seasoned bamboo cane, from fourteen to sixteen feet in length. When trolling with the gorge, or live-bait fishing, a long rod is necessary, to enable the angler to drop in his baited hook over high sedges, rushes, etc., as also when the water is bright, for he should then keep as far away from it as he can, which a long rod enables him to do while dipping, casting or spinning his bait. If either a jack or pike see him, it is very rare indeed that it will take the bait; and again, with a long rod you will be able to drop your baited hook in some very likely place for jack or pike, such as a small hole, division or clear place among a bed of weeds, in a river or any other water where there are any weeds.

There is some difference of opinion among anglers about the number of rings necessary for *trolling rods;* those who have their line on a thumb-winder, or on a bank-runner, seldom place more than two or three rings on their rod, and others have only one large ring at the top; but if a winch is used, there should be a ring to every joint including the butt; make each ring of double twist wire, fixed so as always to stand out, and nearly large enough to admit the top of your little finger; the top joint should have two rings, the top one nearly three times the size of the others; this prevents any obstruction of the line running, which is of material consequence. When not in use, rods should be kept nicely stowed in a moderately dry place, and they ought to be well scraped and re-varnished every three years; should the joints become loose by shrinking, they should be slightly moistened. Should any accident befall a rod while fishing, and you should not have a spare top with you, your only remedy will be to splice your rod. To do this the ends of the broken pieces for about two inches must be laid parallel to each other, and then tightly bound together with waxed silk or very strong yellow hempen twine.

Next to the rod the line is of the utmost importance. Good lines should be well twisted. The twisted lines should be made wholly of silk, or silk hair, but those made of gut are the strongest and best for young anglers; the twisted hair are the cheapest, and the single horsehair the finest. The young angler will find a line of about four yards in length the most useful. A single gut line, with a small porcupine float, is commonly useful for general fishing; the plaited silk lines are the best for trolling, and are less inclined to break or tangle than the twisted.

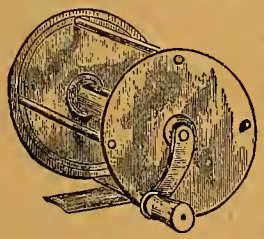
The line must be shotted that the float may partially sink in the water; and in putting on the shots place them altogether within three inches of the bottom loop of the line; to which loop fix the loop of the hair or gut to which the hook is tied. When you make a line of silk, gut or hair, remember it must be always finest at the bottom, where the hook is fastened, very gradually increasing in thickness to the top.



There are various kinds of floats, each adapted for different kinds of fishing. The principal are (1) tip-capped floats, (2) cork floats and (3) plugged floats. The tip-capped floats are made of several pieces of quills, or of reed for the middle and ivory

or tortoise shell for the top and bottom, and narrow at each end, gradually increasing in circumference to the middle. They are superior to all others for angling in waters which are not very rapid, particularly in roach fishing, as the least movement or fine bite sinks them below the water. Cork floats are generally made of quills at the top, with a piece of cork, which is burned or bored in the middle to admit the quill and then filed or ground down smooth and painted. The bottom is plugged with wood and has a ring to allow the line to pass through. Cork floats are most suitable for fishing in heavy or rapid streams, as they require a great many shot to sink them and this weight of shot prevents the baited hook from passing too rapidly over the bottom. They are of various sizes and forms; instead of common quills the quills of the porcupine are sometimes introduced and these make an excellent strong float. A tapering cork is usually preferable to a round one. The cheapest floats are the plugged ones. They are made of indifferent quills, some of them of one goose quill with a wooden plug at the bottom from which they take their name. There is little to recommend them excepting their cheapness as, they easily loosen by the plug coming out and so cause a good deal of annoyance.

A reel or winch is a most necessary addition to the rod and line, as it enables you to vary the length of your line at pleasure, and to play your fish. The best winches are those made to be fixed in a groove on the rod, and which are fastened with brass ferrules made for the purpose on the butt, because you can fasten such a winch to any sized joint.



There are three kinds of winches, check, multipliers and plain; the multiplying winch is apt soon to get out of order, unless carefully and constantly oiled, and is otherwise the least efficient and most expensive of the three. Young anglers are recommended, at first, to purchase a plain and strong winch, which will answer every purpose, and be much less expensive. A check winch is, however, the best.

Reel lines are mostly made of silk and horsehair, twisted or plaited together, but some are made entirely of silk. The latter is preferable, as it is less likely to twist, runs more freely and is not so apt to rot. The length of lines varies from fifteen to eighty yards; but for general purposes thirty or five-and-thirty yards is quite long enough. The line should always be unwound after a day's fishing, as, if it is allowed to remain wet on the reel, it soon rots.

Hooks can be bought of all sizes, suitable for every kind of fish to be caught. There are many controversies among adept anglers about them, and these are sometimes as violent as those upon politics or religion, The hooks found most suitable for the following fish are these:

Barbel, 1, 7, 8, 9.	Loaches, 13.
Bleak, 11, 12, 13.	Miller's thumb, 13.
Bream, 10.	Minnow, 13.
Carp, 7, 8, 9.	Perch, 7.
Chub, 8, 9.	Roach, 10, 11, 12.
Dace, 10, 11, 12.	Rudd, 10.
Eels, 8.	Ruffe, 10.
Flounders, 3.	Smelt, 9, 10.
Grayling, 10, 12.	Tench, 9, 10.
Gudgeon, 9, 10.	Trout, 6, 10.

To bait a hook with a worm, use the following method: First enter the point of the hook close to the top of the worm's head, and carry it carefully down to within a quarter of an inch of its tail; to do which you must gently squeeze or work up the worm with your left thumb and finger, while with your right you are gradually working the hook downwards. The small lively piece of the worm at the point of the hook moving about will entice the fish; but, mind, if too much of the worm hangs loose, though it may entice fish to nibble, yet they will seldom take the whole in their mouth, so as to enable the angler to hook them; on the contrary, he is frequently tantalized with a bite, and, when he strikes, finds part of his worm gone, and his fish too. Therefore, to bait a hook well with a worm is necessary to insure hooking a fish when you strike; and it consists in drawing the worm without injuring it (use him as you would a friend, Walton says) quite over and up the shank of the hook, leaving only a small lively part of the tail below. If you bait with half a worm, choose the tail end, and enter the point of the hook into the top part, and bring it down nearly to the end of the tail, leaving only a very small piece of it loose. If you bait with two worms on the same hook, draw the first up above the shank, while you put the second on in the same manner as directed with one worm, but enter the hook near the tail of the second worm; then draw the first one down on the second over the shank of the hook, and all will

then be well covered, and the bait will be a very *bon-bon* for perch, chub, carp, barbel and all large fish; but when angling for gudgeon and other small fish half a red worm is sufficient, and the tail end is best. If blood-worms are used, put on two or three, in doing which be tender, or you will burst them.

BAITS.

The principal baits are:

1. The Lob-worm.
2. The Brandling.
3. The Marsh-worm.
4. The Tagtail.
5. The Ash-grub.
6. Cowdung bait.
7. Caterpillars.
8. Cabbage-worms.
9. Crab-tree-worms.
10. Gentles.
11. Cad-worms.
12. Flag-worms.
13. Grasshoppers.
14. Wasp-grub.
15. Cockchafers.
16. Bread paste.
17. Cheese paste.

To scour and preserve worms the angler should provide himself with a quantity of fresh moss. Wash out all the earth and squeeze it, but not too dry; then put it into a jar and squeeze it lightly down and throw in the worms upon it. The jar should be kept in a cool place in summer and the moss changed once in three or four days.

The landing-hook or gaff is a large hook, which is sometimes barbed like a fish-hook, and sometimes plain, fastened to one end of a handle; this latter is occasionally composed of several pieces, which run one into another, like the slides of a telescope.

A landing-net is a small net mounted on an iron ring, which is fastened, like the landing-hook, to the end of a handle or pole.

The clearing-line is made of several yards of strong small cord, to the end of which is fastened a heavy ring of lead or brass. If the hook should get fast in a heavy weed, post or anything else, this ring is put over the butt of the rod, and suffered to slip down the line to the hook. The rod should be held in the right hand, the top pointing downwards, the clearing-line in the left; the ring falling on the hook, from its weight, generally clears the hook from what it may have struck against. If not, the angler should hold the rod firmly and draw the line sideways and break away. In this case, the angler seldom loses more than a hook, if he acts as above directed; but without the assistance of a clearing-line he frequently loses his float as well as his hook and line, and sometimes breaks his top joint. The brass clearing-rings are to be preferred because they are jointed, and in consequence can be used when the angler has a winch in his rod, in which case the leaden ring could not be passed over the winch.

The drag is a piece of iron with three or four stout wire hooks without barbs, placed back to back, fastened to a strong cord line, and which is used to draw away weeds.

The bank-runner is mostly used in the day-time, when the angler is fishing for roach, barbel, etc. It is stuck in the bank, the bottom being strong turned wood, sharpened for the purpose, with a winder at the top for the line, which should be from forty to sixty yards long, made of silk, thin cord, or plaited Dutch twine. But there should be a cork and bullet to the line, and the bait a dace or gudgeon, which should swim about mid-water.

The disgorger is an instrument with a forked top, about six inches long, made of iron, brass or bone. Its use is to get the hook from a fish when swallowed; and in using it the forked end is thrust down upon the swallowed hook with one hand, while the line is held tight with the other: pressure disgorges the hook, and it is then easily drawn out. In attempting to get a gorged hook from a fish without this instrument, you run a hazard of breaking the hook and hurting yourself. When the fish is hooked through the lip, the angler has only to hold the fish steadily in one hand, while with the other he carefully disengages the hook.

ANGLING AXIOMS.

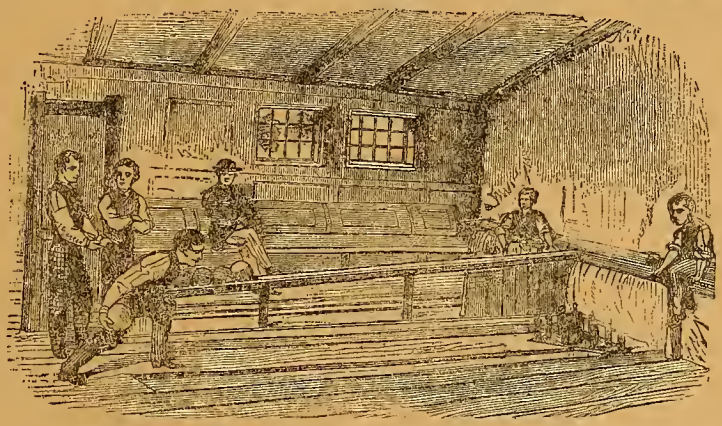
1. Never fish any water without leave from the proprietor, unless it be water that is free to all comers.
2. Never use unfair bait, or attempt to take fish in any but a fair and sportsman-like manner.
3. Never start on a day's fishing without first considering the wind, weather and water.
4. Never let your shadow fall on the water.
5. Use the finest tackle of which your fishing will admit.
6. Never begin bottom fishing without first plumbing the depth.
7. Never intrude upon another fisherman's water.
8. And always remember that nothing is lost by politeness.

BOWLING.

THOUGH bowling in reality is an in-door game, yet it is so active an exercise and is practised so much more by boys and men than by girls and women, that it is thought it should properly find a a place in this volume. It is by no means, however, exclusively a masculine amusement. Girls and women belong to many bowling-clubs and enjoy the sport almost, if not quite, as much as do their brothers and husbands. But the sterner sex forms undoubtedly a majority of bowlers, and so the game is placed among the boys' pastimes.

Fifty years ago it was the most popular sport for an all-the-year-round game in our large cities. Especially was it a favorite in New York, where in 1840 there was scarcely a block on Broadway, from Barclay to Bleecker Street, which had not its bowling alley. American bowling differs from the old English game of "skittles," which was played on an alley on which nine pins were laid in diamond form. This game came under the ban of the law in this country years ago, during a Puritan crusade against "ye wicked sport of bowling," and the law was evaded by substituting ten pins, set up on a triangle instead of a diamond, and now this is the "scientific" game of bowling. Twenty-odd years ago saw bowling almost "played out" as a popular game in this country; but of late years it has obtained a renewed existence, having been started on a new lease of life by the German residents of Brooklyn, who introduced large balls containing finger holes in them, by which the bowlers were enabled to impart a bias to the balls. The game is once more established in public favor, and it has become a feature of fashionable recreation at the prominent watering-places in summer and in the cities during the winter. There is but one drawback to it, and that is that it exercises the muscles of one side of the body too much, especially those of the right side of the chest and right arm. When either arm can be used with equal facility, the sport is a valuable exercise for health.

A bowling-alley is usually about sixty feet long and about five feet wide. It should be made of very hard wood and be perfectly level. At each



side of the alley is a gutter leading into the pit (beyond the end of the alley) into which the pins are knocked and the balls roll. Alongside of the alley an inclined trough is placed to enable whoever sets up the pins to return the balls to the player.

Four pins are placed in a row near the edge of the pit; in front of these three others stand, in front of them two more are set; and the tenth pin forms a row by itself in advance of all the rest, being the apex of the pyramid or triangle and closest to the player. Near the head of the alley a line is drawn across it, beyond which the bowler is not allowed to step in delivering the balls. The balls are made of hard wood and vary in size to suit the taste and strength of the players.

Each bowler has ten turns (or "frames" as they are called), alternating with the others. At each turn he rolls three balls and scores for that frame as many pins as the three balls knock down. (None of the pins are set up again until the three

balls have all been rolled.) Should the whole ten fall before his first two balls, he makes what is known as a "spare;" if his first ball brings them all down, it is a "strike." Either event counts him ten, with one or two balls, as the case may be, yet to be rolled. These remaining balls are not rolled at once. Nor is it customary to record the score of a spare or strike as soon as made. But when the turn of the bowler comes round again to play he adds to the ten previously made the number of pins then knocked over by his first ball, if it is a spare he is completing, or by his first two balls, if he is working out a strike, and the total is then placed on the frame score. In addition to this he of course scores what he makes on his three balls when completing his spare or strike. For example, if a player makes a spare, say at his first frame, he puts on the score board simply some mark (usually this, /), to indicate the spare. At his next turn he knocks over perhaps five pins on his first ball, two on his second and one on his third. He then records fifteen for his previous frame and eight more for the present one. Should he make two strikes in succession, he cannot complete the record of the first one until his turn comes round for a third play. (Strikes are commonly indicated on the frame by the mark of a cross, thus ×.)

Clubs including many members, where a dozen or twenty players take part in a game, often roll only two balls to a frame. This is done, as is the method of playing off spares and strikes, to shorten the length of the contest, which otherwise would be tediously long. Of course its effect is to reduce the total score which the average player will make on his ten frames, though it is possible, if a spare or strike is made at every turn, to reach as high a count in a two-ball game as in one in which the full number is rolled. Time is also saved by using two alleys instead of one; in fact, this is really essential to comfort where four or more participate in the contest.

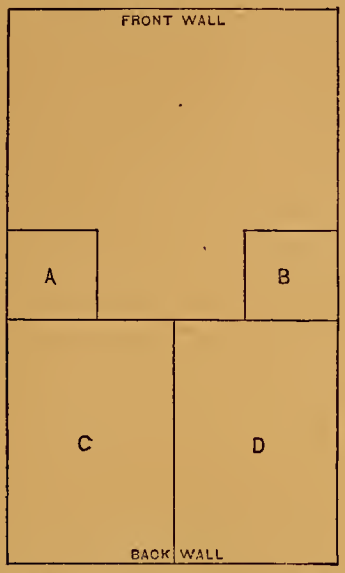
Two, four or any even number of persons can play the game. They are divided into two sides, an equal number on each side, and the party whose total score in the ten frames aggregates the most wins the game. Sometimes an odd number take part, but as this causes unequally matched sides it is undesirable. The highest possible score for an individual to make is ten strikes, which would net him three hundred points—a maximum, it is hardly necessary to add, that is rarely attained. Two hundred is a good average, though many bowlers can be depended upon in matches to regularly run up two hundred and fifty and a few even two hundred and seventy-five.

In rolling the balls they should not be thrown or dropped so as to bump along the alley. It is best to hold the ball with the arm hanging down and swinging slightly. By thus swinging the ball and running a few steps with it, sufficient impetus can be given it to enable it to knock over all the pins if it strikes them properly. The eye should be fixed upon the head-pin, which should be struck a trifle to the right or left of its centre. This causes the ball to deflect a little from its straight course and so knock over the pins on one side, while the head-pin will fall over towards the opposite side and push over the remaining pins there. Expert players can also give the ball a twist as they roll it, the effect of which when it strikes the pins is to twirl them around as they fall and so make them do more damage among the ones not actually hit by the ball. Pins knocked over by a ball rebounding from the back of the pit must be reset and do not score. The same regulation applies to pins knocked over by "dead men" (other fallen pins), when this is caused by a ball in the gutter striking the "dead men." Generally speaking when a ball rolls into the gutter before striking any standing pin, no pins knocked down by it are counted.

When two alleys are used it is customary to exchange alleys at the end of each game; and in matches between different clubs this is done after each frame.

RACKETS.

A RACKET court resembles a hand-ball court, just as the game of rackets resembles hand-ball; but it is larger, and can be erected only at a considerable cost. Hence, it is for the most part only in the large cities that a racket court can be found.



These courts are of various sizes, ranging from fifty to fully eighty feet in length, and from thirty to forty feet wide, with a very high roof and a back wall of less height, having at the top of it a gallery for spectators, who can thus look into the court from above. Across the front wall, which is black, is fixed a board, or balk, about two feet two inches high, and a white line, called the "cut" line, is also traced across it, about seven feet nine inches or eight feet above the floor.

The floor itself, which should be of smooth stone, asphalt, or concrete, perfectly level, is divided into sections, as shown in the diagram. About half way down the court, but nearer to the back wall than the front, a line is marked parallel to those walls; and the back part so marked off is divided into two equal portions, C and D, by a line traced at right angles to the back wall. The two small spaces marked A and B are service spaces, within which the person who serves must place one or both of his feet. The balls are not more than half the size of hand-balls, and are played with "rackets," a peculiar kind of bat, like a battledore, with strong cat-gut laced crosswise through the frame.

The game is begun by one of the players (the server) striking the ball against the front wall, above the white line, so as to fall, without bounding, into the back court opposite. Thus, if he stands at A, he must strike the ball into D, where it must be taken by one of the players on the other side, either at the volley or at first bound. If, in serving, the ball is struck against the side wall, or roof, or floor, before it hits the front wall, or if it is served below the balk line, or is struck so hard as to go out of court, it is a "hand out"—that is to say, the striker loses his innings. If the ball is served from the wrong place, or if it hits the front wall above the balk line, but below the white one, or if, after properly hitting the front wall, it fall into any but the right court, or hit the roof or gallery without going out of court, it is a "fault," and the person to whom it is served is not obliged to take it. He may do so, however; and if he does, the game proceeds as if it had been properly served. Should he attempt to take it, and fail, the server then scores an ace; and the same result follows whenever his opponent or opponents fail to return the ball above the lower line. When an ace is won, the man in goes over from A to B, and then "serves left"—that is to say, into court C. The out-players stand behind the server while the ball is being served and taken; and afterwards the usual arrangement is that the server shall take all the balls which fall inside the cross line, and his partner shall take all which fall farther back. The man who is served to, on the other side, takes all which fall in the back courts, while his partner attends to those which fall nearer the front wall. The game is made up of fifteen aces, and after the first player

is put out, the others succeed one another in order, each pair of partners having to be put out before the other side goes in. Thus, supposing that M and N are playing against X and Y, and that M and X are both better players than their respective partners. The question which side shall go in first is

usually decided, not by tossing a coin as in cricket, but in the following way: It will be discovered, on looking closely at a racket, that at the thin end of it, nearest the handle, the strings which cross the frame from edge to edge are twisted round the other which go lengthwise, so as to project on one side or face of the racket, and give it a "rough" appearance, whereas on the other side they do not project, but are "smooth." When, therefore, it is required to decide as to innings, one of the players holds his racket downward with the handle between his finger and thumb, so that the top part of it rests on the floor of the court. He then gives it a spin, and lets it fall, while one of the adversaries in the meantime calls "rough" or "smooth." When the racket has fallen on its face, it is examined to see which side is uppermost, and the question of innings is decided accordingly. Supposing, then, that M and N have called "rough" and that "rough it is," M, being the better player of the two, will proceed to serve, and as he and his partner score each ace, the game will be called "one love," "two love," "three love," etc. If he is put out after making three aces, X will succeed him, and as he serves the game will be called "love three." As he makes his score it will be called "one three," "two three," "three all," and so on, until he also is put out, when his partner must go in, and serve from the court opposite to that from which the last service was made. When he is out M will go in, and be followed by N. When a game has been won there is no change of innings, but the player who was serving when the game ended begins the next game at "love all," and when he is out his two adversaries go in in what order they please. Thus it will be seen that at the commencement only one hand is allowed to go in, but afterward the two hands on each side go in successively till the game is won. It will also be remarked that a player who is good at serving has a great advantage, as whenever he scores the game, which he is sure often to do, he secures not only this benefit, but that of first innings in the next game. It is generally the rule, that when the game is called "thirteen all," it may, upon the demand of the out-player, be "set at five," in which case five aces must be added to the score of 13 before the game can be concluded on either side. At a tie of 14 the game may be "set at three."

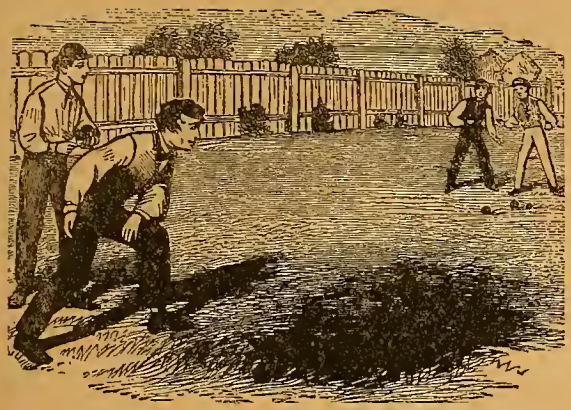
If in serving a ball, it should touch either the server or his partner, before it has bounded twice, it puts him out.

If a striker in returning the ball hits the ball against his partner's racket or person, it counts an ace against him, or a hand out if he is in.

It is a "let" if the out hand unintentionally gets in the way of the striker, and a "hinder" or "balk" if he do it purposely, and in the latter case counts an ace against him.

Two consecutive "faults" put a server out.

BOWLS.



Bowls is one of the oldest games of ball extant, and centuries ago was the most popular of field games among the English nobility, bowling greens in the olden time being as numerous as tennis lawns are now. The regular game is played with hard *lignum-vitæ* balls, turned in such a manner as to make them diverge from a straight line when bowled on the green and turn in toward the "Jack," or ball, which the bowler aims for. In fact, the regular game is quite a scientific sport, and presents a field for a great display of skill. The game as modernized for young players differs from the regular game materially, and it is this latter game of bowls only which is included in the list of sports in this work. For this a special court is laid down, in form as shown in Fig. 1.

To lay down a bowling court like that below, a level piece of hard surface ground is necessary, and it would be well to sink the level of the court about four or six inches below the surface, boarding the sides of the court. When a regular court is not laid out in this way, the game can be easily played on a croquet or tennis lawn, the only points to be laid down being the "tees" at the two ends and the lines behind which the bowlers are to stand when bowling. A small quoit is laid down in the centre of the circle at each end, and this forms the "tee." This court would be marked out as shown in Fig. 2.

From one to five players on a side can take part in the game, each player rolling two balls, one each alternately with an opponent. In delivering the balls the bowler must stand with both feet back of the bowler's line. All the players on both sides bowl from the same place and for the "tee" at the opposite end of the court. When all the balls of both sides have been bowled the "end" is completed, and the side having the ball nearest the "tee" counts one ace. Should a side have more than one ball nearer the "tee" than any ball of the opposite side, an additional ace is to be counted for each additional ball. A ball bowled so as to settle in the centre of the "tee" quoit counts two aces, provided it remains in position until the completion of the end. The game is won by the side which first makes twenty-one aces. Ends are reserved and the other "tee" bowled for whenever all the players have rolled each two balls.

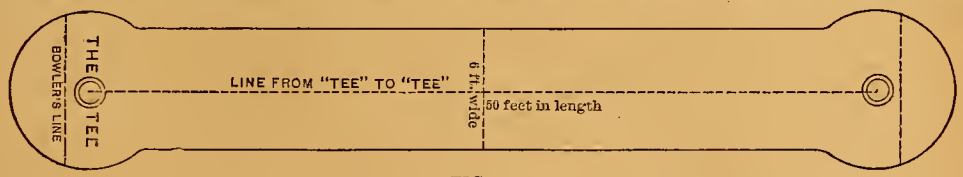


FIG. 1.

FIG. 2.

ATHLETICS.

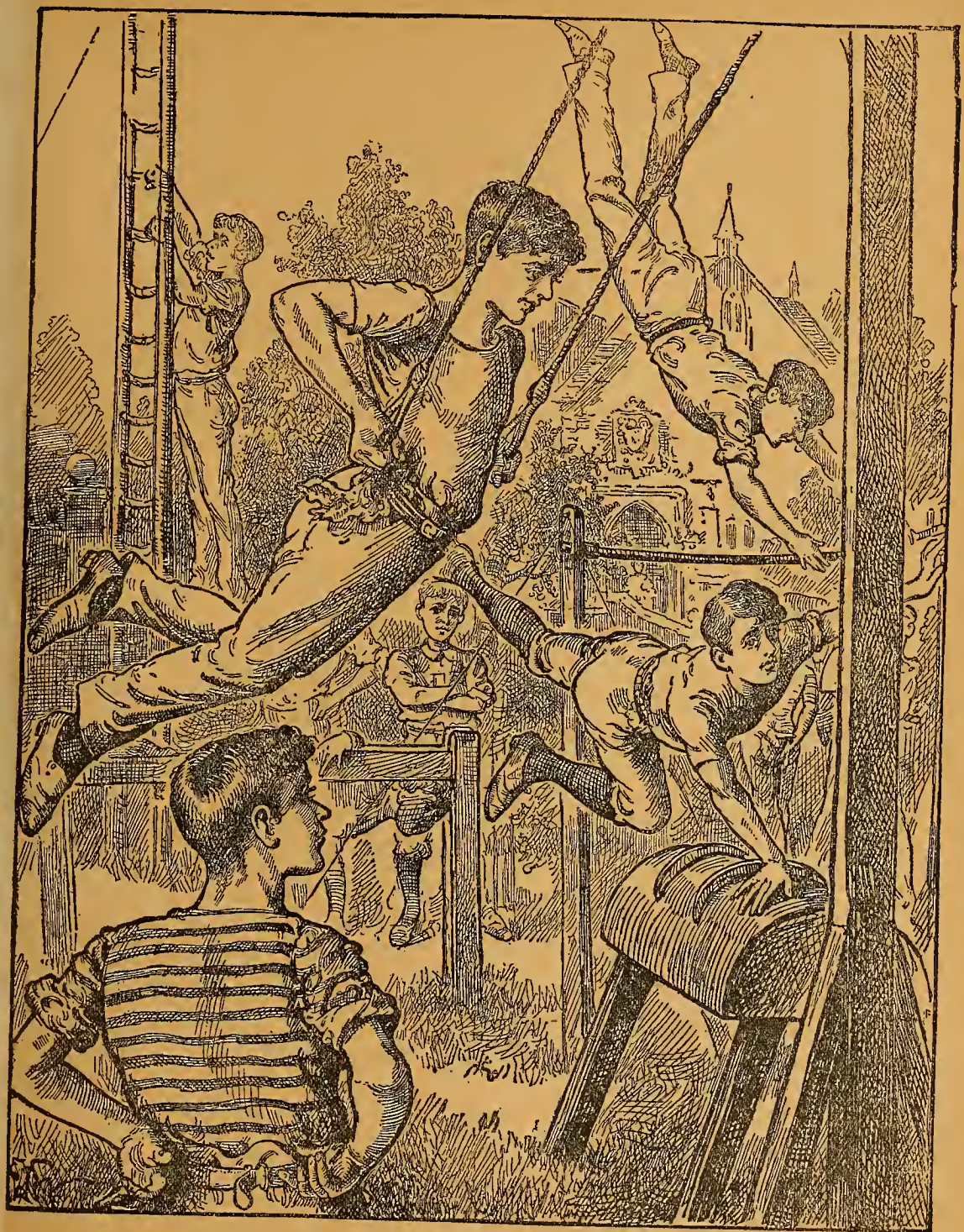
GYMNASTIC exercises may be begun by a boy about eight years old, or may be commenced at any age; but in all cases one should begin gently and proceed gradually without any abrupt transitions. They should be practised before breakfast in the morning or before dinner or supper, but never immediately after meals; and the pupil

should be very careful, after becoming heated by exercise, of draughts or colds, and in especial should refrain from lying on the damp ground or from standing without his coat or other garments. Above all he should rigidly abstain from the dangerous habit of drinking cold water, which in many instances has been known to produce fatal results.

TRAINING.

It is impossible for any one to indulge to any extent in pedestrianism, rowing or other vigorous athletic contests without going into some sort of training, however slight it may be. Before any can be thoroughly enjoyed, it is essential that the body should be brought into condition and the constitution prepared for the severe tests to which it is sure to be put. Until this has been satisfactorily accomplished (and it cannot be done without much perseverance and self-denial) success at regattas or in other out-door sports is quite out of the question, and the most serious results will attend any attempt to take part in such proceedings. Courage and determination to win a race, whether on land or water, are qualities very much to be admired, yet they are entirely after-considerations; the first and chief endeavor must be to reduce the superfluous fat without weakening the system, to secure soundness in wind and limb—in short, thoroughly to prepare the body so that it may be equal to the emergencies that may hereafter present themselves.

Training should not, however, be begun hastily. Before it is commenced, care should be taken to get the stomach into condition for the dieting it will have to undergo. These preliminary proceedings will be more or less prolonged, according to the habits of life of the person. If a boy has been given to eating unwholesome food, or smoking, he does not begin under such favorable circumstances as those who have not so indulged themselves. Probably he has injured his digestion and interfered to, at least, a slight degree with his liver; a state of things that he can readily appreciate by the restlessness of his night's sleep, a furred tongue and an unpleasant taste in his mouth in the morning. The first thing he must do is to give up pastry and other indigestible food and throw away his tobacco. When once he has made up his mind to go in for a system of training, he should commence by taking a mild aperient dose, such as salts and senna or a little rhubarb. He should avoid extremes and only take medicine enough to clear his stomach preparatory to its new treatment. If he has been wise enough to satisfy himself with very little in the way of sweets and has refrained altogether from tobacco, which to young people is simply poison, he may, unless of weak or sickly constitution, begin to train without any preliminary preparations. If his heart and soul are really in the contest for which he desires to get himself into condition, and he possesses a small amount of strength of mind, he will soon become accustomed to the daily routine of food and exercise. It is no use beginning, and then yielding to the temptation for this or that nice thing; when



GYMNASTICS.

once the ordeal has been commenced, it must be carried out strictly and accurately, or it may as well be abandoned altogether; for the desired state of body can only be arrived at by one means, namely, a large amount of self-denial and close adherence to the prescribed diet.

There is of course some slight difference in the systems of training to be pursued for rowing and pedestrianism; at the same time, in the chief and important points precisely the same course has to be taken. If a boy has a walking or running race in view, he must remember this, that he has to suit his daily exercise according to the distance of the competition in which he is going to take part. For short races he need do little more than keep his digestion and wind in good order, taking care to have, say, a couple of hours' good exercise in the course of the day. We would here venture to correct a grave mistake made very often by young runners, who think that by continual practising and "spurting" they learn to improve their pace. They can adopt no better means for defeating their own end than this, as it will tend far more to diminish their pace than to improve it. On the other hand, if they have a long course for several miles to get over, speed is not so much a matter of importance as endurance, and this latter quality can only be obtained by accustoming the body to long and severe exercise. For young persons, however, it is extremely injudicious to attempt too great distances, and we would advise that two miles, and no more, be made the outside limit. Longer spins than this are seldom, if ever, tried in ordinary amateur races.

According as the match that is to be contested is in running or walking, so must the day's exercise be regulated. Avoid, if for the former, taking too much running practice, and that never for a greater distance than that of the race in which you are to take part. Good sharp, brisk walking is more serviceable than anything else in getting the body in order. And now, presuming that a boy is in sound health, with good lungs and no unpleasant thumpings about his heart, let us see how he should regulate his training. Six o'clock to get out of bed and commence the day. No one who intends to train himself really seriously will wish to lie longer. Then a cold tub with a big sponge and lots of water, followed by a severe rubbing with a rough Turkish towel, that leaves you all aglow. Dress as quickly as you can, and go out for half an hour's walk, or run, as you feel inclined. Be sure, however, not to fatigue yourself, and see that you come in to breakfast, say at half-past seven, with a good appetite. Those who can eat porridge will find it a capital thing to commence breakfast with, followed by the lean portion of a broiled chop or steak, with bread at least two days old. Neither tea nor coffee is desirable; a glass or two of milk being much better.

There is no need to bind yourself down to a stipulated quantity of food; eat what you feel you require, and no more. After breakfast get as much rest as you can, say, for a couple of hours; then take yourself off for a couple of hours' walking or running, getting back to dinner by about two o'clock. The programme for this meal is simple enough: a joint of roast meat, either mutton or beef, a potato, and sometimes a little cauliflower, or brocoli, just to make a change, bread as before, and another glass or so of milk. Poultry is sometimes introduced, but we hardly think it good—in fact, as far you can, stick to the good plain joint, or chop, or steak, with bread and milk, and you will be astonished how you will find your condition improved. After dinner rest again for two or three hours, and then about six o'clock take yourself off for another hour's exercise, on your return from which you will no doubt be fully prepared with an appetite for supper. This meal should always be a light one, as it is bad at all times, and especially in training, to go to bed on a full stomach. Unless you feel you absolutely require it, do not take any meat; otherwise, a chop is the least objectionable. Butter, spices, peppers and sauces should on no account be taken, and, as we said before, so we again repeat, smoking must be abjured. If the directions given are followed out, defeat will not be occasioned through any error in the system of preparation.

WALKING.

In all gymnastic exercises walking, running and jumping deserve the preference because they are the most natural movements of man and those which he has most occasion to use. Walking, which is within the reach of everybody, ought to be placed among the forms of exercise which are direct conservators of health, and which have the most important beneficial effects upon our mental and moral economy. It provokes appetite, assists digestion, accelerates the circulation, brings the fluids to the skin, strengthens the memory, and gives cheerfulness to the mind, and in fatiguing the limbs gives repose to the senses and the brain.

It might be supposed that every one knows how

to walk: not so, however; some persons crawl, some hobble, some shuffle along. Few have the graceful, noble movement that ought to belong to progression, or, however well formed, preserve a really erect position and an air of becoming confidence and dignity. To teach walking — that is to say, to teach young persons to walk properly — it is suggested that a class of them unite, that they may be able to teach themselves, which they may readily do if they follow the instructions given below.

SHORT STRIDE.

A company of boys being formed, the eldest, or the one best adapted to the task, should act as captain, and at the word of command, "Fall in," all the boys are to advance side by side, preserving between each the distance of about an arm's length. At the word "Dress" each boy places his right hand on the left shoulder of the next, extending his arm at full length, and turning his head to the right. At the word "Attention" the arms fall down by the side and the head returns to the first position. The captain should now place his little regiment in the following manner: 1. The head up. 2. The shoulders back. 3. The body erect. 4. The stomach in. 5. The knees straight, the heels on the same line. 6. The toes turned very slightly outwards. The captain now stands before his men, and advancing his left foot, his knee straight, and his toe inclined towards the ground, he counts one, two, placing his boot on the ground, the toe before the heel; he then directs his pupils to obey him, and to follow his motions, and says, "March," when each foot is advanced simultaneously, till he gives the word "Halt." He then makes them advance, wheel to the right and left, in slow time, quick time, always watching the position of the body, and requiring that they move all together.

A FINE FREE STRIDE.

Another variation of walking is the tip-toe march, an excellent preparation for running and jumping. The boys being in line, the word "On tip-toes" is given: each boy places his hands on his sides, and waits for the word, "Rise," when they all gently raise themselves on their toes, joining their heels together, and keeping the knees straight, remain in this position till the word "Rest" is given, when they fall back slightly on their heels, their hands at the same time falling down by their sides. Proceeding in this manner through a few courses, with such changes as may present themselves, the pupils will soon acquire a habit of graceful walking, of the highest importance to every one who studies a gentlemanly bearing.

A WALKING RACE.

RUNNING.

Running is both useful and natural; it favors the development of the chest, dilates the lungs and, if

not practised immoderately, is a highly beneficial exercise. To run fast and gracefully one should as it were graze the ground with the feet, by keeping

IN CONDITION.

the legs as straight as possible whilst moving them forward. During the course the upper part of the body is inclined a little forward, the arms are kept

OUT OF CONDITION.

close to the sides and bent at the hips, the hands shut and the nails turned inwards. The faults in running are apt to be swinging the arms, raising the legs too high behind, taking too large strides, bending the knees too much and in not properly managing and economizing the wind. In all running exercises the young should begin gradually and never get out of breath at any time. By careful practice a boy may soon acquire the power of running a mile in ten minutes. This is considered moderate speed. In prompt running a thousand yards in two minutes is thought good work; and in quick running six hundred yards a minute is held to be good The first distance that children from eight to ten years of age should be allowed to run is about two hundred yards; for those who are older, three hundred yards; and for adults four hundred yards. It is, however, most essential that in running boys should not overtax their strength or wind. We are

A VERY FAST SPRINTER.

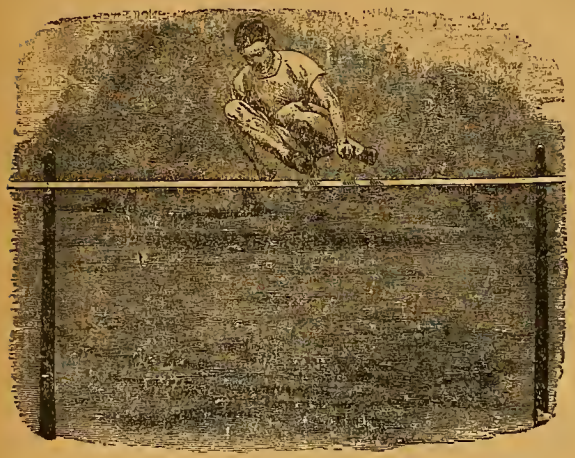
not all constituted alike, and a boy who could last for two hundred yards or so might injure himself considerably by racing for a mile.

JUMPING.

Of all bodily exercises jumping is one of the most useful; and during our lives many instances may occur of a good jump doing us essential service. To jump with grace and assurance one should always fall on the toes, taking care especially to bend the knees and the hips; the upper part of the body should be inclined forwards and the arms extended towards the ground. The hands should serve to break the fall when jumping from a great height. In jumping we should hold the breath and never alight on the heel. Boys should exercise themselves in jumping by practising both on a level and from a height, with due attention to the

FOOT-RACE.

above cautions. They may make progressive exercises in level jumping by varying the distance from time to time, and in height jumping by starting in



HIGH JUMP.

succession from the different steps of a stairway. They will soon find themselves able to jump in length three yards and in height six feet, without injury.

LEAPING.

Leaping is somewhat different from what is called jumping, as the object is to pass over an obstacle; and, as in jumping, it is of great importance to draw in the breath, while the hands should be shut, the arms pendent, to operate after the manner of a fly-wheel or pendulum. It may be practised by a leaping stand, which can be easily made of two sticks or stakes sunk in the ground, in which little catches are made at various distances, on which another piece of wood may be laid, that may readily be knocked over, so as to offer no resistance to the jumper, if he touch it, and save him from injury by an ugly fall. The purpose of this stand is to measure the height leaped.

The principal exercises in leaping are: 1. The high leap without a run. 2. The high leap with a run. 3. The long leap without a run. 4. And the long leap with a run. In the first of these the legs and feet are closed, the knees are bent till the calves nearly touch the thighs, and the arms are thrown in the direction of the leap, which increases the impulse. This leap may be practised at the following progressive heights: eighteen inches, twenty-four inches, thirty-two inches, forty-eight inches—which last is perhaps what few lads would attain.

The high leap with a run.—The run should never exceed twelve paces, the distance between the point of springing and the obstacle to leap over to be about three-fifths the height of the obstacle from the ground; and in making it the leaper should go fairly and straightly over without veering to the side, and descend on the ball of the foot just beyond the toes. The heights that may be cleared by the running leap vary from three to six feet. A good leaper of sixteen years old ought to leap four feet six inches, and an extraordinarily good leaper five feet. Adults well trained will leap six, and some have been known to leap seven feet.

The long leap without a run.—The long leap may be marked out from four to eight feet, according to the agility and strength of the leaper; and the object to be cleared, a small block of wood, which should in this kind of leap be never more than six inches high, placed midway. In leaping the body is bent forward, the feet are closed, the arms first sway forwards, then backwards, and then forwards at the moment of taking the leap. In this kind of leap ten or twelve feet is considered good work.

The long leap with a run.—The run should be on firm level ground. The body should be inclined forward, and the run consist of about twelve paces; a small block of wood, as before, being placed mid-distance in the leap. The spring should be principally on the right foot, and the arms should be thrown forwards at the time of the leap. In de-

LONG JUMP.

scending, if the leap be a very long one, the leaper should descend principally upon his toes; if the leap be not very long, he may descend on the balls of

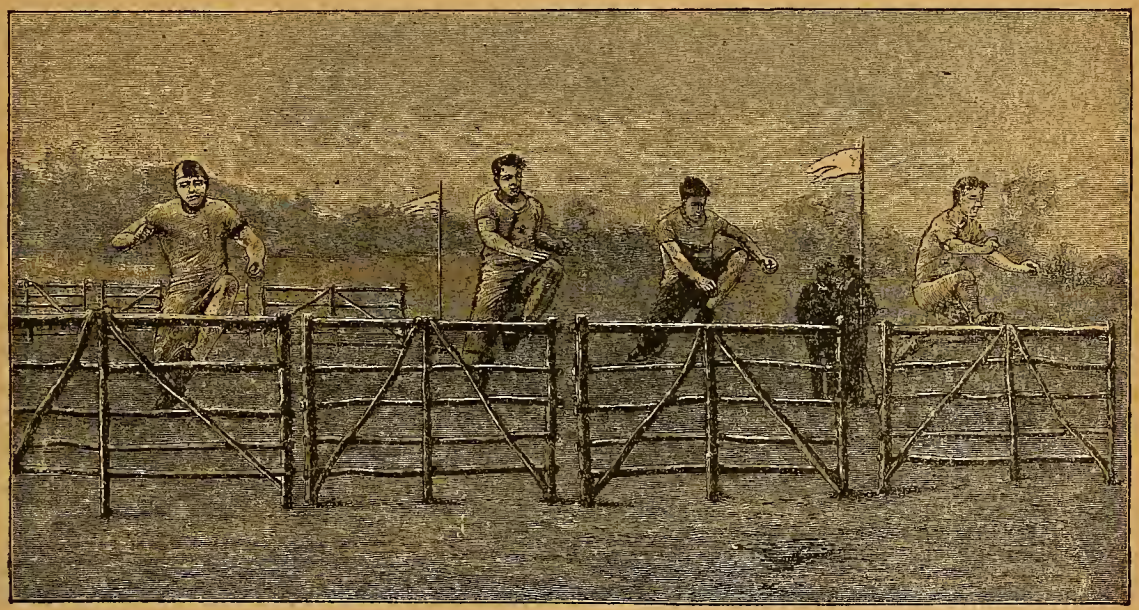
the toes. The leap is considered good if fifteen feet be cleared, but twenty may be done by a good leaper, and one or two individuals have fairly reached twenty-three feet.

Vaulting.—This is performed by springing over some stationary body, such as a gate or bar, by the aid of the hands, which bear upon it. To accomplish it, the vaulter may approach the bar with a slight run, and, placing his hands upon it, heave himself up and throw his legs obliquely over it. The legs should be kept close together. While the body is in suspension over the bar, the right hand supports and guides it, the left remaining free, or fall may be brought towards the place from which he rose.

The pole is also employed in both long and deep leaps. In both of these the mode of holding the pole is similar; but in leaping from a height the pole should be grasped at the level of the knee, and then he leaper, with a slight circular swing, should descend on the balls of his toes.

CLIMBING A BOARD.

A board firmly secured at an angle of thirty degrees to the ground will afford capital amusement



A HURDLE RACE.

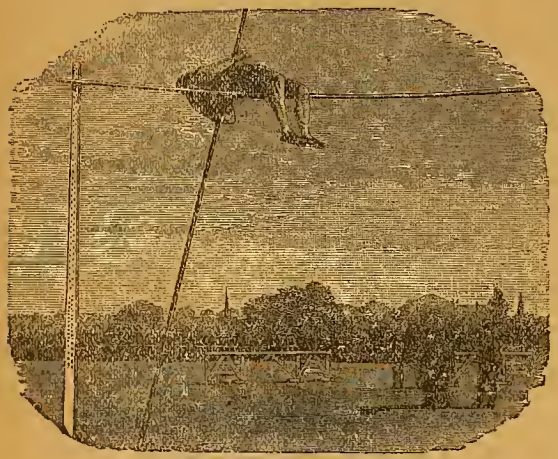
vice versa, if the jump is made to the right. The vaulter may commence this exercise with a bar or a stile three feet high and extend it gradually to six feet.

Leaping with a pole.—A great variety of leaps may be practised with a pole, which should be of sufficient length and shod at one end with iron, so as to take hold of the ground. The leaper should grasp with his right hand that part of the pole a little below the level of his head, and with his left that part of it just below the level of his hips. He should then make a slight run, and placing the pole on the ground, take a spring forward and swing himself slightly round, so that when he alights the and exercise to a boy in learning to climb it. He should seize both sides with his hands and place his feet in the middle on their soles. This will teach him how to hold fast with his hands and to cling with his feet. As the climber gets used to this exercise, the angle of the board may be increased. The young gymnast will find eventually that he can ascend when the plank is perfectly perpendicular. A pole may be mounted in the same manner.

CLIMBING THE POLE.

In climbing the pole one should be selected about nine inches in diameter and firmly fixed in the

ground in a perpendicular position. To mount it, it should be grasped firmly with both hands, the right above the left. The legs are alternately to



LEAPING WITH A POLE: HALF OVER.

grasp the pole in the ascent by means of the great toe, which is turned towards the pole. In descending, the friction is to be thrown on the inner part of the thighs and the hands are left comparatively free.

Climbing the mast is similar to climbing the pole; but in this exercise the climber is unable to grasp it with his hands but holds it in his arms; the position of the legs is the same as for the pole. If either pole or mast is well greased it adds considerably to the interest of the performance.

CLIMBING THE ROPE.

In climbing the rope, it is firmly grasped by the hands, which are placed one above the other, and so moved alternately. The heels are crossed over the rope, which is held fast by their pressure, the body being supported principally by them. In the sailor's method the rope passes from the hands round the inside of the thigh, under the knee-joint, over the outside of the leg, and across the instep. But the enterprising gymnast will not be satisfied until he can climb the rope by his hands only, allowing the rest of his body to hang freely suspended.

CLIMBING TREES.

In climbing trees the hands and feet and knees are all to be used; but the climber should never forget that it is to the hands that he has to trust. He should carefully look upwards and select the branches for his hands, and the knobs and other excrescences of the trees for his feet. He should also mark the best openings for the advance of his body. He should also be particularly cautious in laying hold of withered branches, or those that have suffered decay at their junction with the body of the tree, in consequence of the growth of moss, or through the effects of wet. In descending, he should be more cautious than in ascending, and hold fast by his hands. He should rarely slide down by a branch to the ground, as it is extremely difficult to estimate distances from the branches of a tree.

THE GIANT STRIDE.

The valuable and invigorating apparatus which is called the "giant stride" in some places, and the "flying steps" in others, is to be found in many schools where an enclosed open-air playground can be secured. Excepting on a few occasions, or when the charm of novelty induces the boys to exercise, it is seldom in much favor, and is usually seen idle, with the ironwork rusting, the beam rotting, and the ropes yielding to exposure.

In fact, it really seems as if the masters and teachers were doing their best to weaken their apparatus, and to cause a severe accident whenever it breaks down, as such is always the case, sooner or later. The rusty iron gives way to a harder pull than usual, the ropes snap, or the upright post breaks off level with the ground, and falls with dreadful force.

Boys, too, soon get tired of it; they take hold of the ropes, run round a few times, and then leave it, naturally, seeing no interest in such a proceeding. But in reality the "giant stride" is a most useful article in the muscular education, as it exercises at the same time the arms and legs, is capital for the lungs and strengthens those invaluable muscles about the loins which are so apt to be neglected and by reason of whose weakness many dangerous injuries occur to young and old.

Having fixed upon a suitable spot of level ground, well laid with gravel and carefully drained, dig a hole at least seven feet deep, and fill eighteen inches with stones about the size of the fist. Pound and press the stones well down and then pour rough gravel upon them until the surface is made tolerably level. The object of these stones is to prevent the water from accumulating round the post and rotting it.

Now for the post. This should be at least twenty feet long, so as to leave about fifteen feet projecting

when set upright in the hole. The butt should be left very large, as is done with ordinary wooden gate-posts, and the whole affair ought to be of thoroughly seasoned wood. Unless this is the case it is sure to rot, and then down it comes some day when least expected. Triangular steps should be nailed upon opposite sides, as otherwise the daily task of removing and replacing the ropes will be very irksome.

Get a blacksmith to make a stout iron pin, having a projecting shoulder to prevent it from entering too far into the wood. This pin should be driven into the top of the pole, which should be guarded from splitting by a stout iron collar. There should also be procured an iron disc having a cap or thimble in the middle, which is intended to receive the iron pin and to enable the disc to spin round freely. Four holes should also be bored through the edge of the disc. Purchase four iron S hooks, and the same number of swivels, and a good store of well-made half-inch rope, and the machine may then be set up.

First char carefully the whole of the butt that is to enter the ground, and for about six inches above, in order to prevent the wood from being injured by wet. Place it upright in the hole, testing it by a plumb-line tied to the top, and fill in the hole with earth, pounding it down firmly with a heavy rammer. You cannot be too careful about this process, and the apparatus should not be used until the earth has had time to settle. While waiting for this operation, cut the rope into appropriate lengths, and fasten one end of each rope to a swivel, and the other to the centre of a stout baton of elm or oak wood, about eighteen inches long. Unless you are very sure of your powers of splicing ropes and making "eyes," let the ropemaker do this for you, as it is a most important operation, and involves the security of the gymnast in no slight degree. It is necessary to have swivels, as the ropes would otherwise become so twisted as to lose their freedom of play, or even to weaken their structure. These preparations being completed, mount the post by the steps, taking the cap with you; grease the pin well with an end of tallow-candle, and slip the cap upon it, taking care to spin it well, in order to assure yourself that all is right. Hang the swivels to the circular plate by means of the S hooks, one curve of which passes through the hole in the plate and the other through the loop in the swivel.

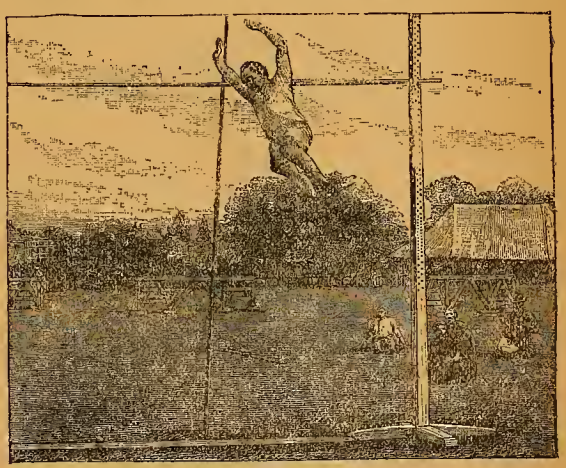
The ropes should be just so long that when they hang loosely along the pole the cross-bar should be two feet from the ground. As, however, new ropes stretch in a wonderful manner, it is needful to allow considerably for this property.

One thing more is needed, and then the whole apparatus will be complete.

Measure the greatest distance which can be reached by the feet of any one swinging round by the ropes, and about one yard beyond that line erect a slender pole nearly as high as the central post, having pegs driven at intervals of four inches. This is intended to aid the learner in leaping.

Having now everything ready, we first look to all the fastenings—a precaution which must never be neglected. See that the pin and swivels are well greased; take the cross-bar of one rope in both hands, and retire from the post as far as the outstretched arms will permit. Of course, if there are four performers, each takes his stand exactly opposite his neighbor. It is better not to exercise alone, on account of the unequal strain on the post; and it is evident that the opposite players should be as nearly as possible of similar weights, so as to balance each other in their course. It may easily be imagined that the strain upon the base of the post is enormous, there being a leverage of fifteen feet, so that some precautions are necessary to prevent injury.

Keeping our right sides to the post and the rope tightly stretched, we begin to run, throwing as much weight as possible on the rope and as little as possible on the feet. As the pace increases, the feet are taken off the ground and touch it at longer intervals until, when at full speed, they only come to the ground occasionally, just sufficient to maintain the impetus.



LEAPING WITH A POLE: WELL OVER.

Having kept up this speed as long as agreeable, we slacken the pace gradually and stop. Next time we take care to run the contrary way, keeping the left side toward the pole. This is done to exercise equally the muscular system on both sides of the body; and, to save time and space, it may be here said once for all, that when any feat is described, it should be accomplished in both directions with equal ease.

One of the most exciting exercises which can be obtained on the giant stride is the following method of leaping.

Set the string to quite a low elevation—say two feet from the ground; stand with your back to it, the cross-bar in your hands, and run quickly round. When you come about one-quarter of the distance, try to fling yourself into the air, not by jumping with the legs, but by letting the whole weight depend on the rope, so that the centrifugal force takes you off your feet. As you touch the ground, take about three long steps, and at the third step hurl yourself again off the ground, with the body straight, and the feet extended well behind, and the impetus will carry you over the string, and land you neatly on the other side. You will soon learn to increase the height of the jump, until you can pass over the string at an elevation of ten feet with perfect certainty.

Another very pretty, though not so dashing, a feat is to spin round on your own axis as you run round the course. At first it is needful to manage this cautiously, as a slip of the foot is sure to disturb your balance and send you ignominiously scraping your way over the gravel in a derogatory and rather painful position. When, however, you have mastered this art, you can go round revolving the whole time, keeping your legs straight, feet together, and toes pointed.

There are many modifications of these exercises which might be described, but, as space is limited, only two more can be mentioned.

In the first of these exercises the performer never moves hand or foot, but holds himself straight, stiff and immovable as an Egyptian statue, and in the course of his progress round the central post his feet describe a series of circles, or rather spirals, while his hands merely move in a circle, and serve as the axis on which the body revolves,

To accomplish it, the performer grasps the cross-bar in both hands at the full stretch of his arms, holds himself quite straight and stiff, points his toes, and then falls forward. If he has the strength and nerve to hold himself quite stiff, though his face comes rather near the ground, the whole body swings off the ground, the hands being the pivot, and the feet take the course denoted by the dotted line, the hands retaining their position. It is possible, by dint of practice, to manage so as to make the entire circle of the pole in four such revolutions.

The last is the most daring and difficult of all the feats, being nothing less than passing over the string with the head downwards and the feet in the air. This should not be attempted by any one but a tolerable gymnast, and is achieved by running at the string in the manner already described and, just as the body is rising in the swing, drawing the hands smartly to the breast, throwing the feet into the air and clasping the rope between them.

THE TRAPEZE.

The best place for a trapeze is in a strongly-built barn or outhouse, but where that is not possible or convenient, one can be erected in the open air either as a permanent fixture, or movably, so as to be taken down in wet weather or when not in use. Wood rots so easily when exposed to water, and an accident caused by the breaking of rotten wood may be so serious, that all owners of trapezes are earnestly cautioned against running any risks in the matter.

A trapeze really is nothing more than a high swing, intended to be used chiefly by hanging from it with the hands, instead of sitting or standing in it as in the ordinary swing. It is better and safer to use wire for the two side ropes than the hempen article, though the latter will answer. If erected in a barn or other building, these ropes can be attached to any lofty beam already there, or one can be put up for the purpose. But if the trapeze is to be used in the open air, then two heavy posts should be sunk in the ground, or better, placed in stone sockets, so as to be readily slipped out and stowed in a dry place in damp weather. Over the tops of these posts a stout cross-piece should be firmly secured, from which the ropes are to be suspended. This cross-piece can be fastened to the posts by screws, so as to be easily separated from the posts when the apparatus is taken down. Guy ropes are necessary to stay the posts and prevent sagging or toppling over. The two side ropes are attached one to each end of the bar on which the gymnast swings and performs his feats.

For practising the feat of passing through the air from one trapeze to another a double set of apparatus is required; but for most useful purposes one set is sufficient. The ropes by which the bar is

suspended must be thoroughly stretched before they are attached to the bar, or there will be no certainty in the swing. Few persons who have not had practical experience on this subject would imagine how greatly the length of a rope is increased by the process of stretching, and how absolutely necessary is this precaution.

The ropes are passed at each end over an iron eye, the upper one of which is hitched over a hook on the cross-bar, and the other receives the hook which suspends the bar. These hooks are useful, because, when needed, a pair of rings can be substituted for the bar, and permit certain variations in the performances. Still their presence or absence is quite optional, and the only remark that need be made is, that they should be furnished with springs like the fastening of a breguet chain, so as to guard against the possibility of slipping. The bar itself must be very heavy, or otherwise it will not have sufficient weight to keep the cords at full stretch, and in consequence will not swing truly. Those which were employed by Leotard were iron, with a mere shell of wood, so as to give a pleasant hold for the hands, and we have seen them made of iron coated with leather. The last point that needs notice is the perch or stand from which the performer launches himself. This may be fixed at any convenient elevation, and its centre should exactly coincide with the centre of the bar. Having now the apparatus ready, let us commence the performance.

Set the bar swinging boldly; ascend the perch quickly, and seize the bar in both hands. Wait for a moment, until the ropes are fully stretched, and then launch yourself for a swing. Now there are two ways of doing everything—a right and a wrong way; and the present instance affords no exception to the rule. The wrong way—and the usual way—is to fall forwards from the perch. Now this is quite wrong; and if you act in such a manner you will bungle your sway, and will not retain sufficient impetus to enable you to return to the perch.

The right mode of starting is as follows: Stand with the spine well bent backwards, the body tolerably stiff, and leaning well against the heavy bar. Now draw yourself up gently by the arms, as if you were trying to lift your chin above the bar, and you will find yourself started without any trouble. Keep the back still bent, and as you descend allow the arms gradually to assume a perfectly straight position. You will then swing out fairly and boldly, and by the least possible sway at the end of the swing will retain sufficient impetus to enable you to resume your stand on the perch.

Even in this there is an art. If you merely allow yourself to swing back as you swing forward, you will be disagreeably reminded of your error, by hitting the back of the leg smartly against the edge of the perch. In order to avoid this misfortune, draw up the legs sharply just before you reach the end of the return swing, and you will find them come down on the perch with perfect ease.

If you are using the rings instead of the bar, you can vary this part of the performance by turning round in the air and crossing the ropes so that you alight on the perch with your back towards the trapeze, though it is necessary to give a sharp twist as your foot touches the perch and so to turn in the direction in which you started.

Take notice that the arms are always at full length during the swing and that any illustrations which represent the performer swinging with bent arms are entirely erroneous. There is another fault into which artists often fall. Thinking that they are obtaining pictorial effect, they represent the ropes which sustain the bar as forming an angle with the arms of the performer, whereas the arms, body and ropes are, or ought to be, all in the same line.

When you have accomplished the swing and return satisfactorily, you may advance another step. Swing off as usual, and, when you have reached the extremity of the swing, you will find yourself hanging for a moment motionless, the attraction of gravitation being balanced by the impetus of the swing. Just at this important point, shift your hold on the bar and change sides, as you would do if the ropes were perpendicular and quiet.

You will then face the spot whence you started, and in landing on the perch you must be careful to give yourself a twist as you place your feet on the perch, and with a slight exertion of the arms you will draw yourself upright without difficulty, and without running the risk of falling off the perch again—a frequent and ignominious misfortune.

It will now be time to practice the descent from the swinging trapeze to the ground. Begin by sitting on the bar, grasping it with the hands, and falling off backwards, taking care to come to the ground with pointed toes and crossed feet. The reason of this precaution is that, if the feet are crossed, the knees are separated, and that when the body yields—as it must do when it touches the earth—there is no danger of hitting the chin against the knee, and thereby receiving a momentary shock to the brain by the teeth striking together.

When you can manage the "fall-back," as it is

called, with tolerable ease and certainty, seize the bar with the hands, set it swinging, keeping your face to the perch, and when you are nearly at the full extent of the swing loosen your hold, and allow yourself to come to the ground. Be very careful to point the toes, as has already been described, and continue the practice until you can stand on the perch, launch yourself backwards, and fly off at the highest point of the swing.

Always leave the bar while you are swinging *backwards*, because the attitude of the body is then such as to insure your coming to the ground in the correct position; whereas, if you do so while swinging forward, you are nearly certain to overbalance yourself, and either fall on your nose, or go staggering along in a very undignified style.

The next process is to start as usual, raise yourself in a sitting position on the bar, and have some one remove the perch. Fall back as before, only, instead of coming on the ground, hang by the legs, and accustom yourself to swing in this attitude. When you can accomplish that feat without difficulty, and feel no nervousness at your strange position, remove one leg from the bar and hang by the other. Practice this with both feet. It is not nearly so difficult as it looks, and is an important feat to perform, because it gives such perfect presence of mind.

The next feat looks positively awful, but, as usual in gymnastic performances, is perfectly easy, requiring no skill at all, and only a little courage. Sit on the bar when it is still, and do the "fall-back." But, instead of allowing the feet to pass between the ropes, spread the legs as far apart as possible, and bend up the feet rigidly. The consequence is, that the insteps hitch in the ropes, slide down them, and the body becomes suspended by the feet, which are firmly hitched between the ropes and the bar.

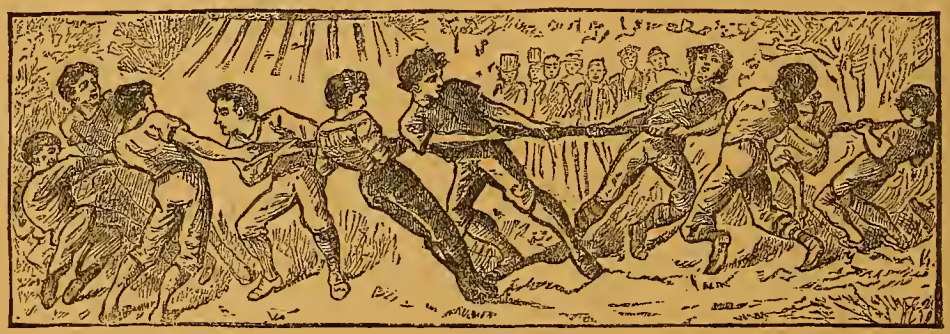
If you possess a second trapeze, you may now proceed to the beautiful series of performances which are achieved upon them.

Let them at first be set moderately near each other, so that when the bar of the first trapeze is at full swing, it passes within a yard or four feet of the second. Start off as usual, and just as you are well on the rise, after passing through the upright, loose your hold of the bar, and you will pass through the air towards the second bar, which you catch rapidly.

If you perform the feat nicely, you will have so much impetus to spare that you will be carried along on the second bar, and may either attempt to return or quietly drop to the ground at the end of the swing. If you prefer the latter course, be sure to turn through your arms and come down on your toes.

You will find that the return to the perch, simple as it looks, is by far the most difficult feat that has yet been mentioned. Make but the least mistake and failure is certain. If you do not catch the bar exactly at the right moment, you lose your impetus; and if you do not seize it exactly in the right place you do not swing truly between the uprights, and consequently cannot land on the spot at which you aim.

The method of performing this feat is as follows: Swing off the perch, pass the second bar, and while at the full extent of the swing, change sides and give yourself a slight impulse with the feet. You will now meet the first bar swinging towards you, and, if you can seize it just at the right moment, you will have sufficient impetus to reach the perch. If not, swing once more, give yourself a hearty impulse with the legs, and try it again. Failure is certain at first, but after a little practice the feat becomes easy.



HARE AND HOUNDS, OR PAPER CHASE.

HARE and hounds is one of the best liked games to be found among those played by American and English school-boys, nor is it despised by those too old to be called boys. It takes some hours to play it, but a cool, bright half-holiday in autumn cannot be much better employed than in a well-organized "paper chase."

The principle of it is simply this: one boy represents the hare, and runs away, while the others act as hounds and pursue him to a specified goal. The proper management of the game, however, requires considerable skill. The first thing to be done is to choose a hare. The hare should not be the best runner, but should be daring, and at the same time prudent, or he may trespass into forbidden lands, and thereby cause trouble. A huntsman and whipper-in are then chosen. The huntsman should be the best player, and the whipper-in second best. Matters having been thus arranged, the whole party sally forth. The hare is furnished with a large bag of white paper cut into small squares, which he scatters on the ground as he goes. A provision is made that the hare shall not cross his path, nor return home until a certain time; in either of which cases he is considered caught. The hounds also are bound to follow the track or "scent" implicitly, and not to make short-cuts if they see the hare. The hare then starts, and has about seven minutes' grace, at the expiration of which time the huntsman blows a horn or whistle with which he is furnished and sets off, the hounds keeping nearly in Indian file, the whipper-in bringing up the rear. The huntsman is also sometimes furnished with a white flag, the whipper-in with a red one, the staves being pointed. (These flags can be improvised for the occasion by fastening white and colored pieces of cloths to sticks.) Off they go in the chase until the huntsman loses

THE HARES.

the scent. He immediately shouts "Lost!" on which the whipper-in sticks his flag in the ground where the scent was last seen and the entire line walks or runs round it in a circle, within which they are tolerably sure to find the track. The huntsman in the meanwhile has stuck his flag in the ground, and examines the country to see in

THE HOUNDS.

what direction the hare is likely to have gone. When the track is found, the player who discovers it shouts Tally ho! the huntsman takes up his flag and ascertains whether it is really the track or not. If so, he blows his horn again, the hounds form in line between the two flags, and off they go again. It is incredible how useful the two flags are. Many a hare has been lost because the hounds forgot where the last track was seen, and wasted time in searching for it again. Moreover, they seem to encourage the players wonderfully. Sometimes the chase extends fourteen or fifteen miles in length; but before such an undertaking is commenced it is necessary to prepare by a series of shorter chases, which should, however, be given in an opposite direction to the course fixed upon for the grand chase, as otherwise the tracks are apt to get mixed, and the hounds are thrown out. The hare should always carefully survey his intended course a day or two previously, and then he will avoid getting himself into quagmires or imprisoned in the bend of a river. A pocket compass is a most useful auxiliary, and prevents all chance of losing the way.

THE CHASE.

PLAYGROUND GAMES.

SKITTLES.

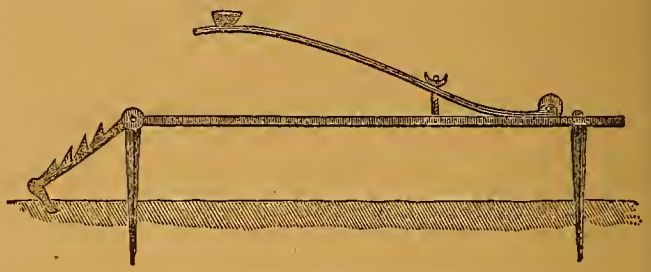
THE modern game of skittles is played in a manner somewhat similar to bowling, but the number of pins is only four. These are very large, and are arranged on a square framework, so as to present one of the angles to the player. The bowl used for playing this game is of the shape of a cheese, and is usually made of lignum vitæ, as being very heavy and hard wood. The game requires more bodily strength than ten-pins, as the bowl must be thrown upon the skittles, and not rolled up to them.

The best play is to throw the bowl with a round-handed swing of the arm, so as to strike the nearest skittle at the right of its upper third. The ball then springs to the second skittle, and from this generally twists to the third, while the fourth skittle is sent down by the roll of the one first struck. It is very difficult to make this throw successfully, and many players prefer driving down the first and third skittles with a straightforward shoot, and then making their second ball spring across from the second to the fourth. This latter stroke appears very difficult, but is soon learnt; the great point being to throw the ball high, so that it may drop as perpendicularly as possible on the left of the upper third of the second skittle. In the long run, the constant repetition of this practice will over balance occasional brilliancy of play.

There are several ways of counting the game in vogue in different parts of England. The simplest is that of counting by "pins" in a given number of throws—three, six or nine—he who knocks down most being winner. Sometimes the game is counted by points—three throws each hand being allowed. If all the pins are knocked at first throw, it counts a "treble" or three points; if in two throws, a "double" or two points; if in three a "single" or one point. If a pin is left standing after the third throw it counts nothing. At the end of three hand the points are compared, the highest being the winner.

KNUR AND SPELL.

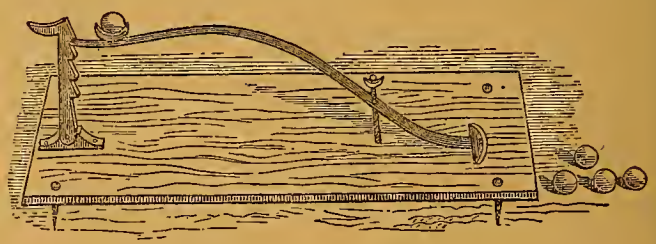
A FAVORITE game in the north of England is one known as "knur and spell." It, undoubtedly, has a common origin with trap-ball, but greater skill is required to play it and proficiency in it can only be gained by a considerable amount of practice.



IRON SPELL.

The name is given it from the principal implements used in playing it: the "knur" or knor being a gnarled piece of round wood, and the spell an instrument to "spill" or cast off the knur or ball. "Pommels" are the bats or sticks with which the ball is struck.

In some places players content themselves with merely fixing the spell and then touching the spring, which is immediately released by the weighted rack falling down. As the knur springs into the air, the player strikes it with the flat side of the pommel, and drives it as far as he can across the field. But to play well requires something more than this.



FLAT SPELL AND KNUR.

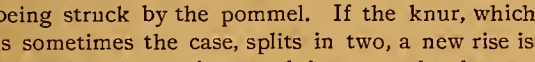
The first thing to be done is to fix upon a centre,

or some suitable spot of ground, and then the direction of the wind is observed ere the spells are fixed, for generally players play with the wind unless it is agreed to the contrary. Every twenty yards from the centre is then marked by a stick known as a "bob," for each separate twenty yards is a unit in the score of the players, which is formed generally on so many bobs "up," or in other words so many score yards to so many "rises." Usually there are five rows of bobs. The spells are

POMMEL.—SIDE VIEW.

placed right and left of the centre, and the choice of position is decided by lot, but the spells must not be placed more than seven yards apart or less than three. An alteration of the wind does not interfere with the game, unless an agreement is made to that effect. Thirty rises each is the usual game, which is thus decided.

Each player has five rises at a time, and counts one for every twenty yards his knur is cast after being struck by the pommel. If the knur, which is sometimes the case, splits in two, a new rise is allowed, and ten minutes of time to make the new knur playable. If the knur remains among the "bobs" so that its value is doubtful, a string is stretched from the side of the bob farthest from the spell, and if the knur does not clear the string, it only counts for the value of the "bobs" it lies amongst; if it does clear the string, it counts one more. If a knur is struck out of the line of "bobs,"



POMMEL.—BACK VIEW.

it must be measured from the spell before the player has another rise. If he strikes three out of the line of bobs, he must turn his spell, and should he again drive the knur out of the line of bobs he must play again. About 200 yards is a fair average score, which is marked by ten bobs towards the total.

FUNGO.

FUNGO is a good practice game in batting, and in catching batted balls. It is played with a round bat and any small ordinary hard ball; one player acting as the batsman, while all the others are fielders. The batsman takes the ball in one hand, tosses it up in the air, and as it falls hits it "on the fly" to the outfield, and if it be caught by any fielder on the fly the batsman goes to the field and the fielder who caught the ball becomes the batsman. The batsman is out also if he sends the ball to the fielders on the bound, or if he strikes at the ball three consecutive times without hitting it, in which case the fielder next in turn goes to the bat. Usually the latter receives the ball when thrown in from the field, and passes it to the batsman. Any number can take part in the game.

HAND-BALL.

HAND-BALL is a modification of the old English game of "Fives." It can be played in a court regularly arranged for the purpose or on any smooth piece of ground which is bounded by a high fence or a brick wall; the side of a house will do very well for this. Four or five feet from the wall (and parallel to it) a line is drawn on the ground called the "ace line." In front of this (*i.e.*, between it and the wall) stands one player, called the "server," and back of the line stands another, known as the "striker." No bat or other implement is used in the game except a small rubber ball. This the server bounds on the ground, and as it rises strikes it (with the palm of his hand) against the wall so that it will bound back to the striker over the line. If it does not do so, that is, if it falls to the ground (on bounding from the wall) in front of the line, the server must try again and continue trying until he succeeds in sending it from the wall fairly over the line. When it has crossed the line the striker must send it back against the wall, using only the palm of his hand in doing so. He can hit it either on the fly or on its first bound from the ground. If he fails thus to hit it, or in hitting it to send it against the wall, he loses his turn and must exchange places with the server. Every time the striker returns the ball so that it strikes the wall fairly without first having touched the ground he scores one "ace," and the player who first reaches a score of twenty-one aces wins the game. After the ball is once in play (that is, after the server has bounded it from the wall over the line) the striker serves himself and he continues to do so by batting the ball with his palm against the fence or wall until either he misses it (on the fly or first bound from the ground) or until the ball touches the ground in front of the line. Under no circumstances must he catch the

ball or take hold of it with his hand; only the server can do that at the beginning of an innings. As many innings are played as are necessary to enable any one of the boys to make a score of twenty-one aces. The striker can play anywhere behind the line, but must never step over it. He naturally has to be very active and skilful to run up much of a score in a single innings, but he can do so if he "places" his ball accurately against the same spot on the wall every time, for in such a case he need move about very little, as the ball would always come back to him where he stands. A double game can be played by alternating the servers and strikers between the two sides, and an odd number of boys can take part by arranging in advance the order in which each shall have a turn at striking and at serving. In the English game each point counted five instead of one, and this gave it its name.

CAP-BALL.

CAP-BALL is the simplest game of ball known to the play-ground. It is played on a space of ground which affords room for running out of reach of a thrown ball. Selecting a ground near a wall, each boy playing in the game places his cap on the ground close to the wall, and in such a manner that the ball can be tossed into any cap readily. The ball used in the game should be a soft one—a rubber air ball being the best—as otherwise injuries may occur, as the ball is thrown hard at the players. A line being marked on the ground about fifteen feet from the wall, one of the players takes his station at it, and begins the game by throwing the ball into one of the caps; the moment this is done all the boys run away, excepting the one into whose cap the ball is thrown, who immediately runs to take it out, and endeavors to strike one of the fugitives by throwing the ball at him; if he can do so, the one struck has a small stone placed in his cap, and has to take his turn at pitching the ball. Should the thrower fail to hit one of the boys as they are running away, a stone is put into his cap, and he has to pitch the ball into the caps again. If a player fails to throw the ball into a cap, he also has a stone placed in his cap, but continues throwing until he succeeds. When a player gets three stones in his cap, he is out. When all the players but one have been struck out, he is considered the winner, and the punishment of the losers then commences; one of them standing near the wall bounces the ball with all his force so as to send it as far from the wall as he can, and next stands with his back to the wall, stretching out his right arm, and placing the back of his hand quite close to the wall, while the winner, standing where the ball fell, takes aim, and throws the ball at the said loser's hand three times; each of the losers likewise receives the same punishment from him.

HOCKEY (OR SHINNEY).

STICKS.

HOCKEY is an old English game, which may be played by any number of boys. Each player must provide himself with a stick having a curved or crooked head at its lower extremity. A large meadow or open common is required for this game when the players are numerous. Two goals or bounds should be formed about five hundred yards apart (though a shorter distance will suffice), each goal being indicated by one or two small flags. Sides are chosen by two of the best players, who select their partners alternately. Chance decides which side is to have the first strike at the little wooden ball (a bung from a barrel answers the purpose excellently), which is the object of contention. The ball is put down at about one third distance from the striker's goal, and the sides are arranged in lines opposite each other. When all are ready, the striker calls out "Play!" and drives the ball

forward toward his adversaries' goal. The aim of the players on one side is to strike the ball over their opponents' bounds, while those of the other party endeavor to prevent this by driving the ball in an opposite direction over the other goal. When the ball is driven over either of the goals the game is decided, and sides must be chosen afresh. This exciting game is called "shinty" in Scotland and "bandy" in many parts of England and Wales.

HOLE-BALL.

HOLE-BALL differs from cap-ball in there being as many holes dug in the ground near a wall as there are players, which holes are made use of instead of hats or caps. The holes are numbered, and each player is allotted to one of them by chance. The ball is bowled into the holes, not thrown. Should one of the runners be struck by the player into whose number the ball has been bowled, he may, if he can obtain the ball soon enough, strike another with it, and he in his turn may strike a third; in this way five or six may be struck in succession, until a miss is made, when the one so missing loses a point and then becomes the bowler. Sometimes one player volunteers to take the ball from another, and endeavors to hit one who may be near him; should he fail, however, he loses a point and must take the consequences. When a player has lost one point he is called a "fiver;" when he has lost two, a "tenner;" and when he has lost three, a "fifteener." A player stands out when he has lost four points. The losers are punished as in "cap-ball."

TWO OLD CAT.

Two old cat is a capital game for younger boys, and serves as an excellent training-school for base-ball, which it somewhat resembles, though in a much simpler form. Ten is the best number to play it, but a smaller number on a pinch can be made to answer. There are no sides, each in turn going to the bat, and all the others uniting for the time being against him. One acts as catcher, another as pitcher, a third as short-stop, three as basemen, and the remainder as outfielders. If there are not players enough to fill all these positions, the short-stop and three outfielders can be dispensed with. The pitcher is only allowed to pitch the ball to the bat, no kind of throw in the delivery of the ball being permitted; and he acts as pitcher until the batsman is put out, when the catcher goes in to the bat, and the pitcher becomes the catcher, and each of the occupants of the other positions advances one position, the retiring batsman going to right field, or whatever is regarded as the lowest place. The batsman can be put out on a fly catch of a fair or a foul ball, and on a foul-bound catch, and also on three strikes. He can also be put out after hitting a fair ball on the bound, if the ball be held at first base before the batsman reaches it. Should he make his base after such hit, however, he is entitled to take the bat again, or he can resign it in favor of any player he chooses. Of course the game is played on a diamond field, roughly laid out so as to mark the several base positions. The ball and bat most commonly used are the regulation ones for base-ball.

TRAP BALL.

FOR trap ball a common ball, a round bat, and a "trap" are required. The latter is a solid piece of wood shaped something like a shoe, and having a movable tongue or spoon. Before beginning a game, it is as well to fix the trap by sinking the heel in the ground. Innings being tossed up for, the winner places the ball in the spoon of the trap, touches the tongue of the trap with his bat, and as the ball rises strikes it away as far as he possibly can. If he makes more than two unsuccessful attempts at striking the ball, or touches the tongue more than twice without being able to hit the ball, he is out, and the next player takes his innings, which order of succession should be settled beforehand. If one of the fielders can catch the ball before it falls to the ground the striker loses his innings; but if it is not caught, the fielder who stops it must bowl it from the spot where he picked it up, toward the trap; if it touches the trap, the striker is out; but if, on the contrary, it misses, the batsman counts one toward his game. It is usual to place two boundaries at a given distance from the trap, between which it is necessary for the ball to fall when struck by the batsman, for if it falls outside of either he is out. As in fungo, there is no fixed number for the game, each in turn playing against all the others.

BALLOON BALL (PALLONE).

BALLOON ball is an old Italian game, once very popular in England. It is played in courts somewhat like tennis courts, only with a much larger floor space. At Bologna, where there is a model court, the floor is a parallelogram three hundred feet long by sixty feet wide, bounded on one of its sides by a high wall and on the other and along the ends by galleries for spectators.

There are three players to a side, the duty of the two "primi" or best players being to stand well back to return all the long and difficult balls, while the third is on the look-out for any ball that comes between him and the transverse line, or that is not likely to reach his companions.

The ball used is five inches in diameter and is made of two coats of cowhide inflated with air. Its weight is twelve ounces. Each player is armed with a *bracciale* or gauntlet of wood, covering the hand and extending nearly up to the elbow. The exterior of the gauntlet is thickly studded with pointed bosses, projecting an inch and a half. Across the inside is a transverse bar, which is grasped by the hand so as to render it manageable by the wearer. Its weight is about four pounds and to wield it effectively is therefore no light task.

These gauntlets are used to beat the ball backwards and forwards in the air from one side to the other. The object of the game is to keep the ball in constant flight, and whoever allows it to fall dead within his bounds loses. It may, however, be struck on the rebound. Whenever it falls beyond the side boundaries of the court or is not struck over the central line, it counts against the party playing it. When it flies over the extreme limits of an opponent's court it is called a *volata*, and is reckoned the best stroke that can be made. At the service (further) end of each court is a spring board on which the principal player (the best batter with the bracciale) stands. Near him is the pallonaio, whose business is to keep the balls well inflated with air; and at a short distance off, facing him, stands the mandarino, who gives ball. As soon as the ball leaves the mandarino's hand, the chief batter runs forward to meet it and strikes it as far and as high as he can. His opponents return it if they are able to do so, and then the ball is batted backwards and forwards by the two sides, fifteen or twenty times, perhaps, before a point is scored.

The game is necessarily a very fatiguing one and every player is obliged to carry, as a regular part of his equipment, a napkin to wipe from his face the perspiration which flows so profusely while he is engaged. In Italy players of the game frequently make exhibition tours. Such parties usually consist of twelve individuals, of whom six play for three days and then rest for the next three days, the severity of the exercise rendering this course absolutely necessary.

Notwithstanding its somewhat laborious character, the amusement is one that ought to be popular with Americans if they should once adopt it, as it is a game whose principal requirements are that promptness and agility on which Americans so justly pride themselves. There is little or no danger attending it, and the fatigue is a healthy fatigue, stimulating to the appetite and strengthening to the body.

DOG-STICK AND SPLENT.

A GAME is played in northern England somewhat like trap-ball, which is known as "dog-stick and splent." The splent is a tongue-shaped piece of wood, having one end tapering and the other rounded and slightly hollowed so as to hold the ball. The dog-stick is a rounded piece of wood very much like the bat used in base-ball. The ball is made of boxwood, loaded with shot to make it heavier and covered with a coating of stout leather.

A boundary-line having been agreed upon, one player goes with his dog-stick to the splent and the rest place themselves, some at the boundary-line and others further off in the field to intercept the ball. The batter then gives a blow to the tapering end of the splent which throws the ball up into the air. As it rises he strikes it with his dog-stick so as to send it as far as he can into the field. Should he fail to strike it on two successive attempts, or if he should not send it over the boundary-line, or if it should be caught by one of the others, he loses his turn at batting and scores nothing. The players are not obliged to catch the ball with their hands; they may catch it in their caps, under their arms or in any way they choose. As the ball is very hard care needs to be exercised to avoid an injury in stopping it.

The ball having passed the boundary uncaught, it is thrown back by any one of the fielders towards the splent. The striker may intercept it with his dog-stick as it is thus returned (before it touches

the ground), either by knocking it towards the field again or simply by stopping it. He then, as it lies on the ground, guesses the number of lengths of his dog-stick it is distant from the splent. Should he overestimate the distance, he counts nothing and gives up his place at the splent. If his guess is either exactly right or under the mark, it is scored to his credit. Thus, should the exact distance be three and a half lengths and he had estimated it at three, the number called by him is credited to him. But if on the other hand he had guessed four he would be out. In any case he may not add more than five to his score, so that when the ball is palpably beyond five lengths from the splent the umpire calls "five" and that number is added to the striker's score without measurement.

Evidently it is to the interest of the striker in the first place to land the ball as far from the splent as possible, and in the second place in guessing its distance to give as high a number as he safely can without overshooting it. On the other hand his opponents strive in returning the ball to send it as near the splent as they can in order to keep down the batter's score. The order in which the players take their turn with the dog-stick should be settled by mutual agreement in advance. The winner of the game is he who scores the most in one, two or three rounds, as may be determined upon before the play begins.

THE CROSS-BOW.

A CROSS-BOW is in effect nothing more nor less than an ordinary bow set crosswise in a butt which is shaped like an ordinary gun-stock.

The object of its first invention as a weapon of war was to obtain greater accuracy and, in some sort, greater propelling power with less muscular exertion. Some of the old cross-bows made of steel were very powerful, but they required a lever or winch to set them and were, take them all in all, so unwieldy that they never superseded the old long-bow, which, in English hands especially, proved its complete superiority to all rivals on many a hard-fought field.

The Chinese even to this day make use of the cross-bow in their wars. They have invented a kind of repeater—one that once charged will shoot off several arrows in succession, the archer not having even to reset the bow each time, and only needing to work a lever backwards and forwards.

As a plaything the cross-bow, while perhaps not quite the equal of the catapult, will afford plenty of amusement in shooting at a target. Pieces of tobacco-pipes serve excellently as missiles.

QUOITS.

THE game of quoits furnishes a healthy exercise and is an enjoyable and frequently exciting sport. The chief drawback to it is that it is apt to exercise one set of muscles too much when indulged in as a regular pastime. Otherwise it is a very desirable addition to the list of out-door games. The ordinary game for youths is played with small quoits (iron rings, one side of which is concave and the other convex), in form as shown in Fig. 1.

These are held in the hand of the player so that when thrown their edge may strike the ground first, the method of holding them being as shown in Figs. 2 and 3.

They are tossed so as to strike the ground, as shown in Fig. 4. When tossed so as to fall on the "hob," the quoit should be pitched so as to just pass over the "hob," as shown in Fig. 5. If tossed so as to strike the "hob," as shown in Fig. 6, the chances are that it will rebound back or to one side.

When the sides have been chosen, the first player stands level with one of the hobs, and taking a step forward with his left foot delivers the quoit by a swinging movement of the arm from behind him to the front. The quoit should fall and remain with its

FIG. 1.

FIG. 2.

convex side uppermost, either imbedded in the earth or clay, or else lying flat with the concave side on the ground. If it rolls along the ground and then

stops, it counts from the place where it finally rests, unless the cause of its rolling was a collision with some other quoit already delivered, or unless, after having been properly thrown, it is knocked out by another afterward played. The proper rule is that each player should play his two quoits in succession, and then be followed by an adversary; but in a party of four it is usual for each party to have only

FIG. 3.

FIG. 4.

one quoit. When all the quoits are thrown the score is taken by measuring the distance from the hob to the nearest part of the nearest quoit, and the side which has thrown best scores one or two, according as his one or two quoits are better than any one thrown by the other side. But every "ringer" or quoit which falls over the hob and remains with the hob inclosed within its ring counts two.

FIG. 5.

FIG. 6.

The distance between the two hobs is eighteen yards for large-sized quoits and twenty-one for the small size. The hobs (short iron pointed stakes) are driven into the clay circle so as to stand out of the ground at an angle of forty-five degrees toward each other, and they must not project out of the ground more than two and a half inches. In the regular match-game rules for prizes "ringers" do not count any more than do the quoits nearest the hob.

LAWN BILLIARDS.

THE game of lawn billiards is a favorite one in many places, and has the great advantage that it can be played in a comparatively limited space. Indeed a large lawn is unsuitable for the game, and if the ground be of too great dimensions it will be better to enclose a circular space.

The materials required are very simple. They comprise only eight or ten balls of different colors, a stick or cue with which to propel the balls, and a revolving ring through which the balls are to pass. The balls should be made of some hard and heavy wood and be about a foot in circumference. Croquet balls answer the purpose very well. The ring is usually made of iron—though brass would perhaps be better—and has a shank or neck. When it is to be used, a large wooden peg is driven into the ground, with the top a little below the surface, and into it a hole is bored, large enough to receive the shank of the ring and to let it revolve freely. The cue is made of two parts, namely, a wooden handle and a metal tip of rather a peculiar shape. It is ring-shaped and is fixed to the handle at an angle. This formation enables the ball to be played better than if the cue and tip were in a line. Sometimes each player has a cue, but as a general rule one cue only is required, and is handed round to the players in succession.

The objects of the game are simple and the rules scarcely less so. Each player endeavors to pass his ball through the ring, and every time he does so he scores one point. If his ball rolls through the ring after striking another ball, he adds two to his score. The ball must not be pushed through the ring with the cue touching it, neither may it be thrown through. After making a successful stroke, the player does not go on with the game, as in croquet, but gives way to the next player.

In this game there is more play than at first appears to be the case. If, for example, a player finds the hoop turned edgewise to him, he can either place his own ball so as to obstruct the next stroke of the enemy, or, by dexterous play at the ring, can turn it edgewise to the enemy next in succession. Sometimes he will strike a ball belonging to his own party so as to put it into position, or will strike away the ball of an enemy who seems likely to make a successful stroke.

A really good player will often contrive to pass the ring even though it be turned almost edgewise to him. If the ring be turned in the least to one side or the other, he will play at it with a peculiar push of his cue, and strike it a little on one side. If this is properly done and with moderate force, the ring spins round and catches the ball in its progress. The effect of this sudden shock is that the ball vibrates backwards and forwards for a moment and finally settles on the opposite side of the hoop.

Half the amusement of this game consists in having a ring only just large enough to let the balls pass through, and so neatly poised as to revolve with a touch. The best plan for securing this latter

point is to have a metal socket let into the wooden peg. If so, care must be taken that the socket be brass if the ring is iron, and *vice versa*. Both shank and socket must be kept well oiled.

RING-TOSS.

RING-TOSS is a naval game, and forms a pleasant pastime for the summer lawn or for the parlor in the winter time. It is played with a target-post and a number of light rings or small hooks, ranging from five to ten inches in diameter. The game is to toss the rings so as to fall on the target-post. The smaller the rings the higher the count.

For the large rings one point is scored; for the next size smaller two points, and for the smallest size three points; fifty points being a full game. The distance on a lawn which the player stands from the target-post is twenty-five feet. In the parlor it is fifteen feet.

THE BOOMERANG.

THE boomerang is an Australian weapon, and, like the sling-bow and in fact nearly all weapons, had its origin in the chase and war. At first sight it is an unpromising-looking weapon enough, being merely a curved piece of flat wood of no very great size or weight, and about as insignificant-looking an object as could well be supposed. But in the hands of the Australian black this simple piece of flat wood can be made to perform the most marvellous feats. It rushes through the air like a "thing of life;" at will it can be made to skim the ground like a swallow, or soar into the air like a hawk; to strike a distant enemy, or to return in a wide graceful curve till it drops harmlessly against his own feet.

Against this strange weapon no trunk of tree or huge mass of rock affords shelter; the boomerang rushing through the air, past and beyond the concealed enemy, comes whirling back again with but little abated force and smites him from the rear. With spear and boomerang the native Australian must indeed be a dangerous foe, and one not to be despised even by the white man with his still more deadly rifle and revolver.

Boys should not expect to make anything more than a plaything out of this interesting weapon; they can neither afford the time nor get the teaching necessary for a thorough mastery of it. To the Australian aborigine the skilful use of the boomerang forms a great part of the business of his life, and is, indeed, one of the conditions on which he lives; but to the white man it can only be one out of many aids to relaxation, and he therefore cannot any more hope to acquire great command over this extraordinary missile—perhaps the most difficult to wield successfully that the ingenuity of man has ever produced—than he can hope to rival the Japanese jugglers in their wondrous performances with tops and paper butterflies.

Should any readers of this volume become owners of a boomerang, they must be very careful at first in experimenting with it, for they will find that it will have a tendency to fly off from its course in the most unforeseen manner and make its way into all sorts of unexpected places, generally being exceedingly perverse in going exactly where it is least wanted to go. A large open field to practise in, with not more than one or two companions, will be found the best for safety.

In the act of throwing, the boomerang is grasped firmly by the end, which is slightly smoothed off for the hand, and, as it leaves the hand, is made to gyrate or revolve on its centre by a quick turn of the wrist; it is thrown, of course, edgewise, with the concave side foremost and the flat side downwards.

THROWING THE JAVELIN.

THROWING the javelin is a very interesting amusement, and gives strength to the arm and exactness to the eye. In playing it a square target must be procured, made of thick wood, about four feet in diameter, and on which should be marked concentric circles, similar to those on a target in archery. This should be well supported behind by two stout back-pieces, resting in the ground, so as to prevent the target from being easily overturned. The circles may be several in number. The centre should be black, and about six inches in diameter, and count ten; the second circle should be red, and count five; and the third should be light blue, and count three.

The other parts of the target to count as may be agreed. The javelins should consist of poles of ash or fir, about an inch and a half in diameter, and should be five feet six inches in length. They should have a spike in one end, which should be surrounded with a rim of iron; the spike should be about two inches long, thick and strong, so as to enable it to become fixed in the target without splitting it. The game may be played by any number of boys, and is commenced as follows:

One player takes a javelin in his right hand, and walking to a distance from the target, previously agreed upon by the players, he poises his javelin, by holding it in the hollow of his hand, between the ball of the thumb and the fleshy part at the side, and his elbow is at the same time bent, and his arm elevated so that his hand is a little above his ear, the javelin being at the same time nicely balanced with the small fingers, touching it so as to direct its course. It is then launched forward at the target, and, if properly poised, directed and thrown, will go to it in a direct line. The point at which it strikes the target is then marked, and then the other players follow in the same way for twelve times in succession, the person who scores the most marks being the victor.

The javelin will fly better and straighter if a rotary movement is communicated to it by a slight pull of the little finger as it leaves the hand. When some skill has been obtained in darting, blunt javelins with padded ends should be procured, and the players should accustom themselves to avoid, parry or catch a javelin thrown at them. When they can do so with certainty they may storm a fort. The best fort is a hedge with gaps. The players divide into two parties, one defending and the other attacking. Each player should be furnished with three javelins at least, well padded and nicely balanced. The art of catching and returning a javelin is exceedingly useful in this game.

LES GRACES.

THE game of les graces derives its name from the graceful attitudes into which it throws the body if properly played. Unfortunately, when badly played, it is about as ungraceful a proceeding as can be imagined.

The materials for the amusement consist simply of a couple of slender sticks for each player and two or more hoops of different sizes. The players stand at some distance from each other, and the object of the game is to throw the hoops backwards and forwards, catching and throwing them by means of the sticks.

To throw the hoop properly it should be hung on the sticks and the sticks then crossed to prevent it from falling off. Hold the sticks, with their points downwards, on the left side of the body, the left hand grasping one stick firmly, while the right hand holds the other loosely between the finger and thumb. Now raise the arms, point the left-hand stick in the direction which the hoop is meant to take and with the right-hand stick throw the hoop, gliding at the same time the right-hand stick over the other.

These movements should be performed as one without any pause between them; and if they are properly done, the hoop revolves rapidly so as to keep it steady as it flies through the air. Unless this be done, it wabbles, or even turns over and over, in either of which cases the player to whom it is thrown can scarcely have a chance of catching it.

The hoop should be thrown tolerably high and ought to be sent with such accuracy that, if it were not stopped, it would fall on the head of the second player.

Catching the hoop ought to be done with both sticks slightly crossed, unless it be flung much to the right or left, when, of course, a single stick must be employed. Sometimes an unskilful player flings the hoop so that it presents its edge to the catcher. Even in this case an expert player will catch it by giving the lower edge a little tap with one stick, the effect of which will be to make the hoop fall over the stick.

The beginner is particularly warned against crossing the sticks horizontally in front of his face, sticking out his elbows on a level with his ears and throwing the hoop by flinging both arms apart. In this mode of throwing there is neither ease, grace nor certainty. A properly thrown hoop ought to look quite steady as it passes through the air and to be thrown so accurately that there is no difficulty in catching it.

With every good set of les graces implements there should be two hoops of a foot in diameter and two of seven inches. The test of good play is to exchange the hoops, throwing them so that the small hoop passes through the large one. This feat looks rather formidable, but every good player can perform it if he has a steady partner whom he can trust. When the hoops are thus crossed the larger hoop should be thrown first, so that aim may be taken with the smaller one.

BATTLEDORE AND SHUTTLECOCK.

BATTLEDORE and shuttlecock is a game suitable for the playground, the lawn or the parlor, but it is best played on a lawn. The materials for the game can be obtained at a sporting-goods store; but a common battledore can be readily made with a hickory stick and a piece of hoop, and a shuttlecock with a cork and a few short feathers. The form of the battledore and shuttlecock is as follows:

BATTLEDORE.

SHUTTLECOCK.

The game is played by two players, each having a battledore, and each bats the shuttlecock from one to the other; the player failing to return it when it is batted to him within possible reach losing a point in the game. A game consists of twenty points, and the best two out of three games gains the match.

THE SLING.

THE sling was much used as a weapon in ancient warfare, and was held in such esteem that it long kept its place even with the bow. As time passed on, however, it fell into gradual disuse; and, long before the time that the bow gave way to fire-arms, the sling had come to be regarded as little more than a toy.

It must not be supposed that it was failure in accuracy that brought the sling into disfavor as a military weapon. It is not worth any one's while nowadays to devote the necessary time and labor to acquire proficiency in its use; though, even at the present time, there would be no difficulty in finding many boys who would be by no means desirable antagonists at fifty yards or so. But in past times, where a man's life and living depended on his skill in slinging—when as a child he had to earn his meals before eating them—then the full capabilities of the sling were brought out, and even the bow hardly over-matched it in absolute accuracy.

Its real defects as a military weapon were the want of penetrative power in the missile, especially against armor, and, more particularly, the inconvenient extent of space each slinger required to work in, and the impossibility of discharging the missiles from anywhere but the front rank. It was the bow's superiority in these respects, rather than its greater accuracy, that drove the sling out of the field.

The simplest form of sling is an oval piece of leather with a slit in the middle and a stout string fastened at each end; one of these strings is looped, the other plain. In using the sling, a smooth stone is put into the leather, the slit holding it in its place; the slinger inserts his middle finger in the loop of the one string, grasping it at the same time firmly in his hand, and holding the other string securely, and yet so that he can easily let it slip, whirls the whole swiftly round his head two or three times and then, at the right moment, lets fly the loose string. The pocket of the sling immediately opens, and the stone is thrown out with extraordinary swiftness.

If a more solid and reliable sling is required, it should be made entirely of leather, thongs and all, every detail being carefully adjusted to the missile it is intended to use. The missile, too, if anything like accuracy is aimed at, should be most carefully constructed. Nothing great can be done with stones; they are too uncertain in weight and shape. Clay balls, made as much as possible of equal weight and size, and baked in the ashes, are very serviceable; but the very best things of all are good-sized leaden bullets. They travel farther and faster and are more reliable than any other procurable missile. They have only one drawback—their expense. The slinger might keep a stock of both—clay for ordinary occasions, lead for special service; but, as far as possible, he should avoid variety of ammunition if he wishes to attain any high degree of skill.

Armed with a good sling and a store of ammunition, a boy, if his taste lies that way, may do considerably more execution as a sportsman than many an older person with pistol or rifle. And his sling has this advantage over fire-arms, that it cannot possibly do any hurt to him, or, with ordinary care, to any one else. It never goes off by accident or when he "did not know it was loaded."

THE CLEFT-STICK.

ANOTHER variation of the sling is the cleft-stick. It is made by taking a piece of tough wood (ash is perhaps the best), about thirty inches in length and three-quarters of an inch in thickness, tapering, if possible, a little towards one end; and splitting

with a sharp knife the smaller end down to a depth of, say, four inches. Care should be taken to do this exactly in the middle. Then whip it round strongly with waxed thread, beginning about two and a half inches from the end and working downwards to a point a little below where the split ends. The object of thus binding it is to prevent the split from extending further.

Now take a smooth flat pebble, force it well into the cleft or slit, hold the stick by the butt-end and throw. The stone will fly out as if from a leathern sling; in fact the only difference between the two is that one is rigid and the other flexible. At first one needs to be careful how he throws; he should be sure that no one is within hitting distance, for until the right knack is acquired the stone is apt to fly about in a very independent manner. It would be as well also to avoid the neighborhood of glass when experimenting for the first time with this rather "offensive" weapon.

The stone is made to leave the stick at the right moment by a kind of jerk, which will soon come of itself to a boy of any natural aptitude but which cannot well be described on paper.

In places where clay is tolerably abundant, a similar effect may be produced by kneading lumps of clay round the top of a pliant stick and throwing them in the same manner as the stone is hurled from a cleft-stick. These clay lumps when they strike against anything—a tree or a post—flatten out and adhere to it with great tenacity.

Sometimes boys get up a battle of clay lumps; but the two parties should always stand at a considerable distance from each other, forty or fifty yards at the least. Even at that distance a blow from a clay lump in the face will often leave a deep red mark as a memento of its visit, and not even the clothes will afford perfect protection from the sting of these soft missiles.

THE PEA-SHOOTER AND PUTTY-BLOWER.

In America the putty-blower and in England the pea-shooter have long been favorites with boys and constitute weapons which furnish capital sport without often doing much damage. The principle of each instrument is the same: a tube made of tin or other metal through which the missile, a lump of putty or a pea, is blown against the object aimed at. The diameter of the shooter should be about the size of that of an average pea, as, if it were much larger, the pea would not be propelled with sufficient force to go any great distance or to strike the object as smartly as desired. The blower can be whatever size is preferable as the softness of the putty permits of the pellets being made to fit the tube. Either implement can be quickly made by a tinsmith.

Pea-shooters have one great advantage over putty-blowers; and that is that their owners can fill their mouths with missiles and blow off one after the other, or even a number at a time, as fast as they please; whereas putty-blowers need to be reloaded after every shot, it not being very feasible to fill the mouth with putty in advance of beginning operations.

There are numberless ways of getting fun out of either blowers or shooters. One of the best is to organize the boys into two parties of about equal strength and have a regular pitched battle. For this purpose pease make better missiles than putty, as they can be shot much more rapidly. In using them, however, more execution will generally be accomplished by a steady fire of single pease than by a furious discharge of volleys. The former method allows opportunity for a careful aim and for searching out the weak spots of the enemy's defence, and attacking him there with unrelenting perseverance, which cannot be done in the latter case. Volleying is useful only when at close quarters with your opponents. Then at such range that you cannot miss, a blast of pease is often effective in driving them back.

THE CATAPULT.

The catapult is a variation of the ordinary sling, but it throws a missile with a far higher degree of accuracy and with much greater force than the simpler implement. Indeed, it may be fairly said to rank next to fire-arms in its destructive capabilities, and it possesses this advantage over the gun and pistol that it is much less conspicuous and is absolutely noiseless, as well as being perfectly harmless to its possessor.

Catapults can be purchased at most toy-stores, but quite as efficient ones can be made at home with very little trouble. Get a forked stick, shaped like the letter Y, about six or seven inches in length, the prongs about three inches apart. To the extremity of each of these prongs lash securely a strip

of india-rubber band or spring about six inches long and attach the loose ends of these springs to an oval piece of soft leather, one and a half inches long by an inch in width, whipping them carefully and strongly for a distance of nearly an inch. This oval forms a kind of pocket in which to place a missile.

The most useful ammunition is No. 1 shot; clay marbles do very well, and even gravel-stones at a pinch may be made to do good service; but the first-named are preferable in every way—for range, accuracy, penetration and portability. They can be fired in volleys, moreover, when occasion requires, which the others cannot, on account of their size.

In using the catapult, the lower end of the forked stick is firmly held in the left hand and the oval piece of leather (containing the missile) is drawn back as far as possible with the right hand and then sharply let go. A little practice will show that it is possible to secure a most excellent aim in doing this, so as to send the missile straight at the desired object.

PRISONER'S BASE.

PRISONER'S base is one of the best of the running class of games, and it is played as follows: Sides of from six to ten players are chosen from among the swiftest runners of the crowd. Two of the best players choose sides, after which the "home" and "prison" bases are marked out. These are laid out by drawing a line ten or a dozen yards from a wall, and dividing the inclosed space into two equal portions, each of which ought to be large enough to contain all the players on one side. At some distance (from a hundred to two hundred feet) in front of these bases, two more spaces must be marked out for prisons, the prison of one party being opposite the home base of the other.

The game is commenced by a player from one side called the "leader" running out of his base toward the prisons; when he has got about half way he calls out "chase," at which signal one of the opposite party rushes from his base and endeavors to catch him; a partner of the first player next dashes out to capture the second, and so on, both sides sending out as many of their partners as they please, to touch or take their opponents. Each player strives to overtake and touch any one of the opposite side who quitted his base before he did, as he must not touch any one who started after him, although they may, if they can, touch him before he gets back to his own base; but if a player has taken a prisoner he cannot be touched when he makes his way back to his base again. It is the rule that a player may touch only one of his adversaries every time he leaves his base, and every prisoner must be taken to the prison of the party opposed to him, where he remains until one of his partners can manage to touch him. It is to be borne in mind that he who comes to rescue the captive must have started from his base after the other has been taken, and the prisoner and his liberator are not allowed to touch any one, or to be touched on their return home. The victors are those who can contrive to make all their opponents prisoners. The game may also be decided by one player taking possession of the base belonging to his opponents when they are all out; it is therefore prudent to leave some one in charge of each base.

TIP-CAT.

TIP-CAT is played with a light stick and a piece of wood called a "cat" shaped as in the appended cut. When the cat is laid upon the ground, the player with his stick tips it at one end by a smart stroke, which causes it to rise in the air, high enough for him to strike it as it falls, in the same manner as he would a ball. The cat should not exceed five inches in length or an inch and a half in diameter, and should be made of light wood. The game is played by two boys who toss for innings. Before playing, a small ring is marked out on

the ground, and at about twelve feet distance a boundary line is drawn. The first player stands close to the ring, and is provided with a stick about two feet long; his opponent stands at the bounds and pitches the cat at the ring. Should the cat alight in the ring the first player is out; should it fall on the line he is allowed one *tip*, but should it fall anywhere outside the ring he is entitled to take three *tips*. If the first player be not pitched out, he now proceeds to "tip the cat," that is, he taps one end of it with his stick, and as it jumps in the air he endeavors to strike it as far as possible. When he has taken his tips he roughly estimates

the distance he has struck the cat, and offers his opponent a certain number of jumps. If the out-player, starting from the point where the cat lies, can reach the ring in the right number of jumps, he puts the first player out, but if he cannot accomplish the task, his opponent counts the number as so many towards the game, which may be fifty or a hundred according to agreement. If the out-player can catch the cat as it is flying he puts his opponent out. The in-player having taken his tips, may also guess at the probable number of lengths of his stick between the cat and the ring and calls out the number; if, on measurement, by means of the stick, the distance is found to exceed the number called, he is out; if, on the contrary, it is within, he scores the number toward his game.

LEAP-FROG.

LEAP-FROG will be best understood by supposing that eight boys are playing at it. Seven of them stand in a row, about eighteen feet apart, with their sides to the leapers, hands on their knees, body doubled, and head bent down, as shown in Fig. 1. The eighth player then takes a short run, and placing his hands on the back of the first player, leaps over him, then over the second and in like

FIG. 1.

FIG. 2.

manner over all the other players, one after the other, and when he has done so, he places himself down in the line, in the proper position, and at a proper distance from the last player; the first over whom he jumped rises immediately he has passed, and follows him over the second, third, etc., who all rise in succession, and leap in their turns; and after they have successively jumped over the last players, they place themselves down in the line, as before described; the game continues during pleasure. Some players stand with their backs to the leapers, as in Fig. 2, instead of their sides; the mode is quite optional, although in some places it is usual to compel those who can jump over the head, to do so.

FOLLOW MY LEADER.

A BOLD, active boy should be selected as leader, and all the other players must range themselves in a line behind him; he commences the game by jumping, running, hopping or getting over any obstacle that may present itself, and then continues on his course, scrambling over everything, and varying his actions as much as possible; all his followers must, according to the rules of the game, do exactly as he does. If he jumps over a ditch, they must clear it; if over a gate, they must do that also; and in everything follow or imitate him as closely as possible. If any one of them fails in performing the tasks, he must take his place behind all the rest, until some other player makes a blunder, and in his turn goes last. The game is continued during the leader's pleasure.

HOP SCOTCH.

THE essentials of the game of hop scotch are a piece of level ground or an even pavement on which to mark out the lines of the field of play, which is formed as in the following diagram.

When the field is marked out, the players who are to compete each try to toss their "tile"—a piece of flat stone or wood—into the half circle at the top of the field. The one who succeeds leads off in the game, the others following in turn. The player who can manage to pitch into the half circle takes the first innings, and if two or more pitch in, they are "ties," and must pitch again. The winner begins, standing at "home," by throwing his piece of tile into the division marked 1; he then hops into the space, and kicks the tile out to "home;" he next throws the tile into 2, hops into 1, then into 2, and kicks it out as before; he repeats this through the several numbers till he comes to 8, which is called a resting-bed; he is here permitted, after hopping through the previous seven spaces, to put his feet in the beds marked

HOME.

LEAP FROG.

6 and 7, and rest himself; but he must of course resume hopping before he kicks the tile out; he then passes through the beds 9, 10, 11, as before directed; 12 is another resting-bed, in which he may put down both feet, and when he comes to the half circle he must kick the tile out with such force as to send it through all the other beds at one kick; it is not necessary to send the tile out so forcibly from any of the other beds, the players being allowed to use as many kicks as they please. The other rules of the game are the following: If the player throws the tile into the wrong number, or if it rests on one of the chalked lines, either when he has endeavored to pitch it into a bed, or when he is kicking it out, he loses his innings; he loses his innings also if he places both feet down in any other than a resting-bed, or if he, hopping out, puts his foot on a line, or kicks the tile over the side lines.

DUCK AND DRAKE.

DUCK and drake requires at least three players, but its interest is considerably increased when there are six or eight. A large stone called "the base," having a tolerably flat top, is placed on the ground, and "home" is marked off about twelve feet from it. Each player being provided with a stone called a duck about double the size of a base-ball, the game is commenced by pitching for "drake"—that is, by all standing at the home and throwing their stones or ducks in succession at the base. The player whose duck falls or rolls farthest from it becomes "drake" and must place his stone on the top of the base. The other players are allowed to take up their ducks and go to the home unmolested while "drake" is placing his stone down; they then throw their ducks, one after the other, at it, and endeavor to knock it off the base. Drake must replace his stone whenever it is knocked off, and the throwers must pick up their ducks and endeavor to run home while he is so engaged. Should the duck remain on after four or five have thrown at it, the stones must rest where they fell, until some player more skilful than the others knocks off the duck, and so gives the throwers a chance of getting home. If drake can touch one of the throwers as he is running home with his duck in his hand, the one so touched becomes drake. When the duck is knocked off by any player, it must be instantly replaced, as drake cannot touch any one while it is off the base. When a thrower's duck falls and lies before the base drake may touch him if he can, even before he picks up his duck. When drake succeeds in touching a thrower, he must run to the base and quickly remove his duck; if he has time, he should tap the base twice with his duck, and call out "double duck!" as he may then walk home without fear of being touched by the boy whom he has just made drake. Should all the players have thrown without being able to knock the duck off, it is frequently proposed by some of them to take either a "heeler," a "sling" or a "jump" toward home, in order that they may have a chance of reaching it. Drake may refuse or assent to these proposals at his option. The "heeler" is performed by the player kicking his duck backward toward home; the "sling" by placing the duck on the middle of the right foot, and slinging it as far in the direction of home as possible; and the "jump" by placing the duck between the feet, and holding it in that manner while a jump is taken, the jumper letting the stone go as he alights, so that it may roll forward. If the duck is so far from home that one sling, jump or heeler will not suffice, two or more of each may be taken, provided of course that drake allows them. If the player does not get his duck home in the number of slings, jumps or heelers agreed on, he becomes drake. Duck and drake is one of the liveliest of games, but we must caution boys against playing roughly or carelessly at it, as they may through negligence do one another much harm, on account of the weight of the stones and the force with which they must be thrown.

TAG.

ANY number of boys or girls can play tag. One of the players volunteers to be "tag" or else he is chosen to fill that office by lot. Tag then endeavors to touch one of the others as they run in all directions to avoid him. When a player is touched he becomes "tag," and in his turn strives to touch one of the others. When "tag" succeeds in touching another, he cries "no tag," which signifies that the player so touched must not touch the player who touched him, until he has chased and touched somebody else.

The game is sometime varied by requiring "tag" to chase one player until another runs across his path, between him and the boy pursued, upon which tag must immediately run after the one who crossed,

until some other crossing between them must in his turn be followed; in this way the game continues until one is touched, who takes the office of tag and gives chase to the others. This is called "cross-tag."

Another variation is granting safety to those pursued when they touch either wood or iron, the rule being that "tag" must touch them as they run from one piece of wood or iron to another.

I SPY THE WOLF.

In the game of "I spy the wolf" the players are divided into two equal parties, one of which is given a certain length of time to hide themselves, the other party remaining meanwhile at home. As soon as this time has expired or as soon as one of the out-players cries "whoop!" the seekers leave home to look for them. When one of the hiders is discovered, the finder shouts out, "I spy the wolf," and he and his companions rush back home, to escape being touched. If the hiders catch a certain number of the seekers before they can return home, they hide again; if not the seekers take their turn.

HIDE AND SEEK, OR WHOOP.

In hide and seek one player takes his station at a spot called the "home," while the others go to seek out various hiding-places; when all are ready, one of them—the most distant from home—calls out "Whoop!" on which the player at "home" goes in search of the hiders, and endeavors to touch one of them as they run back to "home;" if he can do so, the one caught takes his place at the "home," while he joins the out-players. But if all reach home safely without being touched then the same player has to seek for the rest when they hide again.

JINGLE-RING.

Jingle-ring is a lively out-door variation of blind-man's buff. It is played to best advantage on a grass-plot encircled with a roped boundary. The players rarely exceed ten. All of these, except one of the most active, who is the "jingler," have their eyes blindfolded with handkerchiefs. The jingler holds a small bell in his hand, which he is obliged to keep ringing incessantly so long as the play continues, which is commonly about twenty minutes. The business of the jingler is to elude the pursuit of his blindfolded companions, who follow him by the sound of the bell, in all directions, and sometimes oblige him to exert his utmost abilities to effect his escape, which must be done within the boundaries of the rope, for the laws of the sport forbid him to pass beyond it. If he be caught in the time allotted for the continuance of the game, the person who caught him wins the match; if, on the contrary, they are not able to take him he is proclaimed the winner.

BOUND HANDS.

Bound hands is a spirited game, and is peculiarly adapted for wintry weather. It is played by two parties, one—the inners—being called "Jacks," and the other—the outers—"Johnnies." A line should be made on the ground at about four feet from a wall, and running parallel with it; within this bound one of the players takes his station with his hands clasped together, and, after calling out, "Johnnies, look out," he jumps out, runs after and strives to overtake and touch one of the others, without dividing his hands; if he is successful in his attempt, they both return to the bounds, where they join hands, and after repeating the warning rush out again, and each endeavors to touch an opponent; if they can achieve this, they all return and join hands as before. When they sally forth again, the outside players *only* try to touch, and of course every one they touch returns to "bounds" with them, and joins in the line. Whenever an out-player is touched, the Jacks let go their hands and scamper back to "bounds" as fast as their legs will carry them, as the out-players can demand to be carried home by the Jacks if they can catch them when the line is broken. The out-players are allowed to attack the line in the rear, in order to compel the poor widdies to let go their hands. The game may be kept up until all the out-players are caught. Sometimes the one who commences the game is allowed his liberty as soon as he has caught four. As a matter of course, no out-player can be touched when the line is broken.

BULL IN THE RING.

BULL in the ring can be played by any number of boys, and is commenced by their joining hands and forming a ring, having enclosed some boy in the middle, who is the bull. It is the bull's part to make a rush, break through the ring, and escape, and the part of the boys who form the ring to hold their hands so fast together that he cannot break their hold. Before making a rush the bull must cry "boo" to give warning, so that the boys may grasp their hands more tightly. The whole ring generally replies to the bull's challenge by crying "boo" all together. When the bull breaks through the ring he is pursued until captured, and the boy who seizes him first is "bull" when they return. A good "bull" will lead them a pretty dance, clearing hedges and ditches, and if he gets back and touches some mark agreed upon, near to where he broke through the ring, he is "bull" again.

SLING THE MONKEY.

SLING the monkey is a favorite game on shipboard, but it can be played just as well in the country wherever there are trees. One player, who is chosen by lot, takes the part of the monkey and is fastened to a tolerably high branch of a tree by a strong cord knotted in a bowline loop and passed round his waist. The other players then baste the monkey with knotted handkercliefs, and he, similar-

ly armed, endeavors to retaliate. If he succeeds in striking one of them, he is at once released and the other takes his place as monkey. He must make haste in doing it, or he may be basted until he is fairly in the loop. With boys that do not mind a little buffeting this game becomes exceedingly lively: an active monkey cannot safely be approached without considerable difficulty and of course gives much more life to the game.

The cord should be just long enough to enable the monkey to reach the ground comfortably under the branch. Half the fun of the game consists in actually *slinging* the monkey, one of whose most effective ruses is to throw himself forward on the rope, pretend to start off in one direction and then come back with an unexpected swing in the other.

BASTE THE BEAR.

BASTING the bear is a very similar amusement to sling the monkey. The players should toss up for the first bear, who kneels on the ground within a circle marked out for the purpose; each bear may select his own master, whose office it is to hold him by a rope, and use his utmost efforts to touch one

of the other players, as they try to thrash the bear with their handkerchiefs knotted and twisted very tightly. If the bear's master can touch one of the assailants without dragging the bear out of the ring, or letting go the rope, the boy touched becomes bear, selects his keeper as before mentioned, and the sport is continued.

DROPPING THE HANDKERCHIEF.

FOR the game of "dropping the handkerchief" a tolerably large ring should be formed by several boys standing in a circle and joining hands; another boy, who stands out, when all are ready walks round outside the ring, drops a handkerchief behind one of the players, and immediately runs off; he is instantly followed by the one behind whom he dropped the handkerchief, and who must track him in all his windings in and out, under the arms of the boys in the ring, who elevate them for the pur-

pose. Should the pursuer be able to touch the pursued before the latter passes the spot where he dropped the handkerchief, the former takes the handkerchief in his turn, and the latter joins hands in the circle. If the pursued party escapes being touched, however, he again takes the handkerchief and drops it behind another boy.

DRAWING THE OVEN.

In the game of drawing the oven several players seat themselves on the ground, in a line, one behind the other, and clasp each other round the waist; two players then take hold of the foremost sitter by

both his hands, as represented above, and endeavor to detach him from the line by pulling away vigorously. When they have succeeded in doing this, they take hold of the second sitter in the same manner, and so continue "drawing the oven," until they have drawn all the players from the ground.

FLY THE GARTER.

The game of "fly the garter" is played by first chalking or marking a line, or, as it is usually termed, "a garter," on the ground; on this line one of the players must place himself and bend down as in leap-frog, while the other players in rotation leap over him, the last one as he flies over calling out "Foot it." If he should fail in giving this notice, he is out, and must take the other boy's place at the garter. The boy, immediately the word is given, rises, and places his right heel close to the middle of the left foot; he next moves the left forwards and places that heel close up to the toes of his right foot and bends down as before. This movement is called a "step," and is repeated three times. The other players should fly from the garter each time a step is made and the last player must invariably call out "Foot it" as he leaps over. After making the three "steps," the player giving the back takes a short run, and, *from* the spot where he made his last step to, jumps as far forwards as he possibly can, and bends down again; the others jump from the garter and then fly over. Should any of the players be unable to jump easily over the one giving the back, but rather slide down upon, or ride on him, the player so failing must take the other's place at the garter, and the game be begun again; if, also, through the impetus acquired in taking the jump from the garter, a player should happen to place his hands on the back of the player bending down, and then withdraw them in order to take the spring over, he is out, and must take his turn at the garter. It is usual, in some places, for the boy giving the back to take a hop, step and a jump after he has footed it three times, the other players doing the same, and then flying over.

SPANISH FLY.

Spanish fly is capable of being varied to any extent by an ingenious boy, but it is generally played in the following way: One boy, selected by chance, sets a back, as in "fly the garter," and another is chosen leader. The game is commenced by the leader leaping over the one who gives the back, and the other players follow in succession; the leader then leaps back, and the others follow; then they all go over in a cross direction, and return, making, in all, four different ways. The leader then takes his cap in both hands, and leaves it on the boy's back while he is "overing," and his followers perform the same trick; in returning, the last man takes the lead, and removes his cap without disturbing the others, and each boy does the same; this trick is repeated in a cross direction. The next trick is throwing up the cap just before overing, and catching it before it falls; the next, reversing the cap on the head, and so balancing it while overing, without ever touching it with the hands; both tricks must be performed while leaping the four different ways. The leader, with his cap still balanced, now overs, and allows his cap to drop on the opposite side; the others do likewise, but they must be careful not to let their caps touch the others, nor to let their feet touch any of the caps in alighting; the leader now stoops down, picks up his cap with his

teeth and throws it over his head and the boy's back; he then leaps after his cap, but avoids touching it with his feet. The other players follow him as before. The next trick is "knuckling"—that is to say, overing with the hands clenched; the next, "slapping," which is performed by placing one hand on the boy's back, and hitting him with the other, while overing; the last, "spurring," or touching him up with the heel. All these tricks must be performed in the four different ways.

COCK-FIGHTING.

COCK-FIGHTING is a very amusing game for younger boys. Two players are made to sit on the ground, draw their legs up and clasp their hands together over their shins. A stout stick is then passed through under their knees and over their arms at the bend of the elbows, and there they sit trussed like a couple of fowls.

Thus prepared, the two combatants are placed face to face, their toes touching, and are left to fight it out. This they do by striving to knock each other down, each seeking to overbalance the other without losing his own equilibrium.

Two falls out of three decide the game; if both fall it is no "round" and does not count. As the player may not unclasp his hands even when down, he is helpless and must be helped up by his friends.

This game had a wonderful run of popularity once at one of the English naval ports. A foreign man-of-war had put in to refit after a severe gale; her officers, of course, received the hospitality of the local authorities, and one evening after mess, sky-larking being in vogue, cock-fighting was introduced. This so took the fancy of the foreigners, that next day, when some of their hosts of the preceding evening went to call upon them, they found them earnestly engaged, several pairs of them, in this their new pastime, and were called upon with pride to see what proficiency they had attained in a short time.

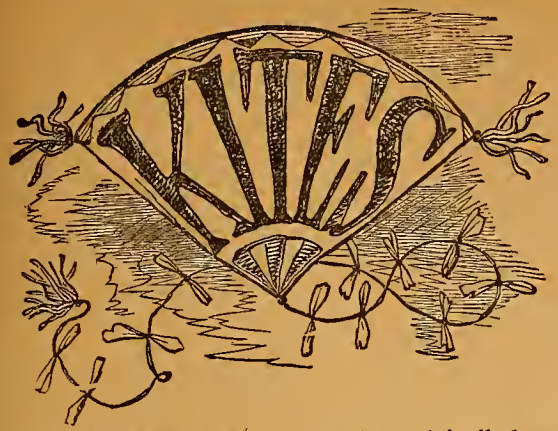
For the rest of their stay the game still maintained its popularity amongst them, and no doubt they carried it with them to their own home. One authority declares that the last thing seen of the vessel when far out at sea, was the captain cock-fighting with the first lieutenant on the quarter-deck and the parson with the doctor; but perhaps this is an exaggeration.

JUMP, LITTLE NAG-TAIL!

IN the game of "jump, little nag-tail!" six or eight players on each side is the best number. The two leaders should toss up for choice of partners, and after selecting them, toss again for innings. The loser must then place himself quite upright, with his face to a wall, against which he rests his hands; and one of his partners should next stoop down, and put his head against his leader's back; another partner also bends, and places his head against the back of the second player, and the rest of the partners must take their places in the same manner, one behind the other. When thus arranged, they are called "nags." One of the winning party next takes a run and, placing his hands on the back of the last player or "nag," endeavors to spring on to the back of the first, or at least to clear as many "nags" as he possibly can, in order to allow room for those following him to leap on the backs of the other "nags," which they should do in succession, until they are all fairly astride. If any of the "nags" sink under the weight, or in trying to support themselves touch the ground either with their hands or knees, or if the riders can keep their seats without touching the ground, whilst their leader counts twenty, or repeats the words, "Jump, little nag-tail, one, two, three!" three times, concluding with "off, off, off!" the riders resume their innings, and begin again; on the contrary, should there not be sufficient space for all to leap on, or they are unable to keep their seats on the back of the "nags," they lose their innings, and become "nags" in their turn. The "nags" must, while in the line, hold either by the trousers of the player before them, or else lean their hands on their knees, or cross their arms on their breasts. Each rider must call out "Warning" before he leaps on the back of one of the "nags."

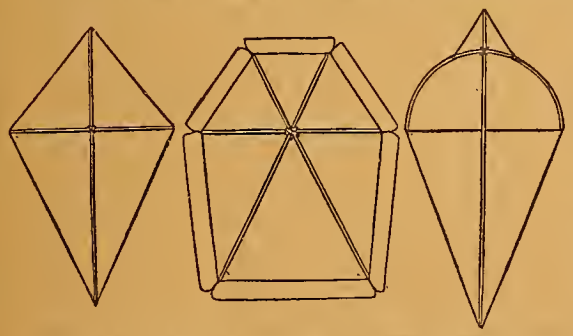
WINDING THE CLOCK.

TO wind the clock all the players join hands, and extend their arms to their full extent. One of the outside players remains stationary, and the others run round him as fast as they can, which proceeding is called "winding the clock." In this manner the straight line becomes a confused spiral, and all the players get huddled together in a most laughable manner.

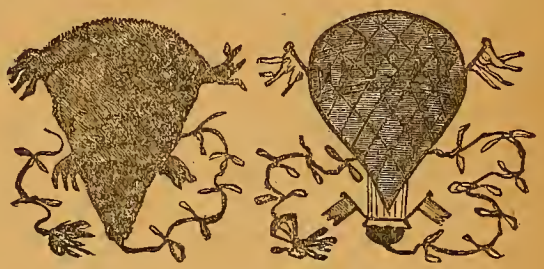


KITES are so called from having originally been made in the shape of birds of that name. Though they are not used exactly in any *game* (that is, in any regular contest, as balls and marbles are), they are the means of a very common amusement in their season—the spring months—and will then be found all over the world. Probably they are nowhere else as popular as in China, for kite-flying has been called the national pastime of that country, and many of the fancy shapes now to be seen here have come to us from literally the opposite side of the globe.

As every boy knows, a kite is made to fly in the air, and in order that it should do so it must first have a body (which is the kite proper) to fly, next a tail to steady it and lastly a string which causes it to fly and at the same time prevents it from flying away. Now, a kite can either be bought at a store or can be made at home, and one which its owner makes for himself will be valued much more than any which is bought. And making them is not very difficult: all that is required is a few light sticks of wood, some string, paper (tissue is the best) and



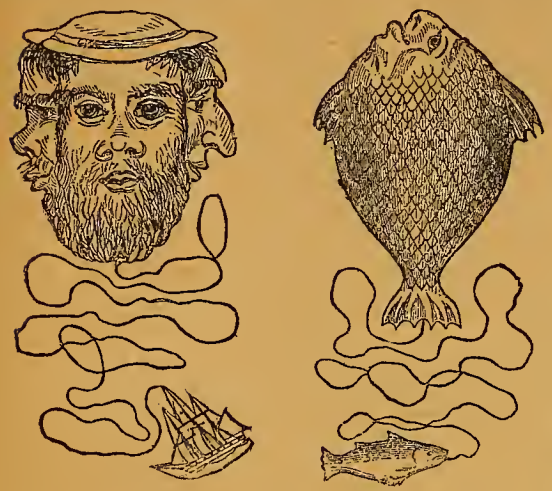
paste made of flour and water. Three of the simplest kind are shown in the above illustrations: the first, made by crossing two sticks, is called a cross kite; the second, made with three sticks, is a house kite; and the third, made with one straight stick and one bowed stick, a bow kite. The sticks must be first tied tightly together, and a string is then put around the outside, in notches cut for it, to paste the paper on to. The tail is fastened to the bottom and can be made of either paper or cloth. Care has to be taken that the tail is neither so heavy as to drag the kite down, nor, on the other hand, that it is so light as to fail in its object of steadying the kite and keeping it upright against the wind. The string to hold and sail the kite with should be strong (as if it breaks the kite is lost) and should be fastened to the kite about one-third the distance below the top. It is best to fasten it with a "belly-band;" that is, to tie a cord of about double the width of the kite to the two extreme side joints and then attach the flying string to the middle of this cord. The string when not let out to fly the kite should be kept wound around a stick.



The shapes can be varied at will and a boy with a little ingenuity can devise some very novel effects—figures of men, fishes, etc.—and by painting them can get up very striking results. Only glaring colors should be used and the designs should be painted as coarsely as possible, to permit of their being seen when high up in the air. A few of these fancy shapes are suggested in the above following illustrations.

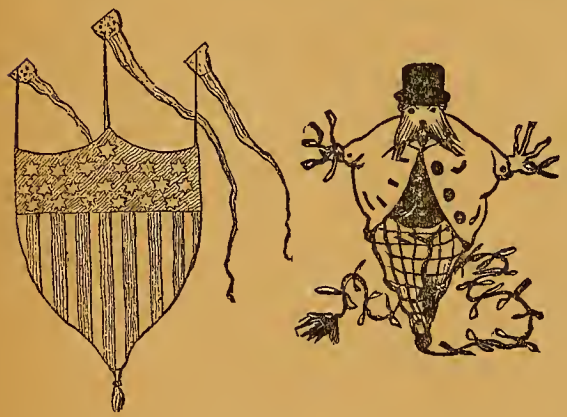
Unless there be a good breeze stirring the kite-flyer need not expect to have much sport, as nothing can be more vexatious than attempting to fly a kite when there is not sufficient wind for the purpose. To raise the kite in the first instance, the flyer will require the aid of another boy. The owner of the kite having unwound a considerable length of string, turns his face toward the wind and prepares for a run, while his assistant holds the kite by its lower extremity as high as he can from the ground. At a given signal the assistant lets the kite go, and if all circumstances be favorable it will soar upward with great rapidity. With a well-con-

structed kite in a good breeze, the flyer need not trouble himself to run very fast nor very far, as his kite will soon find its balance and float quite steadily on the wind. The kite-flyer should be careful not to let out string too fast. When a kite pitches



it is a sign that it is built lop-sided, or that its tail is not long enough.

Some boys amuse themselves by sending messengers up to their kites when they have let out all their string. A messenger is formed of a piece of paper three or four inches square, in the centre of



which a hole is made. The end of the string is passed through the hole, and the wind quickly drives the messenger up to the kite. The kite-flyer should be careful not to send up too many messengers, lest they weigh down the kite.

THERE are various games in which marbles are used and there are many different kinds of marbles. Those made of agate are prized the most, and indeed their pre-eminence is fully justified by the exquisitely beautiful veining of some of them, and the rich and harmonious coloring of others. *Alleys* are made of white marble striped and clouded with red, and when this color predominates, they are called *blood-alleys*. These marbles rank next in value to the *agates*. *Taws* or *stoneys*, of brown marble, streaked with darker tones of the same color, form the third class; *French taws* of stained or colored marble the next; the gaudy Dutch marbles of glazed clay, painted either yellow or green, and ornamented with stripes of a dark color, constitute class the fifth, while the unpretending yellowish clay marbles, or *commoneys*, are the cheapest of all. In many games with marbles, considerable skill is required. To *shoot*, or *fillip* a taw with precision is no easy task; this operation is performed by placing the taw upon the inside of the forefinger and propelling it with the nail of the thumb. While a player is shooting his marble, his opponent can compel him to *knuckle-down* — in other words, to touch the ground with the middle joint of his forefinger; this is to prevent unfair play.

Bounce Eye.

This game requires several players, who each put down a marble, and then form them into a small ring; one player begins by holding a marble in his hand, close to his eye, and letting it fall upon the ring; the marbles forced out of the ring by the concussion become his property, and the other players then try their skill in turn; the players are termed "bouncers."

Three Holes.

Make three holes in the ground, four feet apart from each other, and draw a line, about six feet from the first hole. The first player begins, standing at the line, by shooting into the first hole; if he misses, the second player tries his fortune, each shooting alternately as his opponent fails. A player may, after shooting his marble into a hole, aim at his opponent's taw, if it is near, so as to strike

it away as far as he can; and if he can do so, he continues shooting into the holes as before. The player who gets first into the last hole is the winner; and it is to be done in the following manner: First hole—second hole—third hole—second, first—second, third. The loser then placing his knuckles at the first hole, the winner shoots as near the hole as possible, and fires three times at the said loser's knuckles, from the place where his marble rested.

Ring-Taw.

Draw a circle, and let each player place as many marbles in it as may be agreed on, and then make a line at a little distance off, from which the players are, by turns, to shoot at the ring; this line is called the offing. If a player shoots a marble out of the ring, he is entitled to shoot again before any of his companions. When the players have fired once, they shoot from the place where their marbles rested at the last fire, and not from the offing. If a marble is driven out of the ring by a player, it is won; but if his taw remains in the circle, he is out, and must place a marble in it; and if he has knocked any marbles out of the ring before his taw gets in, he must place them in likewise. It is a rule, also, that if one player's taw is struck by another's, the player whose taw is struck is out, and must give up to the striker all the marbles he may have previously shot out of the ring.

Increase Pound.

This is very similar to ring-taw, the variations being, that if before a marble is shot out of the ring, one player's taw is struck by another's (excepting his partner's), or, if his shot remains within the ring, he puts a shot in the pound, continues in the game and shoots again from the offing before any of his companions. Should his taw be struck after one or more marbles have been driven out of the ring, if he has taken any shots himself, he gives them to the player who struck him, puts a taw in the ring and shoots from the offing, as before. If, however, he has not won any marbles during the game, before his taw is struck, he is "killed" and put out of the game; he is likewise out if, after any shots have been struck out, his taw gets within the pound; if it remains on the line, it is nothing. He then puts the marbles (if he has won any) into the circle, adding one to them for the taw struck, and shoots again from the offing. In case he can-

RING-TAW.

not gain any shots after his taw gets "fat," as remaining in the ring is termed, he is killed, and is out for the rest of the game. When only one marble remains in the ring, the taw may continue inside it without being "fat." Each player seldom puts more than one marble in the ring at the beginning of a game.

Arch Board, or Nine Holes.

Cut out of a piece of wood a rude resemblance of a bridge, and make nine small arches in it and number them thus:

The bowlers must endeavor, after giving the bridge-keeper a marble every time they shoot, to fire through the holes; if any marble touches the sides of the arches, it becomes the property of the bridge-keeper; and, on the contrary, if it passes through one of the arches, the owner of the bridge gives the number of marbles marked over the arch to the bowler. In some parts of the country this game is played with iron bullets instead of marbles.

Picking the Plums.

A line is drawn on the ground, along which each player places a certain number of marbles. At this line the players shoot their taws in turns from a given point. The marbles knocked off the line become the property of the striker and the game continues until no marbles remain. The marbles should be placed as close together as possible without actually touching.

Pyramid.

Let a player draw a circle on the ground, and then make a pyramid, either by placing three marbles triangularly, and one on top of them, or else with six first, then four, and then one; the post of keeper of the pyramid ought to be taken by every boy in succession. Before a player can shoot at this pyramid, he must give a marble to the keeper; and should he strike the pyramid with his taw, all the marbles driven by the concussion beyond the circle belong to him.

Handers.

For this game a hole, two or three inches in diameter, must be made in the ground, near a wall, if possible. When two boys play they first decide upon the number of marbles to be staked by each at every throw, and then proceed to pitch the marbles into the hole, alternately, from a line at about three yards' distance. Let the number staked by each be four; the thrower will then have eight marbles, which he must pitch at the hole all together. Should an even number of marbles fall in the hole, the thrower wins them all; but should he be so unfortunate as to hole an odd number, they become the property of his opponent. The players now stake again, and continue the game until they are tired of speculation. When there are more than two players the game must be slightly altered. Having arranged the turns, the first player pitches the staked marbles at the hole, and keeps all that fall in; the next player takes up those that remain, and throws them in the same manner, keeping those he pitches in; the others follow in turn. When all the marbles are holed, the player whose turn it is to pitch becomes the first player of the next game.

Odd or Even.

One player extends his closed hand containing some marbles, and asks his opponent to guess whether their number is odd or even. Should he guess wrong, he forfeits a marble, and his questioner tries him with another lot; but should he guess right, the first player must pay him a marble, and take a turn at guessing.

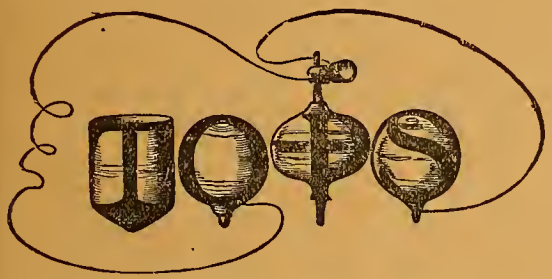
Eggs in the Bush.

This game is a great improvement upon odd or even. Dick asks Tom to guess the number of "eggs in the bush"—that is, the number of marbles in his closed hand. If Tom can guess the right number he takes all; but if he is out in his reckoning he pays Dick as many marbles as will make up or leave the exact number. Suppose Dick has six marbles in his hand; now, if Tom should guess four or eight, he would have to forfeit two marbles to Dick, because four is two less and eight is two more than the exact number. The players hold the "eggs in the bush" alternately.

The Conqueror.

In this game, one boy places a marble down on a smooth spot where it is either hard earth or gravel; turf, through its being too soft, and pavement much too hard, are both unsuitable; another

boy then throws his marble, with all his force, at that of the first player, endeavoring in this manner to split it; if he is unable to do so, the first player takes up, and in his turn throws his taw at that of the second; and so on alternately, each striving to split his antagonist's taw. Good strong stone marbles are the best in this game, and when a marble has been victorious in many such games, it is only used against such as in like manner have proved themselves worthy of the honor of contending for the superiority. Suppose two boys are playing at this game, and that each of them have been victors in many former encounters with other opponents; if one of the taws break, the owner of it must hand over to the conqueror all the marbles he may have won with that taw, and one also for the taw so broken.



HUMMING-TOPS cannot easily be made, but can very easily be purchased by those who are so lucky as to have the money. They are made hollow, having at their crown a peg, round which is wound a string; this being pulled through a kind of fork, gives motion to the top, and sets it spinning—the fork and the string being left in the spinner's hand. In spinning the top, care should be taken to wind the string firmly and evenly on the peg; and when it is pulled out neither too much nor too little force should be used, and a firm and steady hand should be employed, while the top should be held in a perpendicular position. The string should be drawn with a steadily increasing force or the top will not hum properly.

Peg-tops can be purchased at all toy-shops; those which have tolerably long pegs are the best for "peg in the ring," as they describe a much larger circle when spinning, and are more likely to swerve out of the ring than those with short pegs, which are generally "sleepers"—that is, apt to keep in one spot while spinning; the latter, however, are exceedingly well adapted for "chip-stone." In winding the cord on the top, it is the best plan to pass it two or three times round the peg before you commence winding it on the body of the top. Tops made of boxwood are the hardest and best, but they are the most expensive. Tops are also made of deal, elm, yew-tree, lignum-vitæ and other material.

The Spanish peg-top is made of mahogany; it is shaped somewhat like a pear, and, instead of a sharp iron peg, it has a small rounded knob at the end. As it spins for a much longer time than the common English peg-top, and does not require to be thrown with any degree of force in order to set it up, it is extremely well adapted for playing on flooring or pavement.

Of the games in which tops can be used that of whip-top is a capital sport when played by two persons. It is played by first whirling the top into motion by turning it sharply with both hands and beginning to whip it as soon as it acquires a tolerably strong rotary motion, being careful not to strike too hard at the first. A pliable eel-skin makes a far better whip for this sport than one made of leather, but it must not be kept either very dry or very wet, as in the former case it splits and cracks when used, and in the latter becomes heavy and unwieldy with moisture. The number of games with whip-tops is exceedingly limited, being only two—races, in which the boy who can whip his top to the greatest distance in the shortest time is the winner; and encounters, in which the players whip the tops against each other till one of them falls.

Another game is chip-stone, also played by two boys, in the following manner. Two lines, about six feet apart, are marked upon the ground, which ought to be smooth and hard. Some small stones are then procured and placed midway between the lines; they should not be larger than a small bean and the black and polished ones are the most sought after. The tops are set up spinning on the ground, and the players, each being provided with a small

wooden spoon, dexterously introduce them under the pegs of the spinning-tops, and then, with the top still spinning in the spoon, throw the point of the peg against the stone, so as to chip it out of bounds; he who does this the soonest being the victor. While the top continues to spin, he may take it up with the spoon as many times as he can, and when it spins out he must again wind it up, pursuing the same plan till he "chips out." In winding up the top do not wet the end of the line too much, and take care to lap it closely and evenly within the grooves. In throwing the top from you, the line must be pulled in with a peculiar jerk of the hand, which practice alone can give. The string button should be held close in the hand, between the last two fingers of the hand. There is what is called an "underhand" way of spinning top—*i.e.*, by holding its peg downwards, throwing it in a straight line forward, and withdrawing the string.

PEG-IN-THE-RING.

Peg-in-the-ring may be played by any number of boys. A ring about a yard in diameter is first marked on the ground, and another ring surrounding the first, and at a yard's distance from it, is also marked. The players must stand on this ring, and from it throw their tops. One player begins by throwing his top spinning into the ring, and while it is there spinning the other players are at liberty to peg at it as quickly as they can. If none of them hit it while it is spinning, and if it rolls out of the ring, the owner is allowed to take it up, and having wound it, to peg at the others which may be still spinning in the circle. Should any of the tops, when they cease spinning, fall within the ring, they are considered dead, and are placed in the centre of the circle for the others to peg at. The player who succeeds in striking any of the tops out of the circle claims those so struck out. In some places each player may ransom his top with a marble.

Sleeping-tops are exposed to much danger in the play, for they offer a fair mark to the "pegger," and often get split, when the peg is taken by the splitter as his trophy. Long-pegged tops are the best for the game, for they lie more upon their sides after their fall and, before the spinning entirely ceases, are the more likely to spin out of the ring. There is a way of making the top spring directly it has touched the ground. Only long-pegged tops will execute this feat. It is done by drawing the hand sharply towards the body just as the top leaves the string. When the manœuvre is well executed, the top will drive any opponent that it strikes entirely out of the ring, while it does not remain within the dangerous circle itself for more than a few seconds.

HOOPS.

TRUNDLING the hoop is a pastime of uncertain origin, but it has long contributed to the health and amusement of the young people of America and Great Britain. Girls generally prefer wooden hoops, but iron ones are most in favor with boys. These instead of being driven by a stick are usually propelled aud guided by a slender iron hook with a rather long handle.

The proper and legitimate hoop, however, should be made of a stout ashen lath, round on the outside and flat on the inside, and should be well fastened at its point of juncture; it should be high enough to reach midway between the owner's elbow and shoulder, so that he may not have to stoop while striking it. The stick should be about sixteen inches long and made of tough ash, and in bowling the hoop the bowler should strike it vigorously in the centre and in a direction horizontal with the ground.

Wooden hoops, also, give due exercise to the arm; and there is some tact required in knowing exactly where to strike a hoop, so as to propel it with the greatest force.

This cannot well be done with iron hoops, and forms one of the objections to them. Moreover, boys always complain that they soon lose their round form and are awkward to bowl. Still, there is something cheering in the ringing sound of an iron hoop, as it rushes along under the pressure of the curved iron rod that takes the place of the hoop-stick.

The games, properly so called, that can be played with the hoop are very few, and not generally known. Among them is one called "encounters," in which two boys start at different ends of the playground with their hoops, and meeting in the middle, each endeavors to knock down the hoop of his antagonist, while his own remains upright.

There is no small skill required in this game, for it is not always easy to make the hoops touch each other at all. Then a light hoop has little chance against a heavy one, unless it can strike it sideways, for if it were struck directly in front it would be certainly upset. But a ready hand at recovering a falling or tottering hoop wins many a game that appears to be hopelessly lost.

Another hoop-game is called "posting." In this bases, called posting-stations, are formed at regular distances, in a large circle or ellipse, and at each base a player is stationed. Every player, except the hoop-driver, has charge of a base. Let us suppose that there are seven players—A, B, C, D, E, F and G, and that the latter holds the hoop: the other six players having taken possession of their stations, G now starts from the station belonging to F, and drives the hoop towards A, who waits, with hoop-stick in hand, ready to relieve G of his charge. G stops at the posting station, while A trundles the hoop to B, who takes charge of it, and delivers it to C. C trundles the hoop to D; D transfers it to E; E delivers it to F; and F conveys it in safety to the first player, G. In this way the game continues, until all the players have worked round the circle five or six times. It is considered very disgraceful to touch the hoop with the hand, or to allow it to fall after it has been started on its journey. The game is rendered much more lively by increasing the number of players, so that two or three hoop-drivers follow each other from base to base.

"Tournament" is a game very similar to "encounters." Two boys drive their hoops one against the other, and he whose hoop falls in the encounter is conquered. With eight players this game may be rendered very exciting. Four of the players stand in a row, about six feet apart, and, at a considerable distance, the other four take their stand, facing them. At a given signal each player dashes towards his opponent, and strives to overturn his hoop. The four victors now pair off, and charge two against two. The conquerors then urge their hoops one against the other, and he who succeeds in overturning the hoop of his antagonist wins the game.

Five or six boys can play at "turnpike," though only one hoop is required. Chance decides which of the players shall first take the hoop. The other players become turnpike-keepers. Each turnpike is formed of two bricks or stones, placed on the ground, and separated by about three fingers' breadths. These turnpikes are fixed at regular distances, and their number is regulated by the number of keepers. When all is ready, the first player starts his hoop, and endeavors to drive it through all the turnpikes; should he succeed in this, he turns the hoop, drives it back again, and retains it until it touches one of the turnpikes, the keeper of which now becomes hoop-driver. When a player touches the hoop with his hand, or allows it to fall, he must deliver it up to the nearest turnpike-keeper. Each keeper must stand on that side of his turnpike which is towards the right hand of the hoop-driver, and it therefore follows that he must alter his position when the hoop-driver returns. Should a keeper stand on his wrong side, the driver need not send the hoop through his turnpike.