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## THIRTY VOLUMES

## VOLUME ELEVEN

AVOCATION AS ESSENTIAL TO SUCCESS AS VOCATION. MEANS OF RECREATION AND DIVERSION FOR RESTING, DEVELOPING, AND ROUNDING OUT THE SUCCESSFUL MAN OR WOMAN. INTELLIGENTLY DIRECTED RELIEF FROM STRENUOUS CONCENTRATION AS A MEANS OF REFRESHING AND STRENGTHENING POWERS FOR SUCCESS. HOW TO CULTIVATE THE SUNNY SIDE OF NATURE, THE HOPEFUL VIEW AND THE OPTIMISTIC AIM SO AS TO REMOVE THE OBSTACLES IN THE WAY OF SUCCESS. LITERAL POWER OF FAITH TO "REMOVE MOUNTAINS" OF DIFFICULTY

"*Pleasure may perfect us as truly as Prayer*"
WILLIAM EMORY CHANNING

"*. . . Art tired?*
*There is a rest remaining. Hast thou sinned?*
*There is a Sacrifice. Lift up thy head.*
*The lovely world and the over-world alike,*
*Ring with a song eterne, a happy rede,*
*'THY FATHER LOVES THEE!'*"
JEAN INGELOW: Songs with Preludes. Dominion


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## VOLUME XI

### PASTIMES, SPORTS, AND GAMES

SPORTS AND GAMES — OUTDOOR

## HOME DEVELOPMENT

SEC. 6. If, after ordering the removal of a player, as authorized by Rules 20, 52, and 58, said order is not obeyed within one minute.

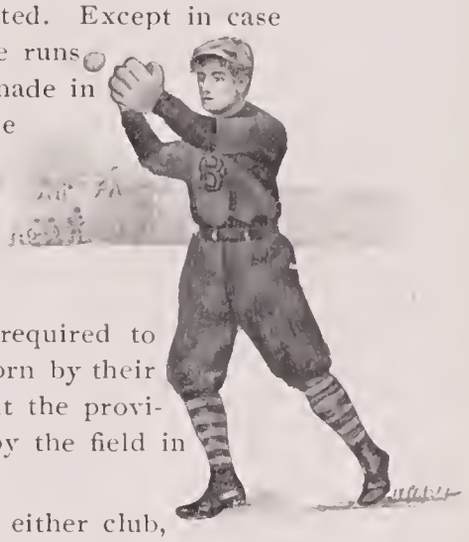
SEC. 7. If because of removal of players in either team by the umpire, there be less than nine players in either team.

SEC. 8. If, when two games are scheduled to be played on the same afternoon, the second game is not commenced within ten minutes of the time of completion of the first game. The umpire of the first game shall be timekeeper.

SEC. 9. In case the umpire declares the game forfeited, he shall transmit a written notice thereof to the President of the League within twenty-four hours thereafter. However, a failure on the part of the umpire to so notify the President shall not affect his decision declaring the game forfeited.

## RULE 26—NO GAME

"No game" shall be declared by the umpire if he shall terminate play on account of rain or darkness before five innings on each side are completed. Except in case the game is called, and the club second at bat shall have more runs at the end of its fourth inning than the club first at bat has made in its five completed innings; in such case the umpire shall award the game to the club having made the greater number of runs, and it shall be a legal game and shall be so counted, in the championship record.



## RULE 27—SUBSTITUTES

SECTION 1. In any championship game, each side shall be required to have present on the field, in uniform conforming to the suits worn by their team mates, a sufficient number of substitute players to carry out the provision which requires that not less than nine players shall occupy the field in any inning of a game.

SEC. 2. Any such player may be substituted at any time by either club, but a player thereby retired shall not thereafter participate in the game.

SEC. 3. A base-runner shall not have a substitute run for him except with the consent of the captains of the contesting teams.

## RULE 28—CHOICE OF INNINGS—CONDITION OF GROUND

The choice of innings shall be given to the captain of the home club, who shall also be the sole judge of the fitness of the ground for beginning a game after rain, but after the umpire has called play, he alone shall be judge as to the fitness of the ground for resuming play after the game has been suspended on account of rain.

## RULE 29—THE PITCHER'S POSITION

The pitcher shall take his position facing the batsman with both feet square on the ground, and behind the pitcher's plate; but in the act of delivering the ball to the bat, one foot must be in contact with the pitcher's plate, defined in Rule 8. He shall not raise either foot, unless in the act of delivering the ball to the bat, nor make more than one step in such delivery.

## RULE 30—A FAIRLY DELIVERED BALL

A fairly delivered ball to the bat is a ball pitched or thrown to the bat by the pitcher while standing in his position and facing the batsman, the ball so delivered to pass over any portion of the home base not lower than the batsman's knee nor higher than his shoulder.

## RULE 31—AN UNFAIRLY DELIVERED BALL

An unfairly delivered ball is a ball delivered by the pitcher, as in Rule 30, except that the ball does not pass over any portion of the home base, or does pass over the home base above the batsman's shoulder or below the line of his knee, in which case the umpire shall call one ball.

## RULE 32

SECTION 1. If the ball is thrown by the pitcher to any player other than the catcher (except to retire a base-runner) and the batsman is standing in his proper position ready to strike at a pitched ball, each ball so delivered shall be called a ball.

SEC. 2. The umpire shall call a ball on the pitcher each time he delays the game by failing to deliver the ball to the batsman when in position for a longer period than twenty seconds.

## RULE 33—BALKING

A balk shall be:—

SECTION 1. Any motion made by the pitcher to deliver the ball to the bat or to first base without delivering it.

SEC. 2. The throwing of the ball by the pitcher to any base to catch the base-runner without first stepping directly toward said base immediately before throwing the ball.

SEC. 3. Any delivery of the ball to the bat by the pitcher while his (pivot) foot is not in contact with the pitcher's plate, and he is not facing the batsman, as defined in Rule 29.

SEC. 4. Any motion in delivering the ball to the bat by the pitcher while not in the position defined in Rule 29.

SEC. 5. Standing in position and making any motion to pitch without having the ball in his possession.

SEC. 6. The making of any motion which the pitcher habitually makes in his method of delivery, without his immediately delivering the ball to the bat.

SEC. 7. If the pitcher delivers the ball to the bat when the catcher is standing outside the lines of the catcher's position, as defined in Rule 3.

If the pitcher fails to comply with the requirements of any section of this rule, the umpire must call a "balk."

## RULE 34—DEAD BALLS

A dead ball is a ball delivered to the bat by the pitcher which, without being struck at, touches any part of the batsman's person or clothing while standing in his position, or which touches any part of the umpire's person or clothing while he is standing on foul ground, without first passing the catcher.

## RULE 35—BALL NOT IN PLAY

In case of a foul strike, foul-hit ball not legally caught out, dead ball, or base-runner put out for being struck by a fair-hit ball, the ball shall not be considered in play until it is held by the pitcher standing in his position, and the umpire shall have called play.

## RULE 36—BLOCK BALLS

SECTION 1. A block is a batted or thrown ball that is touched, stopped, or handled by any person not engaged in the game.

SEC. 2. Whenever a block occurs, the umpire shall declare it, and base-runners may run the bases without being put out until the ball has been returned to and held by the pitcher standing in his position.

SEC. 3. In case of a block, if the person not engaged in the game should retain possession of the ball, or throw or kick it beyond the reach of the fielders, the umpire should call "Time," and require each base-runner to stop at the last base touched by him until the ball be returned to the pitcher standing in his position and the umpire shall have called "Play."

## RULE 37—THE BATSMAN'S POSITION—ORDER OF BATTING

The batsmen must take their position within the batsman's lines, as defined in Rule 10, in the order in which they are named in the batting order, which batting order must be submitted by the captains of the opposing teams to the umpire, before the game, and this batting order must be followed, except in the case of a substitute player, in which case the substitute must take the place of the original player in the batting order. After the first inning, the first striker in each inning shall be the batsman whose name follows that of the last man who has completed his turn, or time at bat, in the preceding inning.

## RULE 38—POSITION OF PLAYERS, SIDE AT BAT

SECTION 1. When a side goes to the bat the players must immediately return to the players' bench, as defined in Rule 20, and remain there until the side is put out, except when called to the bat, or when they become coachers or substitute base-runners; provided, that the captain or one player only,—except that if two or more base-runners are occupying the bases, then the captain and either one or two players,—may occupy the space between the players' lines and the captain's lines, to coach base-runners.

SEC. 2. No player of the side at bat, except when batsman, shall occupy any portion of the space within the catcher's lines, as defined in Rule 3. The triangular space behind the home base is reserved for the exclusive use of the umpire, catcher, and batsman, and the umpire must prohibit any player of the side at bat from crossing it at any time while the ball is in the hands of, or passing between, the pitcher and catcher, while standing in their positions.

SEC. 3. The players of the side at bat must occupy the portion of the field allotted them, but must speedily vacate any portion thereof that may be in the way of the ball, or of any fielder attempting to catch or field it.

## RULE 39—THE BATTING RULES

SECTION 1. A fair hit is a ball batted by the batsman, while he is standing within the lines of his position, that first touches "fair" ground, or the person of a player, or the umpire, while standing on fair ground, and then settles on fair ground before passing the line of first or third base.

SEC. 2. A foul hit is a similarly batted ball that first touches "foul" ground, or the person of a player, or the umpire, while standing on foul ground.

SEC. 3. Should such fair-hit ball bound or roll to foul ground, before passing the line of first or third base, and settle on foul ground, it shall be declared by the umpire to be a foul ball.

SEC. 4. Should such foul-hit ball bound or roll to fair ground and settle there before passing the line of first or third base, it shall be declared by the umpire to be a fair ball.

### RULE 40

A foul tip is a ball batted by the batsman while standing within the lines of his position that goes foul, sharp from the bat to the catcher's hands.

### RULE 41—BUNT HIT

A bunt hit is a ball delivered by the pitcher to the batsman who, while standing within the lines of his position, makes a deliberate attempt to hit the ball so slowly within the infield that it cannot be fielded in time to retire the batsman. If such a bunt hit goes to foul ground, a strike shall be called by the umpire.

### RULE 42—BALLS BATTED OUTSIDE THE GROUNDS

When a batted ball passes outside the grounds, the umpire shall decide that it is «fair» should it disappear within, or «foul» should it disappear without, the range of the foul lines, and Rule 39 is to be construed accordingly.

### RULE 43—FAIR BALL OVER FENCE

A fair-batted ball that goes over the fence shall entitle the batsman to a home run, except, that should it go over the fence at a less distance than two hundred and thirty-five (235) feet from the home base, he shall be entitled to two bases only, and a distinctive line shall be marked on the fence at this point.

### RULE 44—STRIKES

A Strike is:—

SECTION 1. A ball struck at by the batsman without his bat touching it.

SEC. 2. A fair ball legally delivered by the pitcher, but not struck at by the batsman.

SEC. 3. A foul-hit ball not caught on the fly, unless two strikes have already been called.

SEC. 4. A bunt hit, which sends the ball to foul ground, either directly, or by bounding or rolling from fair ground to foul ground, and which settles on foul ground.

SEC. 5. A ball struck at, if the ball touches any part of the batsman's person.

SEC. 6. A foul tip by the batsman, caught by the catcher while standing within the lines of his position.

### RULE 45—FOUL STRIKE

A foul strike is a ball batted by the batsman when any part of his person is upon ground outside the lines of the batsman's position.

### RULE 46—THE BATSMAN IS OUT

The batsman is out:—

SECTION 1. If he fails to take his position at the bat in his order of batting, unless the error is discovered and the proper batsman takes his position before a time at bat is recorded. In such case, the balls and strikes called must be counted in the time at bat of the proper batsman, and only the proper batsman shall be declared out, and no runs shall be scored or bases run because of any act of the improper batsman, provided this rule shall not take effect unless the out is declared before the ball is delivered to the succeeding batsman. Should a batsman declared

out by this rule, be sufficient to retire the side, the proper batsman at the beginning of the next inning is the player who would have come to bat, had the players been out by ordinary play.

SEC. 2. If he fails to take his position within one minute after the umpire has called for the batsman.

SEC. 3. If he makes a foul hit other than a foul tip, as defined in Rule 40, and the ball be momentarily held by a fielder before touching the ground; provided, it be not caught in a fielder's hat or cap, or touched by some object other than a fielder before being caught.

SEC. 4. If he makes a foul strike.

SEC. 5. If he attempts to hinder the catcher from fielding, or throwing the ball by stepping outside the lines of the position, or otherwise obstructing or interfering with the player.

SEC. 6. If, while the first base is occupied by a base-runner, three strikes be called on him by the umpire, except when two men are already out.

SEC. 7. If, while attempting a third strike, the ball touches any part of the batsman's person, in which case base-runners occupying bases shall return as prescribed in Rule 45, Section 5.

SEC. 8. If he hits a fly ball that can be handled by an infielder while first and second bases are occupied, or first, second, and third bases, unless two hands are out. In such case the umpire shall, as soon as the ball is hit, declare infield or outfield hit.

SEC. 9. If the third strike is called in accordance with Section 5, Rule 44.

SEC. 10. The moment a batsman is declared out by the umpire, he (the umpire) shall call for the batsman next in order to leave his seat on the bench and take his position at the bat, and such player of the batting side shall not leave his seat on the bench until so called to bat, except as provided by Rule 38, Section 1, and Rule 53.

## BASE-RUNNING RULES

### RULE 47 — WHEN THE BATSMAN BECOMES A BASE-RUNNER

The batsman becomes a base-runner: —

SECTION 1. Instantly after he makes a fair hit.

SEC. 2. Instantly after four balls have been called by the umpire.

SEC. 3. Instantly after three strikes have been declared by the umpire.

SEC. 4. If, while he is a batsman, the catcher interferes with him and prevents him from striking the ball.

### RULE 48 — BASES TO BE TOUCHED

The base-runner must touch each base in regular order, *viz.*, first, second, third, and home bases; and when obliged to return (except on a foul hit) must retouch the base or bases in reverse order. He shall be considered as holding a base only after touching it, and shall then be entitled to hold such base until he has legally touched the next base in order, or has been legally forced to vacate it before a succeeding base-runner. However, no base-runner shall score a run to count in the game until the base-runner preceding him in the batting list (provided there has been such a base-runner who has not been put out in that inning) shall have first touched home base without being put out.

## RULE 49—ENTITLED TO BASES

The base-runner shall be entitled, without being put out, to take the base in the following cases:—

SECTION 1. If, while he was batsman, the umpire called four balls.

SEC. 2. If the umpire awards a succeeding batsman a base on four balls, and the base-runner is thereby forced to vacate the base held by him.

SEC. 3. If the umpire calls a "Balk."

SEC. 4. If a ball, delivered by the pitcher, passes the catcher, and touches the umpire, or any fence or building, within ninety feet of the home base.

SEC. 5. If, on a fair hit, the ball strikes the person or clothing of the umpire on fair ground.

SEC. 6. If he is prevented from making a base by the obstruction of an adversary, unless the latter be a fielder having the ball in his hand ready to meet the base-runner.

SEC. 7. If the fielder stops or catches a batted ball with his hat or any part of his uniform except the glove on his hand.

## RULE 50—RETURNING TO BASES

The base-runner shall return to his base, and shall be entitled so to return without being put out:—

SECTION 1. If the umpire declares a foul tip (as defined in Rule 40) or any other foul hit not legally caught by a fielder.

SEC. 2. If the umpire declares a foul strike.

SEC. 3. If the umpire declares a dead ball, unless it be also the fourth unfair ball, and he be thereby forced to take the next base, as provided in Rule 49, Section 2.

SEC. 4. If the person or clothing of the umpire interferes with the catcher, or he is struck by a ball thrown by the catcher to intercept a base-runner.

SEC. 5. The base-runner shall return to his base, if, while attempting a strike, the ball touches any part of the batsman's person.

## RULE 51—WHEN BASE-RUNNERS ARE OUT

The base-runner is out:—

SECTION 1. If after three strikes have been declared against him while batsman, and the catcher fails to catch the third strike ball, he plainly attempts to hinder the catcher from fielding the ball.

SEC. 2. If, having made a fair hit while batsman, such fair-hit ball is momentarily held by a fielder before it touches the ground or any object other than a fielder; provided it be not caught in a fielder's cap or hat.

SEC. 3. If, when the umpire has declared three strikes on him while batsman, the third strike ball is momentarily held by a fielder before touching the ground; provided it be not caught in a fielder's hat or cap, or touch some object other than a fielder before being caught.

SEC. 4. If, after three strikes or a fair hit, he is touched with the ball in the hand of a fielder before he shall have touched first base.

SEC. 5. If, after three strikes or a fair hit, the ball is securely held by a fielder while touching first base with any part of his person before such base-runner touches first base.

SEC. 6. If, in running the last half of the distance from home base to first base, while the ball is being fielded to first base, he runs outside the three-foot lines, as defined in Rule 7, unless to avoid a fielder attempting to field a batted ball.

SEC. 7. If, in running from first to second base, from second to third base, or from third base to home base, he runs more than three feet from a direct line between such bases to avoid being touched by the ball in the hands of a fielder; but in case a fielder be occupying the base-runner's proper path in attempting to field a batted ball, then the base-runner shall run out of the path, and behind said fielder, and shall not be declared out for so doing.

SEC. 8. If he fails to avoid a fielder attempting to field a batted ball, in the manner described in Sections 6 and 7 of this rule, or if he, in any way, obstructs a fielder attempting to field a batted ball, or intentionally interferes with a thrown ball; provided that if two or more fielders attempt to field a batted ball, and the base-runner comes in contact with one or more of them, the umpire shall determine which fielder is entitled to the benefit of this rule, and shall not decide the base-runner out for coming in contact with any other fielder.

SEC. 9. If, at any time while the ball is in play, he is touched by the ball in the hands of a fielder, unless some part of his person is touching a base he is entitled to occupy; provided the ball be held by the fielder after touching him.

SEC. 10. The base-runner in running to first base may overrun said base after first touching it, without being put out for being off of it, provided he return at once and retouch the base, after which he may be put out as at any other base. If, in overrunning first base, he also attempts to run to second base, or after passing the base he *turns to his left* from the foul line, he shall forfeit such exemption from being put out.

SEC. 11. If, when a fair or foul hit ball (other than a foul tip as referred to in Rule 40) is legally caught by a fielder, such ball is legally held by a fielder on the base occupied by the base-runner when such ball was struck (or the base-runner be touched with the ball in the hands of a fielder), before he retouches said base after such fair or foul hit ball was so caught; provided that the base-runner shall not be out, in such case, if, after the ball was legally caught as above, it be delivered to the bat by the pitcher before the fielder holds it on said base or touches the base-runner with it; but if the base-runner, in attempting to reach a base, reaches it before being touched or forced out, he shall be declared safe.

SEC. 12. If, when a batsman becomes a base-runner, the first base, or the first and second bases or the first, second, and third bases, be occupied, any base-runner so occupying a base shall cease to be entitled to hold it, until any following base-runner is put out, and may be put out at the next base, or by being touched by the ball in the hands of a fielder in the same manner as in running to first base at any time before any following base-runner is put out.

SEC. 13. If a fair-hit ball strikes him before touching the fielder, and in such case no base shall be run unless forced to be run by the batsman becoming a base-runner, and no run shall be scored or any other base-runner put out.

SEC. 14. If, when running to a base, or forced to return to a base, he fails to touch the intervening base or bases in the order prescribed in Rule 48, he may be put out at the base he fails to touch, or by being touched by the ball in the

hands of the fielder in the same manner as in running to first base; provided that the base-runner shall not be out in such case if the ball be delivered to the bat by the pitcher before the fielder holds it on said base or touches the base-runner with it.

Sec. 15. If, when the umpire calls "Play" after any suspension of a game, he fails to return to and touch the base he occupied when "Time" was called, before touching the next base; provided the base-runner shall not be out, in such case, if the ball be delivered to the bat by the pitcher, before the fielder holds it on said base or touches the base-runner with it.

### RULE 52 — WHEN BATSMAN OR BASE-RUNNER IS OUT

The umpire shall declare the batsman or base-runner out, without waiting for an appeal for such decision, in all cases where such player is put out in accordance with these rules except as provided in Rule 51, Sections 10 and 14.

### RULE 53 — COACHING RULES

The coacher shall be restricted to coaching the base-runner only, and shall not be allowed to address any remarks except to the base-runner, and then only in words of necessary direction; and shall not, by words or signs, incite or try to incite the spectators to demonstrations; and shall not use language which will in any manner refer to or reflect upon a player of the opposite club, the umpire, or the spectators; and not more than one coacher, who may be a player participating in the game, or any other player under contract to and in the uniform of either club, shall be allowed at any one time, except, that if base-runners are occupying two or more of the bases, then the captain and one player, or two players under contract to and in the uniform of either club, may occupy the space between the players' lines and the captains' lines to coach base-runners. To enforce the above, the captain of the opposite side may call the attention of the umpire to any offense and thereupon the umpire must order the illegal coacher or coachers to the bench; if his order is not obeyed within one minute, the umpire shall assess a fine of five dollars against each offending player, and upon a repetition of the offense, the offending player or players shall be debarred from further participation in the game, and shall leave the playing field forthwith.

### RULE 54 — THE SCORING OF RUNS

One run shall be scored every time a base-runner, after having legally touched the first three bases, shall touch the home base before three men are put out. Exception: If the third man is forced out, or is put out before reaching first base, a run shall not be scored.

## THE UMPIRE AND HIS DUTIES

### RULE 55

The umpire shall not be changed during the progress of a championship game, except by reason of personal illness or injury incapacitating him for the discharge of his duties.

### RULE 56

The umpire is a representative of the League, and as such shall have power to enforce every section of the code of playing rules of the game, and he shall have power to order any player, or captain, or manager, to do or omit to do, any action that he may deem necessary to give force and effect to the laws of the game.

RULE 57

There shall be no appeal from any legal decision of the umpire.

RULE 58

Under no circumstances shall any player be allowed to dispute a decision by the umpire, in which only an error of judgment is involved; and no decision rendered by him shall be reversed, except it be plainly shown by the code of rules to have been illegal; and in such case the captain alone shall be allowed to make the appeal for reversal.

RULE 59

SECTION 1. In all cases of violation of these rules, by either a player or manager, the penalty for the first offense shall be a fine by the umpire of five dollars, and for a second offense, prompt removal of the offender from the game or grounds, followed by such period of suspension from actual service in the club, as the president of the League may elect.

SEC. 2. The umpire, within twelve hours after fining or removing a player from the game, shall forward to the president a report of the action and the causes therefor.

SEC. 3. Immediately upon notification by the umpire that a fine has been imposed upon any manager, captain, or player, the president shall notify the person so fined, and also the club of which he is a member, and, in event of the failure of the person so fined to pay the secretary of the League the amount of said fine within five days of notice, he shall be debarred from participating in any championship game, or from sitting on a player's bench during the progress of a championship game, until such fine is paid.

SEC. 4. When the offense of the player debarred from the game is of a flagrant nature, such as the use of obscene language or an assault upon a player or umpire, the umpire shall, within four hours thereafter, notify the president of the League, giving full particulars.

SEC. 5. He shall also notify both captains, before the game, and in the presence of each other, that all playing rules will be impartially enforced, and that their failure to coöperate in such enforcement will result in their being fined and, perhaps, in their removal from the game.

RULE 60

Before the beginning of a game the umpire shall see that the rules governing all the materials of the game are strictly observed. He shall ask the captain of the home club whether there are any special ground rules, and if there are, he shall see that they are duly enforced, provided they do not conflict with any of these rules.

RULE 61

The umpire shall not only call "Play" at the hour appointed for the beginning of the game, but shall also announce "Game Called" at its legal conclusion.

RULE 62

The umpire shall suspend play for the following causes: First, if rain is falling so heavily as to oblige the spectators on the open field and open stands to seek shelter, in which case he shall note the time of suspension; and should rain fall continuously for thirty minutes thereafter, he shall terminate the game.

RULE 63

The umpire shall suspend play in case of accident to himself or to a player which incapacitates him from service in the field, or in order to remove from the grounds any player or spectator who has violated the rules.

RULE 64

In suspending play for any legal reason, the umpire shall call "Time"; when he calls "Time" the play shall be suspended until he calls "Play" again, and during the interim no player shall be put out, base be run or run be scored. "Time" shall not be called by the umpire until the ball is held by the pitcher standing in his position.

RULE 65

The umpire shall call and count as a "ball" any unfair ball delivered by the pitcher to the batsman, but not before such ball has passed the line of the home base. He shall also call and count as a "strike" any fairly delivered ball which passes over any portion of the home base, and within the batsman's legal range, as defined in Rule 44, which is not struck at by the batsman, or a foul tip which is caught by the catcher, standing within the lines of his position, or which, after being struck at and not hit, strikes the person of the batsman; or when the ball is purposely hit foul by the batsman, or when the ball is bunted foul by the batsman.

RULE 66

No person shall be allowed upon any part of the field during the progress of a game in addition to the players in uniform, the manager of each side and the umpire, except such officers of the law as may be present in uniform, and such officials of the home club as may be necessary to preserve the peace.

RULE 67

No manager, captain, or player, shall address the spectators during the progress of a game, except in case of necessary explanation.

RULE 68

No manager, captain, or player, during the progress of the game, shall use indecent or improper language directed to a spectator, umpire, manager, club official or a player. A violation of this rule must be followed by the removal forthwith of the offender from the game and the grounds by the umpire on his own option, or upon the written accusation of the manager or other official of either contesting club; said removal to be followed by written proofs submitted within twenty-four hours to the President of the League, who, if the evidence warrants, shall suspend the offending manager, captain or player from actual service for a definite period of time, subject to appeal to the Board of Directors.

RULE 69

Every club shall furnish sufficient police force upon its own grounds to preserve order, and in the event of a crowd entering a field during the progress of a game and interfering with the play in any manner, the visiting club may refuse to play further until the field be cleared. If the ground be not cleared within fifteen minutes thereafter, the visiting club may claim, and shall be entitled to, the game by a score of nine runs to none (no matter what number of innings has been played).

## GENERAL DEFINITIONS

### RULE 70

"Play" is the order of the umpire to begin the game, or to resume play after its suspension.

### RULE 71

"Time" is the order of the umpire to suspend play. Such suspension must not extend beyond the day of the game.

### RULE 72

"Game" is the announcement by the umpire that the game is terminated.

### RULE 73

An "inning" is the term at bat of the nine players representing a club in a game, and is completed when three of such players have been put out, as provided in these rules.

### RULE 74

A "time at bat" is the term at bat of a batsman. It begins when he takes his position and continues until he is put out or becomes a base-runner; except when one of these occurs because of his being hit by a pitched ball, or in case of an illegal delivery by the pitcher, or in case of a sacrifice hit purposely made to the infield, which, not being a base-hit, advances a base-runner without resulting in a put-out, except to the batsman, as in Rule 46.

### RULE 75

"Legal" or "legally" signifies as required by these rules.

## SCORING

### RULE 76

In order to promote uniformity in scoring championship games, the following instructions, suggestions and definitions are made for the benefit of scorers, and they are required to make all scores in accordance therewith.

#### Batting

Section 1. The first item in the tabulated score, after the player's name and position, shall be the number of times he has been at bat during the game. No time at bat shall be scored if the batsman is hit by a pitched ball while standing in his position, and after trying to avoid being so hit, or in case of the pitcher's illegal delivery of the ball to the bat which gives the batsman his base, or when he intentionally hits the ball to the field, purposely to be put out, or if he is given first base on called balls.

Sec. 2. In the second column should be set down the runs made by each player.

Sec. 3. In the third column should be placed the first-base hits made by each player. A base-hit should be scored in the following cases: —

When the ball from the bat strikes the ground within the foul lines and out of reach of the fielders.

When a hit ball is partially or wholly stopped by a fielder in motion, but such player cannot recover himself in time to handle the ball before the striker reaches first base.

When the ball is hit with such force to an infielder that he cannot handle it in time to put out the batsman. (In case of doubt over this class of hits, score a base-hit and exempt the fielder from the charge of an error.)

When a ball is hit so slowly toward a fielder that he cannot handle it in time to put out the batsman.

In all cases where a base-runner is retired by being hit by a batted ball, the batsman should be credited with a base-hit.

When a batted ball hits the person or clothing of the umpire, as defined in Rule 49, Section 5. In no case shall a base-hit be scored when a base-runner has been forced out by the play.

SEC. 4. In the fourth column shall be placed the sacrifice hits, which shall be credited to the batsman who, when no one is out or when but one man is out, advances a runner a base by a bunt hit, which results in putting out the batsman, or would so result if the ball were handled without error.

### FIELDING

SEC. 5. The number of opponents put out by each player shall be set down in the fifth column. Where a batsman is put out by the umpire for a foul strike, or where the batsman fails to bat in proper order, the put-out shall be scored to the catcher. In all cases of "out" for interference, running out of line, or infield fly dropped, the "out" should be credited to the player who would have made the play, but for the action of the base-runner or batsman.

SEC. 6. The number of times the player assists shall be set down in the sixth column. An assist should be given to each player who handles the ball in assisting a run out or other play of the kind.

An assist should be given to a player who makes a play in time to put a runner out, even if the player who could complete the play fails through no fault of the player assisting.

And, generally, an assist should be given to each player who handles, or assists in any manner in handling, the ball from the time it leaves the bat until it reaches the player who makes the put-out, or, in case of a thrown ball, to each player who throws or handles it cleanly and in such a way that a put-out results, or would result if no error were made by the receiver.

Assists should be credited to every player who handles the ball in the play which results in a base-runner being called out for interference or for running out of line.

### ERRORS

SEC. 7. An error shall be given in the seventh column for each misplay, which allows a striker or base-runner to make one or more bases when perfect play would have insured his being put out, except that "wild pitches," "bases on balls," bases on the batsman being struck by a "pitched ball," or in case of illegally pitched balls, balks, and passed balls, all of which comprise battery errors, shall not be included in said column. In scoring errors of batted balls, see Section 3 of this rule.

An error shall not be scored against the catcher for a wild throw to prevent a stolen base, unless the base-runner advances an extra base because of the error.

No error shall be scored against an infielder who attempts to complete a double play, unless the throw is so wild that an additional base is gained.

### STOLEN BASES

A stolen base shall be credited to the base-runner whenever he reaches the base he attempts to steal unaided by a fielding or a battery error or a hit by the batsman.

### RULE 77 — THE SUMMARY

The Summary shall contain: —

SECTION 1. The score made in each inning of the game.

SEC. 2. The number of bases stolen by each player.

SEC. 3. The number of two-base hits made by each player.

SEC. 4. The number of three-base hits made by each player.

SEC. 5. The number of home runs made by each player.

SEC. 6. The number of double and triple plays made by each side and the names of the players assisting in the same.

SEC. 7. The number of innings in which each pitcher pitched.

SEC. 8. The number of base-hits made off each pitcher.

SEC. 9. The number of times the pitcher strikes out the opposing batsmen.

SEC. 10. The number of times the pitcher gives bases on balls.

SEC. 11. The number of wild pitches charged to the pitcher.

SEC. 12. The number of times the pitcher hits batsmen with the pitched ball.

SEC. 13. The number of passed balls for which each catcher is responsible.

SEC. 14. The time of the game.

SEC. 15. The name of the umpire.

## FOOTBALL

LONG before Rugby Football became known in this country, it was one of the most popular sports in many of the English schools and universities. Scarcely a quarter of a century has passed since the development of the modern game began in America, and it was not until the early eighties that it acquired special prominence in college athletics. In the beginning, the progress of the game was slow, and the first matches, which were played by Harvard and Yale, aroused little interest. But the possibilities of Football soon became apparent, and some of its early enthusiasts set to work to perfect the rules and methods of play.

The history of the gradual development of the game is an interesting one, and is well worth perusal. The changes in the methods of the game have been many. In the sport which to-day is so popular in the schools and colleges of every state and territory, there is little resemblance to the football of twenty years ago. However, the limit of space assigned to this article will per-

mit only a brief description of the game in its latest form. The story of its development and of the evolution in tactics and play may be found in books or magazine articles devoted solely to that subject.

If a novice wishes to acquire a clear understanding of the game, to say nothing of learning to play it, two things are essential: He should read the rules carefully and, if possible, he should secure opportunities of watching a team at practice. There are many of the finer points of play that must be seen to be understood, and while the rules have been so far perfected that they describe the game clearly, actual experience is, of course, the best instructor.

## THE FIELD

THE first necessity is a suitable field, which should be smooth and comparatively level, and covered with turf. This field is first marked with ordinary lime lines (Fig. 1) which form a rectangle three hundred and thirty feet in length by one hundred and sixty feet in width. Twenty-five yards from the lines at each end, or goal, and parallel to them, are what are known as the "twenty-five-yard lines." It is also customary, though not necessary, to mark the entire field with parallel transverse lines, five yards apart. The goal posts are placed upright in the middle of the goal lines, and should be eighteen and one-half feet apart, with a cross-bar ten feet from the ground. The goal posts should project several feet above the cross-bar.

## THE BALL

THE ball (Fig. 2) is oval in shape, and is composed of a leather cover inclosing an inner "bladder" of thin rubber, which is inflated with air by means of a small air pump or the lungs.

## THE TEAM

A FOOTBALL team is composed of eleven men, and is usually divided into seven rushers, or forwards, who stand in line facing the seven forwards of the opposing team; a quarter-back, who stands just behind the rush line; two half-backs, behind and on opposite sides of the quarter-back; and a full-back, who stands directly behind the quarter-back and back of the half-backs. This formation is, of course, varied greatly in the different plays. The seven men of the rush line are designated, respectively, beginning at the right, right end, right tackle, right guard, center, left guard, left tackle, and left end.

## THE UNIFORMS

THE costumes of the players are perhaps the most important accessories of the game. They must be strong and serviceable, and, at the same time, should be made and padded so as to go far toward protecting

the players from injury. Sleeveless jackets of canvas are often worn over jerseys, or the jackets are omitted and the jerseys are reinforced with leather. The canvas jacket is made to fit snugly and is laced up in front. Elastic pieces are sometimes inserted at the sides and back, and sleeves are worn, but these are by no means necessary. The trousers are of some strong material, such as fustian, and are generally padded over the knees and hips.

The jackets and trousers may be home-made and padded, or may be purchased cheaply from any athletic outfitter. Long woolen stockings are always worn, and shin guards form a desirable protection, especially for the players in the rush line. The shoes are the most important feature of the player's outfit. These may be either the every-day laced shoe or canvas baseball shoe, with strips of leather nailed across the soles to prevent slipping, or regular Football shoes may be worn. These are of medium-weight leather, fit the foot closely, lace high up on the ankle, and are provided with leather spikes, which are preferable to the leather strips.

Thin leather ankle-supports are sometimes worn inside the shoe, and furnish good protection against sprained ankles. Caps are not often worn, except when used by the backs to protect their eyes from the sun. The long "Football hair," which has become inseparably associated with this game, is the best sort of head protector. It is unnecessary to describe the numerous devices which are often used to protect the players from injury, since we are to confine ourselves to the essentials of the game. Nose guards, head harness, shoulder shields, and the like are luxuries rather than necessities.

## THE GAME

Before beginning the game, the captains of the two contesting teams should select a referee, an umpire, and a linesman, though in practice games one man may perform the duties of all these officials. The captains then toss for choice of goals, and the winner may elect to have first possession of the ball or to select a goal. If there be an advantage in goals due to wind or position, he will naturally prefer the choice of goals, and will give the opponent possession of the ball.

The ball is then placed on the ground in the center of the field (Fig. I.), and the players of the two teams take the positions indicated in Figure III, or are stationed as the judgment of the captains may lead them to think advisable. The side having possession of the ball is said to have the *kick off*, and one of the players of that side must kick the ball so as to send it at least ten yards into the opponent's territory. The players of either side must not cross the center line of the field until after the ball is kicked.

The player who kicks it tries to send it as far as possible into the opponent's territory, but not across the side lines, so that some of the players of his side may get near the ball before the opponents secure possession of it. When the kick is made, all but two or three of the side having the

kick off charge down the field in the direction taken by the ball, and the foremost players of the opposing side endeavor to block them until some player of that side secures possession of the ball. When he has done this, he either returns it by a kick, or runs with it toward the kicker's goal. If he runs with it, he may be tackled and held by any of his opponents, and as soon as the ball is "down," that is, both player and ball are stopped, the referee blows his whistle and the ball is temporarily dead.

Some player of the runner's side, usually the center-rush, or "snap-back," then places the ball on the ground at the point where it was held and the two teams line up for a "scrimmage." The players assume the position shown in Figure IV, or place themselves as their judgment may dictate, and the ball is put in play by the center-rush who "snaps it back" with his hand to the quarter-back. The most common method of snapping the ball back for a scrimmage is by holding one end in the hand and pressing the other on the ground between the legs of the center-rush so that when the ball is given a quick backward push and released, it will bound up and be caught in the hands of the quarter-back. He then passes it to one of the other players of his side, who, however, must be farther from the opponents' goal line than the quarter-back at the time of receiving it, and that player either kicks it or runs with it toward the opponents' goal.

Both sides press forward as soon as the ball is put in play, the object of the opponents being to tackle the runner or prevent the kick, and that of the runner's side to prevent the tackle or secure the kick. It is regarding this part of the game that the most arbitrary rules have been made regarding the use of the hands, body, and arms of the contestants. When the snap-back sends the ball behind him, he places all of the men in his rush line "off-side," that is between the ball and the opponents' goal, while all of the opponents are on the "on-side"; theoretically, therefore, the playing side may not advance from their first positions, while their opponents have the right to push forward, and are prevented from doing so only by being blocked by their antagonists. For this reason, the rules provide that the side having possession of the ball may not use their hands or arms in blocking, but that their opponents, in their endeavor to stop the runner or secure possession of the ball, may use their hands and arms. In this way the ball is finally "downed" again and the teams line up as before for a scrimmage.

The game thus progresses in a series of downs, which are regulated by numerous rules, until a goal is secured or the period of play comes to an end. In a regulation match, the duration of actual play is seventy minutes, which is divided into two halves. The interval for rest between the halves is ten minutes. In practice and in match games a shorter period of play is often agreed upon, and the two "halves" are not always of equal length. Especially at the beginning of the season, before the players are thoroughly hardened, the first half is often limited to twenty-five minutes and the second half to twenty.

Play is resumed by a kick-off at the center of the field, as at first, the side losing the goal having possession of the ball, after a goal has

been scored, or the side which did not have the kick-off at the beginning of the first half takes it when the first half is begun. The side holding the ball, however, does not always retain possession; if one side is unable to advance it appreciably toward their opponents' goal it would be manifestly unfair to permit them to continue their attempts simply because they have the ball in their possession. If in three downs, or attempts to advance the ball, a team fails to progress five yards toward the opponents' goal, or to retreat twenty yards toward its own goal, the ball must be surrendered to the opposing team.

It is further provided by the rules, that a team may not retain possession of the ball by a second retreat of twenty yards toward its own goal unless in the meantime the ball has gone into the possession of the opposing team. It is seldom, however, that a team actually surrenders the ball on a third down, because, after two downs, if there seems little prospect of making the required five yards, it is usually considered best to resort to a kick. In this way the ball will probably go to the opponents, but will be much nearer their goal than if captured on a third down. If an emergency kick of this kind is made, it must be such as to give the opponents a fair chance to get the ball, and the ball must go beyond the line of scrimmage unless stopped by an opponent.

The rules of off-side play prohibit the players of the kicking side who are in advance of the ball when kicked, from touching it until it has been touched by an opponent, and thus the latter have a better chance of securing possession of it. One way in which advantage of any kick may be taken by the opponents, is by a fair catch. To make this, the player must catch the ball fairly before it touches the ground, or on the fly, and before any other player of his own side has touched it, and without attempting to run, must plant his heel in the ground at the spot where the catch was made.

A free catch gives the player the right of a free kick. In this the opponent may not come within ten yards of the mark made by heeling the catch, while he (and his side) may retire any distance he desires toward his own goal and then kick the ball in any way he may choose either by a punt, a drop kick, or a place kick. The players of his own side must be behind the ball when kicked, and it must be sent at least ten yards unless stopped by an opponent.

Should the ball go across one of the side boundaries of the field, it is said to go "in touch" or out of bounds. It must then be brought back to the point at which it crossed the side line and put in play by one of the side which carried it across the line or first secured possession of it after it went out of bounds. There are two methods of putting the ball in play under these circumstances: The player may either touch it at right angles to the side line and then kick it, or, as is more often done, he may carry it into the field in any direction except toward the opponents' goal and put it down for an ordinary scrimmage. In the latter case the player, who is to carry the ball in, must, before starting, declare how many yards he will carry it, so that the opponent may know where it will be put in play. This distance must be at least five, and not more than fifteen yards.

When the ball has been advanced to a point within kicking distance of one of the goals, by a succession of plays, runs, kicks, downs, fair catches, etc., the captain of the attacking side must decide upon one of the two styles of play that are open to his side. That is, he must choose either to continue the running attempts to carry the ball across the goal line, or to try a drop kick for goal. In deciding this point there are several things to be considered, and it is here that the good qualities of the captain are tested. Should his side be successful in the attempt to carry the ball across the line for a touchdown, five points are scored, and, in addition, they are entitled to a try-at-goal, which, if made, counts one more point.

A drop kick, if made, counts only five points, and, when attempted, is by no means sure of being successful. But, on the other hand, if a drop kick is made on any first down within the twenty-five yard line, and fails to score, the ball is then put in play by a kick-off at the ten-yard line; that is, the attacking side may line up on that line, so that the defenders are forced to kick out from almost within their own goal. In choosing the style of play to be followed, the captain, in addition to the points mentioned, will consider the relative strength of the two teams as shown by the previous play, since it is from this that he must judge of the chances of making a touchdown.

Should he decide to continue the running attempts, and the ball eventually be carried across the goal line and downed, a touchdown is made at the point where the ball is finally held. Any player of the scoring side may then carry it out from that point at right angles to the goal line, and when he has reached a suitable distance, place it for a try-at-goal. When this is made, the opponents must stand behind their goal line. The ball is held by the placer close to, but not touching the ground, and its position is carefully regulated by direction of the kicker until satisfactory to him. It is then permitted to touch the ground and is at once kicked.

As soon as the ball touches the ground it is in play, and the opponents may charge forward and try to prevent the kick. For this reason the placer must not touch it to the ground until it is in a position to be kicked and the kick must be made at once. If the ball goes over the goal one point is scored, and the defenders carry it to the center of the field for a kick-off, as at the beginning of the game. This latter is also done if the goal be missed.

In considering the tactics most likely to be adopted by the attacking side when near the opponents' goal, we must not lose sight of the possibility that the latter may obtain possession of the ball on a third down, or in some other manner. In this case they would naturally endeavor by running or kicking to turn the tables on their adversaries, or, first of all, to free themselves from immediate danger. Sometimes, however, this is impossible, and the rules provide them with a means of release, which, though a sacrifice, is better than the loss of the goal. One of the defenders may at any time kick, pass, or carry the ball across his own goal line, and

if it is then touched down by one of his side a safety is scored. This counts two points for the opponents, but gives the defenders the privilege of carrying the ball out to the twenty-five yard line and there putting it in play by a drop kick, a place kick or a punt. A touchback is similar to a safety except that the impetus which sends it across the goal line must be given by the attacking side. The score for a touchback is two points.

From the foregoing it will be seen that the score of a game may consist of one or more of the following: Touchdown and goal, six points; touchdown from which no goal is kicked, five points; goal kicked from field, five points; touchback, two points; safety, two points for opponents of side making it.

A description of the various different styles of play and the duties of the players in each would require much more space than can be given to this subject here, but from the foregoing description of the principles of the game, coupled with careful study of the rules, a knowledge of Football may be obtained which will fit the beginner to engage in practice games. These, as has been said, especially when conducted under the direction of a competent coach, are absolutely essential to a thorough mastery of the sport.

## GLOSSARY OF TECHNICAL TERMS IN FOOTBALL

*Back* — The four players who ordinarily stand behind the rush line are known as backs. These are respectively designated as quarter-back, right half-back, left half-back. and full-back.

*Center or Snapper-back* — The central player of the rush line (which see), who puts the ball in play by "snapping" it back to one of the other players, usually the quarter-back.

*Dead* — See Rule XI.

*Down* — First, the ball is said to be *down* when the progress of the player holding it has been stopped or he has cried "down"; in either case the referee blows his whistle and the ball is temporarily dead. (Rule II, *a.*) Second, whenever the ball is "downed" as above, a *down* is said to have been played.

*Drop Kick* — See Rule II, *a.*

*Fair Catch* — See Rule VII, *a.*

*Free Kick* — See Rule II, *f.*

*Goal* — First, two upright posts, exceeding twenty feet in height, fixed firmly in the ground, eighteen feet six inches apart, with a horizontal crossbar ten feet from the ground. Second, when the ball is kicked in any way, except by a punt, from the field of play over the crossbar of the opponents' goal, a *goal* is scored. (Rule VIII.)

*Goal Line* — The end lines of the field of play, in which the goals are placed.

*Half* — One of the two parts into which the period of play is divided. In a regulation match, these are thirty-five minutes each, but their length may be changed by agreement of the captains of the contesting teams.

*Heeling a Catch* — A player in order to be credited with a fair catch must while making it, mark with his heel the spot at which the catch is made; this is called *heeling a catch.* (Rule VII, *a.*)

*Holding* — See Rule XVII.

*Kick-off* — See Rule II, *d.*

*Kick Out* — See Rule II, *e.*

*Linesman* — See Rule XXIX (III).

*Line Up* — When the players of a team take their positions ready for play, they are said to *line up.*

*Off-side* — Rule X.

*On-side* — Rule X, *c.*

*Pass* — When a player having possession of the ball voluntarily transfers it to another player of his own side, either by handing or throwing it to him, the former is said to *pass* it.

*Place Kick* — See Rule II, *b.*

*Punt* — See Rule II, *c.*

*Punt Out* — See Rule XXV, *b* and *c.*

*Referee* — See Rule XXIX (I).

*Rushers* — The center, two guards, two tackles and two ends are spoken of as *rushers.*

*Rush Line* — The seven rushers mentioned above compose the *rush line.*

*Safety* — See Rule IV, *e.*

*Scrimmage* — See Rule VI.

*Shin Guards* — A kind of protection worn over the shins, especially by men in the rush line.

*Snap Back* — To put the ball in play for a scrimmage by means of the hand or foot, with one quick and continuous motion from its position on the ground.

*Snapper-back* — See Center.

*Tackle* — First, the player who stands between the guard and the end on either side of the rush line. Second, to seize the player having the ball in the attempt to stop and hold him, so that the ball shall be down.

*Team* — The eleven players on either side constitute a full *team.*

*Touch* — The space outside the side boundaries of the field; if the ball goes across a side line, it is said to go into touch, or out of bounds.

*Touchback* — See Rule IV, *d.*

*Touchdown* — See Rule IV, *a*, *b*, and *c.*

*Try-at-goal* — See Rule XXV.

*Twenty-five-yard line* — Two lines drawn parallel to the goal line and twenty-five yards from them, respectively.

*Umpire* — See Rule XXIX (II).

# FOOTBALL RULES

## RULE I

(*a*) The game shall be played on a rectangular field, three hundred and thirty feet in length, and one hundred and sixty feet in width, inclosed by heavy white lines, marked with lime, or in some similar manner, upon the ground. The two end lines shall be termed goal lines. The side lines shall extend beyond their points of intersection with the goal lines.

(*b*) The goal shall be placed in the middle of each goal line, and shall consist of two upright posts extending more than twenty feet above the ground and placed eighteen and one-half feet apart, with a horizontal cross-bar ten feet from the ground.

(*c*) The game shall be played by two teams having eleven men each.

(*d*) The officials of the game shall be a referee, an umpire and a linesman. (Rule XXIX.)

(*e*) The football used in the game shall be an inflated rubber bladder inclosed in a leather cover. The ball shall have the shape of a prolate spheroid.

## RULE II

(*a*) A *drop kick* is made by letting the ball drop from the hands and kicking it the instant it bounds up from the ground.

(*b*) A *place kick* is made by kicking the ball after it has been placed on the ground.

(*c*) A *punt* is made by dropping the ball from the hands and kicking it before it touches the ground.

(*d*) A *kick-off* is a place kick from the center of the field of play, and cannot score a goal. (Rule VIII.)

(*e*) A *kick-out* is a drop kick, place kick or punt made by a player of a side which has made a touchback or a safety.

(*f*) A *free kick* is a term used to designate any kick made when the opponents are restrained by these rules from advancing beyond a certain point. It may be a *kick-off*, a *kick-out*, a *punt-out* (Rules V and XXV), or a *place kick for goal* after a touchdown.

## RULE III

(*a*) The ball is *out of bounds*, if it touches the ground on or outside the side lines, or the side lines extended, or if any part of a player who holds the ball touches the ground on or outside those lines.

(*b*) If the ball is kicked so that it goes out of bounds before crossing the opponents' goal line, it shall belong to the opponents. If, however, it strikes any player who is *on-side* and then goes out of bounds, it shall belong to the player who first obtains possession of it.

## RULE IV

(*a*) A *touchdown* is made when the ball in possession of a player is declared dead by the referee, and any part of it is on, over or behind the opponent's goal line.

(*b*) The point where the touchdown is marked is not where the ball is carried across the goal line, but where it is fairly held and called "down."

(*c*) If the ball is carried across the extension to the side line, it becomes dead at once, and the touchdown is marked at the intersection of the side line and the goal line.

(*d*) A *touchback* is made when a ball in possession of a player guarding his own goal is declared dead by the referee, and any part of it is on, over or behind the goal line, provided the impetus which sent it to or across the line was given by the opposing side.

(*e*) A *safety* is made when the ball, in possession of a player guarding his own goal, is declared dead by the referee, and any part of it is on, over or behind the goal line, provided the impetus which sent it from outside the goal to or across the line was given by the side defending the goal. Such impetus may come from any of the following: (1) A kick, pass, snap back or fumble; (2) A kick which bounded back from an opponent; (3) A player carrying the ball being forced back, provided the ball was not declared dead by the referee before the line was reached or crossed.

A safety is also made when a player of the side that has possession of the ball commits a foul which would give the ball to the opponents behind the offender's goal line.

## RULE V

A *punt-out* is a punt made by a player of a side which has made a touchdown, to another player of his own side for a fair catch. (Rule VII.)

## RULE VI

(*a*) A *scrimmage* occurs when the holder of the ball places it upon the ground and puts it in play by kicking it forward or snapping it back. The scrimmage does not end until the ball is again declared dead. *Snapping* the ball is sending it back after it is placed upon the ground, by means of one quick and continuous motion of the hand or foot.

The ball is put in play from a scrimmage in every case except those for which specific provision is made in these rules.

(*b*) If after the *snapper back* has taken his position, he should voluntarily move the ball as if to snap it, whether he witholds it altogether or only momentarily, the ball is in play and a scrimmage has begun.

(*c*) When snapping the ball back, the player so doing must be *on side*, the hand or foot used in snapping the ball excepted. (Rule X.)

## RULE VII

(*a*) A *fair catch* consists in catching the ball, after it has been kicked by one of the opponents, before it touches the ground, or in catching in a similar way a punt-out by another of the catcher's own side, provided the player, while making the catch, makes a mark in the ground with his heel and does not take more than one step thereafter. It is not a fair catch if the ball, after being kicked, is touched by another player of the catcher's side before the catch.

(*b*) Opponents who are *off-side* shall not interfere in any way with a player attempting to make a fair catch, nor shall he be thrown to the ground after such catch is made, unless he has advanced beyond his mark.

(*c*) If a player makes a fair catch, one of his side must put the ball in play by a punt, drop kick or place kick, and the opponents must not come within ten yards of the line on which the fair catch was made. The ball must be kicked from some point directly behind the spot on which the fair catch was made and on a line parallel to the side lines.

## RULE VIII

A *goal* is made by kicking the ball in any way, except by a punt, from the field of play over the crossbar of the opponent's goal (Rule II.) If the ball passes directly over one of the goal posts, a goal is scored. If after the ball has been kicked it strikes an opponent and then passes over the crossbar, it still counts as a goal.

## RULE IX

*Charging* is rushing forward to seize or block the ball, or to tackle a player.

## RULE X

(*a*) In a scrimmage, no part of any player shall be ahead of the ball when it is put in play. (See exception under (*c*) Rule VI.) The expression *ahead of the ball* means between the opponents' goal and a line parallel to the goal lines passing through the center of the ball.

(*b*) A player is put *off-side* if the ball, while in play, has last been touched by one of his own side behind him. No player when *off-side* shall touch the ball, except on a fumble or a muff, nor shall he interrupt or obstruct an opponent with his hands or arms until again *on-side*. No player, however, can be called *off-side* behind his own goal line.

(*c*) If a player is ahead of the ball when it is kicked by another of his side he is *off-side*, and he shall not allow the ball to touch him until he is again *on-side*. For infraction of this rule the ball shall go to the opponents on the spot.

(*d*) A player who is *off-side* is put *on-side* when the ball touches an opponent, or when one of his own side runs in front of him, either with the ball or having been the last to touch it when behind the *off-side* player.

(*e*) If the ball, when not in possession of either side, is touched when inside the opponents' ten-yard line by a player who is *off-side*, a touchback shall be scored for the defenders of the goal.

## RULE XI

(*a*) The ball is dead in the following cases: —

(1) Whenever either the referee or the umpire blows his whistle or declares a «down.»

(2) When the referee has declared that a down, touchdown, touchback, safety or goal has been made.

(3) When a fair catch has been heeled.

(4) When it has been downed after going out of bounds.

(5) When it goes out of bounds after a kick before touching a player who is *on-side*.

(*b*) Should the ball strike an official it is not regarded as dead, but play continues exactly as though the ball had not touched him.

(*c*) No play can be made when the ball is dead, except to put it in play according to rule.

## RULE XII

(*a*) The length of the game shall be seventy minutes, divided into two halves of thirty-five minutes each, exclusive of time taken out. There shall be ten minutes intermission between the two halves.

(*b*) The game may be made of shorter duration by mutual agreement between the captains of the opposing teams.

(*c*) Whenever the commencement of the game is so late that, in the opinion of the referee, there is any likelihood of the game being interfered with by darkness, he shall, before play begins, arbitrarily shorten the two halves to such length as shall insure two equal halves being completed, and shall notify both captains of the exact time thus set. If either side refuses to abide by the opinion of the referee on this point it shall forfeit the game.

(*d*) The game shall be decided by the final score at the end of the two halves.

(*e*) Time shall not be called for the end of a half until the ball is dead, and in case of a touchdown, the try-at-goal shall be allowed.

(*f*) Time shall be taken out whenever the game is unnecessarily delayed and while the ball is being brought out for a try-at-goal, kick-out or kick-off, or when play is for any reason suspended by the referee or umpire. Time shall begin to be counted again when the ball is actually put in play.

(*g*) Time shall not be taken out when the ball goes out of bounds, except in case of unreasonable delay in returning the ball to play.

(*h*) No delay arising from any cause whatever shall continue longer than two minutes.

## RULE XIII

(*a*) The opposing captains shall "toss up" before the beginning of the game, and the winner of the toss shall have his choice of goal or kick-off. The ball shall be kicked off at the beginning of each half. Whenever a goal, following a touchdown, has been tried (Rules XXIV and XXV), or a goal from the field has been kicked (Rules VIII and XXVI), the side defending that goal shall kick off. The teams shall change goals at the beginning of the second half. The same side shall not kick off at the beginning of two successive halves.

(*b*) At kick-off, if the ball goes out of bounds before it is touched by an opponent, it shall be brought back and kicked off again. If it is kicked out of bounds a second time, it shall go as a kick-off to the opponents. If either side thus forfeits the ball twice, it shall go to the opponents who shall put it in play by a scrimmage at the center of the field.

(*c*) At kick-off, if the ball is kicked across the goal line and is there declared dead when in the possession of one of the side defending the goal, it is a touchback. If it is declared dead in a similar manner while in the possession of the attacking side, it is a touchdown.

(*d*) At kick-off and on a kick from a fair catch, the opposing side must stand at least ten yards in front of the ball until it is kicked. On a kick-out, the opposing side cannot stand nearer the goal than the twenty-five-yard line, except on a kick-out made after a drop kick on the first down inside the twenty-five yard line, when the ten-yard line is the restraining mark. (See exception, Rule XXVIII.)

## RULE XIV

(*a*) The side which has a free kick must be behind the ball when it is kicked. Otherwise the kick is subject to the penalties under Rule XXVIII, *e*.

(*b*) In case of a kick-off, kick-out, or kick from a fair catch, the ball must be kicked a distance of at least ten yards toward the opponents' goal from the line that restrains the player making the kick, unless it is stopped by an opponent. Otherwise the ball is not in play.

## RULE XV

(*a*) Charging is lawful, in case of a punt-out or kick-off, as soon as the ball is kicked, but the opponents must not charge until the ball is kicked.

(*b*) In case of any other free kick charging is lawful: (1) When the player of the side having the free kick advances beyond his restraining line or mark with the ball in his possession; (2) When he has allowed the ball to touch the ground by accident or otherwise.

(*c*) If such lawful charging takes place, and if the side having the free kick fails to kick the ball, then the opponents may line up five yards ahead of the line which restrained them before charging. In that case, the side having the free kick must kick the ball from some point directly behind its mark, if the free kick resulted from a fair catch, and in other cases from behind the new restraining line. The only exception to the foregoing is that in case of a try-at-goal after a touchdown, if the ball is not kicked after having been allowed to touch the ground once, no second attempt shall be permitted, and the ball shall be kicked off at the center of the field. (Rule 13.)

## RULE XVI

(*a*) The snapper-back is entitled to full and undisturbed possession of the ball. The opponents must neither interfere with him nor touch the ball until it is actually put in play.

(*b*) In snapping the ball back, if the player so doing is off-side, the ball must be snapped again, and if this occurs once more on the same down, the ball shall go to the opponents.

(*c*) The man who snaps back and the man opposite him in the scrimmage cannot afterward touch the ball until it has touched some player other than one of these two.

(*d*) If the man who puts the ball in play in a scrimmage kicks it forward, no player of his side can touch it until it has gone ten yards into the opponents' territory, unless it be touched by an opponent.

(*e*) The man who first receives the ball when it is snapped back shall not carry it forward beyond the line of scrimmage, unless he has regained it after it has been passed to and has touched another player.

## RULE XVII

(*a*) Before the ball is put in play, no player shall put his hands upon, or by the use of his hands or arms interfere with, an opponent in such a way as to delay putting the ball in play.

(*b*) After the ball is put in play, the player of the side that has possession of it may obstruct the opponents with the body only, except the player running with the ball, who may use his hands and arms.

(*c*) The players of the side not having the ball may use their hands and arms, but only to get their opponents out of the way in order to reach the ball or stop the player carrying it.

## RULE XVIII

(*a*) Before the ball is put in play in a scrimmage, if any player of the side which has the ball takes more than one step in any direction, he must come to a full stop before the ball is put in play, except that one man of the side having the ball may be in motion toward his own goal without coming to a stop before the ball is put in play.

(*b*) When the ball is put in play by a scrimmage: (1) At least five players of the side having the ball must be on the line of scrimmage; (2) If five players, not including the quarter-back, are behind the line of scrimmage and inside the positions occupied by the players at the ends of said line, then two of these players must be

at least five yards back of the line, but all these players may be nearer than five yards to the line of scrimmage if two of them are outside the positions occupied by the players at the ends of said line. This means that they must have both feet outside the outside foot of the next player.

## RULE XIX

A player may throw, pass or bat the ball in any direction except toward his opponents' goal.

## RULE XX

(*a*) If a player having the ball is tackled, and the movement of the ball stopped, or if the player cries "Down!" the referee shall blow his whistle, and the side holding the ball shall put it down for a scrimmage.

(*b*) As soon as a runner attempting to go through is tackled and goes down, being held by an opponent, or whenever a runner with the ball in his possession cries "Down!" or if he goes out of bounds, the referee shall blow his whistle and the ball shall be considered down at that spot.

(*c*) There shall be no piling up on the player after the referee has declared the ball dead.

## RULE XXI

(*a*) If, in three consecutive downs (unless the ball crosses the goal line), a team has neither advanced the ball five yards nor taken it back twenty yards, it shall go to the opponents on the spot of the fourth down. In these "consecutive downs" the ball must not have gone out of possession of the side holding it, except that by having kicked the ball they have given their opponents fair and equal chance of gaining possession of it. No kick, however, provided it is not stopped by an opponent, is regarded as giving the opponents fair and equal chance of possession unless the ball goes beyond the line of scrimmage.

(*b*) A team may not retain possession of the ball by taking it back twenty yards a second time, unless the ball in the meantime has been in the possession of the opponents.

(*c*) When a distance penalty is given, the ensuing down shall be counted the first down, except in the cases referred to in Sections A and K of Rule XXVIII, and last paragraph of Duties of the Umpire.

## RULE XXII.

If the ball goes out of bounds whether it bounds back or not, a player of the side which secures it must bring it to the spot where the line was crossed, and there either (1) touch it in with both hands at right angles to the side line and then kick it; or, (2) walk out with it at right angles to the side line, any distance not less than five nor more than fifteen yards, and there put it down for a scrimmage, first declaring how far he intends to walk.

## RULE XXIII

A side which has made a touchback or a safety must kick out from not more than twenty-five yards outside the kicker's goal. If the ball goes out of bounds before striking a player it must be kicked out again, and if this occurs twice in succession it shall be given to the opponents as out of bounds on the twenty-five yard line on the side where it went out. At kick out, the opponents must be on the twenty-five yard line or nearer their own goal, and the kicker's side must be behind the ball when it is kicked. Should a second touchback occur before four downs have been played, the side defending the goal

may have the choice of a down at the twenty-five yard line, or a kick out. The exception to this rule is that whenever a side has tried a drop-kick at the goal on a first down inside the twenty-five yard line and the result has been a touchback, the ten yard line, instead of the twenty-five yard line, shall determine the position of the opponents, and the kicker's side must be behind the ball when it is kicked.

## RULE XXIV

(*a*) A side which has made a touchdown must try at goal, either by a place kick or a punt out.

(*b*) After the try-at-goal, whether the goal be made or missed, the ball shall go as a kick-off at the center of the field to the defenders of the goal.

## RULE XXV

(*a*) If the try be by a place kick, a player of the side which has made the touchdown shall hold the ball for another of his side to kick, at some point outside the goal and on a line parallel to the side line passing through the point where the touchdown was declared. The opponents must remain behind their goal-line until the ball has been placed upon the ground.

(*b*) If the try-at-goal is to be preceded by a punt out, the punter shall kick the ball from the point at which the line parallel to the side line and passing through the spot where the touchdown was made, intersects the goal line. The players of each side must stand in the field of play not less than five yards from the goal line.

(*c*) The opponents may line up anywhere on the goal line except within the space of ten feet on each side of the punter's mark, but they cannot interfere with the punter. If a fair catch be made from a punt out, the catchers shall mark the position in the same way as for any fair catch, and the try-at-goal shall then be made by a place kick from this spot or any point directly behind it. If a fair catch be not made on the first attempt the ball shall go as a kick off at the center of the field to the defenders of the goal. At the time of the punt out the defending team is on-side and they may charge as soon as the ball is kicked and try to get it or to interfere with the catch.

(*d*) The holder of the ball in any place kick may be off side or out of bounds without rendering the kick invalid.

## RULE XXVI

The following shall be the values of the plays in scoring: Goal obtained by touchdown, six points, which include five points for the touchdown and one point for the goal kicked; goal from field kick, five points; touchdown failing goal, five points; safety by opponents, two points.

## RULE XXVII

(*a*) No one having projecting nails or iron plates on his shoes or wearing upon his person any metallic or hard substance that in the judgment of the umpire is liable to injure another player, shall be allowed to play in a match. No sticky or greasy substance shall be used on the persons of the players.

(*b*) A player may be substituted for another at any time at the discretion of the captain of his team.

(*c*) There shall be no unnecessary roughness, no throttling, hacking, or striking with the closed fist.

(*d*) A player who has been replaced by a substitute cannot return to further participation in the game.

(*e*) There shall be no unnecessary delay of the game by either team.

(*f*) There shall be no coaching, either by substitutes or by any other persons not participating in the game. In case of an accident to a player, but one official representative shall be allowed on the field of play.

(*g*) There shall be no tripping or tackling below the knees.

## PENALTIES

### RULE XXVIII

A foul is any violation of a rule.

The penalties for fouls shall be as follows:—

A. (1) For holding an opponent who has not the ball (Rule XVII); (2) for unlawful use of hands or arms (Rule XVII, *b* and c); (3) for violation of the rules governing off-side play (Rule X); (4) for violation of Rule XVI, *b*, *c*, *d* or *e*; (5) for tripping an opponent or tackling him below the knees,—the penalty shall be the loss of ten yards if the side offending is not in possession of the ball; or, if the offending side has the ball, the immediate surrender of it to the opponents. There is an exception to this rule in the case of an off-side play by the side in possession of the ball which shall be penalized not by the loss of the ball, but by the loss of ten yards, the number of the down and the point to which the ball must be advanced for the first down remaining unchanged. In case neither side was in possession of the ball when the foul was committed—for example, if the ball was in the air from a kick or was free upon the ground after a fumble, kick or pass—it shall go to the offended side.

The foregoing penalties shall be given from the spot where the foul was committed.

B. If the ball is thrown, passed or batted toward the opponent's goal (Rule XIX), it shall go to the offended side, who shall put it in play by a scrimmage at the spot where the foul was committed.

C. In the case of interference of any kind with putting the ball in play (Rules XVI, *a* and XVII, *a*) or unnecessary delay of the game (Rule XXVII, *c*), the offended side shall be advanced five yards.

D. (1) In case of piling up on a player after the referee has declared the ball dead (Rule XX, *c*), the offended side shall be given fifteen yards.

(2) If a player who is attempting to make a fair catch (Rule VII, *a*) is unlawfully obstructed, the offended side shall be given fifteen yards, and the choice of putting the ball in play by a free kick or by a scrimmage.

(3) If a player who has heeled a fair catch (Rule VII, *a*) is thrown to the ground, unless he has advanced beyond his mark, his side shall be given fifteen yards and be obliged to take a free kick.

E. (1) In any case of free kick (Rule II, *f*) if the kicker advances beyond his mark before kicking the ball (Rule VII, *a*, and XV, *b*), no matter whether he then kicks or not, the opponents shall be allowed to line up five yards nearer the kicker's mark, and the kick shall then be made from some point back of the first mark, and at the same distance from the side line.

This shall also apply when the side having a free kick allows the ball to touch the ground (Rule XV, *b*) and then fails to kick it (kick off and try-at-goal after touchdown excepted). The same ruling shall be given in case any player of the side making a free kick is ahead of the ball when it is kicked (Rule XIV, *a*).

(2) In the case of a free kick, if the opponents charge (Rule IX) before the ball is put in play (Rule XV, *a*), they shall be put back five yards for every such offense and the ball shall be put in play from the original mark.

F. In the case of unlawful starting before the ball has been put in play for a scrimmage (Rule XVIII, *a*), provided there is no infraction of Rule X, the ball shall be brought back and put in play again. If this occurs again in the same down, the ball shall be given to the opponents. If that side infringes the rule bearing upon this act again during the game, the ball shall immediately be given to the opponents.

The same ruling shall be made in case of infraction of Rule XVIII, *b* and *c*.

G. If either side refuses to play within two minutes after having been ordered to do so by the referee, it shall forfeit the game. This shall also apply to refusing to begin a game when ordered to do so by the referee. (Rule XII, *e*.)

H. Whenever the rules provide for a distance penalty, if the distance prescribed would carry the ball nearer to the goal line than the five-yard line, the ball shall be down on the five-yard line. If, however, the foul is committed inside the ten-yard line, half the distance to the goal shall be given.

I. If a team on the defense commits fouls when so near its own goal that these fouls are punishable only by the halving of the distance to the line (Rule XXVIII, *h*), the object being, in the opinion of the referee, to delay the game, the offending side shall be regarded as refusing to allow the game to proceed. The referee, in such cases, shall warn the offending side once, if the offense is repeated he shall declare the game forfeited to the opponents.

J. If a player is guilty of unnecessary roughness, throttling, hacking, or striking with closed fist (Rule XXVII, *c*), he shall at once be disqualified.

K. (1) In case the success of the play is clearly interfered with by some act palpably unsportsmanlike and not elsewhere provided for in these rules,—*e. g.*, by the throwing of any object by player or spectator with the result of interfering with the play,—the umpire shall have power to award ten yards to the offended side, the number of the down and the point to be gained for first down remaining unchanged.

(2) Whenever a foul is committed, which, in the opinion of the umpire, did not affect the play, the offended side may decline the penalty. In case of a run being made from this play, not more than fifteen yards from the spot where the foul was committed shall be allowed.

## DUTIES OF OFFICIALS

### RULE XXIX

#### I The Referee

The Referee is responsible for the enforcement of Rules 1, 2, 3, 4, 5, 6 (*a* and *b*); 7 (except as relates to interference, throwing catchers, and positions of players); 8, 11, 12, 13 (except *d*); 14, *b;* 16 (*a* and *e*); 19, 20 (*a* and *b*); 21, 22, 23 (except as relates to positions of players); 24, 25 (except as relates to positions of players and interference); 26, 27 (*c*).

In making his decisions, the Referee must recognize and allow precedence to any penalty inflicted by the umpire for a foul.

The Referee's decisions are final upon all points not specified in the duties of the umpire.

The Referee shall see that the ball is properly put in play, and he is judge of its position and progress.

He is judge of forward passes, of interference with the snap-back, and of the advance of the ball by the player who first receives it from the snapper-back when the ball is out in play from a scrimmage (Rule 16, *a* and *e*).

At the beginning of a game, and in every case after time has been taken out, he shall ascertain from each captain that his team is ready, before ordering play to begin.

He is sole authority for the score of the game and is judge of forfeiture of the game under the rules.

The Referee may appeal to both the umpire and the linesman for testimony upon all points within his jurisdiction.

The Referee must volunteer testimony to the umpire concerning infringement of Rule 27, *f*.

### II The Umpire

The Umpire is responsible for the enforcement of all rules whose infringement is punishable by a distance penalty or by the surrender of the ball by one team to the opponents, except 13, *b;* 16, *a* and *e;* 19 and 23. These are: Rules 6, *c;* 9, 10, 13, *d;* 14, *a;* 15, 16 (except *a* and *e*); 17, 18, 20, *c;* 27.

The Umpire is judge of the conduct of the players, and his decision is final regarding such fouls as are not specifically placed within the jurisdiction of the referee.

The Umpire is judge of charging, and of the positions of players whenever the ball is put in play.

He may appeal to both the referee and linesman for testimony in cases of fouls seen by them, and it shall be their duty to volunteer testimony concerning violations of Rule 27 (*c* and *f*). Captain and players, however, may not appeal to the referee or linesman for their testimony on the points just mentioned.

The Umpire shall not blow his whistle, nor declare the ball dead, nor call time, except to grant a penalty for a foul committed.

Whenever the Umpire notices, or is informed by the referee or linesman, that a substitute, or any other person not participating in the game, is coaching, he shall immediately exclude the offender for the remainder of the game from the neighborhood of the field of play, that is, send the offender behind the ropes or fence surrounding the field of play.

Furthermore, the Umpire shall inflict a penalty of loss of ten yards upon the side which is thus coached; the number of down and the point to be reached for, first down remaining the same. Only five men shall be allowed to walk up and down on each side of the field. The rest, including substitutes, water carriers and all who are admitted within the inclosure must be seated along the line of the inclosure.

The referee and Umpire should use whistles to indicate cessation of play on downs or fouls.

### III The Linesman

The Linesman, under the supervision of the referee, shall mark the distances gained or lost in the progress of the play.

He shall remain on the side lines and be provided with two assistants, who shall remain outside the field of play, and who shall use a rope or chain in measuring distance. The best measuring device consists of two light poles about six feet in length, connected at the lower ends by a stout cord or chain exactly five yards in length. It is desirable to have the field marked off with white lines every five yards, parallel to the goal line, for measuring the five yards to be gained in three downs. It is also desirable that two stop watches be furnished the officials.

The Linesman, under the direction of the referee, shall also keep the time and he should use a stop watch in so doing.

The Linesman must give testimony when requested to do so by the referee or umpire (I and II) and must volunteer testimony concerning infringement of Rule 27, *c* and *f*.

The Linesman shall notify the captains of the time remaining for play, not more than ten, nor less than five minutes before the end of each half.

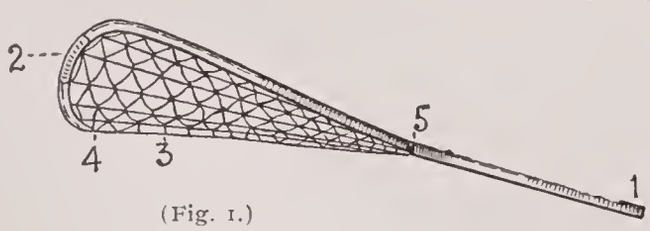
# LACROSSE

EARLY travelers among the Indians of this continent found the game of Lacrosse firmly established as what may be termed a national sport, and it was from the natives that the white population acquired a knowledge of it. If you have ever seen a game of Lacrosse played, you can readily understand the difficulty of learning it, and will not be surprised that this consideration has prevented the game from becoming universally popular. In Canada and the northern part of the United States, and in Ireland, it is played during the summer months, but in England only in winter, on account of the popularity of cricket and other summer games.

## THE GAME

The *crosse* (La Croix, the Bishop's crosier), from which the game derives its name, is formed of some tough, elastic wood, usually hickory, and no metal may be used in its construction. (Fig. I.) The *butt*, or handle (1), is round, and the other end of the crosse is flat and is bent into a curve about nine inches in diameter, which is called the *bend* (2). From the top of the bend to the butt is about four feet, three inches. A strong piece of gut (3), called the *leading string*, is stretched from the *tip*, or extremity (4), of the bend to a point called the *collar* (5), which is about eighteen inches from the butt. The space between the leading string and the back of the crosse is meshed with gut strings, which are arranged in much the same manner as those you have seen on tennis rackets. The latest style of crosse has a piece of gut, called the *crosse-string*, which passes from a point near the collar to the leading string, so as to prevent the ball from rolling off the crosse toward the butt.

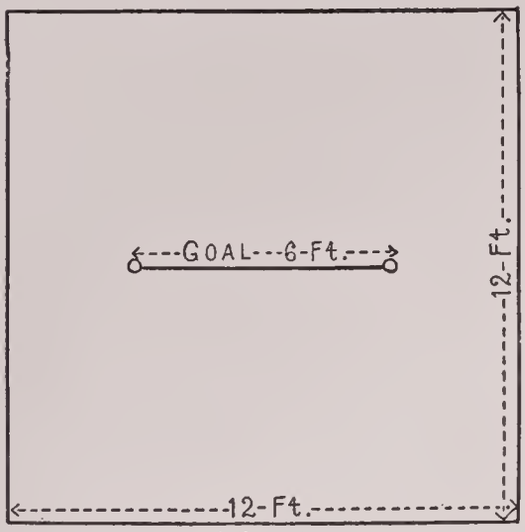
The ball used is of India-rubber sponge, about eight inches in circumference and four and one-half ounces in weight. It is so constructed that there is little danger of a player being injured if struck by it.




(Fig. 1.)

There are two goals on the field, which are placed about one hundred and twenty-five yards apart, and in any position that is agreeable to the captains of the opposing teams.

These goals are posts six feet in height, usually surmounted by flags, and are secured in the ground six feet apart; they are also usually provided with a crossbar that extends from the top of one post to that of the other.



(Fig. 2.)

Goal nets, which fill the space between the posts and the crossbar, are used to prevent the ball from passing beyond the goal when a score is made. Each goal stands in a *goal-crease* (Fig. II), which is a square space twelve feet on a side.

The object of each team is to pass the ball through its opponent's goal by means of the crosse, and to prevent the passage of the ball through its own goal. Except in the special cases referred to in the appended rules, a player is not allowed to touch the ball with his hand. The game is played in two halves from thirty to forty-five minutes in length, with an interval of fifteen minutes for rest between them, and at its close the side that has scored the greater number of goals is the winner.

The boundaries of the field of play must be agreed upon by the captains of the opposing teams before the game begins, for they are not invariable for different matches. The captains agree upon two umpires, one of whom stands near either goal, and a referee, who follows the play and interprets the rules applying directly to it.

A full team is composed of twelve players, who are divided roughly into "attack" and "defense." At the beginning of the game they are distributed about the field between the goals in such a way as the experience of the captain may lead him to think advisable, the formation being subject to numerous variations. Each side has a goal-keeper stationed in its goal-crease, and no opponent may enter it unless the ball be there. Each player of one team "covers" one of his opponents, that is, he devotes his attention especially to him, and always keeps near enough to him to prevent his getting the ball, or throwing it if he does get it.

The two opposing "centers" take their positions in the exact center of the field, each facing the other's goal, and the ball is placed on the ground between them. They stoop down, and each places the back of his crosse against the side of the ball that is farthest from him.

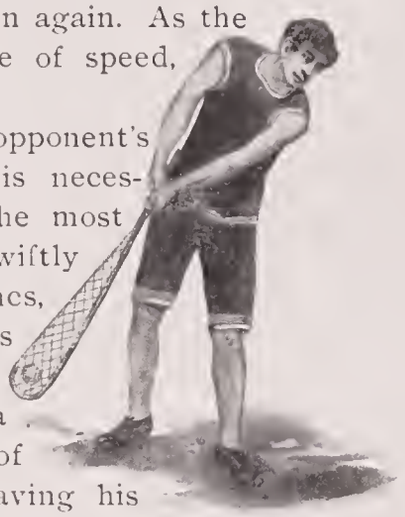
At the signal to begin play, each center draws his crosse quickly and strongly toward him, and as the ball comes to one or the other he takes possession of it and plays it toward his opponent's goal. The other players of his side help him all they can, and those of the other side try to stop him and to get possession of the ball. If the man who has the ball is hard pressed, he passes it to one of his side who is "uncovered," that is, who has no opponent near enough to prevent his catching the ball. In this way it is advanced toward one or the other of the goals until the player having possession of it is near enough for a "pass," or try-at-goal.

It is the goal-keeper's duty, however, to prevent the ball from passing through the goal, and if he succeeds in stopping it, he throws it far down the field and the game is continued as before.

If an attempt at goal is successful, the ball is returned to the center of the field, and the play is begun again as at first. After each goal, the two teams exchange field positions in order to equally share any advantage due to location of goals.

To secure possession of a ball that is on the ground, the player runs toward it, and when it is reached he lowers the bend of his crosse in such a way as to pass it between the ground and the ball, thereby causing the latter to roll up on the netting. He must then control it in that position while running until he is ready for a throw. This is executed by a sweep of the crosse, which is modified according to the desired distance and direction. Correct throws are made along the back of the crosse, and the motion may be either underhand or overhand.

After a throw, the ball is caught on the crosse of one of the other players, or is picked up on it by him, and carried or thrown again. As the ball comes at all sorts of angles, and often at a high rate of speed, one may readily understand the difficulty of catching it.



Attack play should consist in quick dashes toward the opponent's goal, but a player should not carry the ball farther than is necessary to reach a favorable position for a try-at-goal. The most difficult ball for a goal-keeper to stop is one that comes swiftly and strikes the ground a few feet in front of him; sometimes, in fact, he cannot see the ball at all, but must estimate its position in order to stop it.

Opponents are allowed to strike with their crosses at a crosse on which the ball is being carried, with the object of dislodging it, and this is best avoided by the runner waving his crosse about, or "dodging," as it is called. A defense player sometimes stops his opponent, or prevents his throw, by what is known as "checking," in which the checker pays no attention to the runner's crosse, but simply places his body in the latter's way.

The length and weight of the crosse, and the powerful sweeps that are made with it, both in throwing and in preventing a throw, introduce an element of danger that is one of the great drawbacks of the game. This, together with the endurance required of a player, limits the playing of Lacrosse to those who are in the best of physical condition.

Following are the most important rules of the game as adopted by the United States Intercollegiate Lacrosse Association:—

## RULES OF LACROSSE

### RULE I

SECTION 1. Twelve players shall constitute a full team.

SEC. 2. If, however, one team is unavoidably short of men, the other team, if it sees fit, shall drop men until the numbers of the two teams are equal. But no match shall count in which the sides begin with less than nine men each.

Sec. 3. Should any player be compelled to leave the field during a match on account of illness or injury, the opposing team shall drop a player so as to equalize the sides.

Sec. 4. The players on each side shall be designated as follows: —

| | Goal-keeper. |
|---|---|
| Inside Home | Point. |
| Outside Home | Cover-point. |
| 1st Attack | 1st Defense. |
| 2d Attack | 2d Defense. |
| 3d Attack | 3d Defense. |
| Center | Center. |
| 3d Defense | 3d Attack. |
| 2d Defense | 2d Attack. |
| 1st Defense | 1st Attack. |
| Cover-point | Outside Home. |
| Point | Inside Home. |
| Goal-keeper. | |

## RULE II

Section 1. The captain of each team must be one of the players. The captains shall toss for choice of goals, and shall report to the referee any infringement of the rules during the match.

## RULE III

Section 1. The goals must be one hundred and twenty-five yards from each other, and may be placed in any position agreeable to the captains of both teams. The tops of the flag poles, including any top ornaments, must be six feet above the ground and six feet apart. In matches they must be furnished by the home club.

Sec. 2. The crosse may be of any length to suit the player. It shall be woven with catgut, which must not be bagged. (Catgut is intended to mean rawhide, gut or clock string, not cord or soft leather.) The netting must be flat when the ball is not on it. In its widest part, the width of the crosse shall not exceed one foot. A string must be brought through a hole at the side of the tip at the turn, to prevent the point of the stick from catching the opponent's crosse. A leading string, resting upon the top of the stick, may be used, but must not be fastened so as to form a pocket lower down the stick than the ends of the lengthwise strings. A bumper, or stop, may be used, and may be fastened around the stick, but not passed through a hole in the stick, nor arranged in any way so as to form a pocket.

Sec. 3. No kind of metal, neither wire nor sheet, neither screws nor nails, shall be allowed on the crosse. Splices must be made either with string or gut.

Sec. 4. The ball to be used in all match games must be of sponge rubber, marked Regulation Lacrosse Ball, and manufactured by the New York Rubber Company. It shall weigh about five and three-quarters ounces. In each match a new ball must be used and it shall be furnished by the home team. It shall become the property of the winning team.

Sec. 5. No player shall be allowed to wear metal-stripped, metal-heeled, or spiked shoes, nor shall there be any projecting metal on the shoes, and any player attempting to evade this law shall immediately be ruled out of the match.

## RULE IV

Section 1. Before the match begins, the referee shall draw up the players in line and shall see that the regulations respecting the ball, crosses, and shoes are

complied with. Disputed points shall be left entirely to his decision. At any time during the match he shall have power to suspend, for not less than five, nor more than fifteen, minutes, any player who persists in violating these rules; the game shall go on after such suspension. He shall immediately call "Time!" when "foul" has been claimed by either captain or the player appointed by him, or when a goal has been taken. He shall also have power to call "time" when he observes a foul and to enforce the penalty of the foul.

SEC. 2. The jurisdiction of the referee shall not extend beyond the day for which he is appointed, and he shall not decide in any matter involving the continuance of a match, beyond the day on which it is played. The referee must be on the ground at the beginning of the match and during its continuance. At the beginning of each match, and after "fouls" or "ball out of bounds," he shall see that the ball is properly put in play, and shall call "Play!" when both sides are ready. He shall not express an opinion until he has taken the evidence on both sides; after doing this, his decision in all cases must be final. Any side rejecting his decision by refusing to continue the match, shall be declared to have forfeited the game.

SEC. 3. There must be one umpire at each goal. He shall stand behind the flags while the ball is in play. He shall decide whether or not the ball has fairly passed through the goal, and his decision shall be final. If a goal be taken, he shall raise his hand above his head and call "Goal!" The umpires must each be assigned to a goal before the captains toss for sides, such goals to be kept throughout the entire match. They must see that the rules respecting goals are adhered to, and shall be judges of all fouls committed within the goal-crease.

SEC. 4. In the settlement of any dispute, whether by umpires or the referee, it must be distinctly understood that the captains only have the right to speak on behalf of their respective teams; and any proposition or facts that any player may wish brought before the referee must come through the captain.

## RULE V

SECTION 1. A goal shall be scored when, in the opinion of the umpire, the ball has been fairly passed between the posts, and below the level of their tops, by any other method than that of being carried through on the crosse of an attacking player. Should the ball be put through a goal accidentally by one of the players defending it, a goal is scored for the attacking side. Should it be put through a goal by any one not actually a player, it shall not count.

SEC. 2. In the event of a flag-pole being knocked down during a match, and the ball put through the space inclosed by the flag-poles when standing, a goal shall be scored for the attacking side; such cases are to be decided, as usual, by the umpire.

## RULE VI

SECTION 1. The ball must not be touched with the hand, save in cases mentioned in Rules VII and VIII.

## RULE VII

SECTION 1. The goal keeper, while defending his goal within the goal-crease, may knock the ball away with his hand, or block it in any manner with his crosse or body.

## RULE VIII

SECTION 1. Should the ball lodge in a place inaccessible to the crosse, it may be taken out with the hand, and the player picking it up must *face* for it with his

nearest opponent ten feet inside playing limits. In case either uses a left-handed crosse, the referee shall toss up the ball between them and call "Play!" when both are ready.

## RULE IX

SECTION 1. If the ball goes out of bounds, the referee shall call "Time!" The ball is then to be brought back to the place where it left bounds and faced by the two nearest opponents, ten yards within bounds, the other players retaining their positions from the moment when time was called. The captains must agree upon the bounds before the match begins.

## RULE X

SECTION 1. Should the ball catch in the netting, the crosse must immediately be struck on the ground to dislodge it.

## RULE XI

SECTION 1. A match shall consist of two forty-five minute halves, with an intermission of ten minutes between them, and the side scoring the greater number of goals shall be declared winner. Time is to be taken out whenever "time" is called. In the event of a tie, playing shall be continued, after an intermission of fifteen minutes, for one half-hour, and the side having scored the greater number of goals at the end of this time shall be declared winner. In the event of a tie at the end of this time, the captains shall decide whether the game shall be postponed, or whether play shall continue until a goal is scored, or whether the game shall remain a tie.

SEC. 2. At the beginning of each half, the ball shall be faced midway between the goals. The referee shall ascertain if both captains are ready, and place the ball on the ground between the crosses of the two center players. He shall then withdraw at least ten feet and call "Play!" The crosses must be placed back to back, and must overlap about two-thirds the length of the netting.

No other player shall be allowed within six feet of those facing the ball until it is in play.

SEC. 3. Whenever a goal is scored, the players must change goals, and the ball must again be put in play by facing it in the center of the field.

## RULE XII

SECTION 1. Only the captain of either side, and one other player appointed by him, shall have the right to claim a foul, and the referee shall not stop the game when foul is claimed by any one else.

SEC. 2. When "foul" has been claimed, the referee shall call "Time" by blowing a whistle, after which the ball must not be touched by either side, nor shall the players move from the positions in which they happen to be at that moment, until the referee has called "Play." If a player should be in possession of the ball when "time" is called, he must drop it on the ground. If the ball enters a goal after "time" has been called, the play shall not be counted. If a goal is made after the play on which a foul is claimed, and before "time" is called, that goal shall count if the foul claimed is not allowed.

SEC. 3. In case of rain, either before or during the match, the game shall be postponed or delayed only by consent of both captains.

SEC. 4. If postponed, and resumed on the same day, there shall be no change of players on either side.

### RULE XIII

SECTION 1. When a foul is allowed by the referee, the player fouled shall be allowed a "free run" with the ball from the place where the foul occurred. For this purpose, all players within ten feet of said player shall move away to that distance, all others retaining their positions. But if a foul is allowed within twenty yards of a goal, the man fouled shall be entitled to a free run on moving away to that distance from the goal.

SEC. 2. If a foul is claimed and time called, and the foul then not allowed, the player accused of fouling shall be granted a "free run" under the conditions mentioned in Section 1.

### RULE XIV

Any violations following directions shall constitute fouls and be punished as such by the referee: —

SECTION 1. No player shall grasp an opponent's crosse with his hands, hold it with his arms, or between his legs; nor shall any player, when more than six feet from the ball, hold his opponent's crosse with his crosse in any way so as to keep him from the ball until another player reaches it.

SEC. 2. No player with his crosse, or otherwise, shall hold, purposely strike, or trip another, nor push with the hand, nor wrestle with the legs so as to throw an opponent.

SEC. 3. No player shall throw his crosse at a player or at the ball, under any circumstances.

SEC. 4. No player shall hold the ball in his crosse with his hand or person.

SEC. 5. No player shall charge into another after the latter has thrown the ball.

SEC. 6. The crosse, or square, check, which consists of one player charging another with both hands on the crosse so as to make it strike the body of his opponent, is strictly forbidden.

SEC. 7. No player shall interfere in any way with another who is in pursuit of an opponent in possession of the ball.

SEC. 8. "Shouldering" is allowed only when the players are within six feet of the ball, and then from the side only. Under no circumstances may a player run into or shoulder an opponent from behind.

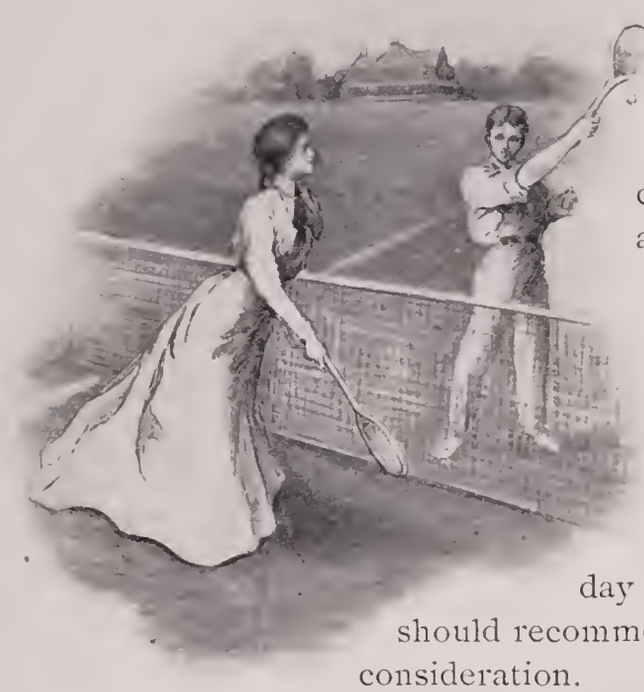
SEC. 9. No attacking player shall be allowed within the goal-crease unless the ball is there.

SEC. 10. No player shall check the goal-keeper from behind the poles while the latter is in position.

## LAWN TENNIS

THE game of Lawn Tennis first became known in this country about a quarter of a century ago, and at the present time is perhaps the most familiar of our lawn games. Although numerous professional and amateur matches are played each year, Tennis is especially a home game, and its adaptability to home amusement has been the chief cause of its popularity. One need only to watch a close game to be convinced that Tennis is an athletic sport, and a player

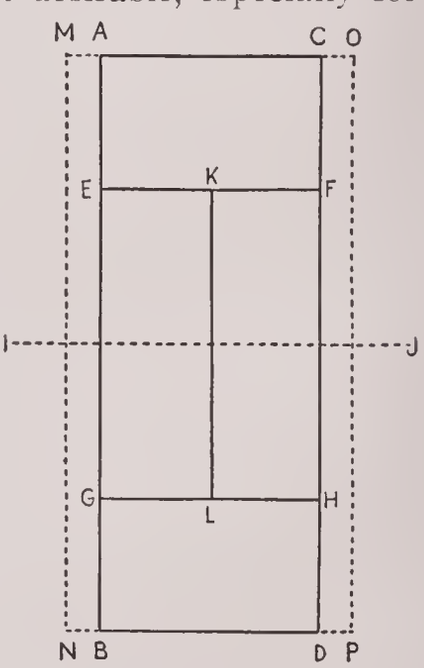
soon finds that it calls for too much rather than for too little exercise, as beginners are likely to suppose. As an interesting and beneficial outdoor sport for women, Tennis enters into close competition with golf. Both games offer a strong incentive to find healthful recreation in the open air. As to the comparative attractions of the two games, there are decided differences of opinion, but it is noticeable that each has done much to bring women into competition with men in the realm of athletics.



The prime requisites of a good Tennis player are agility, and quickness and accuracy of eye and hand. These qualities, with the possible exception of the first, are of inestimable value to us in our everyday lives, and whatever tends to develop them should recommend itself to us as worthy of our favorable consideration.

## THE COURT, RACKETS, AND BALLS

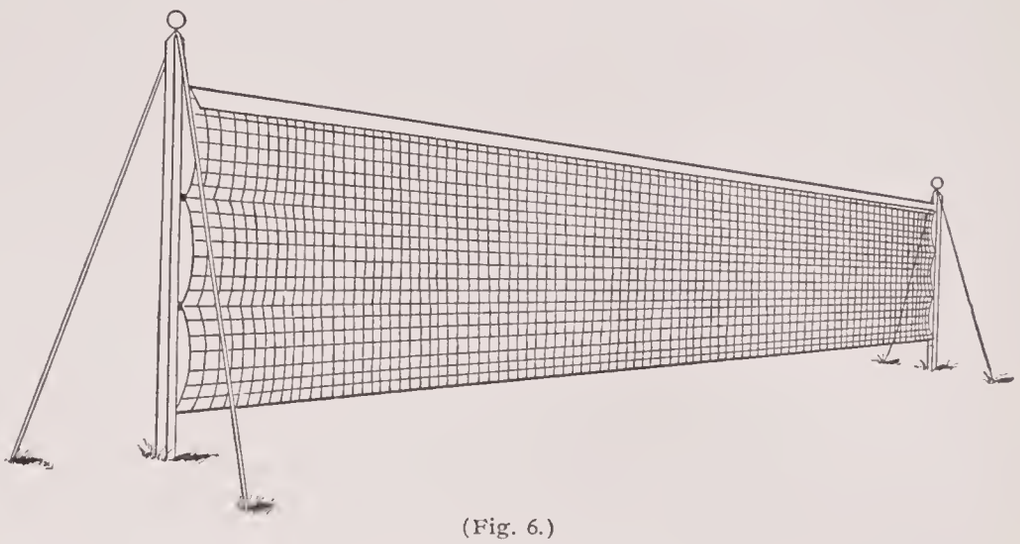
The surface of the field of play, or court, on which Tennis is played, may be macadam, clay, dirt, or grass, but the last is much the best. The hard surface of a macadam or clay court is very trying to the feet, and for other reasons is not desirable, especially for home play. Dirt courts are dusty in dry weather and dry slowly after a rain. They are to be preferred, however, to grass courts for club use, and in all places where the play is almost constant, since grass courts become irregular from being worn thin in spots by frequent use. The space selected should be about forty by ninety feet in dimensions, and the most important requirements are that it be level and smooth. The grass should be kept closely cut, and the surface, whether dirt or turf, should be made smooth and firm by frequent rolling.



(Fig. 5.)

Having selected and prepared the ground, the lines of the court should next be marked out. The marking is usually done by tracing the lines with lime or whiting, which may be applied with a broom

or whitewash brush, or by means of some one of the numerous patent appliances that are made for that purpose. The lines should be about one and one-half inches wide, and should frequently be renewed so that they may always be distinct. Many of our modern courts are marked with strips of tape, which are secured to the ground with pins and staples. In laying out the court (Fig. 5), care should be taken that there is no obstacle of any kind near the corners or the side or end lines. The *side lines*, AB and CD, of the ordinary single court are parallel, and are seventy-eight feet long. The *end*, or *base*, *lines*, AC and BD, are parallel, and are twenty-seven feet long. Lines EF and GH, which are known as *service lines*, are distant eighteen feet from AC and BD respectively. Line KL, which is called the *middle*, or *half-court*, *line*, passes through the center of the field from line EF to line GH, and is parallel to the side lines. The double court is made by the addition of lines MN and OP, which are parallel to the side lines and are four and one-half feet from them. The base lines, AC and BD, must also be extended to meet MN and OP.

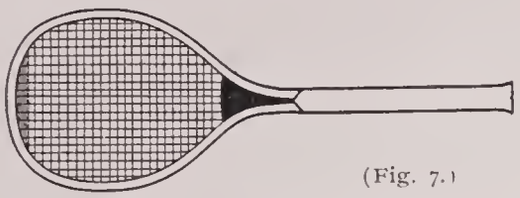


(Fig. 6.)

Line IJ passes through the center of the court, is parallel to the end lines and extends three feet outside of each of the side lines. A net pole is placed at each end of this line, and the net is stretched between the two poles. The poles are of wood or iron, and are four feet high. They are usually supported by guys, as in Figure 6, but they are sometimes fixed firmly in the ground without supports; a number of patent adjustable poles have been devised, which are held in place in various different ways. The net is made of twine, woven into meshes similar to those seen in ordinary fish nets. The openings are uniform in size, and the average diameter of each should not be greater than two inches. The net is required to extend from the ground to a height of three and one-half feet at the poles, and three feet at the middle. The latter height is usually maintained by means of a pronged pole or other device. A strip of white cotton, about three inches wide, running along the top of the net is intended to assist the player in distinguishing the top line of

the net. Stop nets of wire or other material are often placed a few feet outside the end lines of the court to stop passed balls.

The rackets used in Tennis are shaped as shown in Figure 7. Each is formed of a frame of wood in which strings of rawhide are closely and tightly interwoven. The handle is also of wood, and is often covered with cork or other light, rough material, which forms a good grip. The weight of ordinary rackets varies from thirteen and one-half to fifteen ounces, the lighter ones being used by women. In selecting a racket, it is well to choose a light one at first, for the exertion required to wield a fifteen-ounce racket for a considerable length of time, will tire the wrist of a person of ordinary strength and endurance to such an extent as to detract greatly from the accuracy of play. The best rule to follow in holding the racket is to grasp the handle at the point which seems most natural to the player.



(Fig. 7.)

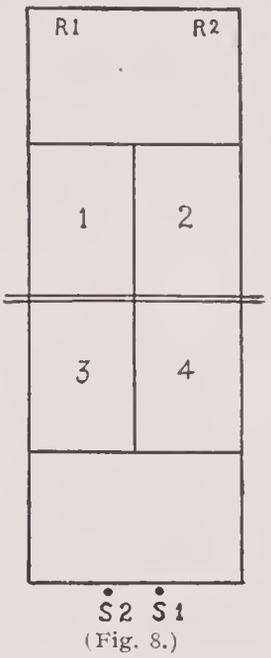
Tennis balls are hollow spheres of rubber, two and one-half inches in diameter, and are covered with a special kind of flannel-like, white fabric. (Fig. 7½.) The regulation ball weighs two ounces.

## THE GAME

In the single game of Lawn Tennis there are two players, who take their places one on either side of the net. The game is started by the "server," and his opponent is known as the "receiver," or "striker-out." The two players toss a coin to decide the choice of sides. The winner of the toss may select either the service or a side, but may not select both, and the choice of the other is left to his opponent. In delivering the first service, the server stands in position S, (Fig. 8) just outside the base line of the court, and a little to the right of the middle line. The receiver stands in position R. The server tosses the ball into the air and strikes it with his racket in the attempt to drive it over the net and to cause it to strike in court 1, which is diagonally opposite his position. The receiver then tries to return the ball with his racket so that it will pass over the net and strike within the outside limits of the server's court. He must hit the ball on the first bound; if he fails to do so, or causes it to strike against the net, or sends it over the net outside the


(Fig. 7½.)

server's court, the server scores one point. If the server fails to serve the ball so that it strikes in court 1, he makes a "fault," and two successive faults score one point for his antagonist. After the receiver returns the ball the first time, either player may hit it on the first bound, or may hit it while it is in the air and before it has touched the ground after leaving the racket of the other player. This latter is termed "volleying" the ball. If either player hits the ball in such a way as to send it into the net, or to cause it to strike outside his opponent's court, the opponent scores a point. This is also the case if a ball touches any part of a player or his clothing; if a player touches the net or its supports while the ball is in play; if he touches the ball with his racket more than once in a stroke; or if he strikes the ball while it is on his opponent's side of the net.



(Fig. 8.)

After the first point has been scored, the server takes the position S 2, and tries to serve the ball into court 2. The receiver then stands at R 2, and the game proceeds as before. The same player serves throughout the game and alternates between the positions S 1 and S 2 as points are scored.

The score is computed as follows: The first point won by a player counts 15; the second, 15 more, making 30; the third, 10, making 40; and the fourth wins the game, unless each player has 40 when the third point is made. The score is then said to be "deuce," and the player who next scores two successive points wins the game. A "love" score is a score of zero. The score of the server is always mentioned first. Thus, if the server has scored one point and the other player has not, the score is said to be "15, love." If the server has not scored and his opponent has scored one point, it is "love, 15." The terms "30, love" and "40, love" are used in a similar manner. The player who first wins six games wins the set, unless the players win five games each, when the set is won by the player who next wins two successive games. A set in which one of the players wins the first six consecutive games is called a "love set."

In serving the ball, the server makes use of the stroke which he believes to be most effective in obtaining two results, namely, accuracy and speed. His principal object is to obtain control of his service so that he may be able to place the ball in the receiving court of his opponent. His next is to serve the ball in the way that will make it most difficult for the receiver to return. The usual manner of serving is to take the ball in the left hand, toss it into the air just in front of, and in line with, the right shoulder, and to strike it with the

racket held in the right hand when it is at such a height that it can just be reached with the face of the racket. Some players, however, prefer to serve the ball from about the height of the shoulder, while others make use of the *underhand stroke*, in which the ball is struck when it is at a point below the elbow line of the server. It is well, in beginning, to pay more attention to accuracy of service than to speed, since only practice can decide how much speed a player can obtain without sacrificing accuracy.

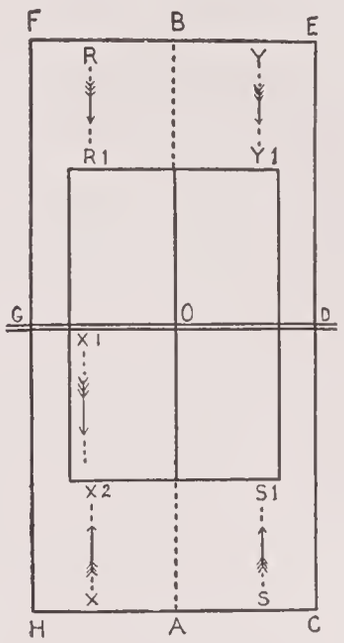
In receiving a served ball, the receiver places himself in the best possible position for returning it effectively, as soon as he is able to determine approximately the part of his court in which it will strike. His object is not simply to return it into his opponent's court, but to place it where it will be most difficult for his opponent to return it to him. One method of returning the ball that is useful, especially if your opponent be near the net, is by "lobbing," which consists in striking the ball in such a way as to cause it to go into the air and over the opponent's head. Especial care is necessary in lobbing the ball to avoid sending it outside the court. "Smashing" consists in putting great force into the stroke and trusting to speed to prevent the opponent from returning the ball. This style of stroke is especially useful to a player who is standing close to the net. Volleying, as has been explained, is striking the ball before it touches the ground. This is not permissible in returning a served ball, but may be done at any other time during the game.

In striking a ball on the bound it is usual to strike it after it has reached the highest point in the bound and is descending again. A stroke made just after the ball leaves the ground and when it is on its upward course, is termed a "half volley." A "drive" is a long, fairly swift stroke which passes close to the top of the net. Any one of these strokes may be either "forehand" or "backhand," that is, may be made either with the front face of the racket toward the ball, or with its back face forward. Circumstances must determine which of these methods is to be used, though the forehand stroke will, of course, be used wherever practicable.

Expert Lawn Tennis players generally follow one of two different styles of play, which are known respectively as the "base-line" game, and the "net" or "volley" game. In the former, the player remains well back in his court, makes most of his returns with the ball on the bound, and seldom volleys. The principal advantages of the base-line game are that the ball is always in front of the player, and that ordinarily he has time to judge its position and direction before returning it. This is a slow, defensive style of play and requires greater endurance than the snappy, offensive net game. In the latter the

player keeps as close to the net as he consistently can, and tries to volley as many balls as possible. When a net player is opposed to one who prefers the base-line style of game, the former tries to return the ball at sharp angles away from his opponent, and to cause it to strike close to the net. This forces the base-line player to make repeated long, quick runs throughout the game, so that, besides fatiguing him, it forces him to attempt the most difficult returns. The net game is no doubt the more effective of the two, as it is also the more difficult to play. The beginner should first become proficient in base-line play, and then gradually modify his style of play so as to approach more closely to the net game.

In the double game of Tennis, there are two players on each side, and the court is enlarged by the addition of the lines shown dotted in Figure 5. The four players serve alternately. Since there are two players on either side of the net, each must look after a specified portion of the court. The way in which this is allotted depends, of course, upon the judgment of the players, but the usual method is illustrated in Figure 9. The first player takes a position outside his base line, as at S, and, after serving, advances to S 1, and covers that part of the court included between line AO and side line CD. His partner stands first either at X or at X 1, and when the service is returned moves to X 2, so as to be in position to cover the part of the court included between line AO and side line HG. The player of the opposite side, who is to receive the service, stands at R, returns the service and moves to R 1. He covers space BOGF. His partner moves from Y to Y 1, when the service is returned, and covers space BODE. Each player should be careful not to encroach upon his partner's playing space, as a collision is likely to result and a stroke thus be missed. Of course, the line separating the spaces to be covered by each of the players on a side is not fixed, but varies slightly, and when the players have become familiar with each other's style of play they are able to estimate at a glance whose territory the ball is in. The three-hand game is played in a double Tennis court, and is a modification of the double game.



(Fig. 9.)

In Tennis, as in other forms of athletic sport, it takes constant practice to become proficient. A beginner should strive to attain accuracy first and speed afterward. He should always play carefully and with judgment rather than attempt brilliant but erratic plays.

Following are some of the terms commonly used in tennis: —

## GLOSSARY

*Advantage* — The next stroke won by either player when the score is deuce (which see).

*Advantage-game* — The next game won after both sides have previously scored five games. (See Rule III, Sec. 21.)

*Back-hander, Back-hand Stroke* — A stroke in which the ball is hit with the reverse side of the racket.

*Ball* — (See Rule II.)

*Deuce* — The score when both players or sides have won three strokes. (The same as Forty-all.)

*Deuce-game* — The game, the winning of which makes the score in games equal, when each side has won more than five.

*Double* — A game in which there are two players on each side.

*Drop-stroke* — A stroke by which the ball is driven to the ground close to the net.

*Fanet* — (See Rule III, Sec. 6.)

*Fifteen* — The score for either player on winning his first stroke.

*Forty* — The score for either player on winning his third stroke. (See Deuce.)

*Forty-all* — (See Deuce.)

*Games-all* — If each player wins five games, the score becomes games-all. (See Rule III, Sec. 21.)

*Half-volley* — A stroke made at the moment the ball leaves the ground.

*Hang* — A method of service by which the ball comes up slowly or irregularly from the ground.

*Let* — (See Rule III, Sec. 19.)

*Lob* — A ball returned high in the air, usually to avoid a player near the net.

*Love* — Nothing scored.

*Love-set* — A set won in six consecutive games.

*Place* — To direct the ball to a desired part of the opponent's court.

*Poach* — To take a ball that should be taken by one's partner.

*Rally* — A series of strokes, beginning with the service and ending with a failure to return the ball.

*Rough Side of Racket* — The side of the racket from which the twisted gut projects.

*Serve* — To deliver the ball from the back line at the commencement of the game, and after the scoring of each point.

*Single* — A game in which there is only one player on each side.

*Smooth Side of Racket* — The side from which the twisted gut does not project.

*Sudden Death* — A term used when it has been agreed to decide the set by the best of eleven games, without playing deuce and vantage-games.

*Tennis-elbow* — An injury to the arm, attributed to excessive strain in overhand service.

*Thirty* — The score for a player on winning his second stroke.

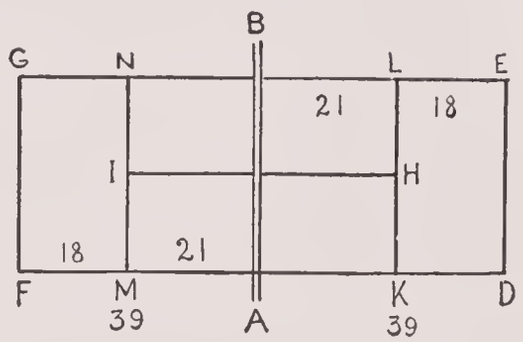
*Twist* — A movement imparted to the ball, causing it to swerve on rising from the ground.

*Volley* — A stroke by which the ball is returned before it reaches the ground.

Following are the rules of the game of Lawn Tennis, as adopted by the National Lawn Tennis Association of the United States: —

## RULE I. — THE COURT

The Court is seventy-eight feet long and twenty-seven feet wide. (Fig. 10.) It is divided into two equal parts by a net, the ends of which are attached to two posts, A and B, standing three feet outside the Court on either side. The height of the net is three feet six inches at the posts and three feet in the middle. At each end of the Court, parallel with the net and thirty-nine feet from it, are drawn the base lines, DE and FG, the ends of which are connected by the side lines, DF and EG. Halfway between the side lines, and parallel with them, is drawn the half-court line, IH, dividing the space on either side of the net into two equal parts, the right and left courts. On either side of the net, at a distance of twenty-one feet from and parallel with it, are drawn the service lines, KL and MN.



(Fig. 10.)

## RULE II. — THE BALL

The official ball shall measure not less than $2\frac{15}{32}$ inches, nor more than $2\frac{1}{2}$ inches in diameter; and shall weigh not less than $1\frac{15}{16}$ ounces, nor more than 2 ounces.

## RULE III. — THE GAME

Section 1. The choice of sides, and the right to serve in the first game, shall be decided by toss; provided that if the winner of the toss choose the right to serve, the other player shall have choice of sides, and *vice versâ*, or the winner of the toss may insist upon a choice by his opponent. If one player choose the court, the other may elect not to serve.

Sec. 2. The players shall stand on opposite sides of the net; the player who first delivers the ball shall be called the *server* and the other the *striker-out*.

Sec. 3. At the end of the first game the striker-out shall become server, and the server shall become striker-out; and so on alternately in all the subsequent games of the set, or series of sets.

Sec. 4. The server shall stand with both feet behind the base line, that is, on the side of that line farthest from the net. It is not a fault if one of the server's feet does not touch the ground at the moment at which the service is delivered. He shall place both feet on the ground immediately before serving, and shall not take a running or walking start. He shall deliver the service from the right and left courts alternately, beginning from the right.

Sec. 5. A served ball must drop between the service line, half-court line, and the side line of the court which is diagonally opposite that from which it was served.

Sec. 6. It is a fault: (*a*) If the server fail to strike the ball; (*b*) if the ball served drop in the net, or beyond the service line, or out of court, or in the wrong court; (*c*) if the server do not stand as directed by Section 4.

Sec. 7. A fault cannot be taken.

Sec. 8. After a fault, the server shall serve again from the same court from which he served that fault, unless it was a fault because he served from the wrong court.

Sec. 9. A fault cannot be claimed after the next service is delivered.

Sec. 10. The server shall not serve till the striker-out is ready. If the latter attempt to return the service, he shall be deemed ready.

Sec. 11. A service or fault delivered when the strike-out is not ready, counts for nothing.

Sec. 12. The service shall not be volleyed, that is, taken before it has touched the ground.

Sec. 13. A ball is in play on leaving the server's racket, except as provided in Section 6.

Sec. 14. A return is allowed, even though it cause the ball to touch the net; but a service, otherwise good, which touches the net, shall count for nothing.

Sec. 15. The server wins a stroke: (*a*) If the striker-out volley the service, or if he fail to return the service or the ball in play; (*b*) if he return the service or the ball in play so that it drops outside his opponent's court; (*c*) if he otherwise lose a stroke, as provided by Section 8.

Sec. 16. The striker-out wins a stroke: (*a*) If the server serve two consecutive faults; (*b*) if he fail to return the ball in play; (*c*) if he return the ball in play so that it drops outside his opponent's court; (*d*) if he otherwise lose a stroke, as provided by Section 8.

Sec. 17. A ball falling on a line is regarded as falling in the court bounded by that line.

Sec. 18. Either player loses a stroke: (*a*) If the ball touch him, or anything that he wears or carries, except his racket in the act of striking; (*b*) if he touch the net or any of its supports while the ball is in play; (*c*) if he volley the ball before it has passed the net.

Sec. 19. In case a player is obstructed by any accident not within his control, the ball shall be considered a "let." But where a permanent fixture of the court is the cause of the accident, the point shall be counted. The benches and chairs placed around the court shall be considered permanent fixtures. If, however, a ball in play strike a permanent fixture of the court (other than the net or posts) before it touches the ground, the point is lost; if after it has touched the ground, the point shall be counted.

Sec. 20. On either player winning his first stroke, the score is called 15 for that player; on either player winning his second stroke, the score is called 30 for that player; on either player winning his third stroke, the score is called 40 for that player; and the fourth stroke won by either player wins the game for that player, except as provided below: —

If both players have won three strokes, the score is called *deuce*, and the next stroke won by either player is scored *advantage* for that player. If the same player win the next stroke, he wins the game; if he lose the next stroke, the score returns to deuce, and so on until one player wins the two strokes immediately following the score of deuce, when *game* is scored for that player.

SEC. 21. The player who first wins six games wins the set; except as provided below: If both players win five games, the score is called *games all*, and the next game won by either player is scored *advantage game* for that player. If the same player win the next game, he wins the set; if he lose the next game, the score returns to *games all*, and so on until either player wins the two games immediately following the score of *games all*, when he wins the set. But the committee having charge of any tournament may in their discretion modify this rule by the omission of *advantage sets*.

SEC. 22. The players shall change sides at the end of every set; but the umpire, on appeal from either player before the toss for choice, shall direct the players to change sides at the end of the first, third, fifth and every succeeding alternate game of each set; if the appeal be made after the toss for choice, the umpire may only direct the players to change sides at the end of the first, third, fifth and every succeeding alternate game of the odd, or deciding, set. If the players change courts in the alternate games throughout the match, as above, they shall play in the first game of each set after the first in the courts in which they respectively did not play in the first game of the set immediately preceding.

SEC. 23. When a series of sets is played, the player who served in the last game of one set shall be striker-out in the first game of the next.

SEC. 24. In all contests, the play shall be continuous from the first service till the match be concluded; provided, however, that between all sets after the second either player is entitled to a rest, which shall not exceed seven minutes; and provided, further, that in case of an unavoidable accident, a cessation of play which shall not exceed two minutes may be allowed between points; but this proviso shall be strictly construed, and the privilege shall never be granted for the purpose of allowing a player to recover his strength or wind. The umpire, in his discretion, may at any time postpone the match on account of darkness, or condition of the ground or weather. In any case of postponement, the previous score shall hold good. When the play has ceased for more than an hour, the player who, at the cessation thereof, was in the court first chosen, shall have the choice of courts, on the renewal of play. He shall stay in the court he chooses for the remainder of the set. The last two sentences of this rule do not apply when the players change every alternate game, as provided by Rule 24.

SEC. 25. If a player serve out of his turn, the umpire, as soon as the mistake is discovered, shall direct the player to serve who ought to have served. But all strokes scored before such discovery shall be counted. If a game shall have been completed before such discovery, then the service in the next alternate game shall be delivered by the player who did not serve out of his turn, and so in regular rotation.

SEC. 26. There shall be a referee for every tournament, whose name shall be stated in the circular announcing such tournament. He shall have general charge of the matches, under the instructions and advice of the Managing Committee, with such power and authority as may be given by these rules and by said committee. He shall notify the committee in case he intends to leave the grounds during the matches, and the committee shall appoint a substitute to act with like power during his absence. There shall be an umpire for each match, and as many linesmen as the players desire. The umpire may also act as linesman. The umpire shall have general charge of the match, and shall decide upon and call *lets*, and also decide whether the player took the ball on the first or second bound. The umpire shall also decide any question that may arise regarding the interpretation

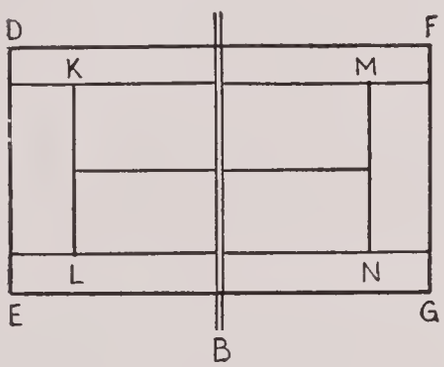
or construction of the rules. The decision of the umpire upon any question of fact, or where discretion is allowed him under these rules, shall be final. Any player, however, may protest against any interpretation or construction of the rules by the umpire, and may appeal to the referee. The decision of the referee upon such appeal shall be final.

The court shall be divided between the linesmen, and it shall be their only duty to decide, each for his share of the court, where the ball touched the ground, except, however, the linesmen for the base line, who shall also call foot faults. A linesman's decision shall be final. If a linesman is unable to give a decision, because he did not see, or is uncertain of the fact, the umpire shall decide, or direct the stroke to be played again.

Sec. 27. The above section shall apply to three-hand games, except as provided below:—

### Three-hand and Four-hand Games

Sec. 28. For three-hand and four-hand games the court shall be thirty feet wide; four and one-half feet inside the side lines, and parallel with them, are drawn the service side lines, KM and LN. (Fig. 11.) The service lines are not drawn beyond the point at which they meet the service side lines, as shown in the diagram.



(Fig. 11.)

Sec. 29. In three-hand games the single player shall serve in every alternate game.

Sec. 30. In four-hand games the pair who have the right to serve in the first game shall decide which partner shall do so; and the opposing pair shall decide in like manner for the second game. The partner of the player who served in the first game shall serve in the third, and the partner of the player who served in the second game shall serve in the fourth, and the same order shall be maintained in all the subsequent games of the set.

Sec. 31. At the beginning of the next set, either partner of the pair which struck out in the last game of the last set may serve, and the same privilege is given to their opponents in the second game of the new set.

Sec. 32. The players shall take the service alternately throughout the game; a player cannot receive a service delivered to his partner, and the order of service and striking out once established shall not be altered, nor shall the striker-out change courts to receive the service till the end of the set.

Sec. 33. It is a fault if the ball served do not drop between the service line, half-court line, and the side line of the court that is diagonally opposite that from which it was served.

Sec. 34. It is a fault if the ball served does not drop as provided in Section 33, or if it touch the server's partner or anything he wears or carries.

### Given Odds

Sec. 35. *One-sixth of fifteen* (*1–6*) is one stroke given by the better to the poorer player in the second, eighth, fourteenth, and every subsequent sixth game in each set.

*Two-sixths of fifteen* (*2–6*) is one stroke given in the second, fourth, eighth, tenth, and corresponding games in each set.

*Three-sixths of fifteen* (*3–6 or one-half*) is one stroke given in the second, fourth, sixth, and every other alternate game in each set.

*Four-sixths of fifteen* (*4–6*) is one stroke given in the second, fourth, sixth, eighth, tenth, eleventh, twelfth, and corresponding games in each set.

*Fifteen* (*15*) is one stroke given in every game of each set.

*Fifteen and one-sixth* (*15.1*) is two strokes given in the same games as for *one-sixth*, and one stroke in each of the others.

*Fifteen and two-sixths* (*15.2*) is two strokes given in the same games as for *two-sixths*, and one stroke in each of the others.

*Fifteen and three-sixths* (*15.3 or half-thirty*) is two strokes given in the same games as for *three-sixths*, and one stroke in each of the others.

*Fifteen and four-sixths* (*15.4*) is two strokes given in the same games as for *four-sixths*, and one stroke in each of the others.

*Fifteen and five-sixths* (*15.5*) is two strokes given in the same games as for *five-sixths*, and one stroke in each of the others.

*Thirty* (*30*) is two strokes given in each game.

*Thirty and one-sixth* (*30.1*), *thirty and two-sixths* (*30.2*), *thirty and three-sixths* (*30.3 or half-forty*), *thirty and four-sixths* (*30.4*), *thirty and five-sixths* (*30.5*), *and forty* (*40*) are three strokes and two given in the corresponding games of each set, as in the fifteen series.

### Owed Odds

Sec 36. Owed (or minus) odds can also be used in exactly the same ways, the chief difference being that the better player is required to earn the owed strokes before he begins to score, while, in the case of given odds, the poorer player is given his handicap before play starts. These owed odds may be used either in conjunction with the given odds or separately. In order that the handicaps may occur as seldom as possible in the same games, when two players meet, one of whom owes odds and the other receives them, the games in which the owed strokes are paid differ from those in which the given strokes are taken. Following is the table for owed odds:—

*One-sixth* (*1–6*) is one stroke owed in the first, seventh, thirteenth, and every subsequent sixth game in each set.

*Two-sixths* (*2–6*) is one stroke owed in the first, third, seventh, ninth, and corresponding games in each set.

*Three-sixths* (*3–6 or one-half*) is one stroke owed in the first, third, fifth, and every other alternate game in each set.

*Four-sixths* (*4–6*) is one stroke owed in the first, third, fifth, sixth, and corresponding games in each set.

*Five-sixths* (*5–6*) is one stroke owed in the first, third, fourth, fifth, sixth, and corresponding games in each set.

*Fifteen* (*15*) is one stroke owed in each game.

*Fifteen and one-sixth* (*15.1*), *fifteen and two-sixths* (*15.2*), *fifteen and three-sixths* (*15.3 or half-thirty*), *fifteen and four-sixths* (*15.4*), *fifteen and five-sixths* (*15.5*), *thirty* (*30*), *thirty and one-sixth* (*30.1*), *thirty and two-sixths* (*30.2*), *thirty and three-sixths* (*30.3 or half-forty*), *thirty and four-sixths* (*30.4*), *thirty and five-sixths* (*30.5*) and *forty* (*40*) correspond to the fractions of fifteen, in the same way that the larger handicaps in the table for given odds correspond to the fractions of fifteen in that table.

The following explanation of special points in the rule will be found of value:—

## KNOTTY POINTS

### Addenda to the Laws of the Game

[Revised and approved by the Council of the Lawn Tennis Association.]

1. In no case may the striker-out volley the service, not even if the ball is clearly outside the service court.

2. A player who is struck by or strikes a ball in play (unless he thereby makes a good return) loses the stroke, no matter whether he is standing within the limits of the court or outside of them.

3. If the service is delivered before the striker-out is ready, and he tries to return it, but fails, he loses the stroke.

4. If the striker-out cries "Not ready!" after the service has been delivered, but before the ball touches the ground, he may not claim a fault because the ball ultimately drops outside the service court.

5. If the server, in attempting to serve, misses the ball altogether, it does not count as a fault, but if the ball is touched, no matter how slightly, by the racket, a service is thereby delivered and the rules governing the service apply at once.

6. If a ball, served or returned, drops into the proper court and screws or is blown back over the net, the player whose turn it is to strike may reach over the net and play the ball, provided that neither he nor any part of his clothes or racket touch the net. If he fails to play the ball, the stroke, of course, scores to his opponent, notwithstanding the fact that the ball has gone back over the net.

7. If a player throws his racket at the ball and so returns the ball into the proper court, he loses the stroke.

8. If a player catches a ball on his racket, walks with it to the net, and, reaching over, drops it into the court, he loses the stroke, as such proceeding cannot be regarded as an "act of striking."

9. If a player's racket passes over the net after he has returned the ball, he does not lose the stroke, providing the ball has passed over the net before being played, and has been returned properly.

10. If a player or his racket touches the posts or supports of the net or posts while the ball is in play, he loses the stroke.

11. If a player's racket slips out of his hand and touches the net while the ball is in play, he loses the stroke.

12. If a player, to avoid touching the net, jumps over it while the ball is in play, he loses the stroke.

13. If a ball is returned outside the posts, either above or below the level of the top of the net, and drops into court, it is a good return.

14. If a player succeeds in returning a ball served or in play which strikes a ball lying in the court, it is a good return.

15. If a spectator impedes, or in any way interferes with, a player, a "let" may be allowed under Section 19.

16. A "let" does not annul a previous fault.

17. The service always begins from the right-hand court, even though odds are given or owed, and the service always continues alternately from the right and left courts.

18. If an umpire erroneously calls "Fault!" and at once corrects himself and cries "Play!" and the striker-out fails to return the ball, a "let" must be allowed.

19. If the ball in play (other than a service) strikes any part of the net or its supports, or the center stay, no matter how low down (provided it does not touch the ground), and eventually goes over into the proper court, it is a good return.

20. If in a double game the service strikes either of the opponents, the server wins the stroke.

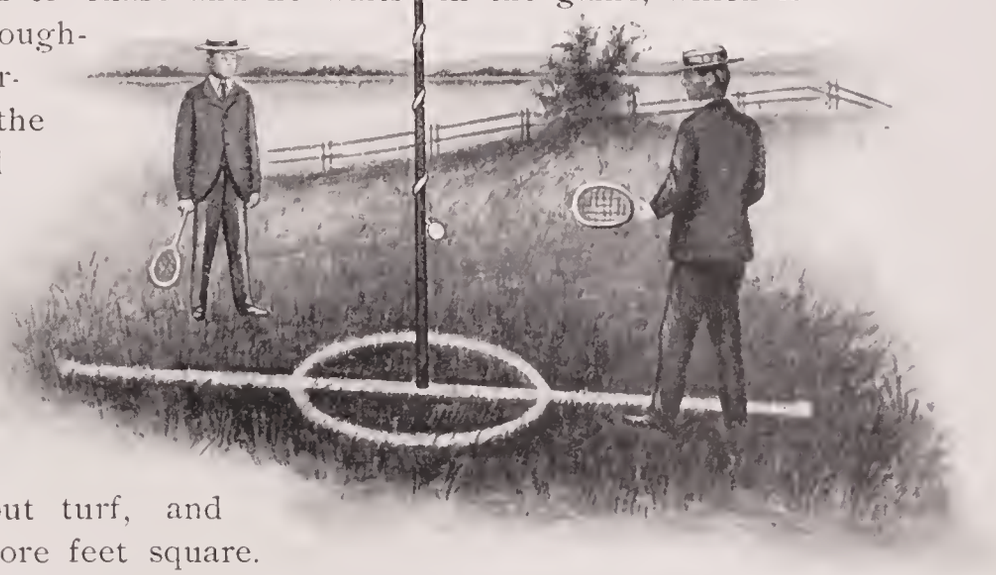
21. If a match is postponed on account of rain or darkness, or for any similar reason, and is continued on the subsequent day, the match shall be resumed from the point where it was discontinued on the previous day. An entirely new beginning may be made only with the consent of the referee.

22. If two players in a handicap play the wrong odds, the match stands, unless they have been wrongly instructed by the referee, or any person or persons acting under his instructions, in which case the loser may require that the match be replayed, unless the mistake in the odds has been in his favor. Such claim must be made within a reasonable time.

23. A similar decision must be given if two players neglect to play advantage sets when one of the conditions of the event in which they are competing is that advantage sets should be played.

# TETHER BALL

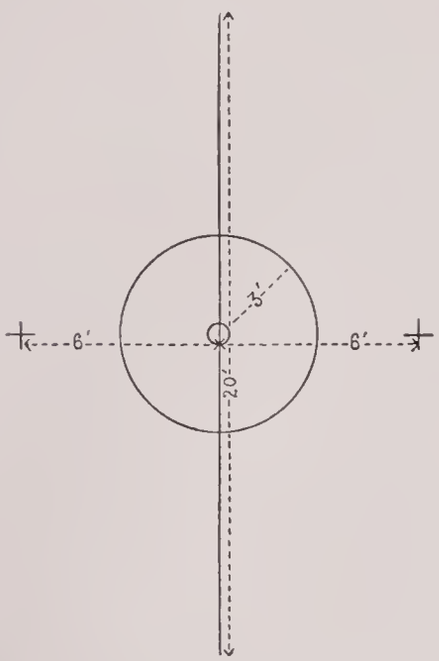
Tether Ball, or Tether Tennis, as it is sometimes called, is one of the recent developments of lawn tennis. From the time of the old Roman games played with rackets, there has been a gradual increase of interest in this class of games, and a corresponding number of improvements have been made and innovations introduced. The game of Tether Ball, though perhaps the most recently devised of the racket games, has already become well and popularly known, and the numerous points in its favor warrant the belief that it will become still more popular in the near future. Some of the advantages of the game are: that it requires only a limited space of ground; that only a few inexpensive accessories are necessary; that there are no balls to chase and no waits in the game, which is fast and interesting throughout; and that the exercise is so light that the game may be played by either men or women without special training.



The court for Tether Ball should be a smooth, level piece of ground, either with or without turf, and must be twenty or more feet square. In the center of this space, a wooden pole is firmly secured in a vertical position, so as to extend ten feet above the surface of

the ground. A circle with a radius of three feet is plainly marked with lime, or in some other manner, around the base of the pole as a center, and this circle is bisected by a straight line, marked in a similar way, which extends ten feet on each side of the pole. The space outside the circle on one side of this line is one *court*, and that on the other side is the other *court*. Six feet on either side of the pole, and at right angles to the line of division, a small cross, called a *service cross*, is marked on the ground. At a point of six feet above the ground, the pole is encircled by a band of black paint two inches wide. An ordinary tennis ball with a linen cover is suspended by a string from the top of the pole, so as to hang two and one-half feet above the ground.

There are two players, and each is provided with an ordinary tennis racket. The game consists in one of the players endeavoring to strike the ball with his racket so as to cause the string to wind around the pole above the painted band in one direction, while his opponent endeavors to cause it to do the same in the opposite direction. The player who succeeds in his attempt wins the game.




In beginning the game, the two players "toss" to decide the order of play. The one winning the "toss" states in which direction he will endeavor to wind the string on the pole; the loser serves first. To do this, he stands in his court at the point marked with the cross, and, after seeing that there are no turns of the string around the pole, takes the ball in one hand and strikes it with the racket, which is held in the other hand, so as to cause the string to wind around the pole in the desired direction. His opponent stands in the other court and strikes the ball with his racket, in the endeavor to cause the string to wind around the pole in the opposite direction, which was the one chosen by him as winner of the "toss." While the ball is in play neither player may touch it with his hand. Each must keep his body and his racket wholly within his own court, and must not step on or over the circle about the pole. The game, though offering plenty of opportunity for the display of skill and judgment, is not at all complicated, and from the foregoing brief description, aided by a study of the following rules, there will be no difficulty in understanding both how to superintend the construction of a court and how to play the game.

## RULES

### The Pole

1. The pole shall be an upright wooden pole, extending ten feet above the ground. It must be in a vertical position and firmly embedded in the earth so as not to vibrate. The pole shall be seven and one-half inches in circumference at the ground and may taper toward its upper end. There shall be a black band two inches wide painted around it six feet above the ground.

### The Court

2. The court may be any smooth piece of ground, either with or without grass. It must be free from all obstructions. A circle with a radius of three feet shall be drawn on the ground about the pole. A straight line twenty feet long shall bisect the circle, dividing the court into two sections, as shown in the diagram. Six feet from the pole, at right angles to the line of division on each side of it, there shall be plainly marked two crosses. They are to be known as the "service crosses."

### The Ball

3. The ball shall be a championship tennis ball, having a tight-fitting cover of linen cord. It shall be fastened to a string with a ring made of the same kind of cord. No metal shall be used on the ball. It shall be suspended from the top of the pole by a piece of heavy, braided fish line. The cord must allow the ball to hang seven and one-half feet below the top of the pole, so that when hanging at rest, it will be two and one-half feet from the ground.

### The Game

(1) The game shall be played by two opponents, who shall toss rackets for choice of court. The loser shall have service.

(2) The game shall be started by the service. This shall be taken from the center of each person's court at the point marked with a cross.

(3) The ball may be struck in any manner with the racket so as to send it in the direction agreed upon at the beginning of the game, the object being to wind the string upon the pole above the black line. The ball may be hit but once. It must then go into the opponent's court. A violation of this rule constitutes a foul.

(4) The winner of the toss shall determine in which direction he will endeavor to wind the ball. His opponent must then endeavor to prevent his winding the ball in that direction, and to wind it in the opposite direction.

(5) Each player must keep wholly within his own court. This includes his arm and his racket. He must not step on or over the circle about the pole. A violation of this rule constitutes a foul.

(6) If the string winds around the handle of the racket of one of the players, a foul is declared. In case the string winds about the pole below the black mark, a foul is counted against the person in whose favor the string is wound.

(7) Penalty for all fouls is a free hit by the opponent from the service cross.

(8) If, in taking the ball for service, it must be either wound or unwound on the pole a half turn in order to reach the other side, it shall be so wound or unwound.

(9) The game is won when the string has all been wound on the pole above the black line.

(10) The person winning the majority of eleven games wins the set.

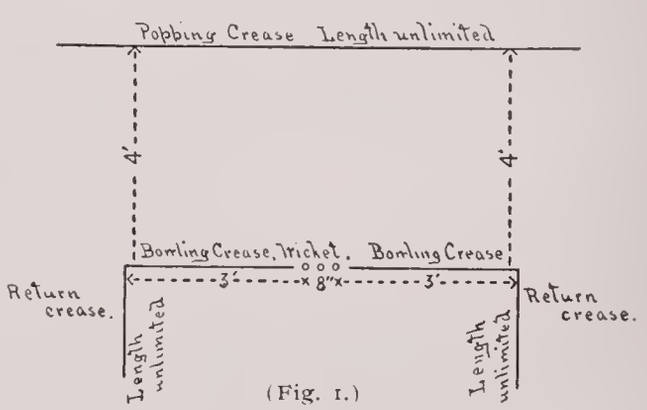
# CRICKET

CRICKET may be said to occupy the same place in the heart of the English boy that baseball does in that of his American cousin, the difference being that Cricket means much more to the former than baseball does to the latter. The reason for this difference is readily understood when we consider that, while our American game has been in existence less than forty years, Cricket has been the English national sport for more than two centuries. In the schools and colleges of the two countries, however, these are respectively regarded as the national games, and the English boy who has made a good score, or has broken the defense of his opponents by skilful bowling in Cricket, is regarded in a heroic light by his fellows, just as is the American youth who has made a "home-run," or a clever "catch" at baseball.

Although a few Cricket elevens have been formed in this country, and intercollegiate matches have been played, the game has never attained the popularity here to which its rank as an amateur sport would seem to entitle it. It is more complicated than baseball. Both games use the ball and bat, and they have many other points of similarity.

## THE FIELD; BALL AND BAT

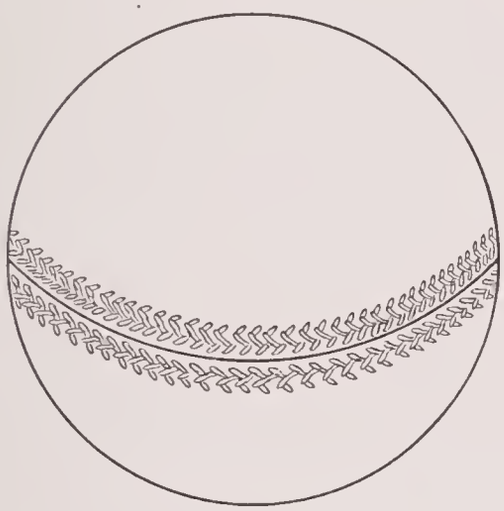
The first requisite for a game of Cricket is a smooth, level field, as large as possible (from four to eight acres is the usual size), covered with a firm turf on which the grass is not coarse, and is kept carefully clipped. The two *wickets* are placed near the center of the field, twenty-two yards apart, opposite and parallel to each other. The space between them is called the "pitch," and corresponds to the space between the pitcher and the home base in baseball. Each wicket consists of three round, wooden sticks, called "stumps," which are driven into the ground in line, and have two bails on top. The stumps must be of




(Fig. 1.)

equal size, and must be placed just near enough together to prevent the ball from passing between them, their total width being eight inches, and their height twenty-seven inches above the ground. The bails are each four inches long, and, when placed in line on top of the stumps, must not project above them more than a half-inch. They should be lightly poised, so that a slight jar of the wicket will cause them to fall to the ground. A wicket is "down" when either of the bails is struck off, or, if both bails be off, when a stump is struck out of the ground.

The *bowling crease* (Fig. I.), which corresponds to the pitcher's box in baseball, extends three feet on either side of the wicket, and in the same line with it, and there is a *return crease* of unlimited length at each end of the bowling crease, extending behind the wicket, and at right angles to it. The *popping crease*, which corresponds to the front line of the batter's box in baseball, is of unlimited length, and is four feet in front of the wicket, and parallel to it.

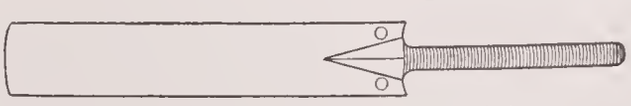


(Fig. 2.)

Cricket balls (Fig. II.), are leather-covered, and are similar to the ordinary baseball; they should weigh between five and five and three-fourths ounces, and should be between nine and nine and one-fourth inches in circumference.

The *bat* most commonly used (Fig. III.) is made of willow, and has a spliced handle, which is usually of cane. The bat is nearly flat, and should be not more than four and one-fourth inches wide in the widest part, and not more than thirty-eight inches long. The best and most durable bats are those having a plain, straight grain. Before being used, they should be well seasoned and oiled. A beginner should be careful not to select too heavy a bat,—a good weight for a young player is about two and one-fourth pounds. The average batsman should use a bat weighing from three to three and one-fourth pounds.

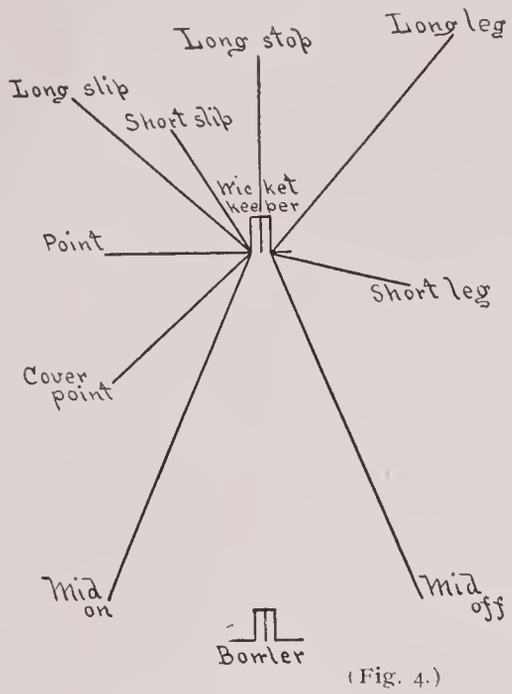
Matches are played between two sides of eleven men each, unless otherwise agreed, and each side has one or more innings, according as the match lasts one or more days. Each side is under the charge of a captain, who manages the side and arranges the order of batting, and the positions the men are to occupy in the field. The captains should also agree as to



(Fig. 3.)

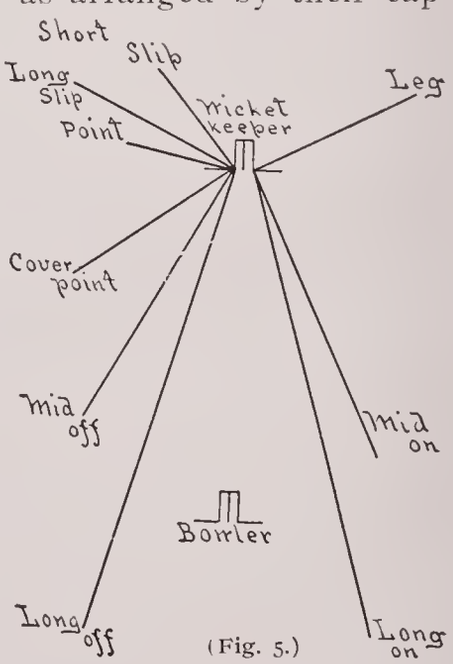
the length of the game and as to the application of any rules about which there is likely to be a difference of opinion. They must agree upon two umpires. During the game, each of the umpires takes a position near one of the wickets. If the field is limited in size, they should arrange before the game is begun to give a nominal value to such hits as send the ball out of bounds.

All the preliminaries having been arranged, the captains toss for the choice of innings, the winner usually preferring that his side shall go first to bat. The umpires then go to their places, taking the ball and bails with them, and placing the latter in position on the stumps. The captain of the fielding side then stations a man at each wicket, one being the *bowler*, and the other the *wicket-keeper*, and the other men take their places in the field. As in baseball, the placing of the field depends entirely upon the captain's judgment, the desire being to have the men stationed where batted balls are most likely to go. Figures IV., V. and VI. give the usual positions for the fielders for the different kinds of bowling, but these vary greatly in different games.



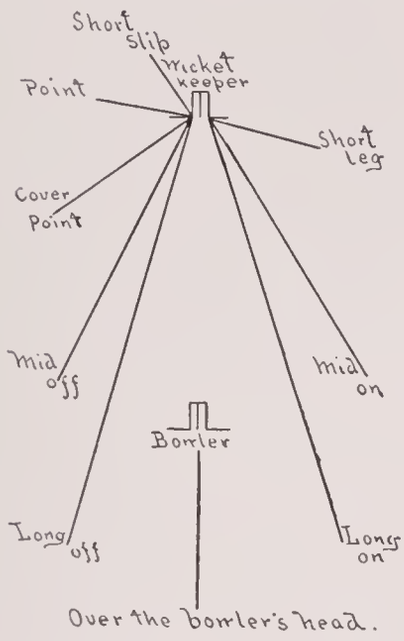
(Fig. 4.)

The two batsmen who are first in order as arranged by their captain, go to the wickets, after having settled between them which is to receive the first ball. The first batsman takes a position in front of the wicket at which the wicket-keeper is stationed, and between the bowling crease and the popping crease (Fig. I), and places himself where, in his judgment, he will be best able to interpose his bat between his wicket and a ball bowled from the other wicket. The unoccupied batsman stands between the bowling crease and the popping crease at the bowler's wicket, in such a position as not to interfere with the latter's movements, or to obstruct the view of the umpire at that end. The bowler must stand with one foot behind the bowling crease, and inside of the return crease. The wicket-keeper, who corresponds to the catcher in



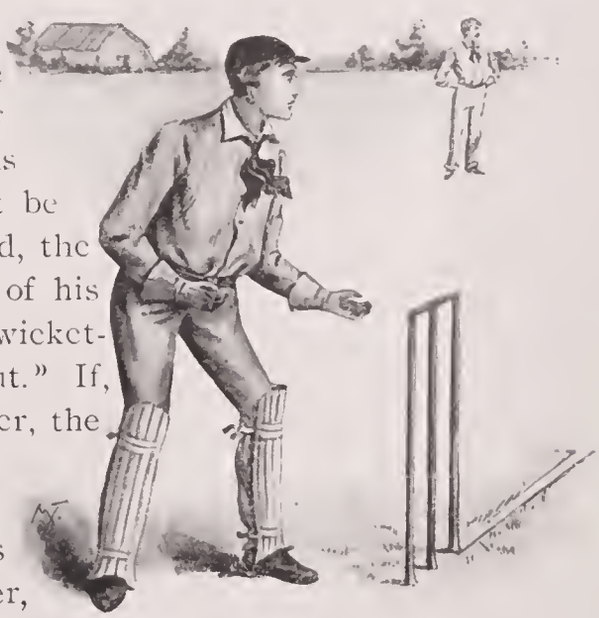
(Fig. 5.)

baseball, stands directly behind his wicket, and when the ball is bowled, catches it and returns it to the bowler, just as is done by the catcher in baseball. The difference between *bowling* and *pitching* is that in the former the ball must not be thrown, and the arm must be straight as it leaves the shoulder.



(Fig. 6.)

The umpire at the bowler's wicket looks to see if all is ready, then calls "Play!" and the game begins. The bowler's object is to hit the wicket, or to deliver the ball in such way that when hit by the batsman it will go into the air and be caught by a fielder; or to coax the batsman over the popping crease, when, if he miss the ball, the wicket is knocked down by the wicket-keeper, and the batsman is *stumped out*. The object of the batsman is to prevent the ball from striking the wicket, and to hit it so that it will go where it will not be caught by a fielder, and a chance will thus be given to the batsman for a run. A run is scored if, after the batsman hits the ball, or at any other time while the ball is in play, both he and his partner run across from wicket to wicket, each getting inside the opposite popping crease without his wicket being struck down by a ball after touching any fieldsman, or by the hand or arm of any fieldsman having the ball in hand; if this process can be repeated, two runs are scored, and so on. It will thus be seen that if an odd number of runs is made, the batsmen will have changed wickets, and the second of them must receive the next ball.



If, in running, or at any other time while the ball is in play, the runner be *out of his ground*, and his wicket be struck down, he is "run out"; if a ball from a stroke of the bat be caught by a fielder before it touches the ground, the batsman is "caught out"; and if he be out of his ground, and the wicket be put down by the wicket-keeper with the ball in hand, he is "stumped out." If, in running, the batsmen have passed each other, the one who is running for the wicket that is put down is out; if they have not passed, the one who has left the wicket that is put down is out. As each batsman is put out he is replaced by another, and when ten have been put out the other side takes its inning. The eleventh batsman is entered on the scoring sheet as "not out."

When five balls have been delivered, the umpire at the bowler's wicket calls "Over!" A fresh bowler takes the ball and bowls from the other wicket, and the fieldsmen take new positions, which, however, bear the same relation to the position of the batsman as before.

With the addition of various minor rules, the whole game is a repetition of *overs*, such as have been described; the batsmen maintain their position as long as they can, the fielders change positions, and the bowlers alternate, whenever "Over!" is called; the original bowlers are replaced as the captain thinks advisable. The score is completed by adding together the runs made by each side during its inning.

Following are some of the most common terms used in Cricket, which should be learned in order to get a clear understanding of the game: —

## GLOSSARY OF TECHNICAL TERMS

*Bye* — If a batsman misses a ball and it passes the fielders behind the wicket, the batsman may make a run, and it will be scored for his side as a *bye*, which counts one point.

*Leg Bye* — If a ball glances from any part of a batsman's body and passes the fielders, the batsman may take a run, and it will count one point for his side as a *leg bye*.

*Maiden Over* — A *maiden over* occurs when a bowler bowls five balls from which no runs are made.

*No Ball* — When a bowler delivers a ball from in front of the bowling crease, or jerks or throws the ball, the umpire calls "No ball!" When a *no ball* is bowled, the batsman can be put out only by "running out."

*Overs* — When a bowler has bowled five balls the umpire calls "Over!" and the ball is bowled by another bowler, from the opposite wicket. The object of *overs* is to rest the bowlers.

*Telegraph* — A *telegraph* is a small, wooden frame on which the score of the game is put after the fall of each wicket, by hanging up numbered pieces of tin or thin board. The top figures show the scores of the two sides; the middle figures show the number of men that are out; and the bottom figures show the score made by the last batsman put out.

*Wide* — A *wide*, or *wide ball*, is a ball that is so bowled as to be out of reach of the batsman. When a *wide* is bowled, the umpire calls "Wide ball!" and a single score is given to the batsman's side.

Following are the laws by which Cricket matches are usually played: —

## RULES

### The Game

1. A match is played between two sides of eleven players each, unless otherwise agreed; each side has two innings, which are taken alternately, except in the case provided for in Law 53. The choice of innings shall be decided by "tossing."

### Runs

2. The score shall be reckoned by runs. A run is scored: (1) As often as the batsman after a hit, or at any time while the ball is in play, shall have crossed and made good the ground from end to end; (2) for penalties under Laws 16, 34, 41, and allowances under Law 44. Any run or runs so scored shall be duly recorded by scorers appointed for the purpose. The side which scores the greatest number of runs wins the match. No match is won unless played out or given up, except in the case provided for in Law 45.

### Appointment of Umpires

3. Before the beginning of the match, two umpires shall be appointed, one for each end of the field.

### The Ball

4. The ball shall weigh not less than five and one-half ounces, nor more than five and three-quarters ounces. It shall measure not less than nine inches, nor more than nine and one-quarter inches in circumference. At the beginning of each inning, either side may demand a new ball.

### The Bat

5. The bat shall not exceed four and one-quarter inches width in the widest part; it shall not be more than thirty-eight inches long.

### The Wickets

6. The wickets shall be placed opposite and parallel to each other, at a distance of twenty-two yards apart. Each wicket shall be eight inches in width, and shall consist of three stumps, with two bails on top. The stumps shall be alike and of sufficient size to prevent the ball from passing between them; they shall extend twenty-seven inches above the ground. The bails shall each be four inches long, and when in position on top of the stumps, shall not project more than a half-inch above them. The wickets shall not be changed during a match, unless the ground between them becomes unfit for play, and then only by consent of both sides.

### The Bowling Crease

7. The bowling crease shall be in line with the stumps and shall extend three feet four inches on either side of the center, with a return crease at each end at right angles behind the wicket.

### The Popping Crease

8. The popping crease shall be marked four feet from the wicket, parallel to it, and shall be deemed unlimited in length.

### The Ground

9. The ground shall not be rolled, watered, covered, mown, or beaten during a match, except before the beginning of each inning and of each day's play, when, unless the in-side object, the ground shall be swept and rolled for not more than ten minutes. This shall not prevent the batsman from beating the ground with his bat, nor the batsman or bowler from using sawdust in order to obtain a proper foothold.

## THE BOWLER

### No Ball

10. The ball must be bowled; if thrown or jerked, the umpire shall call "No ball!"

11. The bowler shall deliver the ball with one foot on the ground behind the bowling crease, and within the return crease; otherwise the umpire shall call "No ball!"

### Wide Ball

12. If the bowler shall bowl the ball so high over, or so wide of, the wicket, that in the opinion of the umpire it is not within reach of the striker, the umpire shall call "Wide ball!"

### The Over

13. The ball shall be bowled in *overs* of five balls from each wicket alternately. When five balls have been bowled, and the ball is finally settled in the bowler's or wicket-keeper's hands, the umpire shall call "Over!" Neither a *no ball* nor a *wide ball* shall be reckoned as one of the "overs."

14. The bowler may change ends as many times as he thinks proper in the same inning, but he cannot bowl two overs in succession.

15. The bowler may require the batsman at the wicket from which he is bowling to stand on that side of it which he may direct.

### Scoring of No Balls and Wides

16. The striker may hit a "no ball," and whatever runs result shall be added to his score, but he shall not be put out from a "no ball" unless he be *run out* or break Laws 26, 27, 29 or 30. All runs made from a "no ball," otherwise than from the bat, shall be scored "no balls," and if no run be made, one run shall be added to that score. From a "wide ball," as many runs as are made shall be added to the score as "wide balls," and if no run be otherwise obtained, one run shall be so added.

### Bye

17. If the ball has not been called "wide" or "no ball," and passes the striker without touching his bat or person, and any runs be obtained, the umpire shall call "bye"; but if the ball touch any part of the striker's person (hand excepted) and any runs be obtained, the umpire shall call "leg-bye," such runs to be scored "byes" and "leg-byes" respectively.

### Play

18. At the beginning of the match, and of each inning, the umpire at the bowler's wicket shall call "Play!"; from that time no trial ball shall be allowed to any bowler on the ground between the wickets, and when one of the batsmen is out, the use of the bat shall not be allowed to any person until the next batsman shall come in.

### Definitions

19. A batsman shall be held to be "out of his ground" unless his bat in hand or some part of his person be grounded within the line of the popping crease.

20. The wicket shall be held to be "down" when either of the bails is struck off, or, if both bails be off, when a stump is struck out of the ground.

### The Striker Is Out

21. Bowled out,—If the wicket be bowled down, even if the ball first touch the striker's bat or person.

22. Caught out,— If the ball, from a stroke of the bat or hand, but not the wrist, be held before it touch the ground, although it be hugged to the body of the catcher.

23. Stumped out,— If in striking at the ball, provided it be not touched by the bat or hand, the striker be out of his ground, and the wicket be put down by the wicket-keeper with the ball, or with hand or arm with ball in hand.

24. Leg before wicket,— If with any part of his person he stop the ball, which, in the opinion of the umpire at the bowler's wicket, shall have been pitched in a straight line from it to the striker's wicket and would have hit it.

25. Hit wicket, — If, in playing at the ball, he hit down his wicket with his bat, or any part of his person or dress.

26. Obstructing the field, — If, under pretense of running, or otherwise, either of the batsmen wilfully prevent a ball from being caught.

27. Hit the ball twice, — If the ball be struck, or be stopped by any part of his person, and he wilfully strike it again, except it be done for the purpose of guarding his wicket, which he may do with his bat or any part of his person, except his hands.

### Either Batsman Is Out

28. Run out, — If in running, or at any other time while the ball is in play, he be out of his ground, and his wicket be struck down by the ball after touching any fieldsman, or by the hand or arm of any fieldsman with ball in hand.

29. Handled the ball, — If he touch with his hands, or take up the ball while in play, unless at the request of the opposite side.

30. Obstructing the field, — If he wilfully obstruct any fieldsman.

31. If the batsmen have crossed each other, he that runs for the wicket which is put down is out; if they have not crossed, he that has left the wicket which is put down is out.

32. If the striker is caught, no run shall be scored. If the batsman is run out, that run which was being attempted shall not be scored.

33. When a batsman is out, from any cause, the ball shall be "dead."

### Lost Ball

34. If a ball in play cannot be found or recovered, any fieldsman may call "Lost ball!" when the ball shall be "dead"; six runs shall then be added to the score; but if more than six runs have been run before "Lost ball" has been called, as many runs as have been made shall be scored.

35. After the ball shall have been finally settled in the wicket-keeper's or bowler's hand, it shall be "dead"; but when the bowler is about to deliver the ball, if the batsman at his wicket be out of his ground before actual delivery, the said bowler may run him out; but if the bowler throw at the wicket and any runs result, "no ball" shall be scored.

36. A batsman shall not retire from his wicket and return to it to complete his inning, after another has been in, without the consent of the opposite side.

### Substitute

37. A substitute shall be allowed to field or run between wickets for any player who may, during the match, be incapacitated by illness or injury, but for no other reason, except with the consent of the opposite side.

38. In all cases where a substitute shall be allowed, the consent of the opposite side shall be obtained as to the person who is to act as substitute, and the place in the field which he shall take.

39. In case any substitute shall be allowed to run between wickets, the striker may be run out if either he or his substitute be out of ground. If the striker be out of his ground while the ball is in play, that wicket which he has left may be put down and the striker put out, although the other batsman may have made good the ground at that end, and the striker and his substitute at the other end.

40. A batsman is liable to be put out for any infringement of these laws by his substitute.

### The Fieldsman

41. A fieldsman may stop the ball with any part of his person, but if he wilfully stop it otherwise the ball shall be "dead," and five runs shall be added to the score of the in-side, whatever runs may have been made.

### Wicket-keeper

42. The wicket-keeper shall stand behind the wicket. If he take the ball for the purpose of stumping before it has passed the wicket, or if he interfere with the striker by any noise or motion, or if any part of his person be over or before the wicket, the striker shall not be out, except under Laws 26, 27, 28, 29 and 30.

### Duties of Umpires

43. The umpires are the sole judges of fair or unfair play, of the fitness of the ground, the weather and the light for play; all disputes shall be determined by them, and if they disagree, the existing state of things shall continue.

44. They shall place fair wickets, arrange boundaries where necessary, and the allowance to be made for them, and shall change ends after each side has had one inning.

45. They shall allow two minutes for each striker to come in, and ten minutes between each inning. When they call "Play!" the side refusing to play shall lose the match.

46. They shall not order a batsman out unless appealed to by the other side.

47. The umpire at the bowler's wicket shall be appealed to before the other umpire in all cases, except in those of stumping, hit wicket, run out at the striker's wicket, or those arising out of Law 42; but in any case in which an umpire is unable to give a decision, he shall appeal to the other umpire, whose decision shall be final.

48. If the umpire at the bowler's end be not satisfied of the absolute fairness of the delivery of any ball, he shall call "No ball!"

49. The umpire shall take special care to call "No ball!" instantly upon delivery, or "Wide ball!" as soon as it passes the striker.

50. If either batsman make a short run, the umpire shall call "One short," and the run shall not be scored.

51. No umpire shall be allowed to bet.

52. No umpire shall be changed during a match, unless with the consent of both sides, except in case of violation of Law 51; then either side may dismiss him.

53. On the last day of a double-inning match, or in a one-day match, the batting side may, at any time, declare their inning, and may put the other side in, with a view to completing the game.

54. The side which goes in second shall follow their innings if they have scored eighty runs less than the opposite side.

### One-day Matches

1. The side which goes in second shall follow their innings if they have scored sixty runs less than the opposite side.

2. The match, when not played out, shall be decided by the first inning.

3. Before the beginning of a match, it may be agreed that the "over" shall consist of five or of six balls.

### Ground Rules

Before the game is begun, it should be understood by the captains what the ground rules are, and they shall agree on them, also on the time of drawing the stumps; they shall inform the umpires when this has been done.

## CROQUET

Croquet, though one of the oldest of the outdoor games, has vacillated so much between public favor and disfavor that it would not be strictly true to call it "popular." Though a subject of ridicule during the greater part of the last twenty-five years, a revival of interest in the game has recently been experienced, so that at the present time there are many people of both sexes who confess that they not only play Croquet, but enjoy it. There are few games in which judgment and strategy play a larger part, and both as a pleasurable recreation for the lawn player and as an exciting sport for the expert, it merits the admiration of its devotees.

### GROUND, MALLET, BALL, HOOPS

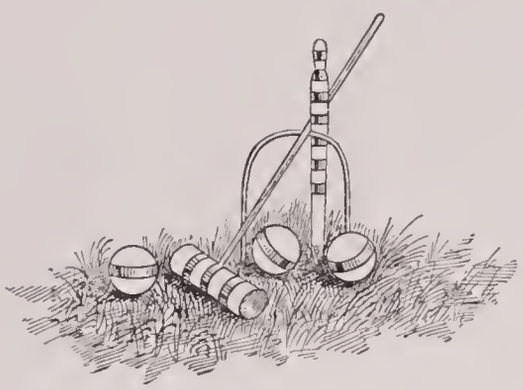
The first necessity for the game is a stretch of suitable turf or bare ground, which, when possible, should be about thirty by forty yards in extent. Inequalities of surface or a steady slope in one direction should be avoided or corrected. The accessories of the game are very simple, and consist of two round stakes, usually of wood, one inch in diameter and twenty-four inches in height, iron hoops, varying in number from six to ten, according to the *setting* adopted, and a mallet and a ball for each player.

The ordinary mallet consists of a handle or shaft of ash about thirty-three inches in length, fitted into a cylindrical head, usually of boxwood, the length of which is eight or nine inches, and diameter about three inches. There are many modifications of this style of mallet, both as to size and as to the material used in its construction, but the shape is approximately the same in all.

The ball is usually made of beech, or better of Turkey boxwood, and is about three and five-eighths inches in diameter. The balls are marked with different colors, so that they may easily be distinguished from one another. The number of players varies from two to eight,

and each may play alone, but usually the most interesting game is that in which four balls are used, with a player for each ball, or, that with two players, each using two balls.

The hoops are of iron or steel, and those in different sets vary both in diameter and in their width at the base. Those used in the original game had a space of from fifteen to eighteen inches between the two legs, but perhaps the best width for ordinary play is from five and one-half to six inches. The latest hoops are rectangular in shape, and are to be preferred to the old-style hoops, which had rounded tops.



Three ways of setting the hoops are in common use, in which six, nine, or ten hoops are used, respectively. The six-hoop plan (Fig. I) is that used in championship games, and presents all the elements of difficult play. The two pegs, or posts, are driven into the ground as far apart as the field of play will permit, though they must be well inside the end boundaries, and in a line passing through the center of the field parallel to its longer sides. One of the hoops is placed on either side of each post, with its face in, and parallel to, an imaginary line passing through the post, at right angles to the medial line of the field, and at such distance from the post as to be well clear of the side boundaries. This disposes of four of the hoops, and each of the other two is placed at one-third the distance between the two posts, with its center in the line connecting them, and its face at right angles to that line.

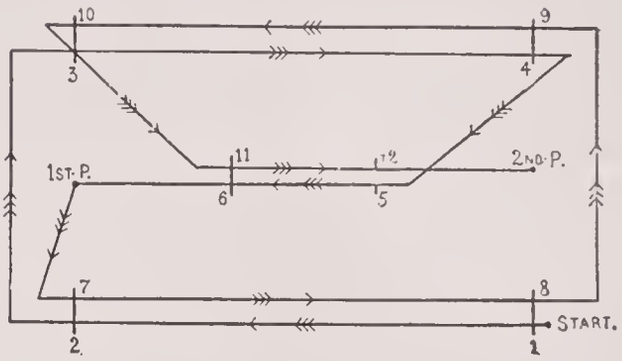
In the nine-hoop arrangement (Fig. II), which is the one usually followed in lawn Croquet, the four side hoops are placed in the same line as above, but each two on the same side are moved closer together. Five hoops are placed in the line between the two posts, one being in the center of the field and two others near each post, one about three or four feet from it, and the other a similar distance from the first. The faces of all the hoops are at right angles to the line between the posts. The ten-hoop arrangement differs from the above only in having one more hoop placed in the center of the field, over, and at right angles to, the one already there. The object of this hoop is to make it more difficult for a ball to be driven through the original center hoop. (Fig. II.)

## THE GAME

A spot is plainly marked near one of the posts, and in beginning the game the ball is played from that spot. The object of the player

is, first, to drive his ball through each of the hoops in its proper order, and from the proper direction, then to strike the post at the other end with his ball, and, returning through the hoops in return order, to strike the first post.

In the accompanying explanations, the side that is to the player's right on starting is called the right side of the field, and the side to his left the left side of the field. (Fig. II.) The order in which the hoops and posts should be made in the nine-hoop game is as follows:—

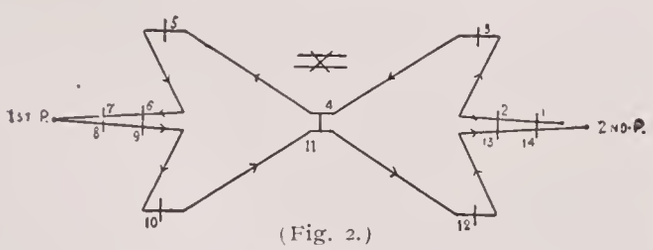


(Fig. 1.)

First two end hoops, first right side, center, second right side, second two end, second post; returning, second two end, second left side, center, first left side, first two end, first post. The ten-hoop game is played in the same order, except that in going from the first post to the second the ball must pass through the right side of the "cage," and on returning, the left side.

In the six-hoop game the ball is started at the first left-side hoop and the order observed is as follows (Fig. I): First left side, second left side; returning, second right side, first right side; direct, first center, second center, second post; returning, second left, first left; direct, first right, second right; returning, second center, first center, first post.

The player who first completes the circuit of hoops and posts wins the game. A turn may consist of any number of strokes, since after the first a player may continue, if with that stroke he has either made his proper hoop or has hit another ball. In the former case he may attempt either to make another hoop or to hit a ball, but in the latter he is obliged to bring his own ball to that which has been hit, and, after placing them together, to strike his ball so that both are moved; this is termed "croqueting," or "roqueting," a ball. The player is then entitled to another stroke, and may either attempt to make his proper hoop or to hit another ball; if he succeeds in either of these attempts, the foregoing process is repeated. He may not hit the same ball a second time, unless he has, in the meantime, passed through the hoop that is next in order. As soon as a player fails in any shot his turn is ended, and the same process is gone through by the next player, the turns alternating in regular order.



(Fig. 2.)

The stroke that is easiest to learn, and that is really the safest, is made by standing over the ball, holding the mallet in both hands, and swinging it between the legs. The force of the stroke should not be given by the arms alone, but the weight of the body and mallet should be brought into play. This is the stroke common among children. The ball should always be struck with one of the end faces of the mallet. The one-hand stroke is much more graceful than that made with both hands, and is used by the best players.

There are also two kinds of strokes in croqueting another ball. The first of these is the push, or follow, stroke, and is designed to make two balls run together, and go practically the same distance. The mallet should be gripped loosely, and its head must follow the ball through the stroke, instead of being checked at the moment of contact. The other style of stroke is used to move one's own ball as little as possible, and to drive the other ball well away. The mallet should be gripped tightly, and a sharp "chop" stroke delivered, that shall hit the ball as low as possible. The swing of the mallet should be checked at the moment of contact.

In partnership games, each player should endeavor to keep as close to his partner as possible, so that each may take advantage of the proximity of the other's ball by playing on it.

Whenever a ball goes out of bounds, it is replaced on the field at a point three feet from where it crossed the boundary, and in a line at right angles to the latter.

## GLOSSARY

Following are some of the terms commonly used in a game of Croquet: —

*Blocked* — When the player finds a ball on which he cannot play, or a hoop or post in the way of a shot.

*Break* — A sequence of successful shots at balls or hoops.

*Cage* — Two hoops crossed at right angles in the center of the ground, as in the ten-hoop game.

*Croquet* — (*a*) The game itself. (*b*) To roquet, or strike, the ball of another player. (*c*) To strike the balls when set together. (*Roquet* is a term that is now very rarely used.)

*Dead Ball* — A ball that has gone through all the hoops in their proper order, and has hit the two posts.

*Double Shot* — Two balls, or a ball and the player's next hoop, which lie so close together that if he misses one he stands a good chance of making the other.

*Hollow Double* — Two balls, or a ball and the player's next hoop, which lie close together, but not so close as to make it likely that after missing one the player will make the other.

*Hoops* — The iron arches through which the ball must be driven.

*In hand* — A ball is said to be *in hand* when it has gone out of bounds, or has croqueted another ball, or when it is not in play for any other reason.

*Jump, or Leap-frog, Stroke* — A stroke that causes the player's ball to go completely over another.

*Loose Croquet* — A method of croqueting in which the player strikes his ball when set against another, without placing his foot on the former.

*Mallet* — The instrument used for driving the ball about the field.

*Pass Stroke* — Taking croquet so that both balls go in about the same direction, but the player's ball goes farthest.

*Peg, Post* or *Stick* — The sticks at either end of the field which must be hit by each ball in completing a game.

*Rover* — A ball that has passed through all the hoops in order, but has not hit the finishing post.

*Rush* — A position from which the player can hit another ball with his own so as to drive the former into a better position for taking croquet. Hence, *to get a rush upon a ball* is to put oneself in such a position.

*Setting* — The arrangement of the hoops and posts.

*Split Strokes* — Taking croquet so as to drive the two balls in directions nearly at right angles to each other.

*Stop Stroke* — Taking croquet so as to drive the object ball to a distance, while the player's ball remains near its original position.

*Strike Out* — To hit the finishing post, after having made all the hoops and the other post in proper order.

*Taking Croquet* — After hitting a ball, to carry one's own ball to it, set it down so that it remains in contact with the other, and then by hitting it to send both in the desired direction.

*Take Two Off* — To take croquet in such a way that the object ball moves only slightly, while the player's ball very nearly follows the line of the mallet's swing.

*Wired* — A ball is wired when either or both legs of a hoop prevent its being sent in the desired direction, or stand in the way of its being hit by an opponent.

Though there are numerous variations in different parts of the country, the following are the rules generally applied to the game of croquet: —

## RULES

1. *Hoops* — The hoops may be of any size, shape, or material that may be agreed upon by the players previous to a match.

2. *Mallets* — There shall be no restrictions as to the weight, size, shape, or material of the mallet; or as to the attitude or position of the strikers; or as to

the way in which the mallet is held, provided the ball be not struck with the middle or the back of the mallet head.

3. *Size of Balls* — The balls used in match play shall be three and five-eighths inches in diameter.

4. *Choice of Lead and of Balls* — It shall be decided by lot which side shall have the choice of lead and of balls. In a succession of games, the choice of lead shall alternate, and each side shall keep the same balls.

5. *Beginning of Game* — In beginning the game, each ball shall in turn be placed on the starting spot. (See *Settings*.) The striker's ball, when so placed and struck, is at once in play, and can croquet another, or be croqueted, whether it has made the first hoop or not.

6. *Stroke, When Taken* — A stroke is considered to be taken if a ball be moved by the striker in the act of striking; should a player, in taking aim, move his ball accidentally, it must be replaced to the satisfaction of the adversary, and the stroke must then be taken. If a ball be moved in taking aim, and then struck without being replaced, the stroke is foul. (Rule 26.)

7. *Hoop, When Run* — A ball has run its hoop when, after having been driven through it, either by a stroke of the player whose ball it is, or by being croqueted by another player, and having ceased to roll, it cannot be touched by a straight-edge placed against the wires on the side from which it was played.

8. *Ball Driven Partly through Hoop* — A ball driven partly through its hoop from the direction opposite that in which the hoop must be made, cannot run its hoop at its next stroke if it can be touched by a straight-edge placed against the wires on the side from which it was driven.

9. *Points Counted to Non-Striker's Ball* — A ball driven through its hoop, or against the turning peg, by any stroke not foul, whether by its owner or the adverse side, counts the point so made.

10. *Points Made for Adversary's Ball* — If the striker make a point for an adversary's ball, he must inform his adversary of it. Should the striker neglect to do so, and the adversary make the point again, he may continue his turn as though he had played for his right point.

11. *The Turn* — When playing his turn, a player may croquet each ball once, and may do this again after each point made. The player continues his turn as long as he makes a point or croquet.

12. *Taking Croquet Imperative after Croqueting* — A player who croquets a ball must take croquet, and in so doing must move both balls. (Rule 26.) In taking croquet, the striker is not allowed to place his foot on the ball.

13. *Ball in Hand after Croqueting* — No point or croquet can be made by a ball which is in hand, or not in play. If a ball in hand displace any other balls, they must remain where they are driven. Any point made in consequence of such displacement, counts, notwithstanding the fact that the ball displacing them is in hand.

14. *Balls Croqueted Simultaneously* — When a player croquets two balls simultaneously, he may choose from which of them he will take croquet; and a second croquet will be required before he can take croquet from the other ball.

15. *Balls Found Touching* — If, at the commencement of a turn, the striker's ball be found touching another, croquet is deemed to be made, and croquet must be taken at once.

16. *Croquet and Hoop Made by Same Stroke*—Should a ball in making its hoop croquet another ball that lies beyond the hoop, the hoop counts, as well as the croquet. A ball is deemed to be beyond the hoop if it lies so that it cannot be touched by a straight-edge placed against the wires on the playing side of the hoop. Should any part of the ball that is croqueted be lying on the playing side of the hoop, the croquet counts, but not the hoop.

17. *Pegging Out*—If a rover (except when in hand) be caused to hit the winning peg by any stroke of the same side, not foul, the rover is out of the game, and must be removed from the ground. A rover may similarly be pegged out by an adverse rover.

18. *Rover Pegged Out by Croquet*—A player who pegs out a rover by a croquet loses the remainder of his turn.

19. *Ball Sent Off the Ground*—A ball sent off the ground must at once be replaced at a point three feet within the boundary, measured from the spot where it went off, and at right angles to the margin. If this spot be already occupied by another ball, the ball last sent off is to be placed in contact with the other, on the side selected by the player who sent the ball off.

20. *Ball Sent Off Near Corner*—A ball sent off within three feet of a corner is to be replaced at a point three feet from both boundaries.

21. *Ball Touching Boundary*—If the boundary be marked by a line on the turf, a ball touching the line is deemed to be off the ground. If the boundary be raised, a ball touching the boundary is similarly deemed to be off the ground.

22. *Ball Sent Off and Returning to Ground*—If a ball be sent off the ground and return to it, the ball must be replaced as above, measuring from the point of first contact with the boundary.

23. *Ball Sent within Three Feet of Boundary*—A ball sent within three feet of the boundary, but not off the ground, is to be replaced as though it had been sent off, except in the case of the striker's ball, when the striker has the option of bringing his ball in, or of playing from where it lies.

24. *Boundary Interfering with Stroke*—If it be found that the height of the boundary interferes with the stroke, the striker, with the sanction of the umpire, may bring in the balls a greater distance than three feet, so as to allow a free swing of the mallet. Balls so brought in must be moved in the line of aim.

25. *Dead Boundary*—If, in taking croquet, the striker send his own ball, or the ball croqueted, off the ground, he loses the remainder of his turn; but if by the same stroke he make a croquet, his ball, being in hand, may pass the boundary without penalty. Should either ball, while rolling after a croquet, be touched or diverted from its course by an opponent, the striker has the option given him by Rule 27, and is not liable to lose his turn, should the ball which has been touched or diverted pass the boundary.

26. *Foul Strokes*—If a player make a foul stroke, he loses the remainder of his turn, and any point or croquet made by such stroke does not count. Balls moved by a foul stroke are to remain where they lie, or be replaced, at the option of the adversary. If the foul be made when taking croquet, and the adversary elect to have the balls replaced, they must be placed in contact, as they stood when the croquet was taken. The following are foul strokes:—

(*a*) To strike with the mallet another ball instead of, or besides, one's own, in making the stroke.

(*b*) To "spoon"—*i.e.*, to push a ball without an audible knock.

(*c*) To strike a ball twice in the same stroke.

(*d*) To touch, stop or divert the course of a ball when in play and rolling, whether this be done by the striker or by his partner.

(*e*) To allow a ball to touch the mallet in rebounding from a peg or wire.

(*f*) To move a ball which lies close to a peg or wire by striking the peg or wire.

(*g*) To press a ball around a peg or wire ("crushing stroke").

(*h*) To play a stroke after croquet without taking croquet.

(*i*) To fail to move both balls in taking croquet.

(*j*) To croquet a ball which the striker is not entitled to croquet..

27. *Ball Touched by Adversary* — Should a ball, when rolling, except it be in nand, be touched, stopped or diverted from its course by an adversary, the striker may elect whether he will take the stroke again, or whether the ball shall remain where it stopped, or be placed on the spot to which, in the judgment of the umpire, it would have rolled.

28. *Playing Out of Turn, or with the Wrong Ball* — If a player play out of turn, or with the wrong ball, the remainder of the turn is lost, as is also any point or croquet made after the mistake. The balls either remain where they lie when the penalty is claimed, or are placed as they were before the last stroke was made, at the option of the adversary. But if the adverse side play without claiming the penalty, the turn holds good, and any point or points made after the mistake are scored to the ball by which they have been made, except when the adversary's ball has been played, in which case the points are scored to the ball which ought to have been played. If more than one ball be played during the turn, all points made during that turn, whether before or after the mistake, are scored to the ball last played. Whether the penalty be claimed or not, the adversary may follow with either ball of his own side.

29. *Playing for Wrong Point* — If a player make a wrong point it does not count, and, therefore (unless, by the same stroke, he has taken croquet or has made a croquet), all subsequent strokes are in error, and the remainder of the turn is lost, as well as any point or croquet made after the mistake. The balls remain where they lie when the penalty is claimed, or are replaced as they were before the last stroke was made, at the option of the adversary. But if the player make another point, or the adverse side play, before the penalty is claimed, the turn holds good, and the player who made the mistake is deemed to be for the point next in order after that which he last made.

30. *Information as to Score* — Every player is entitled to be informed which is the next point of any ball.

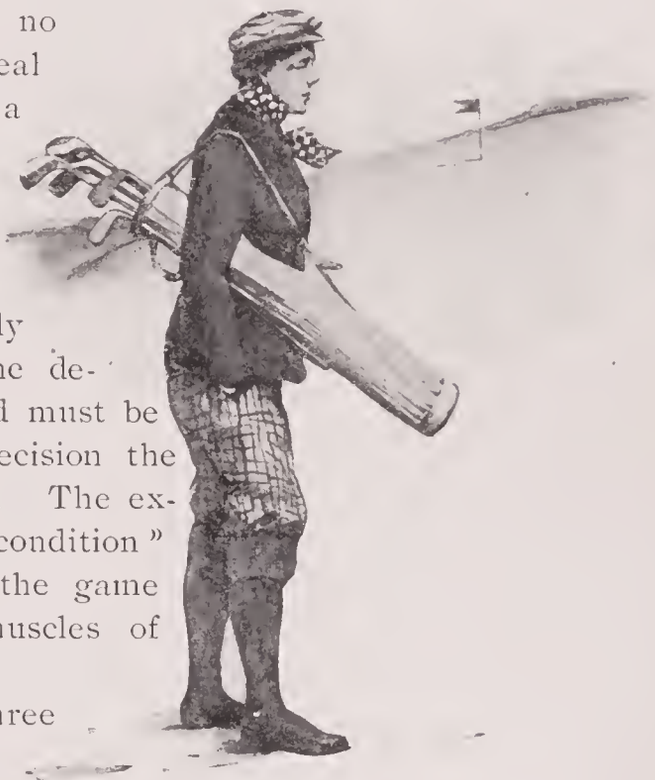
31. *Wire Knocked Out of Ground* — Should a player, in trying to run his hoop, knock a wire of that hoop out of the ground with his ball, the hoop does not count. The ball must be replaced, and the stroke taken again; but if by the same stroke a croquet be made, the striker may elect whether he will claim the croquet or have the balls replaced.

32. *Pegs or Hoops Not Upright* — Any player may set upright a peg or hoop, except the one next in order, which must not be altered except by the umpire.

33. *Ball Lying in a Hole or on Bad Ground* — A ball lying in a hole or on bad ground may be moved with the sanction of the umpire. The ball must be put back, — *i. e.*, away from the object aimed at, — and in such a position as not to alter the line of aim.

# GOLF

THE game of Golf, though but recently introduced into this country, has made rapid strides in public favor. Unlike the other outdoor games, Golf not only can be played the year round, but it numbers among its devotees both men and women, of all ages, from early youth to post-maturity. Golfing combines mental with physical exercise in a manner that is possible in no other game, for, like the surface of the ideal Golf link, the game itself presents a series of perpetual changes. Even in going several times over the same course, the difficulties and complications will be varied each time. The mind must be constantly on the alert to discover promptly just what action will best bring about the desired result, and the eye and the hand must be ever ready to carry out with skilful precision the impulses conveyed to them by the brain. The exercise need not be violent, nor does "condition" in Golf imply physical perfection; yet the game calls into play a great number of the muscles of the human body.



Golf *courses* vary in length from three to five miles, and are usually in the form of an irregular circle, or oval. They generally have eighteen *holes*, though if the course be short, the number may be limited to fifteen, twelve, or even nine. These holes are four and one-fourth inches in diameter and four inches in depth, their proper size and shape being preserved by metal linings, the upper edge of which, however, must not be within an inch of the surface of the ground. The holes need not be equidistant, but should not be less than one hundred yards, nor more than five hundred yards, apart, and, if possible, they should be so arranged that *hazards* will intervene between each hole and the one next succeeding. In general terms, a hazard is an obstruction, such as a tree, fence, road, water, rough ground, etc., and it is in avoiding these hazards that the greatest skill in Golf is shown. Should the ground selected for the *links* not afford a sufficient number of hazards, sand pits, ditches, and other obstructions should be made, and should be so placed as to catch badly-played balls; while plenty of space should be left between them

to reward good strokes. Hazards which are not visible to the player, such as blind ditches or holes, should be marked or filled.

The space within a radius of about thirty yards around each hole is called the *putting green.* The surface of this space should be smooth, though not necessarily flat. For each hole there is a starting point, or *teeing ground*, which should be near the hole, but not in the line between it and the preceding or the succeeding one. There is also a *teeing ground* at the beginning of the course. A box of sand is usually placed near the teeing ground, from which sand may be taken with which to slightly elevate the ball on a tee, thus affording an opportunity for a clear and effective drive.

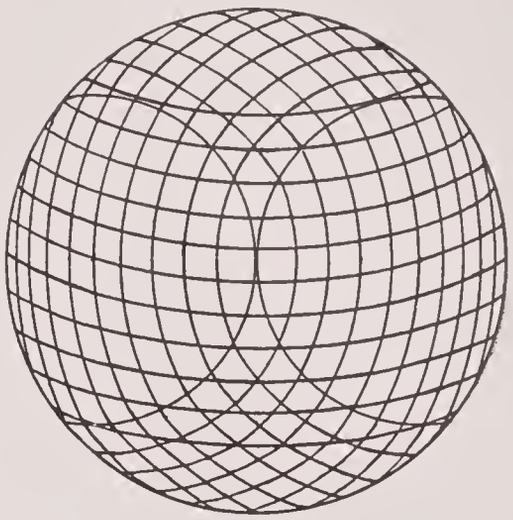
The game of Golf consists in playing a ball, in as few strokes as possible, into a succession of holes, each hole being won by the side making it in the least number of strokes; and the victory of the game goes to the side winning the largest number of holes, or to the side making all the holes in the least number of strokes. The former is called "Match play"; the latter, "Medal play." Should one side gain more holes ahead than remain to be played, the game need not be completed, as it is obvious that the other side will be beaten; but if the score is even at the last hole but one, the side that finishes in the least number of strokes, wins.

Golf may be played on almost any meadowland where the grass is not too long, and where sufficient space is available. The ground best suited for the purpose is undulating, sandy soil, the greater part of which is covered with short turf. This should be interspersed with sand holes, or *bunkers*, which constitute the best form of hazards. For this reason the golfing links, or *green*, should have a goodly number of hazards; but trees, which are not legitimate hazards, should be avoided, whenever possible, in laying out the course.

A long rod surmounted by a flag is placed in each hole, in such a way that it can easily be removed; the flags for half the circuit are of one color, while those indicating the return route are of some color which is in marked contrast to the other. Whenever a player nears a hole, the flag is removed until the hole is made, after which it is replaced. If a hole is screened so as not to be visible from the one that preceded it, a flag of some special color or design is placed between the two to indicate their direction from each other.

The balls generally used in Golf are about one and three-fourths inches in diameter, though they vary in size and weight according to their numbers, which are 26, 27, 27½ and 28. Sizes Nos. 27 and 27½ are the ones most commonly used. The material of which they are made is generally some compound of gutta-percha, and the surface of the ball, which is painted white, is grooved or notched. (Fig. 4.)

In Golf there are usually either two, three, or four players, and the games are designated respectively, *singles*, *three-ball*, and *foursome*, according to the number of contestants. The order of play is agreed on before the start is made. In a game of singles, two persons play, and each has a ball. The score is by holes, and not by the number of strokes required for the entire round of the course. In foursome games, two of the players oppose the other two; only two balls are used, each side having its own ball, and the score is usually by strokes, instead of by holes. Three-ball games are usually played in the same manner as singles; each player has his own ball and the score may be either by strokes or by holes. Should one player be what is termed the "best ball" of the three, the score is by holes, and in order to win a hole, the "best ball" must make it in a less number of strokes than either of the other players.



(Fig. 4)

A Golf game is started from the teeing ground, and the player who strikes first is said to have the "honor." The players strike in turn from the first tee, and after all have struck, the player who is farthest from the hole plays again, the one who is then farthest away plays next, and so on until each player has put his ball into the first hole. The player who has made the hole in the fewest strokes wins it, and if two players have taken the same number of strokes, the hole is said to be "halved," that is, it is not won by either player. The order of beginning play for the second hole corresponds to the order in which the first was made, the winner striking first. The ball is never touched by a player with his hand, except when taking it out of the regular holes. If the player takes the ball out of any bunker or unfavorable ground, instead of playing it out, he loses two strokes, besides missing much of the pleasure and excitement of the game.

It will be seen that the winner of a "match play" game may not have won that same game in "medal play," and *vice versâ*. Thus, if A takes four strokes to the first hole, and B seven, A wins one hole; but B may take the next in four strokes while A requires nine; each will then have won a hole, but A will have taken twelve strokes while B has taken only ten.

There are two general styles of clubs used in playing Golf, known as wood clubs and iron clubs, which differ only in the material of which the head is made. Each style has handles, or shafts, usually made of hickory, which is considered the best wood for the purpose.

Heads for wood clubs are usually made of dogwood, beach, or persimmon, the former being considered the best material.

## GOLF CLUBS

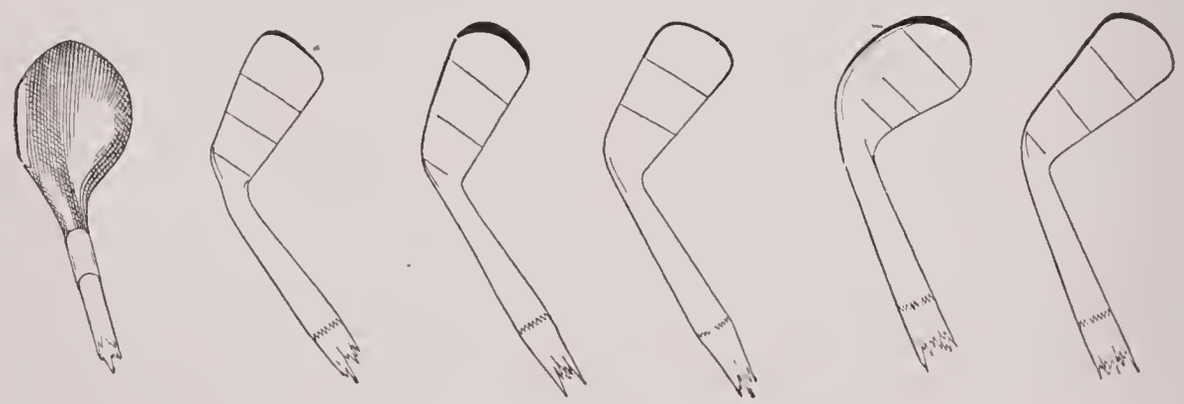
Following is a list of the clubs used in Golf:—

| Wood Clubs. | Iron Clubs. |
|---|---|
| Driver. | Cleek. |
| Long Spoon. | Iron Niblic. |
| Mid Spoon. | Putting Cleek. |
| Short Spoon. | Driving Cleek. |
| Baffy. | Lofting Iron. |
| Brassie Niblic. | Driving Iron. |
| Bulger Brassie. | Mashie. |
| Brassie. | Gun Metal Putter. |
| Putter. | Medium Iron. |

*The Driver*, or *Play Club*, is the longest of the clubs, and is used in driving from the tee, or whenever the ball is lying in a good position and a long drive is required.

The *Brassie* is similar to the driver, except that it has a brass plate on its sole, and is shaped so as to be slightly more suitable for lofting. It is used when the ball is on the putting-green.

The *Brassie Niblic* has a much smaller head than the driver; its face is spoon shaped, and its sole is shod with brass. It is used to raise the ball from a depression.



Driver or Brassie. Putter. Putting Cleek. Driving Mashie. Niblic. Mid Iron.

The *Long*, *Short*, and *Mid Spoons* have heads like that of the brassie, except that the face is very much spooned. These clubs are now little used.

The *Putter* has a short, stiff handle, to which the head is inclined nearly at right angles. It is used for playing short strokes on the putting-green.

The *Cleek* is the longest driver of all the iron clubs.

The *Driving Iron* is not so long a driver as the cleek, but will elevate the ball more. Its blade is deeper than that of the cleek.

The *Mashie*, which is a compromise between the lofting iron and the niblic, has a shorter head than the former, and its head is shaped somewhat differently from that of the latter. It is used for short approaches.

The *Niblic*, like the brassie and cleek, is used in very awkward hazards. It has a small, rounded head, which is very heavy.

The *Lofting Iron* is similar to the driving iron, but its head is shaped so as to elevate the ball.

The *Mid Iron* is similar to the lofting iron, and is used for long, high drives.

It is not necessary to have all of these clubs, but while the player will be able to get along very well with only the driver, cleek, iron, and putter, it is advisable for him to add the brassie niblic and mashie.

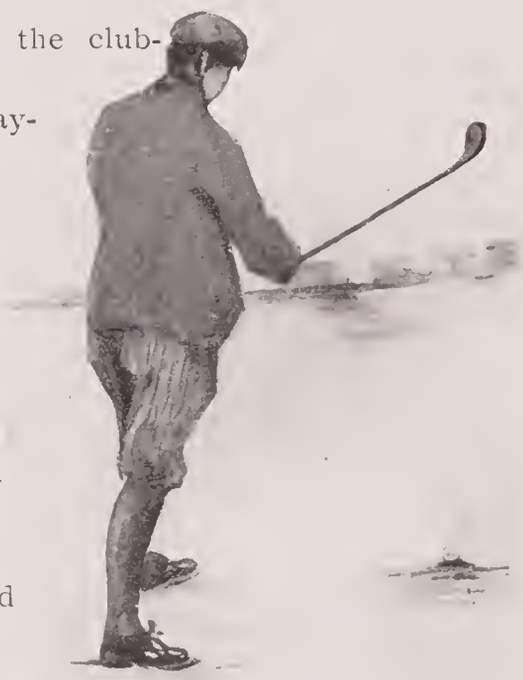
## GLOSSARY

Following are some of the technical expressions used in connection with the game of Golf: —

*Addressing the Ball* — Preparing to strike the ball.

*All Even*, or *All Square* — When neither side has gained an advantage.

*Approach* — When the player is sufficiently near the hole to be able to drive the ball to the putting-green, his stroke is called the "approach shot."



*Baff* — To strike the ground with the "sole" of the club-head in playing, so as to send the ball into the air.

*Baffy*, or *Baffing Spoon* — A wooden club used in playing lofting shots.

*Bent* — Long, wiry grass.

*Bisque* — A point taken by a player to whom odds has been given.

*Blind Hole*, or *Blind Hazard* — A blind hole is one that is so situated that its putting-green is not visible to the player. A blind hazard is one that cannot be seen.

*Bogey*, usually *Colonel Bogey* — An imaginary opponent credited with a certain score for each hole, against which score each player is competing.

*Bone* — A piece of ram's horn or vulcanite inserted in the sole of the club to prevent it from splitting.

*Borrow* — To play a ball up a steep hill or slope.

*Brassie* — A wooden club with a brass sole.

*Break-club* — A hard object lying near a ball, on which the club might be broken in striking.

*Bulger* — A club with a convex face.

*Bunker* — Generally, any rough, hazardous ground; more strictly, a sand pit.

*Bye* — Any hole or holes that remain to be played after the match is finished.

*Caddie* — A person who carries the golfer's clubs and tees the ball, and who can usually give advice in regard to the game.

*Carry* — The distance between the spot from which the ball is driven, and that at which it first touches the ground.

*Cleek* — An iron-headed club of considerable driving power, which is sometimes used for putting.

*Club* — The implement with which the ball is struck.

*Course* — That portion of the link on which the game is played.

*Cup* — Any hole in the ground of the course.

*Cut* — To cause the ball to spin so as to stop where it falls.

*Dead* — A ball is said to be "dead" when it lies so near the hole that the "putt" is a certainty. A ball is said to "fall dead" when it does not roll after alighting.

*Divot* — A slice of turf cut out in playing a stroke.

*Dormy* — One side is said to be "dormy" when it has as many holes ahead of its opponent as there remain holes to be played.

*Down* — A player is said to be "down" when his opponent is one or more holes ahead of him.

*Draw* — To drive widely to the left hand. (Identical in its results with *hook* and *screw*.)

*Driver* — See Play Club.

*Duff* — To hit the ground when making a stroke, so that the ball goes only a short distance.

*Face* — First, the slope of a bunker or hillock; second, the part of the club-head which strikes the ball.

*Flat* — A club is said to be "flat" when its head is at a very obtuse angle to the shaft.

*Fog* — Moss, or long, coarse grass.

*Foozle* — A bad stroke that does not miss the ball altogether.

*Fore* — A warning cry to any person in the way of a stroke. (Contracted from "before.")

*Fore-caddie* — The boy who precedes the players.

*Foursome* — A match in which two play on each side.

*Full Shot* — A shot played with a full swing.

*Gobble* — A rapid, straight "putt" into the hole, such that, had the ball not gone in, it would have gone some distance beyond.

*Grassed* — Said of a club the face of which is slightly "spooned," or sloped backward.

*Green* — First, the whole links; second, the putting-ground around each hole.

*Grief* — A player is said to be in "grief" when he has played his ball into a hazard.

*Grip* — First, the part of the handle covered with leather, by which the club is grasped; second, the grasp itself.

*Gutty* — A gutta-percha Golf ball.

*Half-one* — A handicap of one stroke, deducted every second hole.

*Half-shot* — Less than a full swing.

*Halved* — A hole is said to be "halved" when each side has taken the same number of strokes in making it. A "halved match" is a "drawn game."

*Hanging* — A "hanging" ball is one which lies on a downward slope.

*Hazard* — A general term for a bunker, long grass, a road, water, a whin, a molehill or other obstacle.

*Head* — The head is the lowest part of a club, and possesses a *sole*, a *heel*, a *toe* or *nose*, a *neck*, and a *face*.

*Heel* — First, the part of the head nearest the shaft; second, to hit from this part and send the ball to the right.

*Hole* — First, the four-inch hole lined with iron; second, the whole space between any two of these.

*Hole High* — A ball played upon the putting-green from a distance.

*Honor* — The right to play off first from the tee.

*Hook* — See Draw.

*Hose* — The socket in iron-headed clubs into which the wooden shaft fits.

*Iron* — A club with an iron head, which is shaped so as to elevate the ball.

*Jerk* — In "jerking," the club should strike with a quick cut behind the ball, and should stop on reaching the ground.

*Lie* — First, the inclination of a club when held on the ground in a natural position for striking; second, the situation of a ball, which may be good or bad.

*Lift* — To take a ball out of a hazard.

*Like* — See Odds.

*Like-as-we-lie* — When both sides have played the same number of strokes.

*Links* — The open downs or heath on which Golf is played.

*Loft* — To elevate the ball.

*Lofting Iron* — A club used in lofting the ball.

*Long-odds* — When a player has to play a stroke more than his adversary, who is much nearer the hole.

*Made* — A player, or his ball, is said to be "made" when his ball is sufficiently near the hole to be played on the putting-green at the next shot.

*Mashie* — A club that is a compromise between a niblic and an iron.

*Match* — First, the sides playing against each other; second, the game itself.

*Match Play* — That form of the game in which the holes are counted.

*Medal Play* — The style of game in which the number of strokes taken in the round determines the score.

*Miss the Glove* — To fail to strike the ball, either by swinging the club clear of its top, or by hitting the ground behind it.

*Neck* — The crook of the head of the club where it joins the shaft.

*Niblic* — A small, narrow-headed, heavy iron club.

*Nose* — The point, or front portion, of the club head.

*Odds* — First, means the handicap given by a strong player to a weaker in a single match. This may consist either of one, two, or three or more holes to start with, or of one stroke at each hole, or at every alternate hole, or at every third hole, etc. Second, to have "played the odds" is

to have played one stroke more than your adversary. If your opponent has "played the odds," that is, one stroke more than you, your next stroke will be the "like"; if he has played two strokes more, that is, the "two more," your next stroke will be the "one-off-two"; if the "three more," the "one-off-three," and so on.

*Par* — The number of strokes that would be required for a hole if no mistakes were made.

*Play-club* — A wooden-headed club which has a long shaft that is more or less supple.

*Press* — To strive to recover lost ground by hitting especially hard.

*Putt* — To play the delicate game that is required when near the hole. (Pronounce the *u* as in *but*.)

*Putter* — An upright, stiff-shafted club, with a head usually made of wood, but sometimes of iron.

*Putty* — A Golf ball made of composition.

*Quarter Shot* — A shot made by a quarter swing from the wrists.

*Rind* — A strip of cloth under the leather to thicken the grip.

*Round* — The complete circuit of the course.

*Run* — First, the distance a ball travels on the ground; second, to make the ball travel on the ground, instead of lofting it.

*Scare* — The narrow part of the club-head by which it is glued to the handle.

*Sclaff* — When the club-head strikes the ground behind the ball and follows on with a ricochet.

*Scruff* — To raise the grass slightly in striking.

*Set* — A full complement of clubs.

*Shaft* — The stick or handle of the club.

*Short Game* — Approaching and putting.

*Slice* — To draw the face of the club across the ball so that it curves to the right.

*Sole* — The flat bottom of the club-head.

*Spoon* — Wooden-headed clubs of three lengths — long, middle, and short; the face is scooped so as to loft the ball.

*Spring* — The degree of suppleness in the shaft.

*Square* — When the game stands evenly balanced, neither side being any holes ahead.

*Stance* — The position of the player's feet when addressing the ball.

*Steal* — To hole an unlikely "putt" from a distance, but not by a "gobble."

*Stroke* — The act of hitting the ball with the club, or the attempt to do so.

*Stymie* — When your opponent's ball lies in the line of your "putt."

*Swing* — The sweep of the club in driving.

*Swipe* — A full, driving stroke.

*Tee* — The pat of sand on which the ball is placed for the first stroke at each hole.

*Teeing Ground* — The marked space from which the ball must be played at the beginning of each hole.

*Third* — A handicap of a stroke deducted every third hole.

*Toe* — Another name for the nose of the club.

*Top* — To hit the ball above its center.

*Up* — When a player has gained one or more holes on his opponent.

*Upright* — A club is said to be "upright" when its head is not at a very obtuse angle to the shaft.

*Whins* — Furze, or gorse.

*Wrist shot* — Less than a half shot, generally played with an iron club.

## RULES OF GOLF

Following are the rules of Golf adopted by the United States Golf Association: --

### RULE I

#### Definitions

(*a*) The game of Golf is played by sides, each of which plays its own ball. A side may consist of either one or two players. If one player oppose another, the match is called a "single." If two play against two, it is called a "foursome." A single player may play against two, when the match is called a "threesome," or three players may play against each other, each playing his own ball, when the match is called a "three-ball match."

"Match play" is decided by the number of holes won.

"Medal play" is decided by the aggregate number of strokes.

"Colonel Bogey" is an imaginary opponent, against whose arbitrary scores each competitor plays by holes; otherwise bogey competitions are governed by the special rules for stroke competitions, except that a competitor loses the hole when his ball is lost, and when his ball is not played where it lies, except as otherwise provided in the rules.

(*b*) The game consists in each side playing a ball from a teeing ground into a hole, by successive strokes, and the hole is won by the side which holes its ball in fewer strokes than the opposite side, except as otherwise provided in the rules. If the sides hole out in the same number of strokes, the hole is "halved."

In match play, when two competitors halve their match, they shall continue playing, hole by hole, till one or the other shall have won a hole, which shall determine the winner of the match.

Should the match-play competition be a handicap, the competitors must decide a tie by playing either one, three or five more holes, according to the manner in which the handicap ceded falls upon certain holes, so as to make the extra holes a fairly proportionate representation of the round.

In medal play, when two or more competitors are tied, the winner shall be determined by another round of the course; except that By-laws 15 and 18 of the

United States Golf Association provide that, in case of ties for the sixteenth place in the amateur championship medal-rounds, or the eighth place in the woman's championship medal-rounds, respectively, the contestants so tied shall continue to play until one or the other shall have gained a lead by strokes, the hole or holes to be played out.

(*c*) The teeing ground shall be indicated by two marks placed in line as nearly as possible at right angles to the course.

The holes shall be four and one-fourth inches in diameter, and at least four inches in depth.

(*d*) The term "putting-green" shall mean all ground within twenty yards of the hole, except hazards.

(*e*) A "hazard" shall be any bunker, water (except casual water), sand, path, road, railway, whin, bush, rushes, rabbit scrape, fence or ditch. Sand blown upon the grass, or sprinkled upon the course for its preservation, bare patches, snow and ice are not hazards. Permanent grass within a hazard shall not be considered part of the hazard.

(*f*) The term "through the green" shall mean all parts of the course except hazards and the putting-green which is being played to.

(*g*) The term "out of bounds" shall mean any place outside the defined or recognized boundaries of the course.

(*h*) "Casual water" shall mean any temporary accumulation of water (whether caused by rainfall or otherwise) which is not one of the ordinary and recognized hazards of the course.

(*i*) A ball shall be "in play" as soon as the player has made a stroke at the teeing ground in each hole, and shall remain in play until "holes out," except when "lifted" in accordance with the rules.

(*j*) A ball shall be considered to have "moved" only if it leave its original position in the least degree, and stop in another; but if it merely oscillates, without leaving its original position, it shall not be considered to have "moved."

(*k*) A ball shall be considered "lost" if it is not to be found within five minutes after the search for it is begun.

(*l*) A "match" shall consist of one round of the links, unless it be otherwise agreed.

A match is won by the side which is leading by a number of holes greater than the number of holes remaining to be played. If each side win the same number of holes, the match is halved.

(*m*) A "stroke" shall be any movement of the ball caused by one player, except as provided in Rule IV, or any downward movement of the club made with the intention of striking the ball.

(*n*) A "penalty stroke" is a stroke added to the score of a side under certain rules, and shall not affect the rotation of the play.

(*o*) The privilege of playing first from a teeing ground is called "the honor."

(*p*) "Addressing the ball" means that a player has taken up his position preparatory to striking the ball.

(*q*) The reckoning of the strokes is kept by the terms the "off," "two more," "three more," etc., and "one-off-three," "one-off-two," "the like." The reckoning of holes is kept by the terms, so many "holes up," or "all even," and so many "to play."

## RULE II

A match begins by each side playing a ball from the first teeing ground.

The player who is to play first on each side shall be named by his own side.

The option of taking the honor at the first teeing ground shall be decided by lot, if necessary.

A ball played from in front of, or outside of, or more than two-clubs lengths behind, the two marks indicating the teeing ground, or played by a player when his opponent should have had the honor, may be at once recalled by the opposite side, and may be re-teed.

The side which wins a hole shall have the honor at the next teeing ground. If a hole has been halved, the side which had the honor at the last teeing ground shall again have the honor.

On beginning a new match, the winner of the long match in the previous round shall have the honor, or if the previous match was halved, the side which last won the hole shall have the honor.

*Penalty for playing a ball outside the limits of teeing ground:* — In match play, the ball may at once be recalled by the opponent, no stroke being counted for the misplay; in medal play, disqualification.

*Penalty for leading off the tee out of turn:* — In match play, the ball may at once be recalled by the opponent, no stroke being counted for the misplay; in medal play, no penalty, but it is customary to observe the honor.

## RULE III

A player shall not play while his ball is moving, under penalty of the loss of the hole. But if the ball begin to move while the player is making his upward or downward swing, he shall incur no penalty, except as provided in Rules X and XXVII, and a stroke lost under Rule XXVII shall not, under these circumstances, be counted as a stroke of the player.

*Penalty for playing a moving ball (except at the tee):* — In match play, loss of a hole; in medal play, two strokes.

But if the ball move while the player is making his upward or downward swing, a penalty is incurred only if the player is deemed to have caused the movement under Rules X and XVIII, by moving or touching any loose impediment; or under Rule XXVII, by grounding his club; or in a hazard, by taking his stand to play it. In these cases the penalty shall be: In match play, one stroke; in medal play, one stroke.

## RULE IV

If the ball fall or be knocked off the tee in addressing it, no penalty shall be incurred, and it may be replaced; if struck when moving, no penalty shall be incurred.

## RULE V

In a "threesome" or "foursome," the partners shall strike off alternately from the teeing grounds, and shall strike alternately during the play of the hole.

If a player play when his partner should have done so, his side shall lose the hole in match play; and in medal play, shall lose two strokes.

## RULE VI

When the balls are in play, the ball farthest from the hole which the players are approaching shall be played first, except as otherwise provided in Rule XXXII and in Medal Rule II.

The penalty for playing out of turn shall be: In match play, the ball may at once be recalled by the opponent, no stroke being counted for the misplay; in medal play, no penalty, but the ball may be recalled.

A ball so recalled shall be dropped as near as possible to the place where it originally lay.

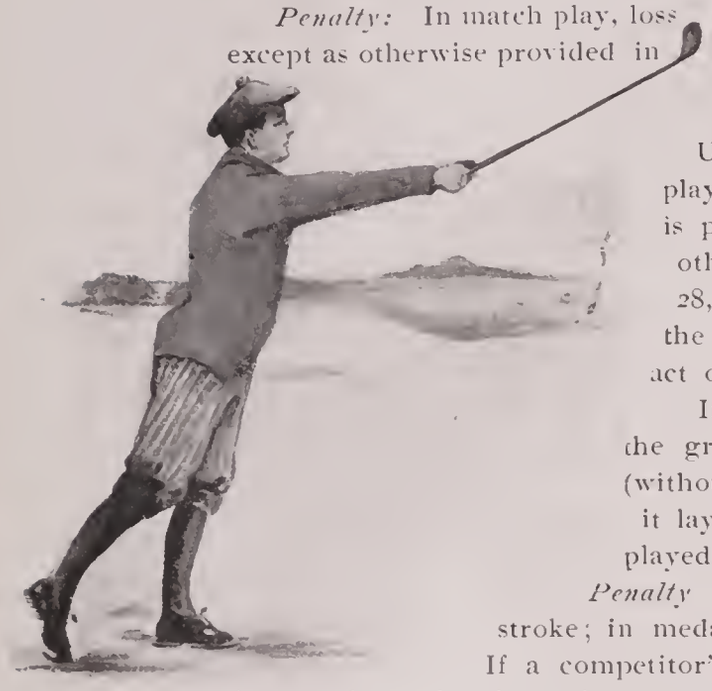
### RULE VII

The ball must be fairly struck at, not pushed, scraped, or spooned, under penalty of the loss of the hole in match play, or of two strokes in medal play.

### RULE VIII

A ball must be played wherever it lies, or the hole must be given up, except as otherwise provided in Rules 9, 11, 13, 15, 17, 22, 23, 28, 31, 32, 34.

*Penalty:* In match play, loss of the hole; in medal play, loss of two strokes, except as otherwise provided in Medal Rules 6, 8, 9, 10, 11.



### RULE IX

Unless with the opponent's consent, a ball in play shall not be moved or touched before the hole is played out, under penalty of one stroke, except as otherwise provided in Rules 11, 13, 15, 17, 22, 23, 28, 31, 34, and Medal Rules 6, 8, 9, 10, 11. But the player may touch his ball with his club, in the act of addressing it, without penalty.

If the player's ball move the opponent's ball through the green, the opponent, if he choose, may drop a ball (without penalty), as near as possible to the place where it lay, but this must be done before another stroke is played.

*Penalty for moving or touching:* In match play, one stroke; in medal play one stroke.

If a competitor's ball be displaced by another competitor's ball it must be replaced, or its owner be disqualified.

### RULE X

Any loose impediment (not being in, or touching, a hazard), which is within a club length of the ball, may be removed. If the player's ball move after any such loose impediment has been touched by the player, his partner or either of their caddies, the penalty shall be one stroke, in either match play or medal play. If any loose impediment (not being on the putting-green), which is more than a club length from the ball, be removed, the penalty shall be the loss of the hole in match play, or of two strokes in medal play.

### RULE XI

Any vessel, wheelbarrow, tool, roller, grass-cutter, box, or similar obstruction may be removed. If a ball be moved in so doing, it may be replaced without penalty. A ball lying on, or touching, such obstruction, or on clothes, nets, or grounds under repair, or covered up, or opened for the purpose of the upkeep of the links, may be lifted and dropped without penalty, as near as possible to the place where it lay, but not nearer the hole. A ball lifted in a hazard, under such circumstances, shall be dropped in the hazard.

A ball lying in a Golf hole or flag hole, or in a hole made by the greenkeeper, may be lifted and dropped without penalty as near as possible to the place where it lay, but not nearer to the hole.

"As near as possible" shall mean within a club length.

If a ball lie on, or within a club length of, a drain cover, water pipe or hydrant, it may be lifted and dropped, without penalty, as near as possible to the place where it lay, but not nearer the hole.

## RULE XII

Before striking a ball in play, the player shall not move, bend or break anything fixed or growing near the ball, except in the act of placing his feet on the ground for the purpose of addressing the ball, in soling his club to address the ball, and in his upward or downward swing, under penalty of the loss of the hole, except as otherwise provided in Rules 11, 13, 30.

*Penalty:* In match play, loss of the hole; in medal play, loss of two strokes.

## RULE XIII

When a ball lies in, or touches, a hazard, nothing shall be done to improve its lie; the club shall not touch the ground, nor shall anything be touched or moved before the player strikes at the ball, subject to the following exceptions: (1) The player may place his feet firmly on the ground for the purpose of addressing the ball. (2) In addressing the ball, or in the upward or downward swing, any grass, bent whin or other growing substance, or the side of a bunker, wall, paling or other immovable obstacle may be touched. (3) Steps or planks placed in a hazard by the green committee for access to, or egress from, such hazard may be removed, and if a ball be moved in so doing, it may be replaced without penalty. (4) Any loose impediment may be removed from the putting-green. (5) The player shall be entitled to find his ball as provided in Rule 30. The penalty for a breach of this rule shall be loss of the hole, in match play, or of two strokes in medal play.

## RULE XIV

A player or caddie shall not press down, or remove, any irregularities of the surface near a ball in play. Dung, worm casts, or molehills may be removed (but not pressed down) without penalty. The penalty for a breach of this rule shall be loss of the hole in match play, or of two strokes in medal play.

Pressing down the surface behind the ball by prolonged or forcible grounding of the club, shall be deemed a breach of this rule.

## RULE XV

If a ball lie, or be lost, in water, the player may drop a ball, under penalty of one stroke in either match or medal play. But if a ball lie or be lost (1) in casual water through the green, a ball may be dropped without penalty; (2) in water in a hazard, or in casual water in a hazard, a ball may be dropped behind the hazard, under penalty of one stroke; (3) in casual water on a putting-green, a ball may be placed by hand behind the water, without penalty.

A ball lifted from a recognized water hazard may be dropped, under penalty of one stroke, even if the hazard be dry at the time.

If the water in a recognized water hazard overflow its usual boundaries, the overflowed portion of the course shall be considered as part of the hazard and not as casual water.

If a ball lie, or be lost, in casual water in a hazard, a ball may be dropped, without penalty, behind the water, but in the hazard, and in line between the spot where it entered the water and the hole.

## RULE XVI

When a ball has to be dropped, the player himself shall drop it. He shall face the hole, stand erect behind the hazard or casual water, keep the spot from which the ball was lifted (or in case of water or casual water, the spot at which it entered) in a line between himself and the hole, and drop the ball behind him from his head, standing as far behind the hazard or casual water as he may please. If it be impossible to drop the ball behind the hazard or casual water, it shall be dropped as near as possible to the place where it lay, but not nearer to the hole. If the ball so dropped touch the player dropping it, there shall be no further penalty, and if the ball roll into a hazard, it may be redropped without further penalty.

*Penalty for a ball not dropped in accordance with this rule:* In match play, the opponent may call for the player to drop again, and if the request be not complied with, the player shall lose the hole. In medal play, the ball must be dropped again or the competitor disqualified.

## RULE XVII

When the balls lie within six inches of each other on a putting-green, or within a club length of each other through the green, or in a hazard (the distance to be measured from their nearest points), the ball nearer the hole may be lifted at the option of either the player or the opponent, until the other is played, and shall then be replaced as near as possible to the place where it lay. If the ball farther from the hole be moved in so doing, or in measuring the distance, it shall be replaced without penalty. If the lie of the lifted ball be altered by the player in playing, the ball may be placed in a lie as nearly as possible similar to that from which it was lifted, but not nearer to the hole.

## RULE XVIII

Any loose impediment may be removed from the putting-green, irrespective of the position of the player's ball. The opponent's ball may not be moved, except as provided in Rule XVII. If the player's ball move after any loose impediment lying within six inches of it has been touched by the player, his partner or either of their caddies, the penalty shall be one stroke, in either match or medal play.

## RULE XIX

When the ball is on the putting-green, the player or his caddie may remove (but not press down) sand, earth, dung, worm casts, molehills, snow or ice lying around the hole, or in the line of his putt. This shall be done by brushing lightly, with the hand only, across the putt and not along it. Dung may be removed by a club, but the club must not be laid with more than its own weight upon the ground. The lines of the putt must not be touched, except with the club immediately in front of the ball, in the act of addressing it, or as above authorized. The penalty for a breach of this rule is loss of the hole in match play, or of two strokes in medal play.

The "line of the putt" does not extend beyond the holes.

The "player or his caddie" shall include his partner or his partner's caddie.

## RULE XX

When the ball is on the putting-green, no mark shall be placed, nor line drawn, as a guide. The line of the putt may be pointed out by the player's caddie, his partner or his partner's caddie, but the person so doing must not touch the ground.

The player's caddie, his partner or his partner's caddie may stand at the hole, but no player or caddie shall endeavor, by moving or otherwise, to influence the action of the wind upon the ball.

The penalty for a breach of this rule is loss of the hole in match play, or of two strokes in medal play.

## RULE XXI

When on the putting-green, a player shall not play until the opponent's ball is at rest, under penalty of one stroke in either match or medal play.

## RULE XXII

Either side is entitled to have the flagstick removed when approaching a hole. If the ball rest against the flagstick when in the hole, the player shall be entitled to remove the stick, and if the ball fall in, it shall be considered as having been holed out at the last stroke. If the player's ball knock in the opponent's ball, the latter shall be deemed as having been holed out at the last stroke. If the player's ball move the opponent's ball, the opponent, if he choose, may replace it, but this must be done before another stroke is played. If the player's ball stop on the spot formerly occupied by the opponent's ball, and the opponent declare his intention to replace, the player shall first play another stroke, after which the opponent shall replace and play his ball. If the opponent's ball lie on the edge of the hole, the player, after holing out, may knock it away and claim the hole, if holing at the like, and the half, if holing at the odd; provided the player's ball does not strike the opponent's ball and set it in motion. If after the player's ball is in the hole, the player neglect to knock away the opponent's ball, and it fall in also, the opponent shall be deemed to have holed out at his last stroke.

*Penalty, if the player's ball knock in the other ball:* In match play, the latter shall be counted as holed out at the last stroke; in medal play, the latter must be replaced or its owner disqualified.

*Penalty, if a player's ball displace the other ball:* In match play, the other ball may be replaced at its owner's option, but this must be done before another stroke is played; in medal play, the other ball must be replaced or its owner disqualified.

## RULE XXIII

If a ball in motion is stopped or deflected by any agency outside of the match, or by the forecaddie, the ball must be played from where it lies, and the occurrence submitted to as a "rub of the green." If a ball lodge in anything moving, a ball shall be dropped as near as possible to the place where the object was when the ball lodged in it, without penalty. If a ball at rest be displaced by any agency outside the match, excepting wind, the player shall drop a ball as near as possible to the place where it lay, without penalty. On the putting-green the ball shall be replaced by hand, without penalty. If a ball at rest be displaced in match play, it must be dropped, or if on the putting-green, replaced, as near as possible to where it lay, or the hole shall be lost; in medal play, it must be replaced as near as possible to where it lay, or its owner must be disqualified.

### RULE XXIV

If the player's ball strike or be moved by an opponent, or an opponent's caddie or club, the opponent shall lose the hole in match play,but in medal play, there shall be no penalty.

If the player's ball strike the other competitor, or his caddie or club, it is a "rub of the green," and the ball shall be played from where it lies. If a player's ball at rest be moved by the other competitor or his caddie, the ball must be replaced or the player disqualified.

### RULE XXV

If the player's ball strike, or be stopped by, himself or his partner or either of their caddies or clubs, his side shall lose the hole in match play, or one stroke in medal play.

### RULE XXVI

If the player, when making a stroke, strike the ball twice, the penalty shall be one stroke, in either match or medal play.

### RULE XXVII

If the player, when not intending to make a stroke, or his partner, or either of their caddies, move his or their ball, or by touching anything cause it to move when it is in play, the penalty shall be one stroke. If the ball move after the player has grounded his club in the act of addressing it, or, when in a hazard, if he has taken up his stand to play it, he shall be deemed to have caused it to move, and shall lose a stroke, which shall be counted as a stroke of the player, except as provided in Rule 3.

The penalty for moving a ball or causing it to be moved as under Rules 10 and 17, shall be one stroke, in either match or medal play.

### RULE XXVIII

If a player play the opponent's ball, his side shall lose the hole in match play, but not in medal play, unless (1) the opponent then play the player's .ball, whereby the penalty is canceled, and the hole must be played out with the balls thus exchanged, or (2) the mistake occur through wrong information given by the opponent or his caddie, in which case there shall be no penalty, but the mistake, if discovered before the opponent has played, must be rectified by placing a ball as near as possible to the place where the opponent's ball lay.

If it be discovered, before either side has struck off from the next teeing ground (or after playing the last hole in the match, before any of the players have left the green) that one side has played out the hole with the ball of a party not engaged in the match, that side shall lose the hole, in match play; or in medal play the player must go back and play his own ball, or, not finding it, must return as near as possible to the spot where it was last struck, tee another ball, and lose a stroke (Rule 6, Medal Play) or else be disqualified.

### RULE XXIX

If a ball be lost, except as otherwise provided in Rules 15 and 23, the player's side shall lose the hole. If both balls be lost, the hole shall be considered halved, in match play; or in medal play the competitor must return as near as possible to the spot from which the lost ball was struck, tee the ball and lose a stroke.

### RULE XXX

If a ball be lost in fog, bent whins, long grass, or the like, only so much thereof shall be touched as will enable the player to find his ball. The penalty for a breach of this rule shall be the loss of the hole, in match play, or of two strokes in medal play.

### RULE XXXI

If a ball be driven out of bounds, a ball shall be dropped at the spot from which the stroke was played, under penalty of loss of the distance, in either match or medal play.

### RULE XXXII

In a three-ball match, if a player consider that an opponent's ball on the playing green might interfere with his stroke, he may require the opponent either to lift or to hole out his ball at the opponent's discretion.

If an opponent consider (1) that his own ball, if left, might be of assistance to the player, he is entitled to lift it, or to hole it out at his discretion; or (2) that the ball of the other opponent might be of such assistance, he may require that it be either lifted or holed out at the opponent's discretion.

### RULE XXXIII

A player shall not ask for advice from any one except his own caddie, his partner, or his partner's caddie, nor shall he willingly be otherwise advised in any way whatever, under penalty of the loss of the hole in match play, or of his disqualification in medal play.

### RULE XXXIV

If a ball split into separate pieces, another ball may be put down where the largest portion lies, or if two pieces are apparently of equal size it may be put where either piece lies, at the option of the player. If a ball crack or become unfit for play, the player may change it, on intimating to his opponent his intention to do so. Mud adhering to the ball shall not be considered as making it unfit for play.

### RULE XXXV

If a dispute arise on any point, the players have the right of determining the party or parties to whom it shall be referred, but should they not agree, either side may refer it to the Committee on the Rules of Golf, whose decision shall be final. If the point in dispute be not covered by the rules of Golf, the arbiters must decide it by equity. Such decision shall finally be referred to the Committee of the United States Golf Association.

## SPECIAL RULES FOR STROKE COMPETITIONS

### RULE I

In stroke competitions, the competitor who holes the stipulated course in the fewest strokes shall be the winner.

### RULE II

If the lowest score be made by two or more competitors, the tie or ties shall be decided by another round, to be played on the same day. But if the green committee determine that to be inexpedient or impossible, they shall then appoint the following or some subsequent day, whereon the tie or ties shall be decided, except that By-laws 15 and 19 of the United States Golf Association provide that, in case of ties for the sixteenth place in the amateur championship medal rounds, or for the eighth place in the woman's championship medal rounds, respectively, the contestants so tied shall continue to play until one or the other shall have gained a lead by strokes, the hole or holes to be played out.

### RULE III

New holes shall be made for stroke competitions, and thereafter no competitor, before starting, shall play any stroke on a putting-green, under penalty of disqualification.

Competitors must always assume that new holes have been made. Practice strokes may be played through the green and in the hazards.

In match-play competitions, other than bogey competitions, practice strokes may be played on the putting-green.

### RULE IV

The scores shall be kept by a special marker, or by the competitors noting each other's scores. The scores marked shall be checked after each hole. On completion of the round, the score of the competitor shall be signed by the marker, countersigned by the competitor, and handed to the secretary or his deputy, after which, unless it be found that a card returned shows a score below that actually played (in which case the competitor shall be disqualified), no correction or alteration can be made.

### RULE V

If a competitor play from outside the limit of the teeing ground, the penalty shall be disqualification.

### RULE VI

If a ball be lost (except as otherwise provided in Rules 15 and 31 of Golf) the competitor shall return as near as possible to the spot from which the lost ball was struck, tee a ball and lose a stroke. The lost ball shall continue in play, if it be found before the player has struck another ball. Penalty for breach of this rule shall be disqualification.

### RULE VII

If a competitor's ball strike himself, his clubs or caddie, the penalty shall be one stroke.

### RULE VIII

If a competitor's ball strike another competitor, or his clubs or caddie, it is a "rub of the green," and the ball shall be played from where it lies. If the competitor's ball, which is at rest, be moved by another competitor, or by his caddie or his club, or his ball, or by any outside agency except the wind, it shall be replaced as near as possible to the place where it lay, without penalty.

### RULE IX

A competitor shall hole out with his own ball at every hole, under penalty of disqualification. But if it be discovered, before he has struck off from the next teeing ground, or if the mistake occur at the last hole, before he has handed his card to the secretary or his deputy, that he has not holed out with his own ball, he shall be at liberty to return and hole out with his own ball, without penalty.

If he fail to find his own ball, he shall return as near as possible to the spot from which he last struck it, tee a ball and lose a stroke. (Medal, Rule 5.)

### RULE X

A ball may be lifted out of a difficulty of any description, and teed, if possible, behind it, under penalty of two strokes. If it be impossible to tee the ball behind the difficulty, it shall be teed as near as possible to the place where it lay, but not nearer to the hole.

### RULE XI

All balls shall be holed out, under penalty of disqualification. When a competitor's ball is within twenty yards of the hole, the competitor shall not play until the flag has been removed, under penalty of one stroke. If a ball nearer the hole might either interfere with the competitor's stroke, or in any way assist the competitor, such ball must be holed out or lifted, at the other's option. Through the putting green, a competitor may have any other competitor's ball lifted, if he find that it interferes with his stroke.

### RULE XII

A competitor, unless especially authorized by the green committee, shall not play with a professional, and he may not willingly receive advice from any one but his caddie, in any way whatever, under penalty of disqualification.

A forecaddie may be employed by any competitor or by each.


### RULE XIII

Competitors shall not discontinue play on account of bad weather, under penalty of disqualification.

### RULE XIV

Where, in the "Rules of Golf," the penalty of the breach of any rule is the loss of the hole, in stroke competitions the penalty shall be the loss of two strokes, except as otherwise provided in these special rules.

### RULE XV

Any dispute regarding the play shall be determined by the rules of the Golf committee.

### RULE XVI

The rules of Golf, so far as they are not at variance with these special rules, shall apply to stroke competition.

## ETIQUETTE OF GOLF

The "Etiquette of Golf" shall be as binding on players as are the other rules of the game.

1. A single player has no standing and must always give way to a properly constituted match.

2. No player, caddie, or onlooker should move or talk during a stroke.

3. No player should play from the tee until the party in front has played his second stroke and is out of range, nor play up to the "putting-green" until the party in front has holed out and moved away.

4. The player who has the honor should be allowed to play before his opponent tees his ball.

5. Players who have holed out should not try their putt over again when other players are following them.

6. Players looking for a lost ball must allow other matches that come up to pass them.

7. On request being made, a three-ball match must allow a single threesome or foursome to pass. Any match playing a whole round may claim the right to pass a match playing a shorter round.

8. If a match fail to keep its place on the green, and lose in distance more than one clear hole on those in front, it may be passed on request being made.

9. Turf cut or displaced by a stroke should at once be replaced.

10. A player should carefully fill up all holes made by himself in a bunker.

11. It is the duty of an umpire or referee to take cognizance of any breach of rule that he may observe, whether he be appealed to on the point or not.

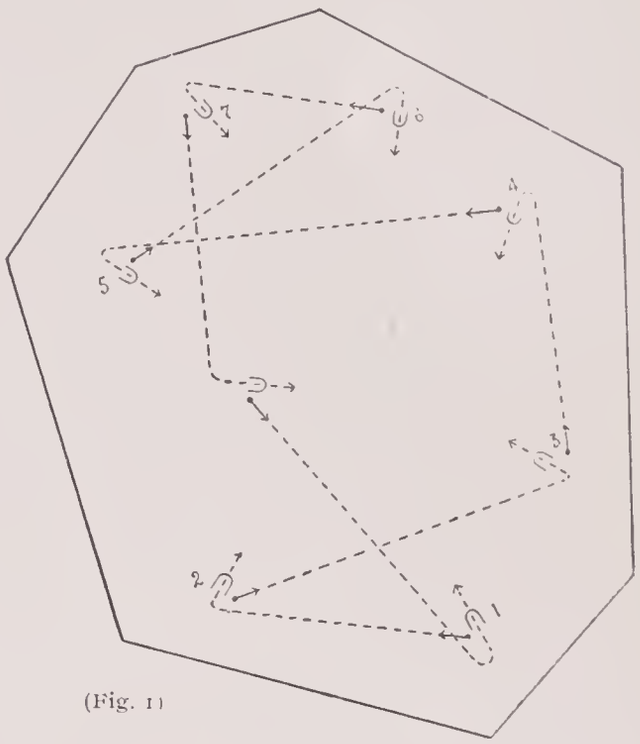
## GOLF-CROQUET

GOLF-CROQUET combines several of the principles of each of the two games after which it is named—golf and croquet. It was invented as a substitute for golf, and was intended to remedy one of the principal drawbacks of that game, namely, the large amount of space required for the links. Golf-croquet permits the use of many of the favorite strokes of golf, while at the same time it can be played on a lawn of moderate size.

The game is played with wooden balls, which are two and three-fourths inches in diameter, and made light and tough so as to secure force and speed without much momentum. Each player is provided with one ball and a mallet; the latter differs from an ordinary croquet mallet in having a larger handle, and a head which is beveled at one end so that it may be used to lift the ball clear of the ground.

The course, or field, of play, for Golf-croquet (Fig. I) may be laid out on a comparatively smooth lawn or field, either turf or bare ground, and of any shape or size. This course is marked with wickets or arches, similar to those used in croquet. Eight of these wickets are generally used, but if the course is small, a less number may be placed, as is the case with the holes in golf, and the player may go over the course twice during a game. The ground for a space of a few yards around each wicket should be made level and smooth. A spot is first marked near the center, since all shots made through the wickets must be made toward the center. The distances of the wickets from the center and from each other should vary, and the more unsymmetrical their arrangement, the more difficult and interesting the game will be. Near each wicket is placed a flag, on which the number of the wicket is plainly marked. The wickets should not be numbered in the order in which they are arranged on the field, but should be placed so that each number is in plain view from the number next below it; that is, wicket No. 6 must be visible from No. 5; No. 5 from No. 4, etc.

The game is usually played either by two persons or by four, and there are two methods of play, which are called "All wickets" and "All strokes." In the "All wickets" game, each player drives his ball through the wickets in their numerical order, and the one making a wicket in the least number of strokes scores 1. If each takes the same number of strokes in making a wicket, there is no score for that wicket. The player winning the greater number of wickets wins the game. In the "All strokes" game the players go through the wickets in their order, as before, and when the entire course has been played, the player who has taken the least number of strokes in making all the wickets wins the game.



(Fig. 1)

Let us suppose that there are two players, A and B: A starts by placing his ball in some place previously selected for the start, and after carefully estimating the distance to the first wicket, strikes the ball and endeavors to send it as near as possible to that wicket. This counts as stroke 1 for A. B now goes to the starting place, and, in the same manner, plays his ball toward the first wicket. Each player goes to where his ball is, and the one farthest away from the wicket played for plays stroke 2. If after this stroke his ball is still farther away from the wicket than that of his opponent, he plays stroke 3. If, however, stroke 2 carries him closer to the wicket than his opponent, the latter plays his second stroke before the former plays his third. The play is continued in this manner until both players get through the wicket, and a record is made of the number of strokes made by each. If a player strikes, with his ball, the ball of his opponent, that stroke is free and is not counted. He may then either replace the other ball where it lay when struck, or leave it in the position to which he has driven it; and he may play his ball from where it lies, or from any point within the radius of a mallet head from the ball struck. After the first wicket, the others are made in a similar manner, the play toward the next wicket being started by each player from a point within a radius of six feet from the wicket just made.

In case there are four players, two play as partners, as in golf, both using the same ball, and taking alternate strokes. A record should be kept, both of the number of strokes required for each player for each wicket, and of the aggregate number of strokes made by each.

The player winning the majority of wickets wins the "All wickets" game, and the one having the least aggregate number of strokes wins the "All strokes" game. As in golf, a player may win either game without winning the other. On account of its simplicity, freedom from expense, and similarity to golf, without several of the drawbacks of that game, Golf-croquet has become deservedly popular, and promises to become especially well known as a "home game."

Although considerable latitude is allowed in the rules of play, the following are generally observed: —

## RULES OF GOLF-CROQUET

1. Some spot must be selected as the *center* of the lawn (or ground) to be used, and must be plainly marked.

2. Place the wickets so that they face the center of the lawn. All strokes through the wickets are made toward the center.

3. In placing the wickets, it is necessary that the next wicket in sequence be plainly in sight, and that it be indicated by a flag, if the distance be great.

4. In beginning the game, the players strike alternately, and when each has played, the one whose ball is farthest away, or is out of position for going through the wicket, continues the play.

5. In counting total strokes, and not wickets, the least total wins the game. This is the ordinary game, called "All strokes."

6. The game by wickets is played by competing in the number of strokes required for each wicket until one or the other passes the wicket, when a fresh start is made for the next wicket. Even strokes at any wicket serve to halve it, as in golf. This is called the "All wickets" game.

7. If the player's ball strikes another ball, the stroke is considered "free"; that is, it is not counted in his score, and he plays again at once. His ball may be played either from where it lies or from a point within the length of a mallet-head from the ball that was struck.

8. When a ball is struck by another, it may be replaced or left where knocked, at the option of the owner, who must decide at once. (See second sentence of Rule 7.)

9. Count must be made of the number of strokes necessary to "make," or go through, each wicket, unless playing under Rule 6.

10. Should the ball become entrapped in a hole or puddle, where it is impossible to handle it with a mallet, it may be lifted out; the player then stands with his back to the center and throws the ball over his shoulder, and adds two strokes to his score.

11. If a ball go out of bounds or into a hedge, it may be thrown by hand toward the center, but two strokes must be added to the player's score.

12. All strokes count, whether the player hit the ball or miss it.

13. If, *on the drive from any wicket*, a player should split the ball so badly as to render it erratic in flight, he may start over, with a new ball, from the wicket last passed.

14. Rule XIII refers to the *first* stroke *from* a wicket; if, however, the ball be split on a subsequent stroke, he must continue to play that ball (or the larger portion of it) until he pass his next wicket, when he may take a new ball.

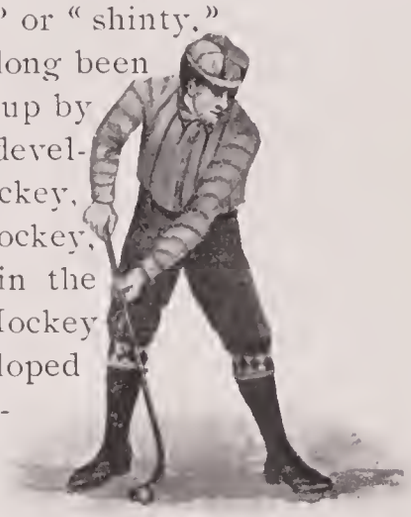
15. The first stroke from each wicket is taken from any point within the radius of six feet from that wicket. This rule is *general*, whether playing "All strokes" or "All wickets."

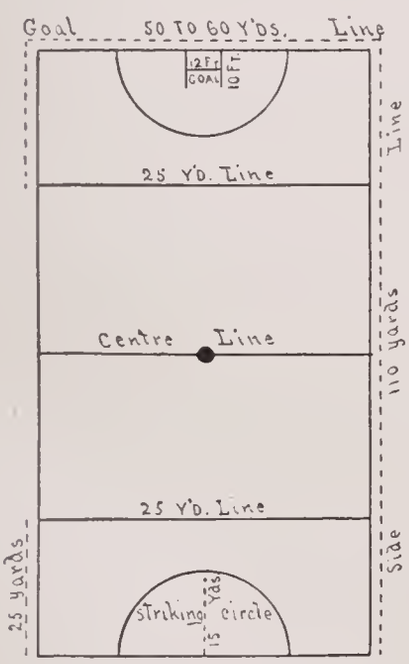
16. When there are four players, each pair uses one ball, and they play alternately. If there are three players, each takes a ball, and the play is competitive for each wicket.

17. The favorite handicap with three players is for the best player to beat both the others; that is, if either player of the two wins a wicket he wins it for both. This is like the "best ball" game in Golf.

# LAWN HOCKEY

THE game of Lawn Hockey, or Hockey, as it is usually called, has been played in one form or another for many years, especially in America, England, Ireland and Scotland. The style of game with which Americans are most familiar is called "shinny" or "shinty," which is the Scotch name for Hockey. This game has long been popular, especially among schoolboys, and as it was taken up by older players, it was gradually changed until it finally developed into the present scientific game of Hockey. Ice Hockey, ice polo and roller polo are similar in principle to Lawn Hockey, though there are several important points of difference in the rules of these four games. In its present form, Lawn Hockey very closely resembles ice hockey, which was developed from it, and in describing the former game it will be necessary to mention only the points in which it differs from ice hockey, which is more generally known in this country than the lawn game.





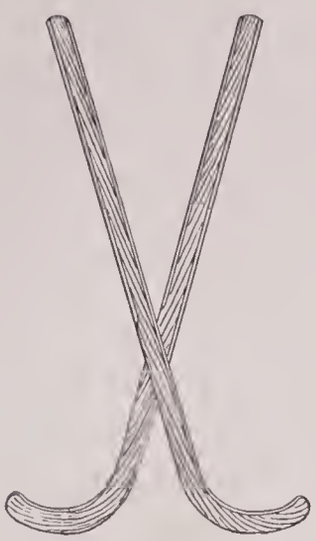

(Fig. 1)

## THE FIELD

The field of play for American Lawn Hockey is shaped as in the accompanying diagram. Its length should be one hundred and ten yards, and its width between fifty and sixty yards. The lines of the field are usually marked with lime, in the same manner as those of a tennis court. The exact center of the field is plainly marked, and a center line passes through that point parallel to the end, or goal, lines. At a distance of twenty-five yards from the goals, lines are marked across the field, parallel to the goal lines.

From the center of each goal line, a semicircle with a radius of fifteen yards is marked, and the space between this arc and the goal

line is called the *striking circle*. The goals, which are placed in the middle of the goal lines, consist of two upright posts twelve feet apart, with a cross-bar between them ten feet from the ground. Instead of the puck used in ice hockey, an ordinary wooden cricket ball is used in the lawn game. Hockey sticks, too, differ from those used in ice hockey. (Fig. II.) Instead of having a long, straight blade, they are curved at the lower end, so that they may be passed through a circle two inches in diameter, and they may not be more than one inch in thickness in any direction.



(Fig. 2)

In the game of shinny, with which most American boys are familiar, the number of players is unlimited, and, except in match games, this rule is sometimes observed in Hockey. In the regulation match games, eleven players are required, unless this number be changed by mutual agreement of the captains. A team of eleven men is composed of three *advance forwards*, four *forwards*, two *advance guards*, one *guard*, and one *goal-tend*. If there are less than eleven men, such of these positions are left vacant as the respective captains may think best.

## THE GAME

At the beginning of each game, and after each goal, the ball is put in play by a "bully," which corresponds to the "face" in ice hockey. The ball is placed in the center of the field, and two of the forwards, one from each team, stand near the center line, facing the ball from opposite sides, and with their backs to the opposite side lines. When the referee calls "Play!" each of these men strikes the ground on the side of the ball nearest his own goal and the stick of his opponent over the ball, alternately, three times. Either player may then strike the ball, and the moment it is touched it is in play. During the bully, the players of each team must be "on side," that is, must be between the ball and their goal. The positions of the players when the ball is bullied are similar to those of the players in ice hockey when the puck is faced, but these positions are varied according to the judgment of the different captains. As soon as the ball is put in play, the advance forwards hurry across the center line into their opponents' territory; the forwards and advance guards, by a series of diagonal passes, advance the ball past their opponents and endeavor to get it to the advance forwards, who should be inside or near the striking circle. This circle is the only place from which a

goal may be made, and in this rule we have one of the most important differences between Lawn Hockey and Ice Hockey, since in the latter game a goal may be made from any part of the rink.

When the advance forwards are in possession of the ball, the forwards assist them in attempting to pass it through the goal. The advance guards keep a few paces behind the line of scrimmage, toward the center of the field, so as to return the ball in case their opponents drive it back from the goal. The guard, as his name indicates, defends his goal from attack, and he never advances beyond the center of the field. The goal-tend never leaves his position between the goal posts, and when the ball is driven to him he either strikes or kicks it to one side, so as to prevent its passage between the goal posts. He is the only player that is allowed to advance the ball otherwise than with his stick, though, as in Ice Hockey, any player is permitted to stop the ball, either with his stick or with any part of his body.

The defense players make every effort to keep the ball from the front of their goal, especially when it is within the striking circle. If the ball is passed between the goal posts, and below the crossbar, one point is scored for the side making the goal. The ball is then returned to the center of the field, and after a bully the game is resumed, and proceeds as before. When the teams are evenly matched, the ball is often first in one striking circle, then in the other, several times before a goal is scored. The game usually consists of two thirty-five-minute halves, with an intermission of ten minutes between, though the length of the halves may be changed by agreement of the captains of the opposing teams.

The rule for off-side play is similar to that in Ice Hockey, except that a player is off side if he is ahead of the ball when it is hit by another player of his team, unless there are at least three of his opponents nearer their goal line than he, himself, is. No player is allowed to advance the ball with the back of his stick, nor is he allowed to raise his stick above his shoulders when striking. The stroke must always be from right to left. Hooking sticks are allowable, if the player is within striking distance of the ball. In this way he may prevent a favorable stroke of an opponent by hooking the latter's stick, and may thus give one of his own side an opportunity to get the ball.

A free hit is given to the opposite side if any player transgresses the rules in one of the following points: (1) Raises stick above shoulders during stroke; (2) kicks ball (except goal-tend); (3) is off side; (4) plays with back of stick; (5) strikes ball otherwise than from right to left; (6) strikes, pushes, trips, or otherwise plays with

unnecessary roughness; (7) fouls; *i. e.*, passes in front of a player from left to right when the latter is about to strike the ball. When a free hit is given, no player of the offending side may be within five yards of the ball, and the striker must not touch the ball again until it has been touched by another player.

If any player is guilty of one of the foregoing transgressions of the rules, except Nos. 1 and 5, within the striking circle, a "penalty bully" is given the opposing team. In this case all players except the offender and one of the other side must be outside the striking circle, and the two players bully as at the center, except that no other player may interfere until after a goal has been scored or the ball passes outside the striking circle. In the latter event, the ball is in play, and the game goes on as before. If a player transgress Rule 1 or Rule 5 within the striking circle, an ordinary bully is played at the spot where the transgression occurred.

If the ball passes the side line during any part of the game, it is rolled, not thrown, back on the field by one of the opposite side, from the spot where it crossed the line to the side of the player who last touched it. It may be rolled in any direction, except toward the goal of the player to whom it is rolled. The player who rolls the ball in may not touch it again until it has been touched by another player. If the ball is driven across the goal line outside the goal by one of the defending players, a free hit is given one of the attacking side from the corner where the side and goal lines meet. During this hit, all of the defending side must be back of the goal line, and all of the attacking side must be outside of the striking circle. If the ball is driven over the goal line outside the goal, by one of the attacking side, it is bullied at a point on the twenty-five yard line, at right angles to the spot where it crossed the goal line.

## RULES OF LAWN HOCKEY

Following are the rules for American Lawn Hockey, as played at the present time:—

### RULE I

#### The Grounds

Section 1. The grounds shall be one hundred and ten yards long and not more than sixty, nor less than fifty, yards wide. They shall be inclosed by heavy white lines marked with lime upon the ground. The longer sides shall be called the *side lines*; the shorter, the *goal lines*.

Sec. 2. *Striking Circle*—From the center of each goal line an arc of a circle shall be drawn, with a radius of fifteen yards. The space included between this arc and the goal shall be called the *striking circle*.

Sec. 3. The field of play shall be divided into two equal parts by a lime line parallel to the goal lines. Lime lines shall also be drawn twenty-five yards from the goal lines and parallel to them.

## RULE II

### The Goals

The center of the goal shall be in the center of the goal line. The goal shall consist of two upright posts twelve feet apart, with a crossbar ten feet from the ground.

## RULE III

### The Ball

The ball shall be an ordinary cricket ball.

## RULE IV

### The Sticks

The sticks must be shaped so as to pass through a ring two inches in diameter. They shall not be more than one inch in thickness. They shall be of wood, without metal fittings or sharp edges.

## RULE V

### The Clothing

The players shall not wear metal spikes in their shoes, or any other hard substance which, in the judgment of the referee, would injure another player.

## RULE VI

### The Players

The game shall be played by two teams of eleven men each. The players shall be called *advance forwards*, *forwards*, *advance guards*, *guard*, and *goal-tend*. The captain may change the number of players, by mutual agreement with the captain of the opposing team.

## RULE VII

### The Officials

The officials shall be a referee and two umpires.

## RULE VIII

### Duties of the Referee

(*a*) He shall put the ball in play at the beginning of the game, and whenever time has been called. He shall see that the grounds, ball, sticks, and clothing are according to regulations. He shall have the power, after warning, to suspend a player because of rough play.

(*b*) He shall act as timekeeper, and shall notify the captains, not less than five, nor more than ten, minutes before the close of each half, how many minutes of play remain.

(*c*) He shall decide all points not definitely covered in these rules, but shall have no power to change decisions under the jurisdiction of other officials. The referee shall suspend the game immediately if a player is incapacitated. No delay shall continue for more than two minutes. When play is resumed, the ball shall be bullied from the spot where it was when time was called.

## RULE IX

### Duties of the Umpire

The umpires shall each judge independently. Each shall assume responsibility for one side and one goal line, and for half of the field of play. They shall, however, judge on sticks over the entire field, as divided in Rule I, Section 3. Each shall

be judge of the position, progress, and ownership of the ball in his half of the field. The umpires are responsible for the calling of all fouls and the enforcement of all penalties for violation of rules.

## RULE X

### The Game

Section 1. The choice of goals shall be tossed for by the captains at the beginning of the game. Each half of the game shall occupy thirty-five minutes, and ten minutes intermission shall be allowed between the halves. The teams shall change goals at the beginning of the second half. The game shall start by a bully (Rule 10, Sec. 6, *c* and *d*) from the middle of the field, with all players on their own side of the ball.

Sec. 2. A goal is scored when the ball passes between the goal posts, beneath the cross-bar, and entirely over the goal line, provided the ball has been struck by or glanced from the stick of a player, or the person of a defender, while within the striking circle.

Sec. 3. (*a*) The ball may be stopped with the hand or any portion of the body, but it must not be held, picked up, carried, kicked, or driven forward or back, except with the front of the stick, and then only from the ground or from a point below the knee.

(*b*) Charging, tripping, kicking, collaring, or shinning shall not be allowed. A player shall not go between the ball and his opponent so as to obstruct him, nor cross him from the left so as to foul him. If the player cross and touch the ball before touching his opponent, no foul shall be called.

(*c*) The goal keeper, except in a penalty bully (Rule 10, Sec. 6, *e*) may kick the ball while within the striking circle. He shall be named by his captain at the beginning of the game. The goal keeper shall not be changed until players and officials have been duly notified.

Sec. 4. *Off side* — A player is off side if he is ahead of the ball when it is hit by another player of his team, unless there be at least three of his opponents nearer their own goal line than himself. This rule shall not apply in the striking circle, provided the man was on side when the ball entered the striking circle. He shall not play the ball nor approach within five yards, nor in any way interfere with any other player, until the ball has been touched or hit by an opponent.

Sec. 5. *Sticks* — In striking with the sticks, all strokes must be from right to left. The stick must not rise above the shoulder during any portion of the stroke. Participation in the game is allowable only when the player has his stick in hand. In a free hit, intentional undercutting, or raising the ball above the hips, is not allowable. Fencing, or hooking sticks, is allowable only when the opponent is within striking distance of the ball. Hooking an opponent is not allowable. The back of the stick shall not be used for stopping or striking the ball. (The back of the stick consists of the outer edge and right-hand surface while held in striking position.)

Sec. 6. The bully and penalty bully are methods of putting the ball in play, either at the beginning of the game, after time has been called, or after a foul. The bully is played as follows: —

(*a*) All players must be on their own side of the ball, that is, between their own goal and the ball.

(*b*) All players, except the man from each side acting as bully, must be at least five yards from the ball until it has been hit.

(*c*) Each player shall strike the ground on his own side of the ball and his opponent's stick three times alternately. The ball shall then be in play for these two men. After it has been hit by one of these men, it shall then be in play for all.

(*d*) The two bullies shall stand facing the side lines, each in a position to strike toward his opponent's goal.

(*e*) The penalty bully is given only for violation of Section 3 of this rule, made by the defending side within their striking circle, this penalty bully to be between the offender and one player selected by the other side. All other players shall be outside the striking circle. These two men shall play the ball, without aid or hindrance from the other players, until a goal has been scored, or the ball has been batted outside the striking circle, when it shall be in play for all. Violation of this section shall give a free hit to the offended side from the spot where the ball was when the foul occurred. All bullies from violation of rules shall take place on the spot where the violation occurs.

Sec. 7. A free hit is given for all fouls except those made by the defending side within their circle, when a bully shall be given, except for violation of Section 3 of this rule, for which a penalty bully shall be given. When a free hit is made, all members of the offending side shall be at least five yards away.

Sec. 8. *Playing in from out of bounds* — When the ball passes over the side lines, it shall be rolled in at right angles to side line or toward goal of player rolling in. It shall be rolled in from the point where it crossed the side line by one of the opposite side to that of the player who last touched it. All players shall stand not less than five yards from the player rolling in the ball. The player rolling in the ball must be out of bounds, and shall not again touch the ball until it has been touched or hit by some other player.

When the ball is hit over the goal line, without scoring a goal by the attacking side, it must be brought out into the field of play twenty-five yards, in a direction at right angles to the goal line, from the point where it crossed such line, and there "bullied."

If the ball glance off or be hit behind the goal line by one of the defending side, the attacking side shall have a free hit from within one yard of the nearest corner flag. At the time of such free hit, all defenders must be behind their own goal line, and all of the attacking side must be outside the striking circle. The attacking side cannot score a goal from such free hit until the ball has been touched or hit by the defenders, or has been brought to a full stop on the ground by the attacking side.

## PONY POLO

The game of Pony Polo, as its name indicates, is played on horseback, but in the object sought by the players, and in some other particulars, it elosely resembles lawn hockey. The origin of Pony Polo antedates the Christian era, but it did not become known in England until 1870, and its introduction into this country is of very recent date. Owing to the faet that each player is required to have at least one pony of a specified size, thus necessitating a considerable expense, the game could never become popular in schools and col-

leges, but is played principally by clubs organized from among the wealthy residents of large cities.

## GROUND—BALL—STICKS

A full-sized Polo ground is three hundred yards long by two hundred yards wide, but the game is often played on a much smaller field. A rectangular shape is usually selected, though many players prefer to have the corners rounded. The playing space should be perfectly level, and though a slight rise from each end to the center is not considered a detriment, there must be no slope from the center to the sides. The field should be covered with a firm turf of closely cut lawn-grass, which should be kept smooth by rolling. The boundaries may be marked by white lines, similar to those of a tennis court, but boards are generally used for marking the side lines. These boards are about ten inches wide and are nailed to upright wooden pegs, which are driven into the ground at intervals. The turf inside the field is sloped up to the sideboards so that the ball may not lodge against them. Lines are also drawn across the ground thirty yards from the ends, and parallel to them, and the center of the field is marked by a white spot.

A goal is placed at either end of the ground, in the center of the back line. The goal posts, which should not be so heavy as to make a collision with them dangerous, are eight yards apart and ten feet high, and are usually surmounted by small flags.

The regulation ball is of willow or alder wood, three inches in diameter, and is painted white. Polo sticks have handles of ratan or malacca, which vary in length from four feet two inches to four feet six inches, and heads made of sycamore, which are usually from seven and one-half to eight and one-quarter inches long, one and seven-eighths to two and one-fourth inches wide, and one and one-eighth to two inches thick. The handle is largest at the grip, and tapers downward, so that it is not likely to slip from the player's grasp.

Each side has four players, who are distinguished by shirts, jerseys, or waistcoats, of different colors. Their dress, of course, varies in different clubs, but a padded cap, or pith helmet, is nearly always worn to prevent serious injury to the head. The players are mounted on light, active ponies, which must not be more than fourteen hands two inches in height.

## THE GAME

In beginning the game, each side takes a position facing its opponents, in the center of the field. Three of the men of each team

are in line, and the fourth is slightly in rear of the others. Two umpires are selected that are satisfactory to the captains of both teams, and they take positions on opposite sides of the ground. The secretary or polo manager, or some one selected by him, then throws the ball in between the line of players and cries "Play!"

The object of each side is to score a goal by driving the ball between its opponent's goal posts, or above their top, but not outside their imaginary continuation line. Whenever a goal is scored the sides change goals, and the ball is carried to the center of the field and put in play as at first. The side scoring the most goals wins the game. In a match the time of actual play is divided into three periods of twenty minutes each, with an interval of five minutes between each two successive periods.

If a ball be hit behind the back line by one of the opposite side, it must be hit out by one of the side whose line it is, from a point as near as possible to where it crossed the line. None of the attacking side may be within thirty yards of the back line when the ball is hit out. If, however, the ball be hit behind the back line by one of the players whose line it is, one of that side must hit it out from the center of the goal line between the posts, and all of the defenders must be behind the line until the ball is hit out, while their opponents may place themselves where they choose, but not within fifteen yards of the ball. When the ball is hit out of bounds over one of the side lines, it is thrown in by the umpire from the exact point where it crossed the boundary line, in a direction parallel to the goal lines, and between the opposing ranks of players.

Subject to certain restrictions, which are defined by the appended rules of the game, a player may interpose his pony before an antagonist to prevent him from reaching the ball, or may hold his adversary's stick by interlocking, or "crooking," his own stick with it, and thus prevent him from hitting the ball. The rule regarding off-side play is similar to the one that obtains in hockey, and no player who is off-side is allowed to hit the ball or to interfere with any player of the opposite side. Penalties for fouls are very severe, and may consist in giving a free hit to the side against which the offense was committed, or in permitting them to rule out of the game any player of the offending side, in which event the game is continued with three players on each side. If a player drop his stick he must pick it up himself, and no dismounted player is allowed to hit the ball.

Ponies may be changed at any time during the game, but this is at the player's risk, unless done at the expiration of ten minutes from

the beginning of one of the periods of play, when the game is suspended for two minutes in order to permit changes to be made.

Should a player's stick be broken, he must ride to the place where sticks are kept and get another, and on no account is a stick to be brought to him.

Following are the most important rules of Pony Polo :—

RULES

1. *Ponies* — The height of ponies shall not exceed fourteen hands two inches, and no pony shall be played in either practice games or matches, unless he has been registered in accordance with the by-laws. No vicious pony shall be allowed in the game.

2. *Ground* — A full-sized ground shall be three hundred yards long by two hundred yards wide. The goals shall be not less than two hundred and fifty yards apart, and each goal shall be eight yards wide.

3. *Balls* — The balls used in Pony Polo shall be of wood, and three inches in diameter.

4. *Officials* — Each side shall appoint an umpire, unless it be mutually agreed to play with one instead of two, and his or their decisions shall be final. In important matches, a referee may be appointed in addition to the umpires, in which case his decision shall be final. An official timekeeper shall be appointed in all important matches.

5. *Number of Players* — In all matches for cups or prizes, the number of players on each side shall be limited to four.

6. *Beginning the Game* — In beginning the game, the two teams take up their positions on opposite sides of the center of the field of play, and the manager or his representative throws the ball in between them.

7. *Duration of Play* — The duration of actual play in a match shall be one hour, which shall be divided into three periods of twenty minutes each, and there shall be an interval of five minutes for rest between each two successive periods. The first two periods of play shall terminate as soon as the ball goes out of play after the expiration of the prescribed time, and any excess of time in either of the first two periods, due to the ball remaining in play, shall be deducted from the succeeding periods. The last period shall terminate immediately at the expiration of the hour's play, even though the game be in progress at that time.

*Exception* — In case of a tie, the last period shall be prolonged till the ball goes out of play, and if there is still a tie, after an interval of five minutes the ball shall be started from where it went out of play, and the game shall be continued as before, until one side obtains a goal, which shall decide the match.

8. *Changing Ponies* — As soon as the ball goes out of play after the expiration of the first ten minutes of each period of play, the game shall be suspended for sufficient time, not exceeding two minutes, to enable players to change ponies. With the above exception, play shall be continuous, and it shall be the duty of the umpire to put the ball in play punctually, and, in the event of unnecessary delay in hitting out the ball, to call upon the offending side to proceed at once.

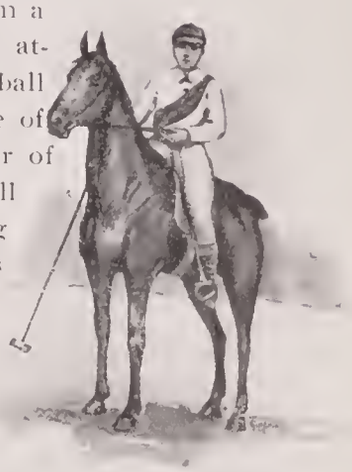
Any change of ponies, except according to the above provision, shall be at the risk of the player.

A bell shall be rung to signify the time for changing ponies, and at the termination of each period of play.

9. *Goals* — A goal is scored when the ball is driven between the goal posts, clear of the goal line, by any of the players or their ponies. If a ball is hit above the tops

of the goal posts, but, in the opinion of the umpire, passes between their imaginary continuation lines, it shall be deemed a goal. The side that scores the greater number of goals shall be declared winner of the match.

10. *Ball Crosses Back Line* — If the ball be hit behind the back line by one of the opposite side, it shall be hit out by one of the side whose line it is, from a spot as near as possible to where it crossed the line. None of the attacking side shall be within thirty yards of the back line until the ball is hit out. If, however, the ball be hit behind the back line by one of the players whose line it is, they shall hit it off from the center of the goal line between the posts, and all of the defending side shall remain behind the line until the ball is hit out, the attacking side being free to place themselves where they choose, but not within fifteen yards of the ball.



11. *Ball Out of Bounds* — When the ball is hit out of bounds, it must be thrown into the field of play by the umpire from the exact spot where it went out, in a direction parallel to the two goal lines, and between the opposing ranks of players. There must be no delay, whatever, nor any other consideration, for absent players.

12. *Riding Out an Antagonist: Crossing* — A player may "ride out" an antagonist, or interpose his pony before the latter, so as to prevent him from reaching the ball, but he may not "cross" another player in possession of the ball, except at such distance that the said player shall not be compelled to check his pony to avoid a collision.

*Definition of "Crossing"* — If two players are riding from different directions to hit the ball, and a collision appears probable, the player in possession of the ball (that is, he who last hit the ball, or, if neither has hit it, the player who is coming from the direction from which the ball was last hit) shall have the right of way; provided that no player shall be deemed to be in possession of the ball by reason of his being the last striker, if he shall not have pursued the exact course of the ball.

13. *"Crooking" Stick* — No player shall "crook" his adversary's stick unless he is on the same side of the adversary's pony as the ball, or is in a direct line behind.

14. *Off-side* — No player who is off-side shall hit the ball, or shall in any way prevent the opposite side from reaching or hitting it.

*Definition of "Off-side"* — A player is off-side when, at the time the ball is hit, he has no one of the opposite side nearer the adversary's goal line, or that line produced, or behind that line, and he is neither in possession of the ball nor behind one of his own side who is in possession of it. The goal line means the eight-yard line between the goal posts. A player, if off-side, remains off-side until the ball is hit, or hit at, again.

15. *Rough Play* — No player shall seize with the hand, strike, or push with the head, hand, arm, or elbow, but a player may push with the part of his arm above the elbow, provided the elbow be kept close to the side.

16. *Carrying the Ball* — A player may not carry the ball. In the event of the ball lodging upon or against a player or pony, it must immediately be dropped on the ground by the player or the rider of the pony.

17. No player shall intentionally strike his pony with the head of his polo stick.

18. *Penalty for Foul* — Any infringement of rules constitutes a foul. In case of an infringement of Rules 12, 13, 15, 16, or 17, the umpire shall stop the game; and in case of an infringement of Rule 14, the umpire shall stop the game on an appeal by any one of the side which has been fouled. On the game being stopped as

above, the side which has been fouled may claim either of the following penalties:

(*a*) A free hit from the position of the ball when the foul took place, none of the opposing side to be within ten yards of the ball; or,

(*b*) The side which caused the foul must take the ball back and hit it out from behind their own goal line.

19. *Penalty for Disabling a Player* — In case a player is disabled by a foul, the side to which that player belongs shall have the right to designate any one of the players on the opposite side, who shall retire from the game. The game shall be continued with three players on each side, and if the side that caused the foul refuse to continue the game, it shall thereby lose the match. This penalty shall be in addition to that provided by Rule 18.

20. *Changing Goals* — The two teams shall exchange goals whenever a goal is scored, or, if no goal has been obtained, at the beginning of the second half of the game.

21. *Damaged Ball Exchanged* — If the ball be damaged, the umpire must at once stop the game, and must throw in a new ball from the place where the first was broken toward the nearest side of the ground, in a direction parallel to the two goal lines and between the opposing ranks of players.

22. *Broken Sticks* — Should a player's stick be broken, he must ride to the place where sticks are kept and take one. On no account is a stick to be brought to him.

23. *Dropped Stick* — In the event of a stick being dropped, the player himself must pick it up. No dismounted player shall be allowed to hit the ball.

24. *Ground Kept Clear* — No persons shall be allowed within the arena except the players, umpires and manager.

25. *Accidents* — If any player or pony fall or be injured by an accident, the umpire may stop the game and may allow time for the injured man or pony to be replaced, but the game need not be stopped should any player fall through his own fault.

On play being resumed, the ball shall be thrown in where it was when the game was stopped, in the manner provided for in Rule 21.

26. *Disregarding Umpire's Decision* — Any deliberate disregard of the injunctions of the umpire shall involve the disqualification of the team so offending.

27. *Umpire's Power to Decide All Disputes* — Should any incident or question arise that is not provided for in these rules, such incident or question shall be decided by the umpire.

## ICE POLO

Ice Polo, as first played, was developed from "shinny," and there was no restriction as to the size of the field of play, the number of players, the size or shape of stick, or the material or shape of the object used for the ball or "puck." Foreigners and others who are not familiar with the game, sometimes erroneously refer to Ice Polo as "American ice hockey," but, except in the object sought by the players, there is little similarity between the two games. The modern game of Ice Polo, however, is almost identical with roller polo, and is played in a correspondingly scientific manner.

## THE GAME

THE field of play, or rink, should be rectangular in shape, and the distance between the goals should not be less than one hundred and fifty feet. The goal posts are four feet apart, and a mark is made on each at a point eighteen inches from the surface of the ice. A goal is made when the ball passes between the goal posts below an imaginary line connecting these marks. Each goal is surrounded by a *goal-tender's circle*, with a radius of two feet from the center of the goal.

The ball used in Ice Polo is the regulation rubber-covered, roller polo ball. The sticks must not exceed four feet in length and one and one-fourth inches in diameter, and may not have any material on them more than one foot from the upper end, or stringing of any kind on any part.

The game is divided into two halves which are usually twenty minutes in length, and the interval between them may not exceed ten minutes. The sides change goals at the end of the first half. Each goal counts three points, and in case of a tie the side that has made the least number of fouls is declared the winner of the game.

Fouls are penalized, as in roller polo, by the deduction of one goal, or three points, from the score of the offending team for every three fouls. A foul is declared if the ball be driven between the goal posts from the rear. In the method of play, duties of the various players, and in other matters not herein especially referred to, Ice Polo is identical with roller polo.

Following are the rules for Ice Polo as adopted by the New England Skating Association:—

## RULES

1. Each team shall consist of five players, who shall be designated as follows: One *goal-tend*, one *half-back*, one *center*, two *rushers*.

2. The distance from goal to goal shall be one hundred and fifty feet. The goal shall be four feet in width.

3. The regulation Spalding Rubber-covered Polo Ball shall be used exclusively.

4. The sticks shall not exceed four feet in length and one and one-fourth inches in diameter. Sticks shall have no material of any kind on them more than one foot from the top. No stringing of any kind is permissible.

5. The referee shall examine the sticks of each player before the game begins.

6. Each goal umpire shall make a mark in some way on each goal post, eighteen inches from the ice, so that it may be plainly seen.

7. Time shall be taken out from the moment after a goal is made and the ball is placed in the center, to the moment when the sides are lined up ready to rush.

8. The time between halves shall not exceed ten minutes.

9. After each goal the ball shall be placed in the center.

10. The referee shall place the ball in the center of the field between the two goals, and when both teams are lined up in their respective places, shall give the signal for play to begin.

11. In case of a skate coming off, or a serious accident, the referee shall call "Time!" and shall deduct time accordingly. Time shall not be called because a player drops or otherwise loses control of his stick.

12. No time exceeding five minutes shall be taken out because of a skate coming off or a serious accident.

13. At the end of the first half the sides shall change goals.

14. When time is called owing to loss of a skate or serious injury, each player shall remain exactly where he was at the moment when time was called, and shall not move so that he cannot resume his exact position when the referee calls play.

15. In case of a tie, the contesting teams shall play not to exceed ten minutes until one side makes a goal.

16. Should time be lengthened in the above manner, or in case of a serious accident or a skate coming off, play must be resumed within two minutes.

17. A forfeited game shall count three goals to the side to which the game is forfeited, nothing being allowed the opposite side.

18. For every three fouls which a side makes, one goal shall be deducted.

19. A goal shall be considered as three (3) points.

20. In case of a tie, the side which has made fewest fouls shall be declared the winner.

21. A postponed game or a tie game shall be played off as soon as the weather permits.

22. A goal is made by passing the ball between the goal posts and below an imaginary straight line connecting the two elements of the goal, at a height from the ice of not more than eighteen inches.

23. There shall be two twenty-minute halves.

24. A foul shall be called if any player: (1) touches the ball with his hands; (2) blocks or holds; (3) purposely trips another player; (4) throws his stick at the ball; (5) goes within the goal-tender's circle; (6) kicks the ball into the goal; (7) drives the ball through the goal from the rear; (8) strikes the ball while any portion of his body is in contact with the ice.

25. The goal-tender's circle shall include the ice within a radius of two feet from the center of the goal.

26. The duties of the umpires shall be to decide if the ball goes within the required goal limits.

27. The duties of the referee shall be to have general charge of the ball, to call time, and to declare the fouls. The decision of the referee shall be final, and any club refusing to play the game out shall be declared the loser.

# CURLING

"There draw a shot; there lay a guard;
And here beside him lie, man;
Now let him feel a gamester's hand;
Now in this bosom die, man.
There fill the port, and block the ice;
We sit upon the tee, man!
Now take this in-ring sharp and neat,
And make this winner flee, man."

CURLING has long been recognized as the national sport of Scotland,—an honor in which it has never been supplanted even by golf. Although it has become known in nearly every country in which ice abounds, it never seems to lose its distinctive Scottish ring, and wherever a Curling rink is to be found, it is almost sure to owe its existence to Scotchmen. When first introduced into this country, some of the features of the game were considered ludicrous, but as it became better known, and the scope it offers for display of skill became understood, ridicule gave way to admiration. At the present time there are numerous Curling clubs in the northern part of this country and in Canada, and each season sees an increase in the popularity of the sport.

In principle, Curling resembles quoits more than any other familiar game, since the object of the curler is to play his stone so as to cause it to stop as near as possible to a designated spot called the *tee*. Ice is, of course, the first requisite for Curling, and the nature of the play requires that the ice of the rink be smooth and free from obstructions.

The form and size of the rink are described in Section 1 of the appended rules. Although Curling is best enjoyed in the open air, it is often played on artificial ice rinks, where the ice can be kept in good condition during all kinds of weather.

## THE EQUIPMENT

THE curler's outfit is not expensive, consisting only of a broom, or *kowe*, with which to sweep the ice, and a pair of curling stones. These stones are the chief part of the curler's equipment, and he is very careful to see that they are perfect in size and shape, and that they are exactly

matched. The material from which they are made is any kind of hard, tough rock that is susceptible of a very smooth finish. Boulders of about the size required are generally used, and great care is exercised in shaping and polishing them. Some players prefer iron blocks to stones, their advantage being that they are better suited to withstand hard knocks and the effect of frost. Stones made from bowlders usually weigh from thirty-five to thirty-eight pounds, while the usual weight of iron "stones" is from sixty to seventy pounds. No stone is allowed in play, the circumference of which exceeds thirty-six inches, and the thickness must be not less than one-eighth of the greatest circumference. Each stone has two playing sides, one for hard, smooth ice, and the other for a softer and rougher surface. Usually, the latter side is highly polished, and is so curved that it passes easily through slush or over slightly rough ice. Sometimes a small hollow, about two and one-half inches in diameter, is ground out of this polished surface, leaving an edge or rim which aids the curler in directing the course of the stone. The side that is used for keen ice is not so highly polished as the other, and has a much larger hollow, which is usually from five to seven inches in diameter. Each stone is fitted with a reversible handle and a bolt by which the handle may be secured to the middle of the stone on either side. The open, or swan-necked, handle is the most common, though some players prefer the closed, oval variety. The game is in charge of two skips, or directors, who are the captains of the opposing sides.

By reference to the accompanying diagram, and the following rules and directions for play, a clear understanding of the game may easily be obtained.

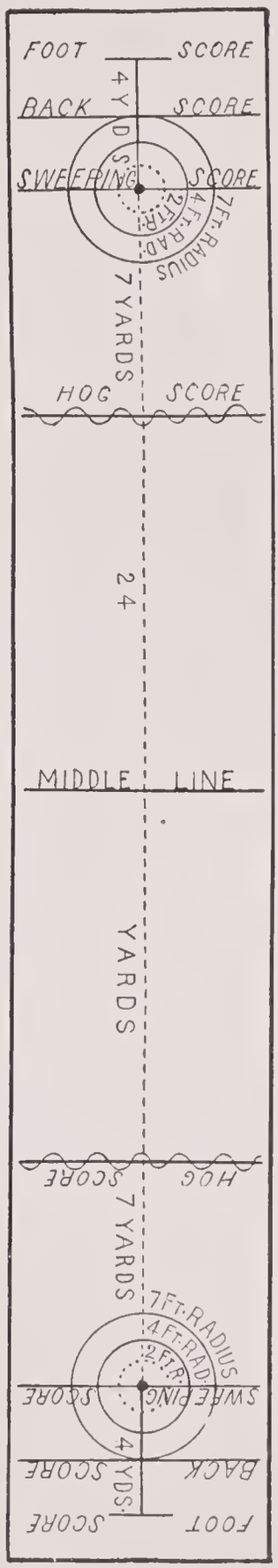
(Diagram of Curling Rink) (Fig. 21)

## RULES FOR CURLING—RINK MEDALS

### RULE I

Section 1. The length of the rink for play shall be forty-two yards. The tees shall be placed thirty-eight yards apart. In a continued straight line with the tees, and four yards behind each, a circle eighteen inches in diameter shall be drawn on the left-hand side of that line (looking toward the center of the rink) with the circumference just touching it. Each player, whether standing on the ice or on any rest, support or abutment, whatsoever, permitted by the rules, when playing his stone shall place his right foot within that circle and his left foot on the left-hand side of the central line. (The circle shall be on the opposite side of the line if the player be left-handed.) When a hack, or hatch, in the ice is used, it must be behind the circle, and not of greater length than fourteen inches, measuring from the central line. A circle with a radius of seven feet shall be described from each tee as a center, and no stone shall count which passes this and goes beyond a line drawn across the farther edge of the circle; such stone shall be treated as out of the game and shall be put off the ice. Should this be neglected, and another stone stopped against the first and within seven feet of the tee, the stone so stopped shall be counted in the game. Each hog-score shall be distant from its tee one-sixth part

of the whole rink played. Every stone shall be a *hog* which does not clear a square placed upon this score; but no stone shall be considered a hog which has struck another stone lying over the hog-score. A line shall be drawn on the ice at right angles to the rink, half-way between the tees, which shall be called "the middle line." In no case shall the rink played be less than thirty-two yards in length.



(Fig. 21)

Sec. 2. As soon as the rink is marked off, and before beginning play, the terms of the match must be distinctly stated and fixed by the skips, if they have not been previously arranged. These terms may be either that the parties shall play for a specified time, or that a game of a certain number of shots or heads shall be played. Though the terms have been previously fixed, they should be repeated.

Sec. 3. Every rink shall be composed of four players on a side, each provided with two stones. Before beginning the game, each skip shall state to the opposing skip the rotation in which his men are to play, and the rotation so fixed is not to be changed during the game. Each player shall play one stone, alternately with his opponent, till he has played both.

Sec. 4. The two skips opposing each other shall settle by lot, or in any other way agreed upon, which party shall lead, after which the winning party of the last end shall lead.

Sec. 5. All curling stones shall be circular in shape. No stone shall weigh more than forty-four pounds nor less than thirty-two pounds, nor shall be more than thirty-six inches in circumference, nor of a height less than one-eighth part of its greatest circumference, unless the club uses iron blocks. No iron block shall exceed seventy pounds in weight, and the same rules as to size which govern the stones must govern the iron blocks. Players may change the sides of their stones once during the game, but they shall not be allowed to change them oftener, or change stones after the beginning of the game, unless by mutual consent of the skips. If, however, one or both be broken, the largest portion of the broken stone shall count, and it need not be played with again. If the played stone rolls and stops on its side or top, it shall not be counted, but shall be put off the ice. Should the handle quit the stone in the delivery, the player must retain it in his hand, otherwise he shall not be entitled to replay his shot.

Sec. 6. Each party, before beginning to play, and during the course of each end, shall be arranged along the sides of the rink, in any places between the middle and the tee selected by their skip; but no party, except when sweeping according to the rule, shall go on the middle of the rink, nor cross it, under any pretense whatever. The skips alone shall stand at or about the tee, as their turn requires.

Sec. 7. If a player plays out of turn, the stone so played may be stopped in its progress and returned to the player.

If the mistake be not discovered till the stone is again at rest, the opposite party shall have the option of adding one to their score, and letting the game proceed in its original rotation, or of declaring the end null and void.

Sec. 8. The sweeping department shall be under the exclusive direction and control of the skips. The player's party shall be allowed to sweep when the stone is past the middle line, and till it reaches the tee; the adverse party, when it has passed the tee. The sweeping shall always be to one side or across the rink; and no sweepings shall be moved forward and left in front of a running stone, so as to stop or obstruct its course. Either party may sweep behind the tee, before or after the stone has been played, or while it is in motion.

Sec. 9. If in sweeping, or otherwise, a running stone be marred by any of the party to which it belongs, it shall be put off the ice; if by any of the adverse party, it shall be placed where the skip of the party to which it belongs shall direct. If marred by any other means, the player shall replay his stone. Should any played stone be accidentally displaced by any of the opposing party before the last stone is played, for the first offense it shall be replaced by the skip to whom it belongs in as nearly as possible its original position before it was displaced; and for the second offense by the same party, the opposing party shall have the option of declaring the end null and void, or of replacing the stone. If a played stone be moved accidentally by any of the party to whom it belongs, it shall be left to the decision of the opposing skip to replace the stone as near as possible to where it was before being moved, or to allow it to remain where it was accidentally moved. No stone displaced by either party shall be allowed to be moved if it has been struck or moved by a running stone before the claim for moving has been made.

Sec. 10. Each player shall come provided with a besom, shall be ready to play when his turn comes, and shall not take more than a reasonable amount of time to play his stone. Should he accidentally play a wrong stone, any of the players may stop it while running; if not stopped till it is again at rest, it shall be replaced by the one that ought to have been played.

Sec. 11. No measuring of shots shall be allowed previous to the termination of the end. Disputed shots shall be determined by the skips, or, if they disagree, by the umpire; or, when there is no umpire, by some neutral person mutually agreed upon by the skips, and his decision shall be final. All measurements shall be taken from the center of the tee to the part of the stone which is nearest it. No stone shall be considered within or without a circle unless it clear it, and every stone shall be held as resting on a line if it does not completely clear it —in every case this is to be determined by placing a square on the ice at that part of the circle or line in dispute.

Sec. 12. Each skip shall have the exclusive regulation and direction of the game for his party, and may play in whichever part of it he pleases; but having chosen his place at the beginning, he must retain it till the end of the game. No skip, when his turn to play comes, after having appointed one of his party to take charge for him, shall be allowed after leaving the ice to go back and examine the end, but shall take directions from the party appointed by himself. The players may give advice, but cannot control their director; nor are they, upon any pretext, to address themselves to the person about to play. Each skip, when his own turn to play comes, shall name one of his party to take charge for him. Every player shall follow implicitly the directions given him. If any player shall improperly speak to, taunt, or interrupt, another while in the act of delivering his stone, one shot shall be added to the score of the party interrupted, and the end shall proceed as before.

Sec. 13. If from any change of weather after a game has been begun, or from any other reasonable cause whatsoever, one party shall desire to shorten the rink, or to change to another, and if the two skips cannot agree upon it, the umpire for the occasion shall be called, and after seeing one end played, he shall determine whether the rink shall be shortened, and how much, or whether it shall be changed; and his decision shall be final and binding on all parties. Should there be no umpire appointed for the occasion, or should he be otherwise engaged, the two skips may call in any curler unconnected with the disputing parties whose services can be most readily secured, and, subject to the same conditions, his power shall be the same as that of an umpire.

## RULES FOR LOCAL COMPETITION

### POINT GAME

1. Competitors shall draw lots for rotation of play, and shall each use two stones.

2. The length of the rink shall not exceed forty-two yards; any less distance shall be determined by the umpire.

3. Circles of seven feet and four feet radius, respectively, shall be drawn around the tee, and a central line shall pass through the center of the circles to the hog-score.

4. Every competitor shall play four shots at each of the eight following points of the game, *viz.*, Striking, inwicking, drawing, guarding, chap and lie, wick and curl in, raising, and chipping the winner, according to the following definitions. (See diagram.)

5. In Nos. 2, 6, 8 and 9, there are two chances on the left and two on the right.

6. The following diagram to be drawn on the ice previous to playing:—

(Diagram, Fig. 22)

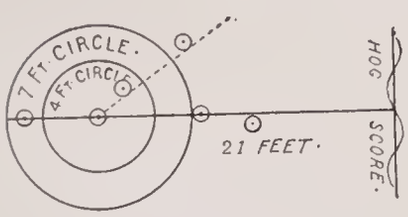
7. The various points and the values allowed for them in the point game are given in the following diagrams and definitions:—

### THE POINTS

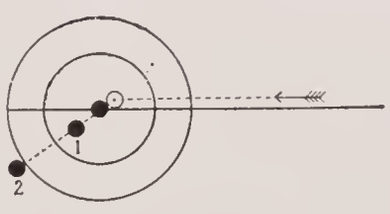
1. *Striking*—A stone placed on the tee, if struck, shall count one; if struck out of the seven-foot circle, the play shall count two.

(Diagram, Fig. 23)

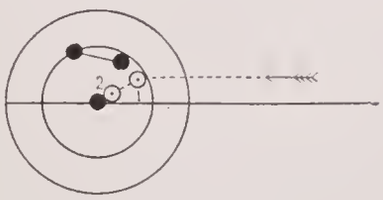
2. *Inwicking*—A stone being placed on the tee, and another with its inner edge two feet six inches from the tee, and its fore edge on a line drawn from the tee at




(Fig. 22)




(Fig. 23)




(Fig. 24)

an angle of 45° with the central line, if the played stone strike the latter on the inside, the play shall count one; if it perceptibly move both stones, the play shall count two.

(Diagram, Fig. 24)

3. *Drawing*—If the stone played lie within or on the seven-foot circle, the play shall count one; if within or on the four-foot circle the play shall count two.

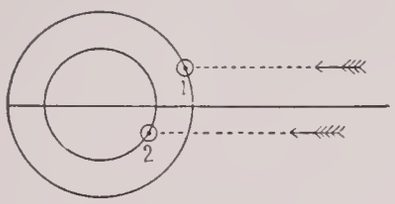
(Diagram, Fig. 25)

4. *Guarding*—A stone being placed on the tee, if the stone played rests within six inches of the central line, the play shall count one; if on the line, the play shall count two. It must be over the hog-score, but must not touch the stone to be guarded.

(Diagram, Fig. 26)

5. *Chap and Lie*—If a stone placed on the tee be struck out of the seven-foot circle, and the played stone lie within or on the same circle, the play shall count one; if struck out of the seven-foot circle, and the played stone be within or on the four-foot circle, the play shall count two.

(Diagram, Fig. 27)

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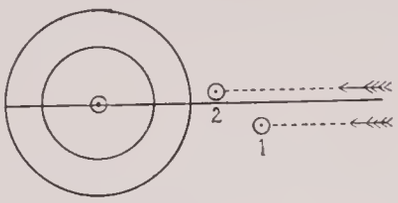


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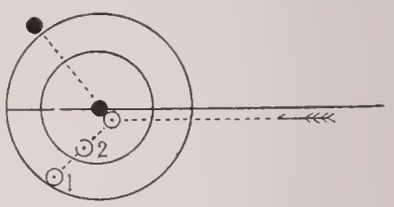


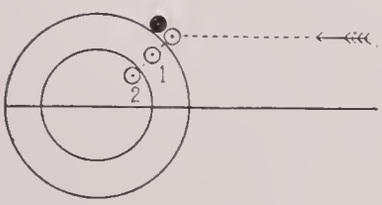

(Fig. 27)

6. *Wick and Curl in*—A stone being placed with its inner edge seven feet distant from the tee, and its fore edge on a line making an angle of 45° with the central line, if the stone be struck, and the played stone curl on or within the seven-foot circle, the play shall count one; if struck, and the played stone curl on or within the four-foot circle, the play shall count two.

(Diagram, Fig. 28)

7. *Raising*—A stone being placed with its center on the central line and its inner edge eight feet distant from the tee, if struck into or on the seven-foot circle, the play shall count one; if struck into or on the four-foot circle, the play shall count two.

(Diagram, Fig. 29)

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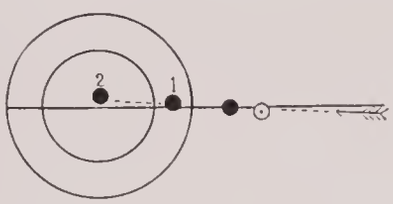


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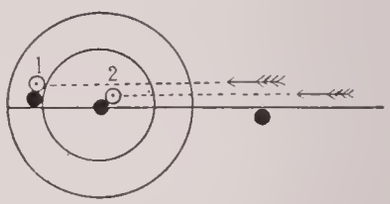



(Fig. 30)

8. *Chipping the Winner*—A stone being placed on the tee, and another with its inner edge ten feet distant, just touching the central line, and half guarding the one on the tee, and a third stone being four feet behind the tee, with its inner edge touching the central line, but on the opposite side from that on which the guard is placed, if the played stone strikes the stone placed behind the tee, the play shall count one; if it strikes the stone on the tee, the play shall count two.

(Diagram, Fig. 30)

9. *Drawing through a Port*—A stone being placed with its inner edge on the central line, ten feet in front of the tee, and another stone on the opposite side with its inner edge two feet from the central line, if the played stone pass between these two stones without touching either, and rest within or on the seven-foot circle, the play shall count one; if within or on the four-foot circle, the play shall count two.

(Diagram, Fig. 31)

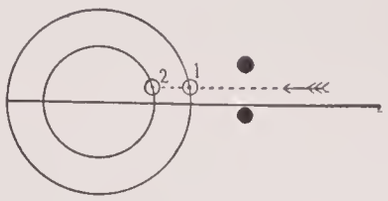
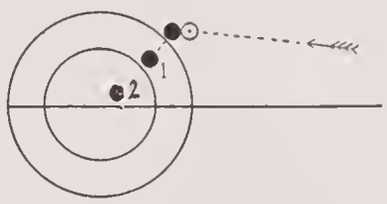



Fig. 31)

10. *Outwicking*—In the event of two or more competitors gaining the same number of shots, they shall play for shots at outwicking, that is, a stone being placed with its inner edge seven feet distant from the tee, and its center on a line making an angle of 45° with the central line, if struck within or on the seven-foot circle, the play shall count one; if within or on the four-foot circle, the play shall count two. If the competition cannot be decided by the shots, the umpire shall order one or more of the preceding points to be played again by the competitors who have tied.




(Fig. 32)

(Diagram, Fig. 32)

## GLOSSARY

*Bias*—Any deviation of the ice from the level.

*Boardhead*—The whole of the seven-foot circle around the tee (which see). Also called *House and Parish.*

*Bonspiel*—A curling match between two rival districts or parishes. To be distinguished from a *spiel*, which is a match between members of the same society, or between a limited number of adversaries.

*Borrow*—The width of ice to be allowed for bias, if a stone played without a twist is to find its mark.

*Break an Egg on*—To touch another stone gently.

*Brittle Shot*—An angular cannoning or caroming shot.

*Broughs*—Circles drawn around the tee inside the seven-foot circle, to assist the players in deciding which stone is nearest.

*Bullet Shot*—A stone played hard and straight in order to drive another from its position.

*Cannoning*—Driving one of the guards (which see) against the winner (which see) with such velocity and at such an angle that both go off the tee, while the player's stone follows on and takes the place the winner has left.

*Chipping*—Striking a stone only a small part of which is exposed.

*Chuckle*—To pass through a narrow opening between two stones and then by a series of wicks (which see) from other stones to reach the destination.

*Cowe*, or *Kowe*—A besom or broom made of twigs, with which the ice is swept.

*Crampit*—Originally a plate of iron, shod with spikes or nails, which was fastened to the side of the player's boot; now a plate secured to the ice, on which a player stands when delivering a stone.

*Draw*—To play a stone gently.

*Drive*—To deliver a stone with extreme force in order to dislodge a winner or a guard and drive it out of the boardhead.

*Drug Ice* — Soft or dull ice on which the stones slide heavily.

*Dry* — A seam running through a stone, which renders it liable to break.

*Edge in* — To rub one stone slightly against another in playing, so as slightly to change the course of the moving stone.

*Fill the Ice or Port* — To play a stone so as to block an opening between two stones.

*Fit the Tee* — To set the foot firmly upon the heel of the fixed crampit before delivering the stone.

*Flee the Ice* — To deliver a stone in a direction or with a force such as to send it off the rink.

*Fore Han'* — The first player on a side.

*Grannie's Wing, to Get Under* — To glance from a stone lying in the way at an angle, and obtain shelter behind another.

*Guard* — (1) A stone that lies in a direct line before another; (2) To play such stone.

*Hack*, or *Hatch* — A hollow or niche cut in the ice four yards behind the tee, in which the player puts his foot to prevent it from slipping, in case he does not make use of the crampit.

*Hands Up!* — The command of the skip (which see) to stop sweeping.

*Harried* — A side is said to be "harried" when, owing to the condition of the ice, the players are unable to send their stones up to the tee.

*Head* — The portion of the game in which all the players have delivered their stones, and have counted the winning shot or shots.

*Hin' Han'* — The last player on a side, who also acts as skip.

*Hog* — A stone which, after delivery, fails to pass the hog-score.

*Hog-score* — A line drawn across the rink at a distance from the tee of one-sixth the length of the rink. A wavy line is usually drawn over it to distinguish the score from a crack.

*Home* — The middle of the rink, which is hollowed by the passage of the stones.

*In-turn* — A twist given to the stone which causes it to describe a curve to the right.

*Inwick* — A stroke which reaches the tee, or object stone, by rebounding from the inside edge of another stone lying to one side. Also used as a verb with a similar meaning.

*Kittle* — (1) A shot that is difficult is said to be "kittle"; (2) To "kittle" means to work energetically, especially at sweeping.

*Lie Shot* — One that causes the stone to come to rest nearest the tee.

*Mar* — To disturb a stone while in motion, whether by accident or otherwise.

*Out-turn* — A twist given to the stone, which causes it to describe a curve to the left.

*Outwick* — A stroke which hits a stone on the outer edge and drives it toward the center. Also used as a verb with a similar meaning.

*Patlid* — A stone which comes to rest exactly on the tee.

*Port* — A space between two stones lying near together.

*Raising* — Driving a partner's stone up to or near the tee.

*Rebutting* — A stroke delivered with extreme force in order to clear the boardhead as far as possible.

*Red the Ice* — To drive off the guards by a strong shot in order to lay open the tee or the winner.

*Ride* — To deliver a stone with such force upon another that the latter is driven from the boardhead.

*Rink* — (1) The four members composing a side; (2) The area on which the game is played.

*Shot* — (1) The unit of scoring each stone nearer the tee than any opponent counting one point; (2) The delivery of a stone.

*Sidelin' Shot* — A stone lying on each side of the tee.

*Skip*, *Director*, or *Driver* — The captain of a side, who gives his men elaborate advice as to the play, and controls the sweeping.

*Sole* — (1) The base of a curling stone; (2) To "sole" means to deliver the stone on the ice.

*Souter* — To score a love game; not to allow the opponents to score.

*Spend the Stone* — To play a wasted shot.

*Striking* — Hitting with a stone another placed on the tee, with sufficient force to drive it out of the circle.

*Stug* — A shot made by accident.

*Sweeping* — Clearing the ice with a besom. (Sec. 8 and 9.) When snow is falling the rink may be swept from tee to tee, but in ordinary cases only from the nearest hog-score.

*Tee* — A point in the ice at the center of the boardhead.

*Winner* — The stone lying nearest the tee at any particular moment in the game.

# TOBOGGANING AND COASTING

When Winter arrives, in all his glory of ice and snow, and the landscape is covered with his fleecy mantle, the time has come for the reign of coasting, the "king of winter sports." It is then that toboggans and sleds should be brought forth from their storage places, and slides should be prepared to receive the fleet coursers that are to glide swiftly over them. Who has grown so old, or has so far outlived his youth, as to have forgotten the delights of this healthful and invigorating sport? And who among the younger generation has found a modern amusement that gives greater pleasure than the old-fashioned sport of Coasting, and its more recent outgrowth — Tobogganing?

## TOBOGGANING

Many years ago the Indians of the northern part of this continent made use of a snow vehicle — a development of the pack sled — to which they gave the name Odabagan. In this rude device, made of strips of bark held together by thongs of rawhide, we find the prototype of the light, graceful toboggan, which to-day is a model of mechanical construction. It is really a long, narrow sled without runners, and is usually constructed either of a single thin board about sixteen inches wide, or of two or more narrower boards placed side by side, so that the width is twenty or more inches. The forward ends of these boards are curved up and then over backward, so that the coasters

are to some extent protected from the wind and flying particles of snow or ice, and the vehicle will easily surmount small obstacles and will readily go up an incline. The bottom of the toboggan is strengthened by small wooden crosspieces, bolted or nailed to the upper side about a foot apart.

There is a small hand-railing, two or more inches in height, running along either side, to which the coasters may cling. Long reins are attached to the "headboard" on either side, so that the toboggan may be drawn like a sled. The whole structure is very light, and may be carried or dragged up a long hill with little more exertion than would be required in walking up empty handed.

The modern toboggan slide, which is constructed with such nicety as to require the services of a civil engineer, was a natural result of the desire on the part of the tobogganers to increase the distance, and more especially the speed, of the coast. The simplest form of slide is made by cutting a trough in the deep snow on a hillside, which is afterward watered and left to freeze so that it makes a smooth, icy surface for the bed of the chute, or slide. Since the motion of the toboggan is so swift as to render its guidance impossible, the slide is cut *into* the snow, and banks are left on either side. These should be a foot wider apart than the width of the toboggan, and must never be less than six inches in height, and twelve inches is even better, so as to allow for the gradual filling up of the chute with snow and ice. The slide is often made steeper by having the head elevated on a trestle built of wood.

A platform is constructed on the trestle, the ascent to which may be made either by means of steps, or up a gradual incline having wood or metal cleats to furnish a foothold. The chute is built from the platform to the ground, and its bed is iced by pouring water on it, which is then left to freeze. This process must be repeated until the successive layers of ice form a surface of moderate thickness, so that there will be no danger of the toboggan coming in contact with the wood of the chute. At the foot of this artificial incline is the slide cut in the snow, as previously described, or, in some cases, the trestle is built on the bank of some body of water, so that the toboggan goes from the chute out upon the ice. The momentum acquired by the coast down one of these elevated chutes is sufficient to carry the toboggan a great distance, and the snow slide or ice space at the bottom should be of sufficient extent to guard against any possibility of the course of the toboggan being obstructed.

A slide is often made entirely of a chute supported on wooden trestles, and sometimes it has several successive inclines. In the latter case the coaster depends upon the momentum gained from one descent to carry him up and over the next elevation. Slides may also be built with curves which add considerably to the novelty and excitement of the sport. These, however, are dangerous and should be planned carefully, and built with the outer edge of a curve much higher than the inner edge to guard against any possibility of the vehicle "jumping the track." There is no danger on a properly constructed slide, but in consideration of the frightful conse-

quences that would result from a fall from a high trestle, care should be taken that the chute is strongly supported and that the sides are high enough to keep the toboggan in the track.

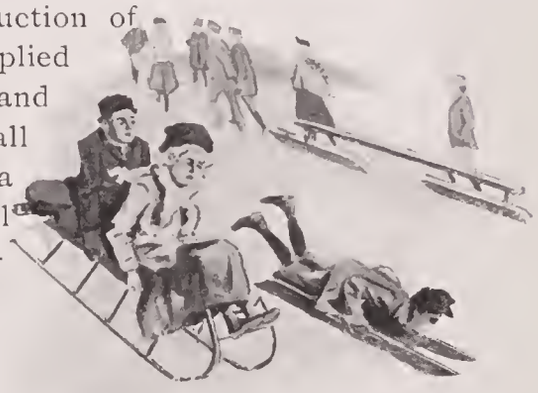
The liability to colds is less in this than in the other winter sports. The swift downward rush exhilarates, but is not of sufficient duration to chill the coaster. The climb back to the top of the slide warms the body and starts the blood in circulation so rapidly that the exertion is forgotten in the feeling of lightness and unbounded energy that is induced. The warm, woolen clothing usually worn is a still further protection against taking cold. Toboggan costumes are made of prettily colored, blanket-like material, and consist of long ulsters for the women and knicker-bockers and jackets with belts for the men. The long, peaked cap, with its bright colored tassel, is worn by both sexes; it is not only picturesque, but serves as a warm covering for the head and ears.

Jollity and good-fellowship are invariable accompaniments of tobogganing. Formality is laid aside and fun and laughter are the order of the hour. To stand at the top of a slide and watch the laughing, shouting loads of coasters gliding swiftly down the incline, while the torches with which it is always lighted at night cast a thousand reflections on the sparkling snow and ice, is attractive in itself, but to be an active participant in the sport, is a pleasure that must be experienced to be fully understood. Tobogganing is a sport for all,—men, women, and children,—fascinating in its life, action, and excitement, and beneficial in its stimulating after-effects.

A home-made toboggan slide, about eight feet high, may be built at a cost of five or six dollars. The parent who constructs one such in his yard, will find it an excellent investment. When there is snow, the children use it all day long, apparently never wearying of it. It keeps them at home, out of mischief, and in good health.

## COASTING

Ordinary Coasting, though not to be compared to tobogganing, is a worthy parent of its attractive offspring, and is even better known than the latter. Few cities afford facilities for the construction of a toboggan slide, and not every boy or girl is supplied with a toboggan. But hills are usually to be found, and with the coming of the first heavy snowfall, the small boy soon prepares for himself and his companions a very satisfactory slide. Here all meet on an equal footing, and the boy with the home-made sled, constructed of materials taken from a dry-goods box, sometimes derives as great enjoyment from the sport as does his fellow who is provided with a handsomely built and painted "Rob Roy" or "Snow King."



The "double-runner" is every boy's ideal of what a sled should be, and though he may be unable to secure one ready-made, he will often give

evidence of his mechanical skill and ingenuity by constructing the coveted steed for himself. The necessary materials are two ordinary sleds, a long iron bolt and a few screws, a board twelve to fifteen inches wide by one inch thick and four feet long, and a square block of wood about an inch thick. The board should be securely fastened with screws to the under side of the bottom of the rear sled, midway between the runners, so as to project about two and one-half feet in front. The block should next be screwed to the center of the bottom of the front sled in the middle, and a hole slightly larger than the diameter of the bolt, bored through both the block and the bottom of the sled. The bolt should then be passed from the upper side through this hole, and a hole bored about three inches from the end of the board secured to the rear sled, and a nut should be securely screwed on the bolt. A steering handle and a bell may now be added, though they are not necessary, and the double-runner is ready for use. A party of boys and girls may have great sport with this kind of sled, and though there is some likelihood that it may deposit its riders in a snow bank, there is slight danger of injury on a hillside or other slide where there are no obstructions and where it is not too steep.

The most approved method of steering a sled of any description continues to be by one of the coasters kneeling behind the others, or at the rear of the sled if alone, and dragging one foot in the snow on the side toward which he desires his vehicle to turn. It is surprising how accurately the course of the sled may be governed in this manner.

Though its enjoyment has always been confined largely to the age of boyhood and girlhood, Coasting, like tobogganing, is a sport for all, and many a care-worn business man or jaded society woman may renew youth, and derive both pleasure and mental physical benefit, from hours spent with a "double-runner" or its modern contemporary, the toboggan.

## SKATING

In all countries where the climate is cold enough in winter to produce ice, Skating is regarded as one of the most fascinating of winter sports. The healthy glow that it brings to the cheeks, the sense of buoyant lightness and glorious freedom that pervades the skater's whole being as he glides swiftly over the frozen surface of pond, lake, or river, must be felt to be understood.

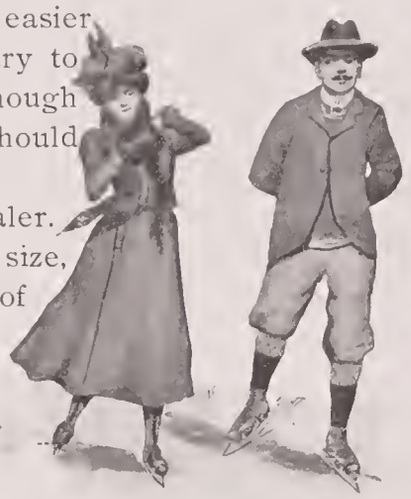
It is difficult to lay down an exact rule as to the earliest age at which a child should be permitted to learn to skate, since this will depend much upon his temperament and physical powers. It is safe to say, however, that the normal child when eight years of age, or even earlier, may put on skates in the house and learn first to stand, then to walk on them. When the ankles become strong enough to

enable him to place his feet alternately upon the floor, at the same time keeping the blades of the skates upright, the beginner may be trusted on the ice.

Having progressed thus far, he must depend upon nature to furnish ice suitable for Skating. Both of these are, of course, to be found in artificial ice rinks, but only the residents of large cities are likely to have access to such. Ponds, rivers, small lakes, and canals, especially if they be well sheltered from the wind, furnish the best natural surfaces.

## INSTRUCTIONS FOR BEGINNERS

Ice of moderate roughness, rather than that having a hard, glassy surface, is best for the beginner, whose first efforts will be devoted principally to maintaining an upright position. This will be much easier if the ice be not too "glary." It is, perhaps, unnecessary to add that care should be taken to see that the ice is thick enough to be safe, and that air holes and other dangerous places should carefully be avoided.



The selection of skates may usually be left to the dealer. The prime requisites are that they shall be of the right size, and that they may be fastened securely to the boots of the wearer. If straps are used, they should be adjusted so that the greatest security may be obtained with the least pressure. The blade of the skate should not be underneath the middle line of the foot, but should lie in a plane passing through the heel and the big toe. Many skaters still prefer the old style of skates, which are secured to metal plates countersunk into the sole and heel, but the modern adjustable, "lever" skates, which may be fitted to almost any kind of footwear, are the more popular. For girls, skates fitted with leather ankle supporters are desirable, as they help to prevent "ankle-turning," which sometimes results in a severe strain.

Having prepared himself for his first lesson, according to the foregoing precepts, the beginner should walk firmly but cautiously out on the ice. At first it is advisable for him to support himself either by clinging to some movable support like the back of a chair, or by the assistance of some good skater. It is not always easy to assist a novice, but it may be done by standing behind him and holding his elbows in the palms of the hands. Take plenty of time to learn to stand safely on your skates, and thus to acquire confidence. Stand nearly upright and be careful not to lean too far forward, which every one has a natural tendency to do. Keep the feet close together, and turned outward at an angle of nearly forty-five degrees with each other. Every joint should be free and supple, with the exception of the ankle and instep, which cannot be too rigid. If now the beginner takes a few ordinary steps, he will find that when one foot

leaves the ice it gives the other a tendency to glide forward, and that when the effect of this impetus ceases, the first foot must again be brought up and planted on the ice to support the body.

This is really a stroke in its simplest form. After walking about in this manner long enough to gain confidence, the beginner may essay a full double stroke as set forth in the following: —

Plant the left foot firmly, with the inner edge of the skate bearing on the ice; give the body a slight impetus by a thrust of the left leg, and, throwing the right shoulder forward, advance the right foot until the outer edge of the right skate takes on the ice, the weight of the body being shifted to the right leg. The first part of the stroke is taken with the runner perpendicular to the ice, in a nearly straight line and pointed at an angle of about 30° to the right of the direction in which the skater is facing, but as the stroke nears completion its course turns outward, and the blade of the skate leans slightly in the same direction. Bring the left foot up to the right, and turning the latter slightly in, so that the inner edge of the skate touches the ice, thrust with the right leg, and advance the left foot as you did the right in the first half of the stroke, at the same time throwing the left shoulder slightly forward.

The arm should swing naturally and easily, the left arm and right leg advancing together, and so with the right arm and left leg. Many of the best skaters never swing their arms at all, and after the first few lessons, it will be found that there is no method more graceful than folding them behind the back or using a muff.

In bringing forward the foot with which the thrust was made, to its position alongside the other, the skate should not be raised more than an inch or two from the ice, as this gives greater neatness to the stroke and prevents unnecessary exertion. The succeeding strokes are made the same as the first, the force of the thrust gradually increasing until reaching full speed. An effort should be made to acquire a long, steady stroke, which always distinguishes the good skater. The length of stroke must necessarily vary greatly with different persons, and is largely a matter of judgment, but from five to seven yards may be given as the average of the ordinary man.

After the stroke, the next thing for the beginner to learn is to stop. There are in general use three different methods of doing this. Formerly a common way of stopping was to bring the feet together with the skates parallel, and by turning up the toes force the sharp heels of the runners into the ice. The knees were slightly bent, and the upper part of the body was inclined backward, to preserve the balance. Nowadays, however, the heels of skate runners are rounded, so that this method is little practiced. Another method is to bring the feet together, with the toes turned inward so that the inner edges of the blades take against the ice at an angle to the skater's course. A third way is to bring the feet together with the runners parallel, and, keeping them in the same position relative to each other, to turn them nearly at right angles to the direction in which the skater is going. As the body must be inclined well backward to pre-

serve the balance, the edges of the runners take against the ice in such a way as to bring the skater quickly to a stop.

The beginner will have little difficulty in learning to change direction. It is comparatively easy to regulate the amount of curve in either half of the stroke; and in order to turn toward the right, for instance, the body should be faced easily in that direction and the right half of the stroke turned well outward. Then when the left half of the stroke is taken, it may be made nearly straight, and thus in one full stroke the direction may be changed as desired.

Thus far, all progress has been made in a forward direction, but the skater often desires to skate backward. In learning to do this, the beginner must repress the natural instinct to put one foot behind the other, as in walking backward. The proper way is to stand with the feet moderately close together and the toes turned in; acquire impetus by a thrust of the right foot, and balance the body on the left till the force of the stroke is nearly expended; then place the right alongside the left, which becomes the thrusting foot, and effect the second half of the stroke in a manner similar to the first.

The principal difficulty experienced by the beginner in learning to skate backward is caused by the fear of leaning well back, as he should do, on the backward glide. But after a little practice, taking short strokes at first, he will acquire confidence, and will soon be able to progress either backward or forward with almost equal facility. But the balance is far more delicate in skating backward than forward, and the danger of falling is correspondingly greater.

Before taking up the more advanced stages in the art of skating, it may be well to mention briefly several rules of value to the beginner in both his first and his later efforts.

## GENERAL RULES

1. Learn to put on and take off your own skates without assistance.

2. Never venture upon ice until you have assured yourself that it is safe, and do not endanger your comfort, and possibly your life, by going near open water or taking risks of any kind.

3. Do not look down more than is necessary to enable you to avoid cracks and other obstacles on the ice.

4. Concentrate your attention on the poise and sway of the body, rather than on the movements of the feet.

5. Make the side-thrust with the whole length of the skate blade.

6. Do not make scratch thrusts with the toe, but keep the skates as near the ice as possible throughout the stroke.

7. Keep the feet as near together as you can without noticeable effort.

8. Remain on the employed foot long enough to make a full, regular stroke.

9. Avail yourself of every opportunity of following a good skater; keep close behind him and imitate each movement of his body, arms and legs.

10. Never throw stones or other obstacles on the surface of the ice which may be used for skating.

## FIGURE SKATING

HAVING learned to use the plain stroke, both forward and backward, and to turn and stop both easily and gracefully, the beginner is prepared to undertake some of the simpler kinds of figure skating. As has been stated heretofore, in skating the feet should follow the body and be controlled by it, and this is especially true if the skater desire to deviate from a straight line. Figure skating, though executed with the feet, is really made possible by getting the body into a position which will enable the feet to be turned in the desired direction. It is natural for the novice to give no attention to the body, but to try to twist the feet so as to execute whatever movement he may be attempting. This cannot be done, and almost invariably results in a fall. In the following description of a few of the simple figures, particular attention should be paid to the movements of the body, and in every case the following rule should be observed: Whenever it is decided to make a turn which necessitates a change from one edge to the other, just before the full turn is executed the upper part of the skater's body should be faced in the direction of the new curve which will result from the turn, so that no alteration in the position of the body will then be necessary.

What are known as the four "rolls" should first be learned, since they are the basis of all fancy skating. These are respectively designated as the "outside-edge forward," the "outside-edge backward," the "inside-edge forward," and the "inside-edge backward."

The forward outside-edge roll to the right is made as follows: The impetus is obtained as in plain skating, but the right foot is turned outward more than in the plain stroke, the right arm is drawn back, and the left shoulder and the whole body swung forward to the right. The stroke to the left is taken in a similar manner (Fig. 1) the left foot being brought forward and placed a few inches in advance of the right. The curves should be large and regular, and should not turn outward so much as to make the skater advance slowly.

The outside-edge backward (Fig. 2) is made in a relatively similar manner, one foot being placed directly behind the other, and the head turned to the right as the left foot is put down, and *vice versâ*. This movement should be practised very slowly at first, the speed and length of stroke being increased gradually.

The inside-edge forward on the right foot (Fig. 3) is started in the same manner, and from the same position, as the outside-edge. The right knee is bent, and the body is inclined forward at the beginning of the stroke, both being straightened as soon as momentum is acquired. The stroke is taken on the inner edge of the runner, instead of on the outer, as in the outside-edge roll, and the curve is to the left. The principal difficulty is the tendency of the curve to curl inward, thus making small,

irregular strokes. To prevent this, the body should be held erect, and the unemployed leg kept well to the rear, with the toe turned outward.

The inside-edge backward (Fig. 4) is by far the most difficult of the "rolls," and should be practiced last. To start this stroke on the right foot, the skater should stand with his left foot nearly perpendicular to the line of motion, and with his right foot parallel to the left, the toe of the former being near the heel of the latter. He should turn his head so as to look over his left shoulder, and, obtaining his impetus from a thrust of the left leg, describe a curve to the left on the right foot. The stroke is completed when this foot is nearly at right angles to the line of motion, and the roll on the left foot is made from the same relative position as that on the right, and in a similar manner.

After becoming proficient in the four rolls, the skater is prepared to undertake any of the almost infinite number of other figures and movements. Two of these are the "spread-eagle," which may be made either forward or backward, and "cutting the circle," which may also be done in both directions. To make the spread-eagle (Fig. 5), the skater, while going forward on one foot, turns the other so as to bring the two heels together, with the feet nearly in line. The body is bent forward, and its weight is equally divided on the two legs. The spread-eagle is made forward or backward, according as the feet are so placed as to make the line of motion a curve in the direction in which he is facing, or in the opposite direction. Cutting a circle forward (Fig. 6) consists in describing that figure by continually putting the outside foot over forward and inside of the other. In the backward circle, the outside foot is put behind and inside of the other.

Even before the beginner has become proficient in the rolls, he will have a natural desire to master the "figure three." (Fig. 7.) This is started with an outside-edge curve, and the turn is made by reversing the skate so as to bring the skater to an inner-edge backward. Just previous to the full turn, the whole body from the hips upward should be turned so as to be in a position suitable for the curve on which the skater will find himself after the full turn. If this be done the figure will be executed with surprising ease and with little danger of a fall.

Among the many feats performed by expert fancy skaters is that of tracing names with the skates on the ice. This degree of proficiency can only be attained, however, after long and necessarily tedious practice.

## SKATE-SAILING

Closely connected with the sport of skating are Skate-sailing and ice-boating. The only real difference between the latter two is in the method of attaining the desired object — propulsion on ice by the agency of the wind. The simplest form of skate-sail may be seen almost any windy day wherever juvenile skaters are to be

found. The small boy discovers, as soon as he learns to stand on skates, that by holding out the lapels of his coat sidewise, and turning his back to the wind, he may attain a fair rate of speed with no further effort on his part. It was doubtless from this beginning that real skate-sails came into use. One thing that adds greatly to the popularity of this sport, is the fact that it may be enjoyed on ice that is too rough for ordinary skating, or that has been spoiled for the skater by a light fall of snow.

## THE SAILS

THERE are many varieties of skate-sails, both single and double, almost any one of which may be made easily and cheaply; and can be manipulated by any one who is a fair skater. But perhaps the simplest of all, and yet most desirable, is the "bat-wing," which may be made as follows:—

Spread upon the floor a piece of ordinary sheeting, or other available cloth, about six feet square, and tack the four corners in place. Lie on your back in the middle of the cloth, with the feet spread about a foot apart and the arms extended at right angles to the body. Marks should now be made on the cloth to indicate the positions of the crown of the head, the wrists and the ankles. Connect these points by straight lines marked with chalk or a lead pencil, so as to form a five-sided figure. Allowing about four inches for the hem outside the lines of the figure, cut the sail out and keep the spare pieces for future use. The hem should now be made either by hand, or, preferably, on a sewing machine. Make straps about an inch in width, of two thicknesses of the cloth taken from the left-over pieces, and sew them in place to go around each ankle, each wrist, the forehead and the waist. These straps should be made in two pieces, and the free ends of each pair may be connected by either a button or a buckle.

After the straps have been secured around the respective parts of the body, the sail is set by spreading the arms in line with the shoulders; to furl the sail, fold the arms or drop them by the sides. Holding the arms outstretched would soon become tiresome, and to obviate this a light stick is often used by the skater. This is placed across the back of the shoulders, and thus a support is found for the arms by grasping the ends of the stick in the hands. The skater steers with his feet, and varies the angle of the sail presented to the wind by changing the positions of his legs and arms. This rig presents a novel and grotesque appearance as the skater flaps his "wings" about in executing various evolutions.

One of the best of the single sails is what is known as the "Cape Vin-

cent rig." The frame for this consists of a long spar, sometimes ten or more feet in length, and a crosspiece or sprit. The sail is triangular in shape, and its longest side is securely fastened to the spar, which should be of strong but light wood, and only slightly longer than its side of the sail. The sprit may be of the same material as the spar, but is usually only about one-third as long. One end should be shaped so as to form a crotch or U. The other end is secured to the corner of the sail that is opposite the spar, and the sprit should be of such length that when sprung into place at right angles to the spar, and with the crotch fitting around the latter, the sail will be stretched taut. The spar rests on the shoulders, being grasped by the hands on each side, and the sprit rests against the skater's back. It has been stated on good authority that with a large sail of this variety, and under favorable conditions of wind and ice, a speed of more than seventy-five miles an hour may be attained.

Of the double sails, the "Northern rig" is perhaps the most easily manipulated, and in many respects it is superior to the cumbersome single sail. One of its most desirable qualities is that it does not obstruct the view of the skater in any direction, and he is thus able to avoid other skaters and obstacles. The main spar is double, and is usually made of spruce or bamboo, though cane fish-poles will answer the purpose. Two pieces of about the same diameter, each ten feet in length, are placed side by side, with the butt of one and the small end of the other together. The ends of these pieces are then securely lashed together with fish line, fine wire or other small but strong material. Two pieces of cane, about four and one-half feet in length, form the two yards, or cross-pieces. Each of these is fitted with a small cleat, lashed firmly at its middle point. Small metal knobs, or buttons, are fastened to each end of the cross-yards and the main spar. The two sails are each four feet square, and, in addition to having wide hems, should be bound with strong tape; the corners should be reinforced so as to be extra strong.

At each "clew," or corner, sew a small metal ring or a loop of strong cord or tape, just large enough to go over the metal buttons on the spars. First, secure the sails to the cross spars by slipping two diagonally opposite clew rings or loops of each sail over the buttons on its spar. Spring the two parts of the main spar apart, near the middle, and, inserting the cleats of the yards, slide them along until one is about two feet from either end of the main spar, and the yards are at right angles to it. Fasten the outside clew of each sail to the button on its end of the main spar, and secure the two inner clews together with a strong cord.

The sail is now ready for use. The main spar is grasped in the hands and may be held either behind or in front of the body. Ready-made skate-sails may be bought, which have jointed spars fitted with brass ferrules, and can be packed in a very small space. The sails are often made of bright-colored cloth, and are fitted with gay pennants. When to these are added suitable costumes, the skate-sailer presents a picturesque and attractive appearance as he tacks, wears, and executes various other maneuvers of an ordinary sailboat.

# ROLLER SKATING

THE pleasure of ice skating has its natural limitations. Of necessity it is, and ever must be, chiefly confined to the more northern latitudes. Only at the extreme north do climatic conditions afford the opportunity to enjoy this exhilarating sport more than a few weeks in each year. In many of the states of the United States this is often reduced to a few days, and in some of them it is quite unknown. Few persons who live south of the line of Pennsylvania and Ohio, know anything of skating except as a theory. In the large cities, nature has been supplemented in some degree by artificial rinks; but only a few can enjoy the privilege thus afforded, and at best the manufactured surface, within narrow bounds, and covered with a swaying throng, is a most unsatisfactory substitute for the long sweep of lake or river, where the skilful skater may find pleasure without limit, breathing the keen, crisp air, in the winter sunlight, or "under the quiet stars."

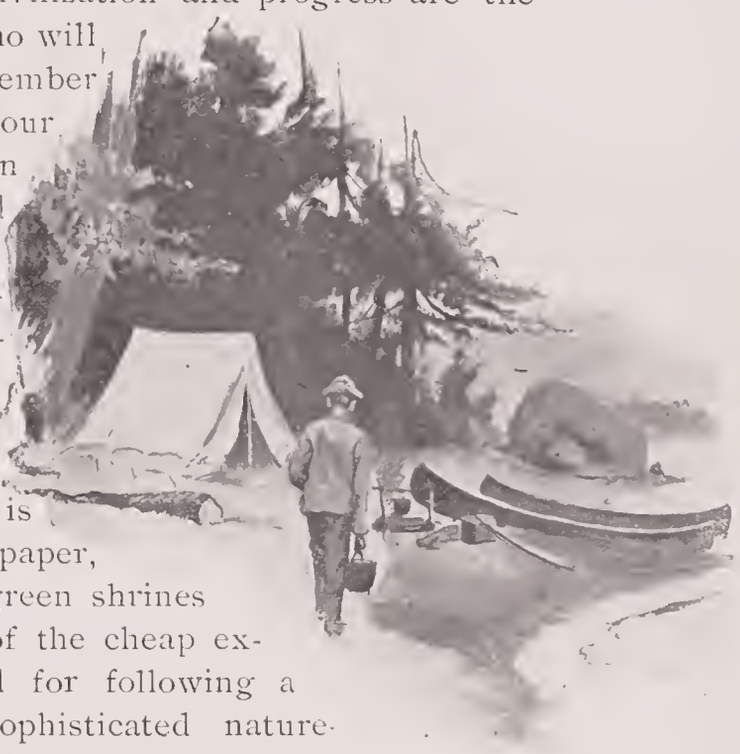
Many years ago, in the effort to provide young people with a substitute for the genuine article, the "parlor skate" was introduced. Instead of runners, the bottom was fitted with small rollers, by means of which, after a probationary term of practice, with a due proportion of falls, a fair degree of motion, on a smooth floor, could be attained. It served well its purpose as a toy to divert the children, but was long considered to be nothing more than this; it was too juvenile to attract those of more mature years. But from it, in the fullness of time, was evolved the regular roller skate. This was constructed on scientific principles, with a certain flexibility to the device by which the front and rear groups of rollers were attached to the body of the skate, similar in its operation to that of the trucks under a railway car. Thus improved, its possibilities were limited only by the skill of the ambitious skater, and it quickly bounded into popularity. During the '70's, roller skating became a craze. Rinks were built in all the cities and large towns, and night and day they were thronged with skaters, of both sexes and of all ages. The rinks were in full blast during the entire year. While the roller craze lasted, the demand for skates was so great that a dozen manufacturers were unable to supply it. But it was of brief duration. It fell away as quickly as it had burst into being. Everywhere the deserted rinks lapsed into decay or were converted to other uses. Now the roller skate has been relegated to its former place in the world of sports, as a toy for the amusement of children. But the joys of ice skating, like Tennyson's brook, will "flow on forever."

# CAMPING

## SUGGESTIONS ON THE BEST FORM OF OUTING

*By CHARLES G. D. ROBERTS*

THE object of an outing is a return to nature. Antinous-like, we renew our strength when we touch our Mother Earth. During the greater part of the year we are living at high pressure; at a pitch of activity, in one form or another, exhausting to body, brain, and spirit. The forces of modern civilization and progress are the Hercules with whom we strive, and who will never defeat us so long as we remember where to turn for the renewal of our powers. To most of us the realization of our need comes but blindly; and therefore we find a hundred forms of outing which but awkwardly and imperfectly fulfill their office. Nevertheless, we are Autochthones all, however harsh conditions may have obscured our parentage; and the noisy mob which, on holiday or festival, is wont to desecrate with wrapping paper, broken bottles, and rude hilarity, the green shrines of every forest temple within reach of the cheap excursion, is no less to be commended for following a sacred instinct than is the more sophisticated nature-worshiper who pursues his cult in the most inaccessible and exclusive of wilderness retreats. The mistakes, the deficiencies, the loud vulgarities, indeed, that accompany the outings of so many summer excursionists, are matter for sympathy, not for scorn. Those who see but dimly must be expected to stumble, as they grope their way back to nature.



The form of outing about which I am now speaking is that which, of all its kind, takes one closest to the heart of earth, admits one nearest to nature's intimacy. The camper who knows how to go about his camping earns before all others the freedom of the wilderness. He is the real initiate of flood and forest. It is his eyes that are purged with the dew, his feet that take hold with new strength upon the naked earth, his hair that revivifies in the sun, his spirit that is cleansed by the free winds, while he sloughs the winter skin of fret and solicitude. It is he who best learns to realize that—

"Leisure in the sun and air
Makes the spirit strong and fair;
Flaccid veins and pallid features
Are not fit for sky-born creatures."

When I speak of camping out, I do not mean to include within the term what is known as the "house-camp." The pseudo-civilization of the house-camp, "with all modern conveniences," is but a bit of suburbia violently transplanted to the wilderness. As a rule, it is built like a flimsy, but more or less luxurious, summer cottage, crowded with guests, and ruled by a tyrannous alliance of domestics and conventionality. Except for bad roads, pungent, woodsy smells, strange bugs, an occasional far-off peal of loon-laughter, and perhaps a devoutly credited rumor of bears in the neighborhood, one might almost as well be at any fashionable summer resort. Custom still holds sway. Nature is still held at arm's length. She may peer curiously in at the windows, but she sets no foot across that alien threshold. The house-camp *may* offer something better than the fashionable summer resort; but it is a makeshift at the best, and at the worst, a desecration.

## THE INLAND CAMP AND THE CAMP BY THE SEA

The personality, so to speak, of the camp that sits by the seashore is very different from that which inhabits the intimate seclusion of the forest, companioned by inland lake or unfrequented stream. The seashore camp has its own characteristics, — wide horizons, splendor of sunrise and sunset, the impulse and inspiration of great winds, the enfranchising vigor of alternate storm and calm. The camp by the sea is best, perhaps, for those who carry with them the burden of an inordinate egotism, or the torment of a too-persistent introspection. The sea is a masterful reducer of self-conceit, and in its presence we cannot long be blind to our own comparative insignificance in the scheme of things. But the bigness of it is uncomforting, daunting, overwhelming. What we return to nature for is not to be taught our place and chastened into humility, but to be recreated, and to have new strength breathed into vein and nerve for the battle which we must all of us fight with life. At the inland camp, our intercourse with Mother Earth is more tender and confidential. In these kindly wilds, where one can be secret, and shy, and elusive, curling up in one's nook like the squirrel in his nest, to look out on the quiet world of leaves and shadows, or hiding in the willow-thicket like the deer, to watch with wide, still eyes the passing foam and sparkle of the river, — in these kindly wilds, I say, nature is more

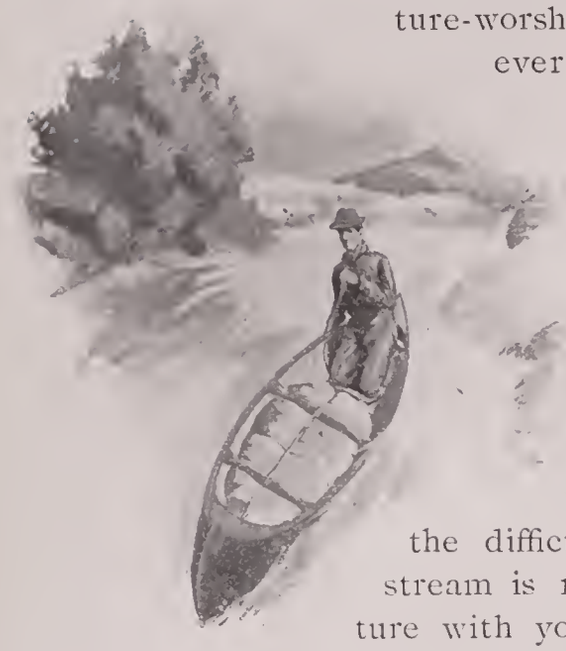
tolerant and more personal. She lays aside her austerity, becomes indulgent to our whim, and gives to each according to his needs. It is the inland camp, therefore, that meets most perfectly the imperious cravings of those who would medicine their weakness by a summer outing; and it is the inland camp that is referred to throughout this paper.

## THE CAMP STATIONARY OR THE CAMP ITINERANT

When one has elected to camp inland, there is yet another point to decide upon. Shall the camp be stationary or itinerant? The one offers ease, tranquillity, acquaintance with the furtive life of the neighborhood, and the opportunity to strike root into the soil. There are many of the secrets of nature which she positively refuses to disclose until you rest long in one place, become an accepted part of the environment, and quite divest yourself of the scent of the stranger. The moving camp, on the other hand, gives the stimulus of exercise and purpose, the zest of ceaseless variety. When each day means a new journey, each night a new camping-ground, one lives a more exterior life, taking in impressions more abundantly, but assimilating them less thoroughly. To the itinerant camper, all experience is primarily physical. His senses are kept lightly occupied with objects that succeed each other without much time for close scrutiny. He has no time to think. He works with joyously responsive muscles, eats with huge and healthy appetite, sleeps deeply and with no care for the morrow, and grows simple and unconsidering as a wholesome child. Life at the stationary camp, on the other hand, is less strenuous and more contemplative. One sinks into his surroundings, and absorbs wisdom unawares. There is enough exercise and labor to keep the physical side of life vigorous, but not enough to make the body swamp the mind. The material is not all, for the spiritual, too, has a chance to play its part. There is time to think, to feel, to dream, as well as to do. One adjusts himself softly to new relations, and gathers a variety of riches unattainable by the hurried though happy itinerant. Each camp, indeed, the itinerant and the stationary, has characteristics and qualities which the wise camper cannot willingly do without; and each, if possible, should have its share in the camper's scheme. But if a strict choice must be made, the weight of argument will be found, I think, to lie with the camp which takes a local habitation and surrounds itself with leisure to be wise.

The itinerant camper travels by boat or canoe, as a rule, though sometimes a sturdy horse and wagon, in a country where roads are wide and farms are few, may lend themselves not ungraciously to

the happy vagrant's need. But in most cases, it is the canoe; and there is no room for argument as to its unassailable supremacy. In fact, the camp and the canoe are twin servitors in the temple of nature-worship; and no camp, stationary or itinerant, can ever seem quite complete without a canoe turned over in the foreground.



If the camp is to be a moving one, served by the canoe, then the route should first of all be carefully chosen. The canoe or canoes (two persons to each canoe, preferably) should take the water somewhere near the head of an interesting, unfrequented, and easily navigable watercourse, so that the current shall be with the traveler all of the way. Unless the canoeist be a past-master in the difficult art of poling a canoe, a long journey up stream is rather heartbreaking work. Better to have nature with you, not against you. In paddling with the current, there is work enough to flavor holiday,—especially if such waters be chosen as afford the excitement of a rapid here and there, with uncertain shoals and eddies to keep the voyager alert. There is no more tonic stimulant to nerve, muscle, and wits, than the running of a good rapid, where disaster is the sure penalty of not doing the right thing at the right instant. A river that connects a chain of lakes, with diversified scenery, diversified fishing, rough water and smooth succeeding each other, and here and there, at long intervals, a settlement or a cabin whereat one may renew the more perishable of the camp supplies, affords the ideal conditions for the itinerant camper. Nature, indulgently provident for her favorite devotees, has scattered such conditions pretty lavishly over the northern section of this country. I have in mind one such route in particular, which combines all fascinations for the canoeist. It is the route of the Squatook Lakes, in the high and wild plateau where the boundaries of Maine, Quebec, and New Brunswick, come together. At the little town of Edmundston, on the upper St. John, flows in the amber current of the Madawaska, draining the Temiscouata Lake basin of Quebec.

A journey of fifteen miles up the Madawaska, by poling against a strong but unobstructed stream, brings one to an easy portage of about two miles and a half; and then the canoes take the water on a shallow, desolate pond called, not unjustly, Mud Lake. The specialty of Mud Lake is its leeches, and one does not bathe there. Its bleakness whets one's taste for the beauty that comes after. The

outlet of Mud Lake is Beardsley Brook, which leads the canoes into the varied and lovely Squatook River, with its succession of lakes, its swift current and usually clear channel, its changing shores, its abundance of enticing spots for the nightly camp, and its unfailing supply of trout for the camp-fire cooking. The Squatook River empties into the Tuladi Lakes, whence the Tuladi River conveys one, not without violence, into the broad expanse of Lake Temiscouata. A half day's paddling down the Temiscouata and one finds himself again upon the current of the Madawaska; and the run back to Edmundston is all too swift and easy. In this circle of perhaps a hundred and odd miles there are but two serious obstructions after passing the portage to Mud Lake. At the First Falls of the Squatook, one makes the portage of a couple of hundred yards, and at the Tuladi Falls, a rougher portage of a quarter of a mile. But both these falls may be run by the skilled canoeist (who takes the precaution to survey them beforehand) unless the water chances to be phenomenally low.

For the camp stationary, the site must be chosen with care and manifold provision. It should be far enough from the haunts of men, and sufficiently difficult of access to secure it against the burden of uninvited guests; yet, generally speaking, near enough to traveled ways to make it possible for the elect, congenial few to visit it. Its approaches, in a word, should have obstacles enough to act as a sieve. The wrong person is nowhere more wrong than when he intrudes himself upon the homogeneity of a well-harmonized camping party; but to such a party, the fitting visitor may bring new zest, opening everyone's eyes afresh to the delights of the situation. Moreover, it is a great advantage to have a settler's cabin, or a little backwoods farm, within a mile or two, where to buy eggs, fresh milk, vegetables, and other perishable supplies. Such a little neighbor to the camp is never obtrusive, but may become most useful in case of a sudden need to communicate with civilization.

The nature of the locality chosen for the camp should be such as to permit as much diversity of interest as possible. Needless to say, the camp must be by water. Wild nature in the summer time is not half herself without abundance of open, living water. Let this water be a lake of size not too great to be companionable, or the embayed cove of a bigger lake; or else a river large enough to be ruffled and spacious, yet not so large as to become impersonal. A quiet, amenable water is what the camp requires, where boat and canoe can launch or land in all weathers, where swimming invites, and where washing, and such trivial duties of camp life, do not seem an affront to the powers of silence. If there can be added a small brook or rapid little

river emptying itself near by, very great is the addition. There is no music that so becomes a summer camp as that of running water, no music that so effectively lures one's spirit out of the commonplace and off into the realness of dream. Also, there should be an ice-cold spring close at hand, for drinking and to cool the larder, unless a little river flows near by — one of those mountain streams which keep their coolness and sweetness even through the dog-day droughts.

The site for the camp should be a level patch of ground, beyond suspicion as to its drainage, and high enough above the water to escape the low-lying mists. It should be inclosed by the forest on the back and sides, but well open on the front to sun and wind, for the sake of unimpeachable sweetness and the effective banishing of damp. The exposure should be southerly, for sunlight is health; and shade is plentiful enough when wanted. It is the cheer of nature, not the gloom, that the camp demands.

It may seem to the inexperienced and the enthusiastic as if these requirements were too many. But for the camper there is no time better spent than in searching out the exact, predestined spot for the camp. The search is fascinating in itself, leading one to the loveliest scenes, and affording continual suggestion. But the searcher should be firm, and demand all. He should be hard to satisfy. The delight of camp life is made up of little things, and it is greatly worth while to avoid the petty avoidable discomforts. Let the site of the stationary camp be nothing less than the very best available. The kind of camp, — for camps are of many forms and characters, — will be discussed in another section.

## THE CHUP-LAH-QUAH-GAN

It might naturally be supposed that the first requisite of a camp is to provide shelter, and that, therefore, the first thing to think of is a roof. It is not so, as the truly initiated well know. The first requirement of a camp is a center, to enable the camper to differentiate for himself a little personal holding from the vast unchartered spaces of the wilderness. Such a center, such a differentiation, is supplied most speedily and effectively by the camp-fire. Where the camp-fire is, there is the camper's lair. With a log or a tree trunk at his back, and ever so little a fire at his feet, he feels at home; he has the natural dignity of a man with a habita-

tion; he is not a lonely derelict in the wilds. The symbol of the camp-fire is the forked stake of green sapling which is driven into the ground so as to slant across the flame. Upon this forked stake the camper slings his pot. It is called among the Indian tribes by the musical name of the *Chup-lah-quah-gau.*

The Indian makes no big, wasteful fires. In his blood dwells the remembrance of the days when a big fire might reveal him to his enemies. Moreover, the little fire does its work better, costs less labor, and does not endanger the forest. The little Indian fire is the more companionable. You can gather closer about it, light pipes at it, fuss with it and control it; while the big fire, with all its cheer and the splendid picture it makes upon the night, is likely with every changeful gust to become a scorching tyrant. Furthermore, one cannot cook at a big fire. The big fire is, in fact, a bonfire, not a camp-fire. It has its place, of course. At the stationary camp it adds picturesqueness and supplies evening diversion. There is fascination in feeding the ravenous and magnificent monster. By all means, let the stationary camp have its bonfire; but let it not be confused with the camp-fire, and let it be firmly taught to know its place. This should be at a safe distance from the camp, at a safe distance from inflammable trees and underbrush,—on the beach close to the waterside, or on some rocky promontory where its roaring and soaring riot of beauty may not start a conflagration. The camp-fire, then, is such a one as can be rightly symbolized by the *chup-lah-quah-gau*, which leans above it without being devoured. It is the fire to cook by, to hug, and to moderately and safely light the camp with.

For the camp itinerant, the *chup-lah-quah-gau* fire in its simplest form is sufficient. It is best built between two flat-topped stones or two small pieces of log, for the better draught, for continence of fuel and heat, and for convenience in supporting such cooking utensils as may be used. The very first thing to be done in pitching camp on a journey is to get the camp-fire started and the water on to boil. Only then comes the secondary concern of shelter,—be it tent, brush lean-to, or bivouac under the upturned canoe.

With the fixed camp, however, the fire is a matter for careful thought. Its situation must be chosen with an eye to the prevailing winds; it should be as near to the camp as is consistent with safety; and so placed as to throw its enlivening radiance into the sleeping-bunks. Upon its proper location and judicious construction, depends much of the comfort of camp management.

There being more luxury in the fixed than in the itinerant camp, there is more cooking to be done, and the single *chup-lah-quah-gau* is likely to be insufficient. In such a case this tutelary deity of the camp-fire

takes on a new form. It expands to two forked stakes, planted upright, with a cross-stick of green sapling running horizontally over the fire. From this, the fire being built to fit, several pots can be suspended at a time.

And now for the fire itself. Let this be no haphazard structure, but a work of skilful devising. Cut two green logs, eight or nine inches in diameter, and four or five feet in length, and lay them side by side, about four inches apart at one end and twelve or fourteen inches apart at the other, on the spot chosen for the camp-fire. Let the wider opening between them face the camp. Hew the top surface flat,— and there is a thoroughly manageable out-door kitchen-range, with all the advantages of an open fire. Along between these logs the fire should be built of small kindling and short billets. As soon as a good bed of coals is formed, cooking at this improvised range becomes the simplest affair imaginable — for one who knows how to cook. *Chup-lah-quah-gans*, one or several, may lean over it with their swinging burdens, while saucepans and frying pans find a secure position on the flat-topped logs, with the hot coals close beneath them. Where the space is narrowest, there perches safely the smallest skillet; and where it is widest is built up the most abundant fire for boiling the pot. The logs, of course, should be green wood, full of sap, in order to last as long as possible. Pine, ash, and birch, should be avoided, as these burn freely even when green; but spruce, hemlock, butternut, and chestnut, will be found to resist the fire stubbornly. A camp-fire of this pattern gives the very best results, with the least squandering and scattering of fuel. It may be banked and kept in for hours without tendance, and it is readily fed up to a blaze when illumination is demanded; as for the fuel, there is usually no lack of well-dried windfalls to be cut up for the purpose, and the young birch, chopped short and split, burns green or dry, while the bark of a dead hemlock makes the handiest and hottest of fires.

## CAMPS AND THEIR KINDS

At this point it is perhaps well to say a word about "roughing it." There is no virtue, and very little fun, in being unnecessarily uncomfortable. Those harsh deprivations which hunter and trapper so often endure, they endure because they must. They are not an end in themselves — though they make an end of many a fine enthusiasm. They are by no means essential to a sincere "return to nature," but rather, a serious obstacle to it. It is through such that nature so often gets herself seriously misunderstood.

The first thought of the inexperienced, to whom the idea of camping out presents itself merely as an escape from the treadmills of convention and a plunge into the coolest pools of peace, is that these desired consummations will be best attained by an uncompromising course of "roughing it." Only let them get into the greenwood, and they dream that their utmost needs will be compassed in food for a hunter's appetite, and a place, preferably dry, to lie down upon. In such a panic of enthusiasm they go, ignorant and unequipped, to join the hearty fellowship of the wilderness. The first evening in camp,— in spite of burnt supper, boiled tea, and smoke that blows nowhere so freely as into the camper's eyes,— is a carnival of song and strange exhilaration. But mosquitoes, black flies, and those infinitesimal pests, the sand-flies,— *bite-um-no-see-ums*, as the Indians call them,— are playing their games steadily, and toward bedtime enthusiasm is on the wane. The forest floor, imagined as a deep, fine-scented cushion of yielding moss, proves to hold a hummock or knot for each several bone of the weary body. Level as the ground appeared, strange and incalculable undulations develop themselves. Sleep refuses to come until near daybreak, if at all; and then the awakening is to a state of puffed faces, aching joints, and such general disillusionment as may send the party back to town with execrations on their lips.

The journeying camper should carry a tent with him. If it were always fine weather, then the light lean-to of brush, facing the campfire, would be sufficient; or even, when the day's journey had been long and journeyers were weary, the canoe, turned up on its side, would afford enough shelter for the night. But fine weather we have not always with us; and for the camper, to be wet is to be miserable. The joy of an outing is in its weakest joint. Be ready for the worst, and take a tent. Of course there may be occasions when a camper wants to go without a tent, or when it is not possible to get the right kind of tent. Then a well-constructed lean-to will give satisfaction, indeed,— but the building of it takes time. A ridge-pole and two uprights will, of course, constitute the framework of the structure. One saves trouble, and gains stability, by taking a large tree as one of these uprights. A crotch, or hole, or a deep cleft in the bark, five or six feet from the ground, will serve to support one end of the ridge-pole. Unless another tree with similar

conveniences happen to be growing just seven or eight feet away, one must plant firmly in the ground a forked stake, to form the other upright. The ridge-pole should be tied firmly in its place. Then long, trimmed saplings should be leaned against the ridge-pole, at such an angle as to have a floor space of six to eight feet depth, according to the accommodations required. The slanting roof must be thatched thickly with branches, hemlock by preference, laid on in courses, butt upward, beginning at the bottom, and finishing at the top with another pole tied firmly over the last layer of butts, to keep the whole thatching in place. A thatch of hemlock, laid in this fashion, will shed a very heavy rain for one night. The open ends of the lean-to may be closed by upright stakes interwoven with hemlock branches. The front, of course, remains open to the cheer of the camp-fire. A little modification, such as deepening the thatch and partly inclosing the front to keep out driving storms, may transform such a lean-to into a more or less permanent camp, not, of course, adapted to long occupancy, but a very good thing to return to from time to time — a waterside caravansary for the canoeist.

The requirements of the tent are that it be light, not bulky to store in the canoe, simple to pitch, and waterproof. The most convenient, all things considered, is a small ridge-pole tent of strong cotton duck, with drop curtains at the sides, allowing about two feet of space between the floor and the bottom of the eaves. The ridge-pole should be fully six feet six inches above the floor. The depth and spread will of course be apportioned to the number of the party to use it; but as a rule, a depth of seven feet with a spread of six will be found convenient. Such a tent, if light duck, will fold into small space and slip handily under the fore or aft crossbar of the canoe so as to form a comfortable seat for the paddler. It is fitted, of course, with guy-ropes and stays; and notched and pointed tent-pegs should be carried with it. To have these ready saves much time and fussing; and they take up little room in the canoe. The ridge-pole and uprights may be cut at any camping place where saplings abound; and a spot without saplings is not likely to be attractive as a camping place. The ridge-pole must be straight and smoothly trimmed, so as not to injure the roof by uneven strain; but almost any forked stakes will do for the uprights. The front flaps should open full width, fronting the camp-fire, and they should be kept tied back all night. More than half of the good of the woods life is lost if one sleeps in a closed tent, shut off from the benign air and mystic influences of the forest night. Of course, the itinerant camper must usually count upon having some annoyances of flies and mosquitoes, as some of his camp-grounds are sure to be infested. But fly-medicine is better and

more wholesome than a sealed-up tent, as a protection against these pests. Of this fly-medicine I will speak further on.

The prime essential of the tent, as I have said, is that it shall shed the rain adequately. The best of tents, unless made of canvas so heavy as to be intolerably burdensome in traveling, is not so waterproof but that it will bear to be more so. That veteran camper, "Nesmuk," in his delightful little camper's handbook entitled "Woodcraft," gives the following recipe for waterproofing the tent material. I have found nothing better for the purpose. "To ten quarts of water add ten ounces of lime and four ounces of alum; let it stand until clear; fold the cloth snugly and put it in another vessel; pour the solution on it and let it soak for twelve hours; then rinse in lukewarm rain-water, stretch, and dry it in the sun." Cotton duck treated in this manner has its capability of shedding water more than doubled.

For the stationary camp, such a tent as I have described, but of more generous proportions and more substantial make, will give excellent results. But as a safeguard against prolonged storm, those persistent, driving rains which get through the tightest canvas, it should be provided with a "fly" or false roof, spreading from the ridge-pole at such an angle as to lie at least two feet above the roof proper, at the eaves. This shelter roof is in reality a sort of umbrella to the camp, and may be of very light material. It must be securely stayed, however, or a sudden great gust swooping under it, will tear out the guy-ropes and carry it off in a white flutter over the tree tops.

But there is a modification of the ridge-pole tent,—a sort of hybrid between tent and log-cabin, which makes the ideal camp for comfort. Let me, from my notes of a successful outing, describe the establishment and construction of such a camp. Its location was on a wild lake, one of the Aylesford chain, in the heart of Nova Scotia. The time of year was late August and September, at which fortunate season mosquitoes and black-flies largely withdraw themselves from the woods of Nova Scotia and New Brunswick. Our party consisted of ten, men and women. We chose this particular lake for reasons already mentioned. It was thoroughly secluded, having but a single squatter's cabin on its shores, and that a good half mile back from the water. That cabin meant milk and eggs for us. The lake was reasonably accessible. A drive of fifteen miles from the railway, over an excellent road, took us to within six miles of its shores. Those remaining six miles were traversed by a passable wood-road, leading to a delightful beach of silver sand at the foot of the lake. The wood-road was bad enough to prove an effectual barrier to the bicycle-tourist and the picnic party; but it was no serious obstacle to

our strong express wagon, or to the huge extension farm wagon which carried our boat, canoe, baggage, and provisions.

Arriving at the lake about midday, we pitched tents for temporary use, lunched, and devoted the afternoon to exploring the lake for a camping-ground. The wide circuit of the shores was exquisitely diversified, — now high, now low, here naked rock, there wooded to the water's lip, and yonder fringed with beach of dazzling whiteness. All the rock about Aylesford Lake is a light-toned granite. Where the age-long, stealthy depredations of wave and rain and wind have worn this rock away, only the hard white crystals of the quartz are left, and these are hoarded in silvery drifts at the head of every cove. Where it shoals upon these beaches, the brown water turns to gold, and the lure to the bather is irresistible.

What we sought was an island near the shore, wooded with well-grown timber, with a sheltered cove as a landing-place, a silver beach for bathing and the picturesque bit of level for the two camps. What we found had all these attractions, with others added unto them. It was a narrow crescent, with three coves and three of those delectable beaches, so that we had at least one haven of windless calm secured to us in all weathers. The island was diversified by two little hills; it carried so many different kinds of trees as to be a very epitome of the forest; and it was simply brimming over with ripe huckleberries. It had two ice-cold springs, — and on the shore, two hundred yards away, flowed in a lively brook, with promise of trout and performance of music.

On a plateau, high, but close to the water, we cleared spaces a few yards apart for the two camps, with a little alley of greenery connecting them. Having leveled the ground, removing roots and stones, and filling in all unevennesses with close-packed moss, we returned to the tents at the foot of the lake, planning to move early on the morrow and to get established before night. In the morning we breakfasted while the sun was yet low, packed supplies into the boat and canoe, loading them to the gunwales, and migrated to the delectable island. There we set about building the women's camp.

Selecting hard-wood trees, birch and poplar chiefly, on account of their freedom from sticky balsam, we chopped a supply of logs from six to eight inches in diameter, and built an oblong pier fourteen feet long by ten in width, with a spacious doorway in the end facing the water. Needless to say, we had brought, besides our axes, a handy tool-chest, with plenty of spikes and nails. The stationary camper has this advantage over the itinerant, — he does not have to deprive himself of conveniences in order to travel light. The logs were carefully matched to fit into each other at the corners and hold

securely. The walls thus built were about four feet in height. As the men erected them, the women occupied themselves by "chinking" the crevices with moss to keep out the wind. Over these walls we raised a ridge-pole tent such as I have already described, of dimensions to allow the eaves to project fully a foot beyond the walls, keeping out the rain and leaving space for perfect ventilation. A canvas curtain, always pulled back except in case of driving rain from the south, was hung at the doorway. Down the middle of the floor ran a smooth log, fencing off a space to be filled in to the depth of a foot with picked hemlock and balsam fir, making the most luxurious of sleeping-places. The other half of the floor space was tramped hard and swept clean. Pegs were driven into the logs, and lines strung this way and that way under the roof supplied room to hang things out of the way to avoid confusion. A tiny but water-tight tent of tarpaulin beside the door served as storehouse for our provisions. As for the men's camp, it was a mere dormitory, and a small tent sufficed for that. We lived in and about the women's camp.

Once settled in these quarters, we were independent of the weather. When it stormed we lay reading, smoking, tying trout-flies, scribbling, or doing mysterious things with thread and needle, in unalloyed comfort, while the wind rushed through the trees and the lake-waves roared finely on the beach below us. When it was fine,—as it usually was at Aylesford Lake,—we went exploring the winding shores and innumerable islands, gathering water lilies, fishing in the cold streams that fed the lake on every side, or swimming in the silver-sand coves. As for the blueberries and the huckleberries, the supply of them was inexhaustible, and we almost lived on huckleberry duff. Their abundance brought to the island countless squirrels, Canada jays, robins, and thrushes; and these wild creatures, observing that our shotguns were never fired and that our manners were not ferocious, became almost familiar. Even those cautious birds, the loons, so far overcame their reason, in time, that they would play and scream and call in the moonlit water immediately below our bluff, within easy pistol-shot. When we left the camp on Aylesford Lake, we carried away the memory of a perfect outing; and we flattered ourselves, also, that we left behind us a good reputation among the furred and feathered citizens of our island.

### AYLESFORD LAKE

All night long the light is lying
Silvery on the birches sighing;
All night long the loons are crying
Sweetly over Aylesford Lake.

Berry-copse and brake encumber
Granite islands out of number;
All night long the islands slumber,—
But my heart is wide awake.

Listening where the water teaches
Magic to the shining beaches,—
Watching where the waveless reaches
Hold communion with the sky,—

Soon my spirit grows serener,
Hearing saner, vision keener.
In the night's benign demeanor
Peace and wisdom venture nigh.

## BEDDING AND CLOTHING

Next in importance to the camp-fire is, perhaps, the camp bed; for it is only the seasoned backwoodsman who can sleep comfortably on the hard ground, and he won't do so unless he has to. To get up with aching joints is a poor preparation for a day's delight. Whatever the shelter, then, — be it upturned canoe, lean-to tent, or elaborate camp, — let the sleeping-place be well prepared. First, remove every knot, root, stone, or hillock, and fill in every awkward little bottom with sod or hard-packed leaves. Then make the bed. Let it be, if there is time, a foot depth of picked balsam fir and hemlock twigs, — the best of all bedding. Failing this, or lacking time, dry moss and green bracken make a substitute for a night or two; but let there be plenty of it. It is better to take an hour longer in the preparation of the bed than to scamp the job and then toss sleepless half the night. In the stationary camp, the bunk should be made as described in the preceding section, and filled in with the finest pickings of hemlock and fir. On this luxurious divan, each camper has his own space allotted, and makes his bed there according to personal preference. One will roll himself in a blanket, of weight suitable to the season; another will crawl into a blanket sleeping-bag which leaves just his head sticking out. For my part I prefer the freedom of the loose blanket; but in chilly weather, and for a lethargic sleeper, the sleeping-bag doubtless has its advantages. Under all ordinary circumstances, it is well worth while to undress at night. At the stationary camp, there is no reason why one should not have the wholesome luxury of pajamas. At the camp itinerant such things are just so much more to carry and should be left at home; but in that case, change into the extra shirt and drawers for the night. You will get more refreshment, more renewal out of your sleep; you will have your day clothes fresher to put on in the morning; and the oftener each day

you can get your body naked to the sweet air and tonic light, the better for that body's health. Nature does not greatly love clothes.

Another adjunct to the camp bed that should not be forgotten is the pillow. One has to be very tired, indeed, to sleep well all night with a boot leg or a pair of shoes under his head. In the absence of a pillow, stuff your coat with moss and twigs, and you have a tolerable substitute. But there is no reason why one should not always have a pillow. A little bag of cool, light cotton may often prove useful for carrying loose articles that may get mislaid; but when empty, it takes up little more room than a pocket handkerchief. Stuffed with fir-twigs and moss it makes a pillow fit for an empress, one that will distill tonic savors and spicy dreams into your breathings all night long and work miracles of healing upon sensitive lungs.

In regard to clothing, the inexperienced camper is apt to think it must be of some massive woolen stuff, to defy time and blizzards. One's clothing on a camping trip should be just a little heavier than one's ordinary wear. It is best to make the adjustment through the medium of the underwear, and to let the coat and trousers be of light weight, but *strong*, tweed or flannel. Let the shirt, too, be of light-weight flannel. One coat is enough, but carry an extra shirt, an extra pair of trousers, an extra pair of socks, extra shoes, and an extra suit of underwear. The shoes should not be so heavy as to be a burden in tramping, and top boots are absurd in the woods, as well as a nuisance. Go lightly shod, but strongly. Better far the flexible Indian moccasin than the clumsy and burdensome high boot. Have shoes with low heels; medium soles are the best. Wet feet are not a calamity in the camper's eyes. For the head, a cloth cap or a soft felt hat, but not straw. In general, let all the clothing be of soft, neutral grays or browns, that will harmonize with the wilderness coloring and not frighten the wild creatures into spasms. If we harmonize our bodily exterior to our surroundings, we will find it easier to attune our minds and spirits also to the forest world. At the stationary camp, where one does not have to consider every additional pound or square foot of "dunnage," it is well to have extra clothing in the shape of a stout overcoat, and extra bedding to the extent of a light blanket, against the contingency of a cold wave or an easterly rain. In the camp itinerant, a light rubber-coat may chance to pay many times over in comfort for the extra space it takes in the canoe.

Under this heading it may be well to speak of sundries which are apt to be overlooked, but which play an important part in the comfort of the camp. That the ax should be a good one, and well

sharpened, is too obvious to call for assertion; but I might suggest that for the itinerant camper a heavy hatchet will give better satisfaction than an ax, for all that veteran backwoodsmen may say to the contrary. No camping expedition should set forth without two hatchets; for lacking its hatchet the camp is bereft indeed, and accidents may happen in deep water.

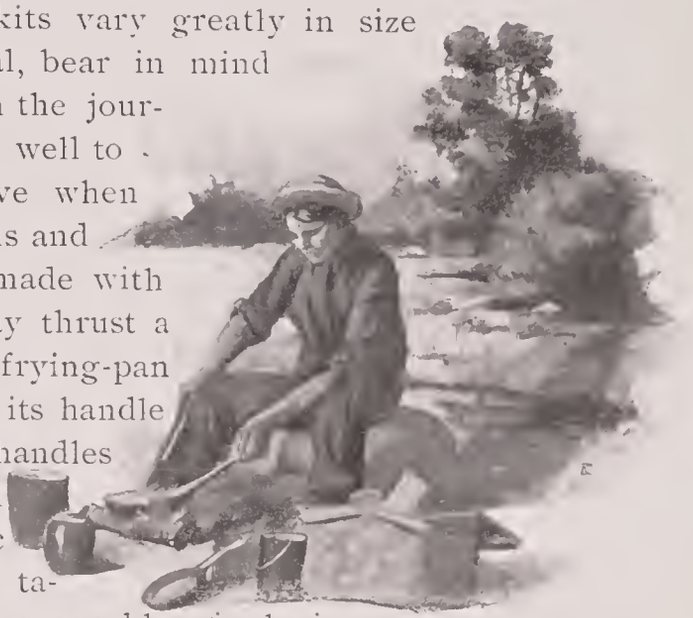
Then there is the "ditty-bag." This little bag does not take up much room, but it has a fashion of proving its usefulness in unexpected emergencies. The experienced camper will, from time to time, add to the variety of its resources, according to his individual tastes and needs; but from every ditty-bag one should be able to unearth such occasional necessities or utilities as the following: scissors, needles, and strong linen thread, buttons, string, tape, a little tape-measure, paper of pins, lump of shoemaker's wax (wrapped up carefully, in case of heat), sticking plaster, a cork-screw, and other small articles that one never knows the value of till he has to do without them. The ditty-bag speedily becomes popular in camp. Then there should be, not perhaps in the ditty-bag, but associated with it in unexpected usefulness, a bottle of pain-killer or some tried medicine of that class. And no outfit is complete without a few yards of light clothes-line. A stationary camp should also be supplied with a little tool-chest, containing hammer, saw, gimlets, or brace-bits, screw-driver, and assorted nails and screws. But such a luxury is not needed at the itinerant camp.

## FOOD AND COOKING

At the stationary camp, there is so much opportunity for varying the bill of fare that it seems to me superfluous to offer suggestions. Moreover, among the members of such a camp there are sure to be some who have that genius for cooking which makes miracles possible. All that I have to say on the subject of food and cooking, therefore,—and it is not much, as this department of camp science has never been a specialty of mine,—applies primarily to the requirements of the camp itinerant.

In the first place, the proper camp-fire has been already described. With such a fire, cooking becomes easy, if one has the proper utensils. These are made, to suit all needs, in compact, convenient "kits," which all camp-outfitters will supply. A large kettle of the heaviest block tin has perhaps two smaller kettles fitting into it, on the nest-within-nest principle; together with half a dozen tin plates, a couple of two-inch deep tin pans, a skillet, a nest of tin cups, and at the heart of all, a set of tin cases to hold salt, pepper, sugar, butter, coffee, tea,

and the like, and a compartment of knives, forks, and spoons,— which should be as few as possible. These kits vary greatly in size and degree of completeness. In general, bear in mind that simplicity becomes more precious on the journey than it may seem at the outset. It is well to have the plates of such sizes as to serve when necessary as covers to the two deep pans and the skillet. These, moreover, should be made with an indented socket, into which one may thrust a bit of green stick for handle. The frying-pan should be made in the same way, and its handle renewed at every camping-place. Long handles are an abomination in packing the load into a canoe. As for the knives of the outfit, they should be not the ordinary table knives, but knives that will cut, knives capable of playing many parts in case of need,— in fact, good serviceable hunters' knives.



If one carries along, to hold the provisions, a waterproof tin box, of size and shape to go handily into the canoe, he will have reason to congratulate himself in wet weather or when the canoe is shipping seas. To find the tobacco and the grub water-soaked, at the end of a hard day's journey, is an experience to discourage all but the most indomitable. In this tin box should be a little bag of bran, rice, cornmeal, bacon, lemons, a bottle or two of pickles (to take the place of fresh fruit and salad), good "hard-tack" biscuit, oatmeal, and the reserves of tea, coffee, and sugar, which cannot find space in the "kit" before described. Also, there should be some canned stuff, according to the campers' tastes. Corned-beef, tomatoes, peaches, and green corn have proved to me the most satisfactory. Even the campers' appetites are susceptible to the charm of variety, and if one is on good fishing-waters, the richness of fresh trout or bass fried in pork-fat and cornmeal will soon cloy on the palate. There is one addition to the larder which I suppose will be regarded with scorn by most of my readers, but let none condemn it who have not tried it. To me no camp fare would be complete without *molasses;* and never would I go on any long canoe-trip without a sizable jug of the brown, plebeian syrup, stowed securely in the stern. It belongs to the woods essentially, and blends with the heavy savors of the camp *menu.* It is strong, wholesome, wild, and primitive,— I speak, perhaps, with the prejudice of my native Canadian backwoods,— indispensable. Try it!

As to recipes for camp cooking, it is not a part of my plan to include them in this paper. If one has had no experience in such fundamentals of camp cookery as the brewing of tea and coffee, the

frying of fish and bacon, the boiling of beans and rice, the preparation of corn-meal mush, the frying of potatoes,— there is sure to be room for a little bag of potatoes in the canoe,— then he should take a lesson or two in these arts at the kitchen range before undertaking the responsibility in camp. If he finds that the instinct for it all is not his, then let him shift the office to a camp-mate's shoulders, before spoiling the tempers of all the party. These fundamentals mastered, then one may go to such elaborate achievements as stews, flapjacks, and even huckleberry duff. For the stationary camp, I can confidently recommend a cooking utensil much favored by the Indian guides of the St. John River,— the old-fashioned "bake-oven" of bright tin. This is, in shape and size, something like the ordinary blower used to start a coal fire in a grate, but deeper, and with two shelves. Set with its open front close to a steady bright fire, it roasts admirably; and a camp equipped with it need not be deprived of the unwholesome luxury of hot bread.

If the camp cook wants to carry with him specific directions and recipes, he cannot do better than take to Nesmuk's little handbook on "Woodcraft," already mentioned. Nesmuk's hints are sensible, practical, and easily followed; and they are in compact form. I know of no more useful guide to the woods than this small book.

## THE PLAGUE OF FLIES

It is only those who have not really experienced them who prefer to think that flies can be ignored. By flies, of course, I mean the whole biting and tormenting tribe that infests our wildernesses, — mosquitoes, sand-flies, and the small black flies whose cutting bite bleeds so freely that the poison is apt to be pretty well washed out. There is a large fly, called in some neighborhoods the black-fly, but more often the dog-fly or the moose-fly, which, happily, is restricted in its range. Where this fly has its haunts, one does not go camping for pleasure. Its bite raises a sore like a small boil. But in most of our northeastern wilds this pest is seldom seen, and then, by reason of its size, is easily avoided. I do not include this fly under my general heading.

As for the smaller pests, whose terrors depend largely on their numbers, the stationary camp should avoid them altogether. There are plenty of high, well-wooded, clean-watered localities where the mosquito is practically unknown, and where the little black-fly disappears after June. Let such a place be chosen for the stationary camp, and escape all fussing with fly poison and mosquito nets. But the moving camper must expect to traverse many infested neighbor-

hoods. Most of the best canoe routes will take him through an occasional mosquito swamp or low-lying fly-belt. The inexperienced camper, who has faced and endured the mosquitoes which frequent suburban lawns, is inclined to think he has been initiated, if not inoculated, and goes to the ordeal with light heart and unarmored features. The morning after his first real initiation his face will resemble nothing human, his hands and wrists will look spottedly dropsical, and he will be fortunate if he can see at all. Where the flies really hold sway, nobody despises them,—not the Indians,—not even the bears.

The sensible remedy is, of course, fly-medicine. The raw camper looks on this dark, ill-smelling stuff with what seems at first an unconquerable aversion. But if the flies are in force, he comes to it, he cries out for it; and after a time he says that he likes the smell, and finds the fluid softening and helpful to the complexion.

In the backwoods of Maine and New Brunswick, a simple mixture of tar and butter, simmered together to the consistency of thin molasses, is used. This useful mess is not uncommonly known as "slitheroo." It is effective, if used very freely. It must be rubbed over the face, neck, wrists, and backs of hands,—applied often and not washed off at all while within the fly-belt! It gives to the skin a fine gipsy coloring for the time, but is, indeed, a preservative and true complexion balm, however little suited to My Lady's toilet.

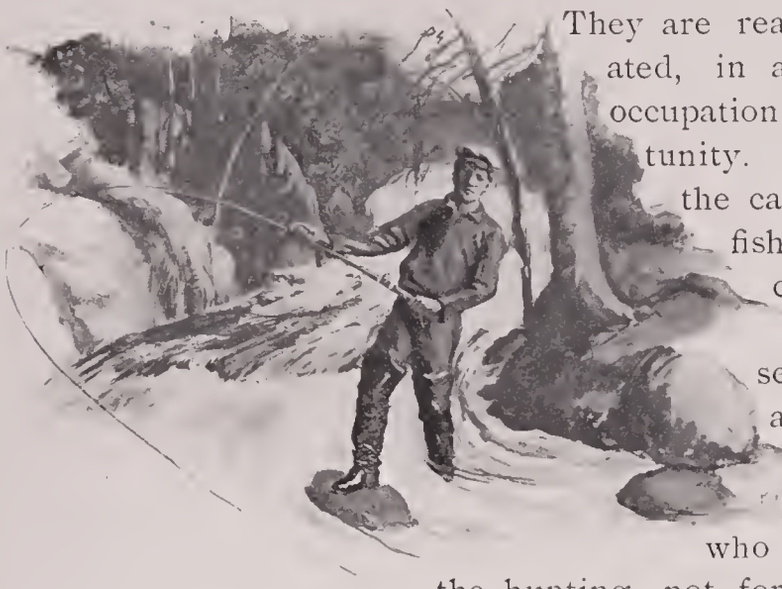
But much more effective is the following mixture,—which is in reality just "slitheroo" with the addition of oil of pennyroyal. Five parts of pine tar, three parts of olive oil, and one part of oil of pennyroyal should be simmered together very gently until the blending is perfect. This is not unpleasant to use,—when you get accustomed to it; and the flies do certainly abhor it. Pennyroyal is an abomination in the nostrils of all the fly kindred. Use it freely, and don't wash your face and hands too assiduously, and you will walk unscathed while the hosts of the enemy encompass you.

## RECREATIONS IN CAMP

As I began this article with the premise that camping was in itself the best of all forms of recreation, it may seem superfluous to write this section. Possibly, however, I may be permitted here to regard the word in its collateral meaning of diversion, while elsewhere I give it rather its original sense of renewal or re-making.

It is, of course, only the inhabitant of the stationary camp who has to give thought to his recreations. The itinerant camper's day is all diversion, however laborious it may be at times. But at the stationary

camp there are long, sweet hours of leisure, to be filled or not as one may choose. For the camper who has a fad, and who brings it to camp with him, the question is settled beforehand. But most men and women are not so fortunate, or so unfortunate, as to be fad-ridden.



They are ready to be amused, diverted,—reereated, in a word,—by whatever pleasurable occupation may present itself to their opportunity. The most appropriate diversions for the camper's leisure, it seems to me, are fishing, hunting with the camera—and consistent, deliberate, unapologized-for loafing. Hunting, in its aceepted sense, I purposely omit, though well aware of all the fascinations and advantages to be urged for it. Hunting is an end in itself, and those who enjoy it go to the wilderness for the hunting, not for the camping. The fieree and sanguinary excitement of it seems to me out of key with the camping spirit. We ean get eloser to that side of nature which is best for us if we go to her without a gun, without the lust of blood in our hearts and in our eyes. But to those of my readers who would join issue with me on this point, I hasten to aeknowledge that I am a reformed hunter, and perhaps subjeet to the fanatieism of the eonvert. My rifle has been for some years left to rust, sinee I have learned to dislike killing the wild ereatures and have found the greater pleasure in getting to know them alive.

But fishing is another matter. Consistency is the least interesting of the virtues, if, indeed, it be a virtue, and not, rather, the refuge of weak and timid souls. Well did Isaak Walton eall fishing the gentle art. It is eontemplative, and admits one's spirit to the forest eompanionships. It laeks the violenee and the bloodiness of hunting. In hunting, it seems to me, there is something of the disastrous nature of eivil strife. The furred and feathered vietims of our prowess are warm-blooded, and akin to us. But the fish are creatures of another element, living in a world remote from us, not in any sense personal to us. All this, of eourse, is relative; and if any one dislikes to kill even fish, I say to him he does well. His regeneration has gone further than mine, and I honor him. For the present, however, I like fishing,—and for all who think with me, fishing is an ideal eamp diversion. Of eourse the fishing enthusiast goes for the fishing, not for the camping. I do not speak to him in this article. But if the stationary eamp have near it good bass or piekerel waters, or, best of

all, an amber stream where the trout lie at the foot of the rapids, ready to rise to a red hackle, in the cool of the morning, or to a white miller, in the first of the purple dusk, blessed is that camp.

Still better, perhaps,—and certainly impregnable to criticism,—is hunting with the camera. All the nicety of woodcraft which forms so great a part of the hunter's pleasure is required in this new art. All, did I say? Nay, many times more—more patience, more subtlety, more knowledge of the quarry. For the camera is no long-range weapon, like the rifle. This is, indeed, a fascinating sport. To excel in it, one must himself become preëminently a portion of the woods, adopting all the methods and tactics of the furtive kindred, and in the end beating them at their own game. One comes to know the wood-folk as in no other way. And the trophies which one wins are practically imperishable.

But above all, in the affections of the true camper, stands loafing. I mean, of course, that true loafing wherein one "invites his soul." When you loaf because there is nothing else to do, there is little gain to body or spirit. The outcome is merely littleness. The nerves, indeed, are apt to get upon a rack of expectation, or else to sag heavily into *ennui*. But the proper loafing is a state of happy, receptive passivity, where knowledge and wisdom steal into us unawares, and nature, having her will with us, stealthily makes us over, a little nearer to the heart's desire.

## ROWING

In addition to the fact that Rowing brings into play a great number of the muscles and organs of the body, it is of especial value in promoting a judicious system of training; since to become a good oarsman one must practise long and earnestly in order to master the art, and must prepare his whole organism to withstand a long and severe physical and mental strain. This, of course, applies especially to racing, though in Rowing simply for pleasure, the better one's physical condition, the greater will be his enjoyment of the sport.

Boat building has been brought to such a degree of perfection that a modern boat race is an exhibition of science and skill, instead of being, as in the early days of racing boats, a contest between two badly trained crews, trying to propel by main strength, heavy, unwieldy boats. The standard of Rowing is maintained by the universities and athletic clubs, especially in this country and in England, and though there are slight fluctuations in form from year to year, there is no doubt that speed has been gradually on the increase.

Coaching has become a sensible and scientific form of instruction. Training is now merely a matter of adhering to the common sense rules of hygiene as regards diet, bathing, exercise, and rest; and, as has been said, the building of racing boats has developed into a contest of skill between the different builders, in which as much interest is taken as in the race itself.

## GENERAL DESCRIPTION

Rowing may be defined as the art of propelling a boat through the water by means of oars or sculls, the person or persons operating them usually sitting with the back toward the bow, or forward part of the boat. In Rowing with a single oar, the oarsman reaches forward with the oar in the air, then dips it into the water, and, throwing the body straight backward, dashes the oar through the water, and, finally, completes the stroke by bringing the handle against the chest.

In racing boats, the greater part of this operation is performed with the aid of the resisting power of a stretcher and a sliding seat. Rowing with sculls is much the same, except that instead of the single oar, the sculler uses a pair of sculls, one in each hand. A boat may be sculled by a single person, but when oars are used, one, two, or more persons may handle them, and they are usually assisted by a third, the cockswain, who sits in the stern of the boat and steers.

The action of Rowing really consists of two parts,—the stroke proper and the feather. The stroke consists in pulling the oar through the water with its blade in a vertical position, so that the water will offer resistance to its passage. Strictly speaking, feathering is the turning of the oar at the conclusion of a stroke, by dropping the hands and turning down the wrists so that the blade becomes parallel with the surface of the water; but the term is also held to refer to the action of carrying back the oar in the same plane until it is in position to be dipped for another stroke, since during this motion the oar is said to be "on a feather."

Several styles of Rowing are, or have been, in vogue, but these differ only in form, not in principle, and a general description of correct rowing may be given that will include all styles. Its characteristics are a firm, clear-cut entrance of the blade into the water; a powerful, steady, and horizontal stroke; a quick, low, but clean feather; and a complete, powerful, and smooth finish.

The amateur oarsman should first learn to embark in the right way. Lay the blade of your oar in the water, if about to row the outboard oar; on the float, if the shoreward oar. Step into the boat with your face to the stern, placing your foot on the keelson so as to avoid any possibility of forcing your toe or heel through the bottom of the boat; stoop, place a hand on each gunwale and lower yourself easily into the seat. Now fit your feet into the stretcher-boots, provided for the purpose of holding the feet firmly in place, and ship the oar by inserting the small part of

the loom into the row lock and shoving the oar outboard to its proper position. Be careful to sit squarely in the middle of the boat and exactly opposite the row lock. Hold the body erect, with the shoulders thrown slightly back, and head up, and the elbows held close to the sides.

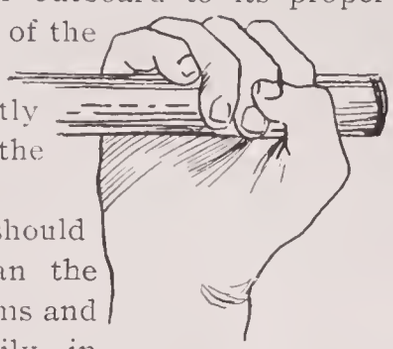


Fig. 1, *a* — Holding Oar (Wrong).

The position of the hand is important, and care should be taken that it is such as to give the oarsman the best leverage, with the minimum strain on his arms and hands. The oar should be held firmly, but easily, in both hands, the outside one close to the end of the handle, but not over the end. (Fig. 1, *a* and *b*.) The fingers of both hands should be on top, and the thumbs underneath, though some oarsmen prefer to have the thumb of the outside hand in the same position as the fingers. The inside hand, which is nearer to the loom, or body, of the oar, should be from one and one-half to two inches away from the other hand, grasping the oar more convexly than the latter, and with the thumb underneath. It must be borne in mind that the greater exertion is required of the outside hand, since the inside hand is used principally to guide and manipulate the oar.

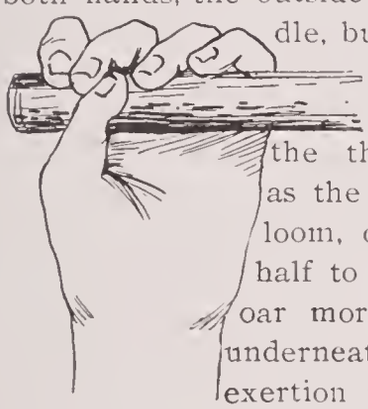


Fig. 1, *b* — Holding Oar (Right).

The oar should be held at right angles to the keel of the boat and feathered; the forearms should be below the level of the handle, and the wrists dropped and relaxed. The inside hand must not be held too low, since a great deal of force will thus be lost,— the arm will be bent and the stroke weakened, while the shoulders could not be square. The difference in position of the two hands and wrists permits of both arms being stretched out perfectly straight when going forward on the recover, instead of one arm being bent, as would be the case if both hands were in similar positions.

At the beginning of a stroke, the body is inclined forward on the hips, with the back perfectly straight, the chest thrown forward and raised as much as possible, and the stomach kept well out and down. The great difference between the position of an oarsman and that of a soldier at drill is that the former is required to keep the stomach out, whereas in other forms of athletics and in drilling it should be kept in. The shoulders should not be dropped too far forward, as in Figure 2, *a*, and neither should be advanced farther than the other, while the top of each should be in the same horizontal plane. The joints of the shoulders and hips should play freely, since at these points perfect flexibility is required. The arm should be perfectly straight from the shoulders to the wrist, and in the first part of the stroke they should be used merely as connecting rods between the body and the oar. (Fig. 2, *b*.) Should the arms be bent, the weight and strength are thrown on the handle of the oar, and thus a great part of the

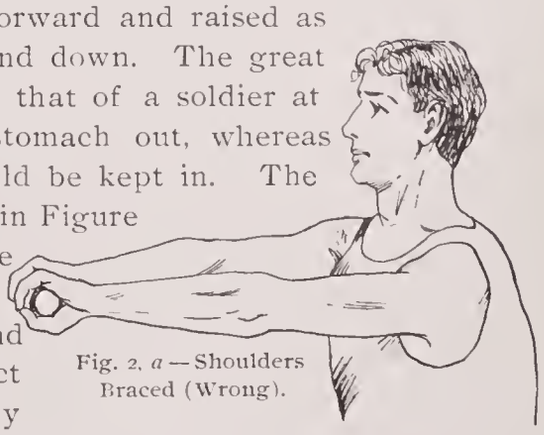


Fig. 2, *a* — Shoulders Braced (Wrong).

stroke is lost. The inside wrist should be raised slightly, and the outside one bent around so that the knuckles of that hand are parallel to the oar; the grasp of both hands must be firm, so that the stroke may be started strongly. In all parts of the stroke the head must be kept up, the eyes must look directly astern, or, when rowing behind another man, at the back of his neck; and the feet must be firmly braced against the stretcher.

Fig. 2, *b* — Shoulders Braced (Right).

One of the distinguishing marks of a finished oarman is the peculiarly easy and graceful manner in which the arms are shot out straight from the body without the least pause. As the oar passes the knees, the wrist is raised so as to bring the blade at right angles to the water preparatory to the "catch"; should this motion be delayed, the oar will be likely to strike the water at an angle, instead of squarely. As the arms shoot forward, the body and the sliding seat are drawn forward at the same time by the aid of the stretcher-boots. As soon as the oarsman's hands have passed the line of his stretcher, he should raise them straight up until the blade enters the water; the hand should not be lowered too much in going forward as this will tend to make the stroke short and choppy. The upper part of the blade should be just below the surface, since in a shell or other light boat special care should be taken to avoid dipping too deep, which would cause that side of the boat to be depressed.

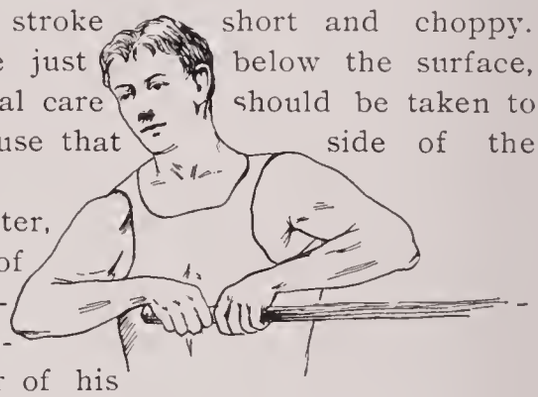


Fig. 3, *a* — Finish With Biceps (Wrong).

The instant the oar takes the water, the rower should bring the muscles of the back and legs into play, and, throwing his whole weight and strength together against the oar, rise almost clear of his seat. It is difficult to explain the change from the end of the feather to the beginning of the stroke, and, in fact, they must be seen to be understood. It is important that all the men in the boat shall catch the water and "lift" at the same time, and in order to do this the end of the feather and the beginning of the stroke must be simultaneous. Having thus begun the stroke with the body only, the oarsman should finish it with his arms and shoulders, being careful to keep his elbows close to his side, to drop his shoulders well down and back, and to hold his head up and his chest out. (Fig. 3, *a* and *b*.)

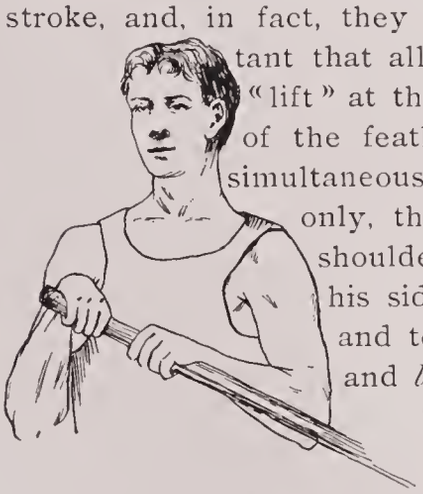


Fig. 3, *b* — Finish With Shoulders (Right).

The whole strength of the arms and shoulders should be given to the finish of the stroke, though this does not mean that the finish should be made with a jerk. The oar should be brought close to the chest, so that all the available length of the stroke is made use of. The hands should then be dropped straight down, turned

over for the feather, and shot forward again close to the legs, the body following at the same time. (Fig. 4, *a* and *b*.) Unless this motion is made properly, the oar will be feathered under water, and the oarsman will "catch a crab."

The movement of the slide on the recovery must be controlled carefully, so that the body will go forward evenly from the hips, and not with a jerk.

The following points are referred to by a well-known oarsman as among the most important in executing a stroke: —

"First, when the hands are raised at the beginning of a stroke, and the oar thus plunged below the surface, the whole power of the oarsman's body should be brought to bear at the moment of the oar's contact with the water, so as to give the greatest effect to the first or vital part of the stroke; second, the pull home to the chest should be made in a perfectly straight line, thus causing a horizontal stroke through the water; third, the finish of the stroke should be as quiet and easy as it is possible to make it, but there should be no lessening of the force applied, which naturally diminishes because at the first part of the stroke the oar is at an acute angle to the boat, and afterward at an obtuse angle."

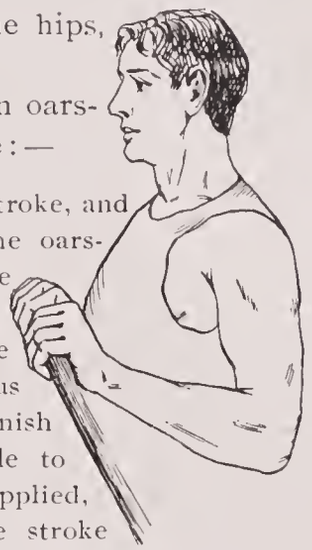


Fig. 4, *a* — Hands Turned Before Dropped (Wrong).

Next in importance to the foregoing movements are those of the oar itself. As the oar goes forward on the feather, the blade should be kept constantly in the same horizontal plane, which should be just far enough above the surface to avoid touching the water, whether it be smooth or rough. At the time of the dip, the oar must be plunged sharply into the water, and the blade must be immersed before any force is applied. As the oar passes from the feather to the dip, it performs a motion which may best be described as a *powerful scoop*. The oar should not enter the water so suddenly as to cause a splash; to prevent this, perfect control of it must be retained as the arms go forward. It has been said in general terms that when the blade is immersed it should be at right angles with the surface, but this is not strictly true; the proper position is for the front face of the blade to be inclined slightly forward, so that its entry into the water is less than a right angle. This increases the oarsman's reach, gives a clear-cut dip, prevents the blade going too deep, and causes the boat to be, in a sense, lifted through the water. To combine the foregoing movements in an easy, finished whole is no light matter, yet the ability to do so is required in an expert oarsman.

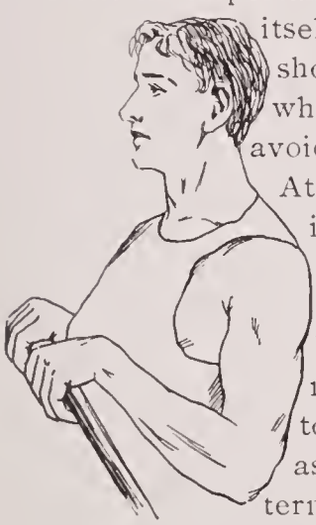


Fig. 4, *b* — Hands Dropped Before Turned (Right).

The main points to be remembered by the beginner may be pointed out briefly as follows: First, a full, fair reach-out over the stretcher, with both arms perfectly straight; second, a firm, square catch at the dip, with the application of the weight and strength of the body at the moment of

immersion; third, a strong stroke with the blade at medium depth, pulled straight through the water without wavering or vibration, yet always long and seemingly easy; fourth, a graceful and easy, but forceful finish, with a clear turn of the water off the after edge of the blade, the feather being light, as low as possible, and rapid; fifth, one instantaneous connected movement as the oar completes the feather and dips to begin the new stroke.

The foregoing description has referred only to plain pulling, but there are various other maneuvers which go to make up the science of Rowing, such as paddling, easing, holding water, and backing.

*Paddling* is simply a milder form of ordinary rowing, the other extreme being known as "spurting." The difference consists principally in the amount of strength applied, and in the number of strokes taken to the minute, though there is also often a difference in the length of stroke.

*Paddling* is especially valuable to the beginner and the coach, since it enables the former to perfect his style and the latter to discover and correct faults.

*Easing* is a reduction in speed, either from spurting to ordinary Rowing, from Rowing to paddling, or from one of these to a cessation of Rowing. The latter is the more common meaning, being generally understood to signify "stop pulling." The command "Easy all!" means merely to reduce speed, and the order "Row easy all!" may be given at any part of the stroke. The order "Easy all!" on the contrary, should be given immediately after the beginning of the stroke.

*Holding water* is the means employed to stop a boat suddenly. The maneuver is executed by partially reversing the oar and holding it farther under water than in ordinary pulling, so as to check the boat's momentum. The oar should be held with the blade in nearly the same position as on the feather, but under, instead of above, the water. By changing the angle of the oar, thus increasing or diminishing its depth, the amount of resistance offered to the progress of the boat may be made greater or less. Thus, by turning the upper edge of the blade downward, the oar goes deeper into the water, while, by depressing the after or lower edge, the blade is brought nearer the surface.

*Backing* is the movement necessary to propel the boat backward, and hence is the exact opposite of Rowing. The oar is reversed, as in holding water, and the handle is pushed away from the body, instead of being pulled toward it. The movement is begun with the body well back on the slide, and is finished just beyond the knees. The blade should not be sunk too deep; the first part of the stroke, as in ordinary rowing, is the most important; the entire stroke through the water should be long and light; and the oar should be feathered, and carried on the feather in the same manner as in ordinary pulling. In backing a boat, care must be taken that the strokes are as smooth as possible, since otherwise the strain on the outrigger might be so great as seriously to damage the boat.

The foregoing movements should be practiced until they can be executed easily and correctly, and the oarsman should learn to change easily and smoothly from one to the other.

The act of disembarking is attended with considerable danger to the boat and oars; it should be done carefully in the following manner: Bring the boat alongside the float, with very little way on, and come to a standstill, either by holding water with the off-shore oars or by having an assistant on the float catch one of the on-shore outriggers. Unship the oars and lift them out before leaving the boat. When rising from the seat, place one foot on the keelson in a fore-and-aft position, support yourself by grasping the gunwale on each side, and step lightly on the float. The boat should be held steady during this operation by at least two persons, one of whom may be the cockswain, who should disembark first.

## SCULLING

As was stated at the beginning of the foregoing article, Sculling is usually performed by one person, who sits in the center of the boat and uses a pair of short oars, called "sculls," one in each hand. In double Sculling, which is now also in vogue, there are two persons and four oars. The inboard length of the sculls is such that they overlap more or less, and for this reason one hand must be held above the other. It may be left entirely to the preference of the sculler which hand shall be uppermost, since there is no arbitrary rule to be followed in this regard.

The principal things to be kept in mind in Sculling are to sit upright, to get a long, full reach well over the stretcher by dropping the body forward between the knees, which should be spread apart as the arms shoot forward, to execute a firm, scooping dip, as explained under rowing, and thus to *lift* the boat *over* the water in the first part of the stroke.

The amount of power applied will naturally diminish gradually as the stroke nears completion, but the sculler should be careful not to finish with a jerk, since the frail outriggers used in Sculling are capable of withstanding but little downward pressure. In reality, the principles of Sculling are very similar to those of rowing with a single oar. The body should not be permitted to fall too far back of the perpendicular, the elbows should be kept close to the sides, the feather should be low, but clean, and the recovery should be quick. rapid and smooth.

To turn a boat with sculls, back water with the oar on the side toward which you wish to turn, and pull with the other. It is much easier to come to a full stop with sculls than with oars, though the movement is executed in exactly the same manner, as is also that of backing water.

When not in use, the sculls should lie flat on the water, with the concave side uppermost to preserve the equilibrium of the boat. Since the sculler has no cockswain, he must do his own steering, and must depend upon himself to keep the boat in an upright position, hence must be careful to pull evenly with both hands. To assist him in keeping a straight course, he should keep his eyes on some fixed object astern, and by turning his head, not his shoulders or body, slightly to the right or left, avoid obstacles in front. Especially in racing, the difficulty of steering is great, and the sculler should never permit himself to become so excited as to

neglect it; this has often been known to cause the defeat of a sculler who might otherwise easily have won his race.

A rate of thirty-five or thirty-six strokes to the minute is considered very good for the average sculler, and this rate will be lessened in rough water. Perhaps the two most important points in fast sculling are a long stroke and a high, clean feather, the latter of which will be impossible unless the boat is kept on an even keel. It is easy to be seen that if the blade comes in contact with the surface of the water on the recovery, the speed will be lessened appreciably.

## LAWS OF BOAT RACING, OF THE NATIONAL ASSOCIATION OF AMATEUR OARSMEN

### Starting

1. All boat races shall begin in the following manner: The starter, on being satisfied that the competitors are ready, shall give the signal to start.

2. If the starter considers the start false, he shall at once recall the boats to their stations; and any boat refusing to start again shall be disqualified.

3. Any boat not at its post at the time specified shall be liable to be disqualified by the umpire.

4. The umpire may act as starter if he thinks fit; where he does not so act, the starter shall be subject to the control of the umpire.

5. Boats shall be started by their sterns, and shall have completed their course when their bows reach the finish.

### Water

6. A boat's own water is its straight course, parallel with those of the other competing boats, from the station assigned to it at the start to the finish.

7. Each boat shall keep its own water throughout the race, and any boat departing from its own water will do so at its peril.

8. The umpire shall be sole judge of the boat's own water and proper course during the race.

### Fouls

9. It shall be considered a foul, when, after the race has begun, any competitor, by his oar, boat, or person, comes in contact with the oar, boat or person, of another competitor; unless in the opinion of the umpire, such contact is so slight as not to influence the race.

10. No fouling whatever shall be allowed; the boat committing a foul shall be disqualified.

11. During the race, the umpire may caution any competitor when in danger of committing a foul.

12. The umpire shall decide all questions as to a foul.

13. A claim of foul must be made to the umpire by the competitor himself, and, if possible, before getting out of his boat.

14. In case of a foul, the umpire shall have the power — (*a*) To place the boats (except the boat committing the foul, which is disqualified) in the order in which they come in. (*b*) To order the boats engaged in the race, other than the boat committing the foul, to row over again on the same or another day. (*c*) To restart the qualified boats from the place where the foul was committed.

### Accidents

15. Every boat shall abide by its accidents, except when, during a race, a boat while in its own water shall be interfered with by any outside boat, the umpire may order the race to be rowed over, if, in his opinion, such interference materially affected its chances of winning the race.

### Assistance

16. No boat shall be allowed to accompany a competitor for the purpose of directing its course or of affording other assistance. The boat receiving such direction or assistance shall be disqualified at the discretion of the umpire.

### Umpire

17. The jurisdiction of the umpire extends over the race and all matters connected with it, from the time the race is specified to start until its termination, and his decision in all cases shall be final and without appeal.

18. The judge-at-the-finish shall report to the umpire the order in which the competing boats cross the line, but the decision of the race shall rest with, and be declared by, the umpire.

19. Any competitor refusing to abide by the decision, or to follow the directions, of the umpire shall be disqualified.

20. The umpire, if he think proper, may reserve his decision, provided that in every case such decision be given on the day of the race.

21. Contestants rowing a dead heat shall compete again after such interval as may be appointed, and the contestant refusing to so row shall be adjudged to have lost the race.

### Turning Races

In turning races each competitor shall have a separate turning stake and shall turn from port to starboard. Any competitor may turn any stake other than his own but does so at his peril.

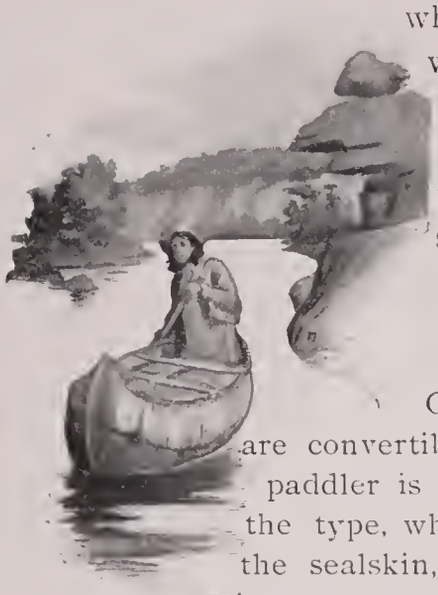
## CANOEING

CANOEING, one of the earliest of the useful arts of man, is even to this day one of the most charming and simplest of outdoor recreations. It requires no unusual dexterity, the cost is not prohibitive, and poor, indeed, is the stretch of water that does not give the canoeist opportunity. It is the ideal form of aquatic exercise.

Where there is water, canoes are to be found. Naturally, they vary greatly in appearance and detail, and the term has been used to include all sorts of boats, but public usage has established pretty definitely what is meant by canoe.

Generally speaking, then, a canoe is a boat sharp at both ends, which can be as easily propelled astern as ahead; it must be of light draught, capable of navigation in shallow and in very rough water and, as a general rule, of such light construction as to be

easily transportable by its users, when necessary, overland from water to water or around an obstructive fall or rapid. Further, a canoe when not under sail is always propelled by paddles, used without row-locks or other fixed boat-fulcrum.



To describe the many varieties of canoe in use even on our own waters is beyond our scope. A simpler plan is to tell of the uses of the canoe, and, as we go, describe the types best fitted to these uses.

## CANOES AND CANOEING

Of Canoes there are sailers and paddlers, and those which are convertible in a greater or less degree from one to the other. The paddler is the primitive boat of man and does not differ essentially in the type, whether it be the "dugout" or birch bark of the Indian, or the sealskin, whalebone-ribbed fishing boat of the Eskimo. The sailer is more complicated; it is in fact a miniature yacht, and is sailed in practically the same manner. An open, clear water is needed for the sailer; the paddler can find a welcome in all but the most churlish and insignificant streams.

The paddler is the boat of the hunter, the lover of nature, and the camper. It is the key to the wilderness. It opens up the inaccessible places. If you would get into the cool sweet woods, or seek the unpolluted waters near their source, the canoe will take you. It will give you transportation by day, carry your stores, and be your hotel by night. But you, too, must do something in return. You must be prepared when a rapid or a fall intervenes, or when you want to cross a watershed, to take your Canoe upon your shoulder and trudge with it. This carrying is called portage. If you have the right kind of Canoe, and are yourself the right kind of canoeist, you will not mind this.

Let us assume that you are going to take a trip of a week or two through the woods; you will want to know what to do and what to take. You are going alone, so as to enjoy nature unhampered, and naturally, for freshness, you are going up stream. Your first care will be the selection of a suitable Canoe. You will take a paddler, for portage may be necessary, and sailing and steering gear are of prohibitive weight. You have a choice of two kinds of paddlers, the decked, or covered in, and the open kind known as the Canadian open canoe.

The decked Canoe, except for a cockpit of from five to seven feet, is covered over bow and stern, with waterproof canvas or other suitable material. Stores and camping gear can be secured safely underneath this, and the boat is buoyant beyond the possibility of sinking.

The Canadian open Canoe is, however, a more desirable boat. As it is usually fitted with waterlights at either end, it has nothing against it in regard to safety, while it has the advantage of greater freedom of movement and better facilities for stowage and discharge than the deck boat. For

cruising it has almost superseded the covered Canoe. It has the further advantage of being easier of portage in many ways.

Your next care will be to ship your provisions. You will need a week's supply, at least. Your own taste and judgment must be employed in deciding what to take and how much, but of course you will have to depend upon biscuits for breadstuffs, and largely on canned foods for the rest of your larder. If you are a hunter or a fisherman, you will be able to provide yourself with fresh delicacies. Your next care will be for the cooking apparatus. If you carry matches in corked bottles you may rely on driftwood fires. It is always advisable to carry a can of kerosene, but unless the can is absolutely oil-proof it is likely to be a source of contamination to everything in its vicinity. In wet weather it is difficult to do without this. Cooking utensils may range from a billy-pot and a few tin pots and a frying pan, to one of the latest ingenious condensed kitchen arrangements put on the market by enterprising manufacturers.

You have noticed that we have not taken hotels or wayside houses into consideration, for the trip the real earnest canoeist wishes to take, will be off the beaten track, and he will be alone with the silent, nodding trees and the lapping water. Carry your own hotel, a tent securely wrapped around its pole and stowed lengthwise along the Canoe. Some Canoes can be converted into tents, and very pleasant quarters they make. The canoeist is the free man of the blue sky and the deep woods. In the kingdom of nature he pays no tribute to convention.

Bedding and clothes are the next consideration. Woolens and flannels should be insisted upon. Two stout blankets, one of which when folded will serve for a mattress, or when cold as an extra cover, a pneumatic pillow with a removable and washable cover, and a thick serviceable suit of woolen pajamas, will be found essential. A pair of woolen wading boots, are excellent in the kit. Add a small ax and a jack-knife or two, and you have the necessaries of your trip. Then you must see that all perishable or damageable articles are carefully preserved in waterproof bags, so that an occasional immersion will not hurt them. If you are a photograher, you will take a camera; if a hunter, a gun; if a fisherman, a rod and tackle. Your own taste and judgment will suggest what you shall carry over and above the actual Canoeing outfit.

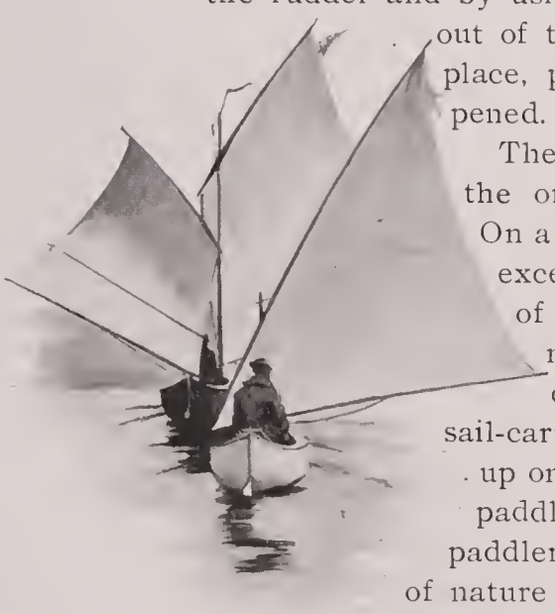
For one person, a boat fourteen feet in length and twenty-eight to thirty inches in beam will be of ample size. For two, a Canoe of large size is necessary. In that case the stores are stowed amidship, and the canoeists sit, one in the bow and the other in the stern. Everything in the boat is lashed securely to obviate any danger from capsizing; and should the boat ground or reach an obstruction, the position of the two men is such that they can immediately jump out — for the canoeist is never afraid of getting his feet wet — and right the boat, carry it over a shallow, or bear it between them to the land. Every ingenious man will devise his own means of covering and securing his stores, always, of course, using waterproof cloths and coverings. A hundred and one simple and effective plans are possible.

So much for the paddling cruising Canoe. It furnishes a clean and wholesome recreation. There is a manly independence, a freshness and vigor in the sport which appeal to the open nature. The cost is small — such a boat can be purchased for from thirty dollars upward. A Canoe, when strongly built, can be fitted with a mast and sail and in that way its capability for usefulness and pleasure giving is increased.

The sailing Canoe is really a yacht of smaller size. It is a much more complicated vessel than the paddler. It has its centerboard, its rudder, steering gear, sails and masts, and frequently a sliding seat which can be projected over the side of the Canoe. The hull, however, retains all the characteristics of the Canoe. A Canoe under sail is the prettiest of all boats. Its airy lightness, as it swiftly skims over the water makes it look like a graceful bird flying low on full wing.

There are two types of the sailing Canoe. One is built simply for speed and is exclusively a racing machine, the other is a comfortable pleasure boat. The racing sailing Canoe is decked over, with the exception of a very small cockpit, or well, as the open hollow space amidships in the boat is called, and into this the captain places his feet when working the Canoe. It is a water-tight shell, and even if the cockpit fills with water, or the Canoe is overturned, it will not sink, as the air-chambers in the decked over space give it exceptional buoyancy.

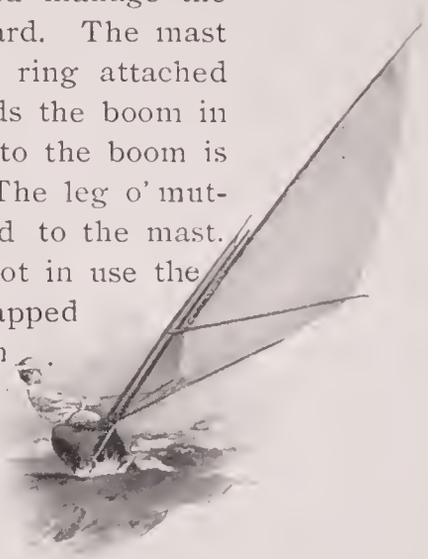
Owing to the large sail surface of a racing Canoe it is extremely liable to capsize, but such an event is a trifling circumstance to the canoeist. When it occurs, he climbs out on the windward side, and by his weight on the rudder and by using the extended sliding seat as a lever, lifts the sails out of the water, rights the boat and, climbing back to his place, proceeds on his way as if nothing unusual had happened.



The racing Canoe is of little use as a pleasure boat, but the ordinary sailing cruiser is an argosy of enjoyment. On a lake, on the broad surface of bay or river it is unexcelled as a pleasure craft. In skilful hands it is one of the safest of boats, and has advantages possessed by no other. The same Canoe can run out to sea, and can enter a river or creek unnavigable to all other sail-carrying boats. It is comfortable, can always be hauled up on the beach and used to sleep in, and, indeed, like the paddler, it becomes the hotel of its skipper. Unlike the paddler, it does not take the Canoeist to the retired spots of nature inland, but on a lake shore or in a nook of an armlet of the sea, it introduces him to equally fresh delights. On our lakes, studded with islands, every Canoeist can become his own Crusoe — can be monarch of all he surveys, as long as his provisions and his ectasy lasts.

The Canoe sails most in general use to-day are the leg o' mutton, the canteen, and the lug. Of these three the lug is held by many Canoeists to be the best. It approaches nearer to the square than the others, and the nearer the sail is to a square the better for the Canoe. The canteen,

however, has the advantage of being a very simple sail and easy to manage. These are desirable qualifications when it is considered that one man has to handle the sails and at the same time balance and manage the Canoe. It is a triangular sail, with two sticks, boom and yard. The mast is short and fitted with a pin at the top. Over this fits a ring attached to the yard. A jaw on the boom which fits the mast, holds the boom in place and allows the working of the sail. A line attached to the boom is called the sheet, and with this the skipper trims his sail. The leg o' mutton sail is also triangular, but is a standing sail attached to the mast. The boom swings around the mast on a ring, and when not in use the boom can be folded up against the mast and the sail wrapped around it. The lug sail is patterned after the sails of an old Chinese junk. It is simple and good.



In selecting or judging sails, it is always well to bear in mind the essential difference that must exist between the sails of a Canoe and the sails of a yacht. The rig that will serve admirably for one may mean destruction for the other. The crew of the yacht have room to stand about or to shift their positions when necessary, but in the Canoe one man is—

"The cook and the captain bold,
And the mate of the Nancy brig,
And the bo'sun tight, and the midshipmite,
And the crew of the captain's gig,"

and he has to do all his work from an unchanging position.

The greater the sail area of a craft, the greater must be its lateral resistance; and since no keel, or practically none, is fitted on a Canoe, a centerboard is employed to enable her to "stand up" before the wind. The centerboard is really a removable keel. It is a brass plate working in a trunk in the body of the Canoe, and can be raised or lowered at will, by a rod or line. If placed in the center of the boat, it sticks up in the well and obstructs the sleeping quarters of the canoeist, but from a purely sailing point of view this is the best position for it.

In many boats it is placed well forward, and an attempt is made to balance this disadvantage by the arrangement of the two sails. A large sail is used forward and a small sail aft. Some Canoes are fitted with two centerboards, the second being small and carried aft. A centerboard weighs from eighty to one hundred pounds, and is dropped on all occasions except when the Canoe is running in shallows or is being beached, and when she is running before the wind. Even when running before the wind, it is frequently let down, since it is an excellent ballast and retards the speed but slightly. When not in use, it can be lifted out and put away.

The rudder is another highly important part of the sailing Canoe. The one now most in use is known as the drop rudder. It works on a shaft, and by means of a line can be raised to the stern of the Canoe; by releasing the line the rudder's weight causes it to drop back to its deep position again. Thus, even when the stern rises on a wave out of the water, the

rudder is at least partly immersed and can be depended on to steer the craft in a rough piece of water. Like the centerboard, the rudder can be removed, when the Canoe is in shallow water, and may be used for paddling. A tiller connecting with the rudder is pivoted on the deck, and can be reached by the canoeist from either side.

The racing-sailer Canoe is, as has already been said, simply a racing machine. It requires an expert, one who is an athlete, and almost an acrobat, to manage it. The skipper on his precarious seat has a hard job to keep right side up. The seat slides outward on either side extending over the water. On this the canoeist sits or leans, using his weight and the leverage of his body to keep the Canoe from capsizing. He sits on the windward to balance the pressure on her sails and to keep the Canoe from going over on her side.

## INSTRUCTIONS FOR CANOEISTS

Canoeing, whether sailing or paddling, is a splendid exercise. It is a bracing, healthful, invigorating recreation. Although boating is popularly supposed to be a dangerous pastime, canoeing really ought not to be so considered. Taking it all in all, it is the least dangerous of the vigorous sports, for the canoe is, when properly constructed, an unsinkable lifeboat. A ducking is usually the worst effect of a spill, for even if the canoeist is not able to swim, he is able to save himself by clinging to the floating craft. However, no one should engage regularly in aquatic exercise without first learning to swim. It is not only a means of safety when capsized, but it begets confidence and enhances the enjoyment of the canoeist.

To the beginner the little arts of the canoeist will be unfamiliar, but they are readily learned and the novice may speedily acquire the knack of handling the paddle or manipulating the sails.

Paddling brings into play the arms, wrists, back, and to a certain extent, the legs. The paddler may adopt one of three positions, sitting, kneeling, or standing. It is, however, a dangerous and useless practice to stand in a canoe, as the advantages to be derived from that position are trifling at best. The sitting position is the one the canoeist will naturally take; it is the safest and most comfortable. The young canoeist will have his seat fixed as low in the canoe as possible. Thus he lowers the center of gravity and increases the stability of the boat. A higher seat would give greater power of paddling, but with the peril of a "cranky" canoe.

A single person in a canoe will use a double-bladed paddle, but where two are in the boat they will use single blades, one sitting forward, the other aft, paddling on opposite sides and changing when they grow tired. Expert canoeists, even when alone, use the single blade, but should the beginner do so, he will find considerable difficulty in keeping the canoe headed in the right direction, as all the force must necessarily be exerted on one side and the boat will be driven out of its course.

When the single blade is used by one person, the canoe is kept in its right course by a certain turn of the paddle at the end of each stroke.

When the knack of making this turn is acquired, it is very simple to keep a true course all of the time.

The Canadians, who are very fond of canoeing, largely adopt the kneeling position. They kneel on a cushion in the bottom of the boat, at the same time half-sitting on a crosspiece against which their heels are braced. Usually this cushion is stuffed with cork shavings and, in case of accident, can be used as a life-preserver.

Two dips of the double-blade paddle, one on the right side of the Canoe and one on the left, go to make up "a stroke." It is a simple and natural motion and the canoeist will readily fall into it. In a Canoe, the paddler faces the bow, and all the time is looking in the direction the Canoe is going, which is an improvement on the crouched position assumed in a row-boat, where the rower always faces astern. It is one of the things that add to the enjoyment of Canoeing, that you always see where you are going, the head is held erect, and the scenery on either bank of the stream is unfolded before you as you pass.

If the paddler using a double blade sits, not kneels, his feet will rest on a stretcher which will give him a good brace, and his back will be propped up by a cushioned attachment. We learned the use of the double-blade paddle from the Eskimo. The North American Indian always used the single blade in his birch-bark canoe.

The length of the paddle varies according to the beam of the boat. Formerly seven feet was considered a suitable length for a beam of twenty-eight to thirty inches, but nowadays an eight or nine foot paddle is used with a thirty-inch beam. The paddle blades will give better service if they are without "spring." They should be tipped with sheet brass or copper, and the young canoeist will find it well to fit his double blades with drip-cups, to protect himself from the annoyance of wet hands. The cups are placed on the handles outside the hands, and receive and throw off the water that runs down from the blade when it is elevated too high in the air.

Steering gear is attached to some Canoes, even though the craft is inexclusively for paddling. In such cases lines run from the head of the rudder to pedals at the bottom of the boat, and thus the paddler can control the rudder by simple movements of his feet.

In sailing it is more difficult to give directions to the beginner. Practical tutelage is indispensable, and more can be learned in an afternoon's cruise than in all the written instruction that could be devised. The amateur, however, may learn some of the general principles of sailing. In the first place he should know the things by which the stability of the boat is affected. He already knows of the uses of the centerboard and the drop rudder, both of which, in addition to their regular functions, serve as ballast and allow a greater area of sail. A sail spread low and broad, rather than high and narrow, contributes to stability.

A paddle should always be carried when sailing, for there is a risk that the wind may fail, and without the paddle the canoeist is left to drift helplessly.

The sailing canoeist needs all his caution. It is not a mark of good seamanship to carry full sail when others are reefing. Most of the Canoeing accidents are due to foolhardy people who attempt to "go one better" than anybody else in "dirty" weather.

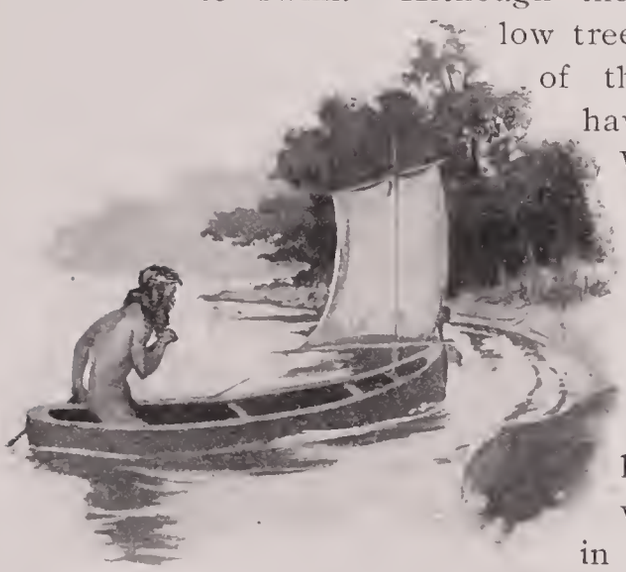
Canoeing is not a winter sport, and the canoe will have to be cared for during the months of idleness. It should be protected from the weather, and varnished or painted, according to the style to which it belongs. It will repay this care. A well-built canoe can be counted on to pay an annual interest of happiness and pleasure for twenty years.

Finally, learn to swim as the first course in your Canoeing; acquire the habit of carefulness in the management and equipment of the Canoe; take good care also of yourself, and remember that the moments of particular danger are those when you are getting into and out of the Canoe. Don't wear laced shoes in the Canoe. Provide yourself with a pair of slippers, so that when you fall into the water, as every canoeist does at one time or another, you can kick them off and be unimpeded in swimming.

# BOAT SAILING

"Man made him a boat of a hollow tree,
And thus became lord of the bounding sea."

NOTHING is known of that prehistoric ancestor of ours who laid the foundations of future world-wide empires. But inasmuch as he had developed some common sense, it is safe to assume that before he undertook a voyage in his unsteady craft he had learned to swim. Although there is a vast difference between the hollow tree of the savage and the small sailing craft of the twentieth century yachtsman, they still have in common the possibility of a capsize. Wherefore, now as then, the man who goes a-sailing does well to learn first how to swim.



This is not said with the intention of exaggerating the danger that lends zest to the sport of yachting. It all depends on the skill of the man who handles the tiller and tends the main sheet. If he understand his business, a small sailboat may be brought with perfect safety through foam-capped seas, in a stiff breeze. It is under such conditions, when the salt spray is dashing over the bows, when the sharp cutwater is cleaving the billows, when the lee gunwale is almost level with the angry sea, and the flying craft leaves a creamy furrow astern, — it is then that the yachtsman's cup of happiness is filled to the

brim, and that he feels such ecstatic thrills as the "landlubber" never knows. But if the man at the helm be a bungler, joy may be turned into lamentation in the twinkling of an eye — especially for the man who can't swim.

It is this demand for skill and resourcefulness that makes yachting such a fine school for the cultivation of the manly virtues. There is no question concerning its healthfulness. Association with the sea acts as a moral as well as a physical tonic. Self-reliance, pluck, endurance, and many other qualities essential to success in life, are continually brought into demand, especially when racing. Let parents remember this when casting around for a healthful means of recreation for their boys.

## SAILBOATS AND SAILORS

In most cases, at least, it is best to learn how to sail a boat before seeking to own one. While learning, one acquires a good idea of the type of boat that is best suited to his needs. It is very easy to learn the rudiments of sailing; but to impart the necessary instruction through the medium of the printed page would require a book in itself, and a large number of diagrams and illustrations, and even then the results would be far from satisfactory. The best way to learn to sail a boat is to get a friend to instruct you. If such a friend is not available, the next best way is to hire a boat of some old salt and secure the services of the owner as instructor. A small and simply-rigged boat is best for the learner.

It is impossible to overstate the necessity for caution when first undertaking alone the management of a boat. The first venture should be made when there is only a moderate breeze. If the wind freshens much, take in a reef, no matter if other boats are carrying full sail, and flying along in a smother of foam. Their skippers are not beginners. Enlarged experience, while giving one a better command of the boat, and a keener appreciation of her capacity to careen in the wind, without risk of filling, will, at the same time, emphasize the need of what sailors call "keeping the weather eye open" all the time.

When sailing on a lake or river, with banks of irregular height, the boatman must be on his guard, because, from between the hills, puffs of wind of great violence may swoop down on him with very little warning. Easing off the sheet a few inches and luffing gently will generally prevent the shipping of water over the lee gunwale, and may avert a capsize. To be prepared for such emergencies, the main sheet should never be made fast permanently, and should always be coiled so as to run freely. When these precautions are neglected, a sudden squall may cause fatal results. In such a contingency, if a knife is handy, the main sheet should be cut at once, and the boat, even if of the shallow centerboard type, being relieved of the pressure of the wind on her sails, may right herself, though almost

on her beam ends. In such emergencies, the cool head and quick hand count for everything.

Many places along the coast are visited in summer-time by brief, but violent, thunder storms. If caught in a boat in one of these squalls, especially if there be women or children aboard, the best thing to do is to take in every stitch of canvas and let go the anchor. The disposition to carry a large amount of sail when the wind is stirred to sudden fury, annually causes much loss of life. It is not the seaman, but the lubber, who neglects to take proper precautions. Rashness is not courage.

The man or boy who wants to become a thorough yachtsman should begin with a comparatively small boat, which he can handle without assistance, both steering and trimming sails for himself. Such a craft forms the best school of yachting seamanship. Nearly all of the crack yachtsmen of to-day, whatever the size of the yachts they now sail, cut their nautical eye-teeth on small boats. The Prince of Wales began with a small craft. So did his son, the Duke of York. C. Oliver Iselin, of New York, who raced the "Columbia" when she successfully defended America's cup against Sir Thomas Lipton's "Shamrock," learned the tricks of the trade on a small yacht. And it is noteworthy that the yachtsman starts his sons in the same way.

Obviously it is the best way. In fact, a small yacht furnishes in some respects more exciting sport than a large one. On the large yacht, it is the hired skipper who gives the orders and the hired crew that executes them. The owner's rôle is hardly more than that of a highly privileged spectator. On the small boat, the owner gives his orders and executes them, too. He is part and parcel of his craft. If she wins a race, the glory is his, not some hired man's. Not a few wealthy men who own palatial steam yachts, carry, besides row boats and naphtha launches, swung from the davits, a small sailing yacht — frequently an up-to-date racing craft — that they may occasionally enjoy a taste of this stimulating sport. Therefore the tyro has no cause to complain if his comparatively moderate means compel him to start with a small boat. It is the best way to start, no matter how large a yacht he may be able to buy.

In choosing the style of boat, remember that no one boat can combine every desirable quality. Probably that which will give the greatest satisfaction to the greatest number is the "single-hand" cruiser. This is a sailboat suitable for cruising — that is for living on board for days at a time, minus, of course, many of the comforts of home, while journeying from one place to another — and capable of being managed by one man under all ordinary circumstances. It does not mean that the boat will hold only one person; on the contrary, single-handers are always designed to carry two or more; and for short spins may accommodate four or five quite comfortably. But to be handled effectively by one man, the boat must be comparatively small, certainly not over twenty feet on the water line, and preferably between fourteen and eighteen feet.

With the long overhangs, fore and aft, now found in modern yachts, a boat eighteen feet on the water line will measure from twenty-three to

twenty-five feet or more over all, which makes of her a good-sized little ship. Unless the sailing is all to be done in deep water, the draught should be light, which means that the boat should have a centerboard. A deep-draught boat is very unhandy in shoal water, and necessitates the towing astern of a small dingy, to make landings, etc. The boat of shallow draught cannot be rendered non-capsizable. But by providing watertight sections sufficient to float her when full of water, she may be easily rendered non-sinkable when capsized. To insure safety, this must be done.

In a single-hander, that element may be further conserved by building the floor of the cockpit above the water line and providing drainage tubes, or scuppers, through which the water that finds its way in over the deck may run out. This makes the boat self-bailing. Of course the floor and siding of the cockpit should be practically water tight. The air compartments in the ends may be utilized, by means of deck hatches, for stowage. Such a boat cannot well have a cabin, being too small and shallow for that. But sleeping accommodations may be provided by setting up a tent over the cockpit, or by camping on shore as canoemen do.

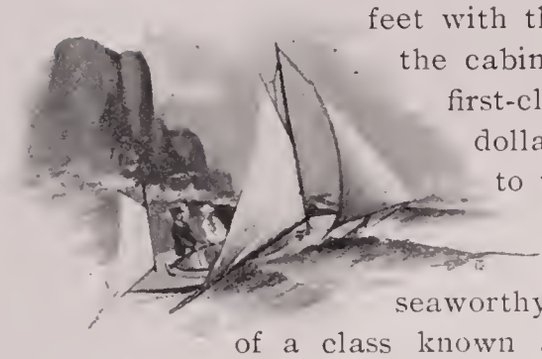
The rig should be simple, as much of the handiness of the boat depends on that. A jib and mainsail are preferable to a single large mainsail, as in a catboat. Such a sail is awkward to manage when running free or when reefed down in a blow. The yawl rig has some advantages over the jib and mainsail rig. A boat with the former rig may be worked, when the wind pipes fresh, under the jib and mizzen without the mainsail, or under the mainsail alone, set full or reefed. But the yawl rig is somewhat less speedy than the jib and mainsail rig. In a cruiser, however, speed is not of prime importance.

A boat of the type described, fifteen feet on the water line, twenty feet over all, well and substantially built by a reputable builder, and provided with sails, can be purchased new for about two hundred and fifty dollars. A boat of the same class eighteen feet on the water line, twenty-three feet over all, similarly equipped, will cost approximately three hundred dollars.

Nearly all of the canoe builders construct canoe yawls which make capital little cruisers where the work demanded of them is not too rough. They are built like canoes, to a length of eighteen feet, and are four or five feet wide, and much deeper than a canoe, so as to give more free board. Such a boat is fairly safe, fast, moderately comfortable, and is easily handled by one man. Fully rigged, it will cost about two hundred dollars.

These boats, it should be understood, are without cabins. The more elaborate types, provided with cabins and sleeping berths, and outside lead ballast on the keels, are far more costly. For instance, a single-

hander yawl, seventeen feet on the water line, twenty feet over all, seven feet beam, drawing three feet six inches without the centerboard, and six feet with the board down, having five feet of head room under the cabin trunk, and two sleeping berths, is catalogued by a first-class builder at six hundred dollars, nine hundred dollars, and one thousand two hundred dollars, according to the grade of finish.



In recent years, the demand for a good all-around type of boat, speedy, roomy, comfortable, safe and seaworthy, has been admirably answered in the evolution of a class known as "knockabouts," which have attained wide popularity in eastern waters. The knockabout is rigged with jib and mainsail, but with the long, overhanging, spoon-shaped bow, which is one of its distinguishing characteristics; the jib is all inboard, and there is no necessity, when a squall threatens, for lying out on a slender bowsprit to gather in a refractory sail, at the risk of being thoroughly soused in salt water. The boats are remarkably well-balanced, and require no laboring at the tiller to overcome the grip of a big mainsail.

The racing craft, large and small, are in a class apart. In these boats, speed is the primary consideration; and this involves the most costly form of construction, in order that all unnecessary weight may be saved. Provided with hollow spars and silk sails, and with all of the latest notions in equipment, an eighteen-foot racing machine, decked of course, but without cabin, will cost about a thousand dollars. The development of this type of boat, which is good for little besides racing, has had an unwholesome tendency to restrict that sport of late years to men who have long purses. It also has produced a type of boat that is decidedly deficient in seaworthiness and comfort. To counteract this, and to give the man of moderate means an opportunity to enjoy the sport of yacht racing, which is perhaps the finest sport in the world, and one that is utterly free from the taint of gambling that attaches to nearly all others, popular yachting clubs are adopting one-design classes, the boats of which are all built to conform to certain specifications which demand boats of a wholesome type and of reasonably moderate cost. In one club, in the vicinity of New York City, there is a class for dories, modeled after the staunch little boat which the Gloucester fishermen have rendered famous. They are inexpensive, and racing among them is just as exciting, and calls for the exercise of just as good seamanship as in the more expensive classes.

Providence has wisely ordained, for the benefit of the man of comparatively slender resources, that the man of wealth, with a taste for yachting, usually tires of one craft after a season or two, and orders another, usually a larger and more expensive boat. Thus it comes about that there are many excellent second-hand yachts for sale, at prices much below their original cost. But the tyro should not trust himself to buy, unaided by the counsel of some one of experience and good judgment. Human nature is weak; a greenhorn is a great temptation to the man who has a boat to sell, and paint and putty readily conceal serious defects.

The shallow centerboard boat, which was long regarded as the distinctively national type of boat, exemplified in the small classes in the catboat, has lost much of its popularity of late years. It is impossible to make such a boat "fool proof." She can be capsized. Indeed, in the hands of a man who is not a fool she sometimes suffers that calamity. And since it has been demonstrated that the keel boat is just as speedy as the skimming dish, and perhaps a trifle faster, the demand for the latter for racing has very much abated. But in shoal water, no other boat can be sailed. In certain points of handiness, too,—running ashore, making landings, navigating waters of unknown depth, etc.,—she excels. Therefore, like the poor, she is destined to be always with us. Properly modeled, not over-canvased, and handled with care, she is reasonably safe. And it is very easy to make her at least non-sinkable, which is the next best thing to being non-capsizable.

Now a deep-keel boat, with a lot of lead low down, tugging the harder to right her the farther she lists, is practically non-capsizable. There can be no doubt, therefore, that she is the better type of boat, especially for the beginner, and if the sailing conditions in local waters admit of her use. But even then she is not "fool proof." In the hands of a "duffer" she may be laid over on her beam ends until she fills and sinks. And she is an awkward boat with which to strike a rock or shoal. Whatever kind of boat he may sail in, the sailor must always "keep his weather eye open."

When on the water, either sailing or rowing, if there are other persons in the boat—especially if these be women—always take every possible precaution against accident. It is safe to say that four-fifths of the lives that are lost while boating are needlessly sacrificed by reason of negligence, carelessness, thoughtlessness, or reckless fool-hardiness. Take no unnecessary chances; when you may exercise discretion—and in most cases this is your privilege—always choose the safe side. Usually you are in deep water; do not forget this. A depth of even four feet is, in the excitement and panic of an accident, dangerous to persons who cannot swim. Above all, don't "rock the boat." This is often done in a spirit of "fun," to scare occupants of the boat who may be naturally timorous, and very many fatal accidents have resulted from this most reprehensible practice. *Don't do it!*

Emergencies which call for the exercise of the best judgment and skill at command will sometimes arise—perhaps quickly, without warning, as a sudden squall, or imminence of collision or of striking a rock or other object. Experienced sailors usually know what to do and how to do it, and it should be the chief concern of the amateur to school himself for emergencies, by learning from others, by studying all the phases of danger, and by the use of good sense. Coolness and self-control in trying moments are of the first importance. Upon this may depend the lives of those who are dependent upon you, who confide in you, and for whose safety you are chiefly responsible. In the face of danger do not "lose your head"; your example will be most beneficial in its effect upon others. A panic—in most cases wholly needless—increases the danger tenfold.

# KNOTS AND SPLICES

The various ways of making ropes fast to each other, to rings, spars, masts, or other objects, are known as knots, bends, hitches, and splices. In nautical language, a hitch is a temporary knot that can easily be slipped off, while a bend is a more permanent knot. The making of knots and splices should be part of the education of every one who indulges in outdoor sports.

The fisherman is constantly called upon to make firm, delicate knots in his gear, and the sailor who cannot make a dozen different varieties of bends and hitches does not know the first rudiments of seamanship. It often happens that the security of lines depends upon the proper tying of a knot. A well-tied knot never slips, nor does it jam so that it cannot be readily untied; it is also neat and pleasing in appearance. The rough, cumbersome knot is not only ungainly, but in all probability it is insecure. All ropes, to give good service, should have the ends securely whipped, that is, bound around to prevent the strands from unlaying.

For knot-making purposes a rope has three parts, the standing part or main body of the rope, the end or short part, with which the knot is made, and the bight or loop formed by the end and standing part. (Fig. 1).

To understand the tying of knots, one must acquire the knack of tying them for himself. Even those who are all clumsiness at first can become, by a little practice, quite efficient. A few of the principal kinds of knots, with diagrams illustrating the manner of tying them, are here given.

## KNOTS

The *Overhand Knot* (Fig. 2) is made by passing the end of a rope over the standing part and through the bight so formed. The diagram shows it when made and when pulled taut.

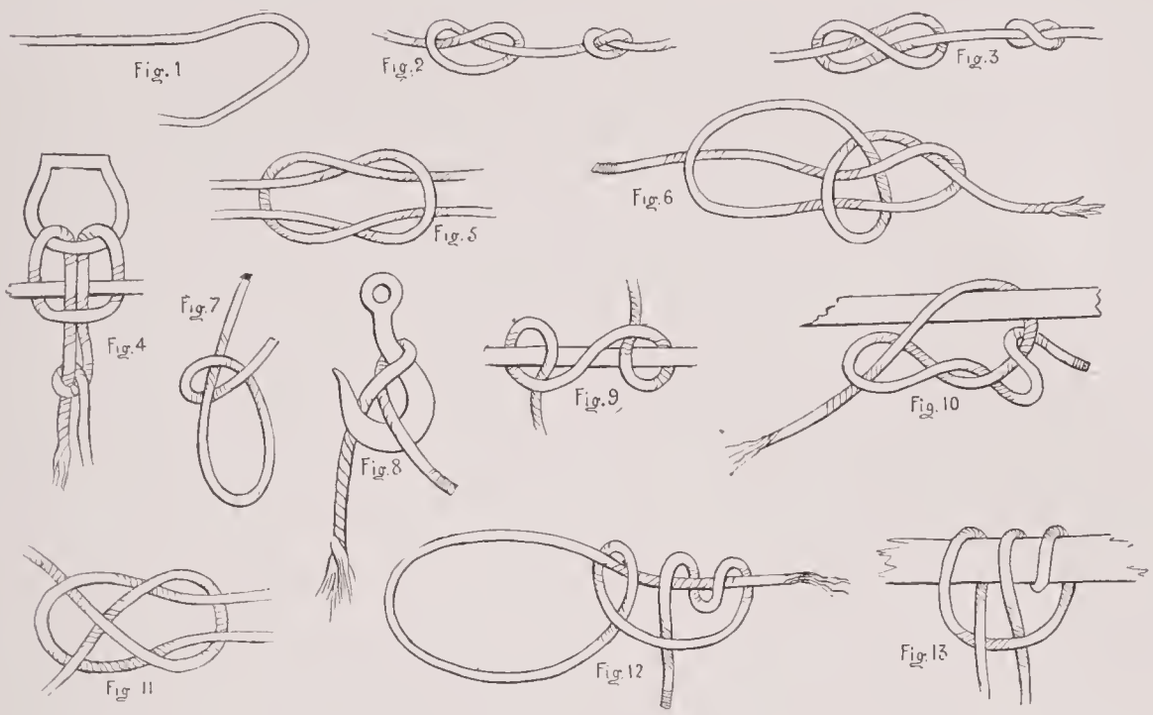
The *Figure Eight Knot* (Fig. 3) is a development of the Overhand. To make it, pass the end around the standing part, under its own part, and then through the bight so formed. The advantage of this knot is that it will not jam. It is shown here as it appears when made and when fast.

The *Larks-head* (Fig. 4) is a very useful knot. It can be cleared by pulling out the crossbar of wood or "toggle."

The *Reef Knot* or *Square Knot* (Fig. 5), is the one most frequently used on shipboard and, indeed, everywhere that knots are to be tied. To make it, first make a plain overhand knot, then repeat the operation by taking the end and passing it over and under the loop, drawing the parts tight. Simple as this knot is, the tying of it is not easily learned. When incorrectly made, it is called a "granny" knot, and is sure to yield to strain.

*Bowline Knot.* (Fig. 6.) When this knot is made, one end of the rope is supposed to be attached to some object. Take the end of the rope in the right hand and

the standing part in the left. Turn the bight of the standing part over the end part so as to form a neck on the standing part. Next, lead the end around the standing part above and stick it down through the neck. Draw it taut and the knot is complete.




## HITCHES

*Half Hitch* (Fig. 7) is used for fastening a rope to an upright or spar. The diagram shows how it is made.

The *Blackwall Hitch* (Fig. 8) is employed to jam the bight of a rope to a hook. It will hold only as long as there is a strain on the standing part.

The *Clove Hitch* (Fig. 9) is used for hitching the ratlines to the rigging.

The *Timber Hitch* (Fig. 10) is a quick way of bending a rope to a spar. A loop or bight is formed by twisting the end of a rope around its standing part as shown in the diagram.

The *Sheet Bend* or common bend (Fig. 11), is used for bending two ropes together.

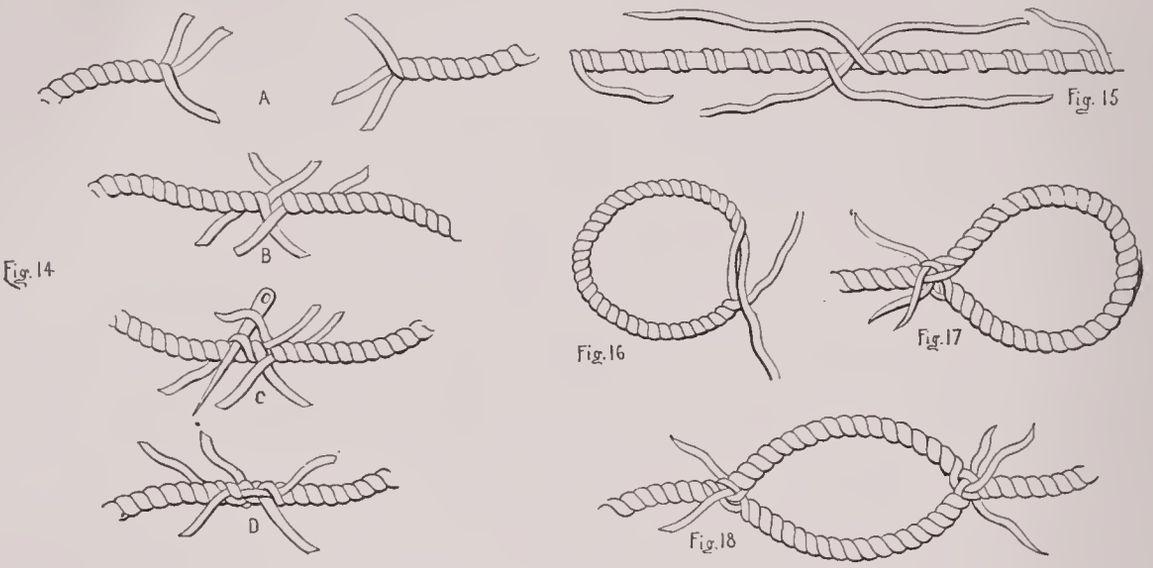
The *Midshipman's Hitch* (Fig. 12) is useful for securing gear. It is made by taking a half hitch with the end of the rope around the standing part and then jamming it by taking another turn through the same bight.

The *Magnus Hitch* (Fig. 13) is used for bending ropes to spars, quickly and simply.

## SPLICES

Splicing a rope means joining the two ends together by weaving the strands one between the other. It is an operation that cannot be correctly performed without considerable practice. Sailors generally splice their ropes left-handed, as the splice looks neater when done in that way. The following are some of the principal splices used by sailors:—

The *Short Splice* (Fig. 14) is that used for all general purposes; it embodies the principles of all other splices. It is made by unlaying the ends of the ropes that are to be joined (Fig. A) to a length of ten to twelve inches. To simplify the operation, grease the strands well, and, having opened them out, place the two ends together. (Fig. B.) Now take a greased marlinespike and open a strand, as in Figure C. Through the opening thus made, shove the nearest strand of the opposite rope, and so on with the other strands, raising alternate strands with the marlinespike on both rope ends. The splice, after the two ends have been once put through, presents the appearance shown in Figure D. Split off half of the yarn of the projecting strands and repeat the former operation; again cut off




half of the yarn, and interlace as before. The projecting ends may now be trimmed off, and if the strands have been pressed in carefully, a neat and strong splice will have been made.

The *Long Splice* (Fig. 15) is used where the rope has to pass through a block after being spliced. The ends of the rope are unlaid to a length of four to five feet, and the loose strands are knitted by putting each strand of one between two of the other, decreasing the quantity of yarn in each strand as the splicing proceeds. It is finished and fastened in the manner of a short splice.

A *Gromet* (Fig. 16) is a ring formed of a single strand laid over three times.

An *Eye Splice* (Fig. 17) is made by unlaying the end of a rope and placing it back over the standing part and weaving the loose strands into the standing part with a marlinespike, after the manner described in making a short splice.

A *Cut Splice* (Fig. 18) is used to form an eye in any part of a rope. A piece of rope the length of the eye required, allowing for the ends forming the splices, is laid along the main rope and joined in the way already described.

# AMATEUR PHOTOGRAPHY

## THE CAMERA AND THE LENS

THERE are three classes of Cameras — the bellows, or tripod, Camera, the hand Camera, and the folding Camera; the latter combines the essential features of the other two, and is the one generally selected by the amateur who wishes to make both snap shots and true pictures. The simple hand camera is intended primarily for snap shots, and is not well adapted for making "time" pictures or portraits. It has either a universal focus or a device for quick focusing, both of which must necessarily be more or less approximate. Generally, too, it carries films, on account of their light weight, but these do not give the best results.

The regular tripod Camera is by far the best for studio and portrait work and for careful work in general. It is the kind of instrument used by professionals. The average amateur, however, wants a Camera that he can take with him on holiday excursions — one that he can set up on a tripod when he wishes to photograph a landscape, or that he can hold in his hand when he is photographing a dog. The distinctive features of the various styles of Cameras will not be described here, as their uses may quickly be learned from the instruments themselves.

In picture making, the form of the Camera is not so important as is the character of the lens. A lens of wide angle includes more of the view seen by the eye than does one of narrow angle, but the latter gives a larger image at the same distance and produces better pictorial effect. The former is excellent for taking interiors, for copying, and for photographing buildings in confined situations; but it is not satisfactory for general work. It "takes in" too much; the art of picture making is not in getting all that you can on a plate, but in leaving out, as far as possible, that which does not add to the desired effect of the picture. Unless he can afford both kinds of lenses, therefore, the amateur will do well to select the one of smaller angle.

## COMPOSITION

The Composition of a photograph goes far toward making it a success or a failure. Do not "snap" at a wide stretch of valley, or an expanse of water, and expect to get an interesting result. Select, rather, some picturesque nook, a few trees, a glimpse of water, or a boat drawn up on the shore, and aim to have in your picture one object or group of objects in

which interest may center, and to which everything else on the plate is subordinate — a mere setting or background for the real picture, which should tell a story of some sort.

Avoid having in your picture two objects of especial interest, widely separated. The eye will glance from one to the other, when it should rest on one and be satisfied. If you are taking a landscape, see that your foreground is short, and let the horizon line be beneath, rather than above, a line drawn horizontally through the center of the picture. All pictures contain lines which give them their character. Have these lines converge to a point within the bounds of the plate; if they run off into space, the picture loses its interest.

Give the object an appropriate setting. The wall of a house made of brick, or of weather-boarding, is a poor background for almost any subject. At the same time, do not let the background be too prominent. Let it be neutral or indistinct, and it will not attract the eye from the principal object.

When you photograph a road, do not stand in the middle of it. Go to one side. A fence that runs horizontally across a picture spoils it. Let it be at an angle with the bottom of the plate — if you cannot keep it out altogether.

When you have your picture finished, cut it down and you will see how much it is improved by leaving out the unnecessary things. Study photographs that please you, and try to imitate them in style and arrangement. Unless you learn something of composition, your photographs, whatever their chemical excellence, will never rise to the dignity or interest of real pictures.

The mechanical details of picture making may be arranged under three general heads — exposure, development, and printing.

## EXPOSURE

The substance on which negatives are made is in the form of roll films, cut films, or glass plates. A film is a thin support of transparent celluloid, and is either wound on spools or cut into lengths suited to the camera in which it is to be used. It weighs very little, and several exposures may be made from a single spool of the smaller sizes; but it curls and cracks, and the negatives are hard to develop and print. Films are used only in "snap-shot" cameras. The plates used by professionals, and by many amateur workers, consist of a piece of thin glass, on one side of which is a coating of gelatin, sensitized with a salt of silver. This coating is no thicker than a sheet of paper. It is alike on both plates and films. Films for snap-shot cameras are so protected with black paper that they may be placed in the camera by daylight. Glass plates must be placed in the plateholder while in the dark room.

When inserting a plate in the holder, be careful to have it film side up; that is, it must be so placed that when the holder is in position in the camera the sensitized gelatin film, which covers one side of the glass, and

which is to receive the photographic image, will be toward the lens. As plates and films are very sensitive to white light, only a faint ruby or orange light can safely be used while handling them before development. This makes it difficult for a novice to distinguish between the glass and the film side of the plate; but if it is held so as to reflect the light, the glass side will show a bright, clear reflection, while the film side will appear dull and misty; or if the finger is placed lightly on the corner of the plate, the film side will feel velvety and the glass side smooth. Never touch the film side, however, if you can avoid doing so, as the perspiration from the fingers will cause a defect in the finished negative. It is not necessary to touch the film side except when plate-holders are loaded in absolute darkness. Be sure that the plates which remain in the box after loading are carefully covered by the black paper, and that both the box and the plate-holders are tightly closed before any outside light is admitted to the dark room.

When you have chosen your subject, if you are using a hand camera with a universal focus, all you need to do is to judge the distance so that the pictured image will be the desired size; set the proper "stop," according to the light, and regulate the speed of your shutter to suit the motion of the object, if it is moving. The distance of the camera from the object to be photographed should be determined by the size of the latter; if the camera is too near, the lines will not be sharp; if the camera is too far away, the object will be too small in the picture. From five to fifteen feet is about the right distance when you are making a portrait; for a house, or other large object, the distance should be greater "View finders," which are attached to most cameras, show the comparative size of the picture as it will appear on the plate, and the range of objects that will be included.

"Stops" are circular openings of various sizes, in a disk placed before the lens, in hand cameras. These stops regulate the amount of light admitted when the exposure is made. The smaller the stop, the sharper the image will be; but in bright sunlight, if the object is stationary, use a small stop and set the shutter for a slow movement; if the object is moving rapidly, use a large stop and a quicker shutter. With a quick shutter it is difficult to get a good picture if the object is in the shade, or if the day is cloudy. Bright sunlight is almost a necessity for good snap shots; but, on the other hand, it should be remembered that sunlight makes sharp, ugly shadows on the face in portraits. The natural deduction is that instantaneous exposures are not adapted to fine work, and that a camera intended solely for snap shots is more or less unsatisfactory, except as a means of obtaining humorous, remarkable, or souvenir, pictures which have little merit from an artistic standpoint. The convenient size and the simplicity of operation of the hand camera make it useful in certain fields where other cameras are too bulky, and require too much time for adjustment.

All combination, or folding, cameras, and many of the hand cameras, are provided with shutters which may be set for either "time" or instantaneous exposures. For instantaneous work with a combination camera, the same instructions will apply as for the ordinary hand camera, though an explanation of the focusing device must be added. Focusing may be done either on the ground glass or by the scale. The latter is used chiefly for snap shots, when there is not sufficient time, or it is not convenient, to use the ground glass. After the front of the camera is lowered, the bellows is drawn out until the proper focus is reached. The scale in feet is marked along the line of extension, and a pointer, which is affixed to the bellows frame, indicates the focal distance on the scale. For example, if the object to be photographed is judged to be twenty feet away, the pointer should be set at figure 20 on the scale. The bellows must be drawn out farther to photograph a nearer object, and be pushed back for one at a greater distance.

The ground glass occupies exactly the same position in the camera during the time of focusing that the sensitive plate occupies at the time of exposure. It is examined through an opening in the back of the camera. An inverted image of the object is seen on the ground glass, and the proper focus is secured by extending or collapsing the bellows until the image stands out clear and distinct. In taking a portrait, focus on the eyes; for other pictures, focus on the cracks between bricks, the bark of a tree, or some similar detail. In a landscape, select the object that "tells the story" of your picture, and focus sharply on that. Always use the largest stop, or none at all, when focusing.

Let us suppose that the camera is set on the tripod, for photographing a landscape. If no tripod is used, the camera must be held motionless on some stationary object, such as a stump or a fence. First, be sure that the instrument is level, and that the feet of the tripod are secure. Open the shutter or remove the cap, and place the largest stop in position; then put your eye close to the opening in the back of the camera, and throw the black focusing cloth over your head, or shut out with your hands as much light as you can. Look *at* the glass and not *through* it, and you will see, in colors, a beautiful reflection of the view. In the distance are mountains; near at hand is an old barn with a dilapidated, zigzag fence running past it and disappearing in a grove of trees; at the bottom of the plate are the blue sky and white clouds, and at the top are grass and green foliage. A little way beyond the barn is a dead tree, the black leafless branches standing out clearly from the rest of the picture. Focus on this. If your foreground does not show sufficient detail, use a smaller stop; but remember that the sharper your picture is, the less it is like nature. A wide-open lens, properly used, gives the best pictorial effect. When you can see the smallest branches distinctly, replace the cap or close the shutter; remove the ground glass, insert the plate holder, and draw the slide. All this must be done carefully, so that the position of the camera will not be disturbed.

Much now depends upon your judgment, as the length of the exposure is of the utmost importance. You have provided yourself with landscape

plates, that is, plates that are not too highly sensitized. In this work you do not have to make a snap shot, for which extra rapid plates are required. Softer pictures and more delicate details are secured with slow plates and long exposure than with quick plates and short exposure. The sun is shining brightly, and you have chosen a position with the sun at your back. You can take a picture toward the sun if it is high enough so that you can shade the lens tube with your hand, or with the slide from the plate holder; but if it shines directly into the tube, the plate will be "fogged," or blurred. All the conditions taken into consideration, you decide that five seconds will be about the right time for exposure. Remove the cap carefully, in order that the camera may not be jarred, keep your hand out of range of the lens, and slowly count five. Replace the cap quickly. If you have a "time," or "stop," shutter, you can manipulate it for the proper exposure without using the cap. Now replace the slide in the plate-holder, with the side marked "Exposed" outward, or toward the lens. You thus avoid the possibility of a "double exposure," or of taking two pictures on one plate, as you will know which side of your plate-holder has been used, when you are ready to take another picture.

A beginner must experiment before he can judge the conditions well enough to determine the proper amount of exposure, and it is well to take two or three pictures under exactly the same conditions, giving a different time for exposure to each. The finished picture will show which length of exposure was best for these conditions.

If you are taking a portrait out of doors, have your subject sit in the shade, and make the exposure a trifle longer, say six seconds for a slow plate. If the plates are quick or extra quick, from one to three seconds will be sufficient; and, in a strong light, if your subject is very light in color, or white, you will find that you cannot remove or replace the cap too quickly. The tendency of beginners is to over-expose.

The hand camera is wholly unsuited to the work of photographing architectural subjects. For such work a tripod camera is necessary. It must have a swinging back, so that the plate may be kept in a vertical position when the front part of the camera is tilted upward in order to include the upper part of the building on the plate; and the front-board, to which the lens is screwed, should be so made that it can be moved up or down at will. By these means the building may be "centered" on the plate. If the camera is tilted upward and the plate remains parallel with the lens, the lines of the picture converge at the top, producing distortion. If you can make your exposure from the second story of a building opposite the one you are photographing, you may be able to produce a fairly good result with your hand camera; otherwise, do not attempt it.

Indoor work with the camera presents many fascinating features. Interiors of rooms, flowers, and portraits, are among the most desirable subjects to be had. Sometimes it is possible to photograph the interior of a room only by flashlight exposure, especially when it is desired to include a window in the view; but it is exceedingly difficult to get good results in this way. If a person be included in the picture, the sudden flash makes

him close his eyes, or gives him the appearance of staring, besides making deep, black shadows; or, if there is no shadow, the face comes out white and ghastly, with little or no detail of feature or expression.

It is difficult to focus an interior view. The best way is to have some one hold a lighted match in the center of the desired field, at the right distance from the camera; then, by passing the match from side to side and up and down, the extreme limits of the range may be ascertained. The lights should be turned low before the cap is removed and the slide drawn; the flash should come from directly over the camera or from the side, but never from the front.

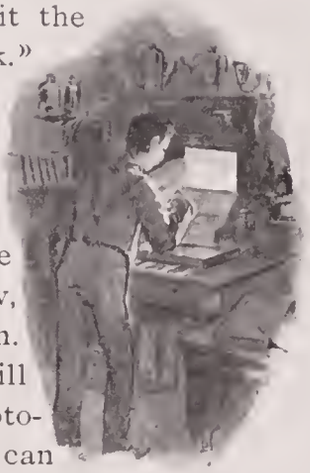
The flashlight powder should be placed in a shallow pan. In igniting it, use a slow fuse or a long taper or gas-lighter. When the flash comes, be sure to shield your eyes.

Good portraits may be made in an ordinary room. If possible, select a room that has a window facing the north, and place your subject four or five feet from the window, and beyond it. Do not expect to get a good portrait if you use the wall paper for a background. Get a large square of cloth of a neutral tint, drab or gray, and fasten it to the wall behind your subject, or, better, make a light frame on which it may be stretched taut and kept from wrinkling. Have the background as far from your subject as the space will permit, so that the texture of the cloth may not appear in the picture. Never use a white background; it makes the picture too harsh. Have your subject turn two-thirds or three-quarters toward the light, and use a reflecting screen to lighten the shadows on the side of the face farthest from the window; this screen may be extemporized from a white sheet thrown over a clothes-horse.

The camera should stand near the wall of the room, so that no direct light will enter the lens tube. The window should be covered with muslin to soften the light. If there are lace curtains, not too solid in pattern, they may serve for this purpose. Seat your subject gracefully and naturally; do not strain after effect, or the result will be an awkward picture. The eyes of the subject should be turned toward the lens or a point near it. Indicate some object at about the same height from the floor as is the lens, and tell your subject to fix his eyes upon that. Study the face on the ground glass, and turn the subject's head a little this way or that, so that the shadows may not make strong lines on the face. In this connection, special care should be taken with the nose and the mouth. Focus on the eyes, and use the largest stop. This helps to give roundness to the portrait; a small stop would make the image flat, as if cut from paper and pasted on the background. Give full time to the exposure. Tell your subject to wink naturally, but not to shift the eyes from side to side. At least from eight to ten seconds should be taken for a satisfactory exposure. Let the time be more, rather than less, for an under-exposed portrait is harsh and unattractive.

## DEVELOPMENT

THE smallest direct ray of white light will ruin a sensitive plate or film before or during development. Red or dull orange light does not effect the plate. A dark room must, therefore, be fitted up, and in it the plates can be handled without danger of their being "light struck." A small room or closet may be darkened by tacking strips of black felt, or other cloth, around the edges of the door and over any other openings that may appear. If there is a window in the room, it must be made light-proof. It may be found difficult to do this, but the best way is to paste several thicknesses of orange or red paper over the windows, and thus the light from the window, if not too strong, may be made to serve in place of a ruby lantern.



At night, an ordinary reading lamp set outside the window will furnish the necessary light. If there is no window, a regular photographic lantern must be used. A thoroughly serviceable lantern can be made from a wooden box large enough to hold a common lamp. Blacken the box inside and out with paint or liquid shoe-polish, and paste strips of black paper over all the cracks. Cut a hole, say four by six inches, in the front, and cover it with several thicknesses of orange or ruby paper. The number of thicknesses of paper must be regulated by the amount of light needed, and this should be no greater than is necessary to observe the process of development. An opening for the admission of air must be provided at the back of the box, near the bottom, and an opening for a chimney at the top. It will be found an advantage if the front is shaded with a sort of awning or hood, so that the light will be reflected downward, and not upward into the eyes. A second opening, or window, may be made in the side of the box and covered with but one or two thicknesses of paper. This may be fitted with a tight, sliding cover, and will afford a strong light, which may be used when it is necessary to examine an unfinished negative; it should be used only when necessary, however, and should be kept closed when not needed.

If you have any suspicion that your light is not safe, test it in the following manner: Place a plate in the holder in total darkness, draw the slide sufficiently to expose half of the plate, and allow the light from the dark room window or lamp to fall on this exposed half, for several minutes. Then develop the plate, the usual length of time, in total darkness, and if the exposed part is no darker than the unexposed part, your light is safe.

Running water is a great convenience in a dark room, and for this reason there is no better place for developing purposes than the bath room. If developing is done only at night, the room may be darkened by simply closing the door and the window shutters and drawing the shades.

Besides the lantern, the necessary articles for the equipment of a dark room are a developing tray, a fixing tray, a four-inch glass graduate, and several bottles for holding chemicals. The trays may be of glass, porcelain, hard rubber, or japanned tin, and should be large enough to hold one or more plates or films.

Before taking the plate from the holder, have the bath ready in its tray and the developer in the graduate. The trays should be marked so that they may be readily distinguished; the one used for the "hypo," or fixing solution, should never be used for any other purpose. Never let the hypo get into the developer, or toning solution, or touch an undeveloped plate or print.

There is a large number of developing formulas from which to choose. Developer that is especially suitable for a traveling outfit may be purchased, ready mixed, in liquid or in powdered form. The economical photographer, however, makes his own solutions at one-tenth the cost of those purchased ready-made.

Following are two good developing formulas: —

### HYDROCHINON DEVELOPER

1

| | |
|---|---|
| Hydrochinon | 1 oz. |
| Sulphite of soda crystals | 5 oz. |
| Bromide of potassium | 10 gr. |
| Distilled or pure well water | 55 oz. |

2

| | |
|---|---|
| Caustic potash | 180 gr. |
| Water | 10 oz. |

Take four ounces of No. 1 and one and one-half ounces of No. 2 and pour into a developing tray. After using, pour into a separate bottle. This may be used repeatedly by adding one drachm of No. 1 and ten drops of No. 2 to every eight ounces of old developer, but the mixture is cheap, and the best results are always obtained by using it but once. The temperature of the room should be between 70° and 75° Fahrenheit.

### EIKONOGAN-HYDROCHINON DEVELOPER

1

| | |
|---|---|
| Distilled or pure well water | 32 oz. |
| Sodium sulphite (crystals) | 4 oz. |
| Eikonogan | 240 gr. |
| Hydrochinon | 60 gr. |

2

| | |
|---|---|
| Water | 32 oz. |
| Carbonate of potash | 4 oz. |

For developing use: —

| | |
|---|---|
| No. 1 | 2 oz. |
| No. 2 | 1 oz. |
| Water | 1 oz. |

Aim to keep the developer at a uniform temperature of about 65°. In summer use ice, if necessary; in winter warm the solution slightly. Use less water in the developer for a snap shot than for a time exposure. More of No. 1 increases density of negative; No. 2 gives detail and softness.

It is not necessary to make up at one time the whole amount of the solution called for by these formulas. You may make up one-half or one-fourth of the above quantity at a time, and so have fresh developer to use.

While hydrochinon and eikonogan are excellent developing agents, they are seldom used by professional photographers, who prefer pyragollol or pyrogeolic acid, as it is called, for this purpose. "Pyro" makes soft, quick-printing negatives. It has a slight tendency to "fog" the plate, unless properly restrained, but, when skillfully used, produces negatives of the finest quality.

The following is a simple formula for Pyro developer:—

1

| | |
|---|---|
| Sulphite of soda | 1 oz. |
| Water | 4 oz. |

2

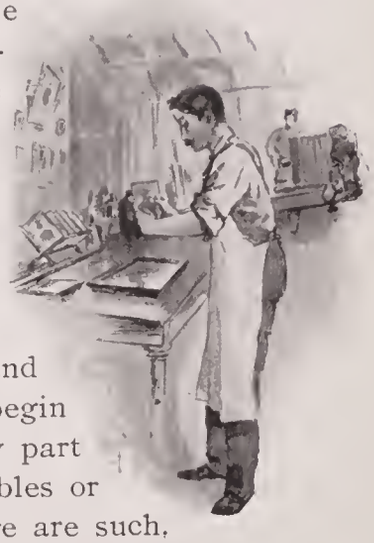
| | |
|---|---|
| Carbonate of soda | 1 oz. |
| Water | 4 oz. |

3

| | |
|---|---|
| Bromide of potassium | 48 gr. |
| Water | 1 oz. |

To develop, combine four drams each of No. 1 and No. 2, and add eight grains of dry Pyro and four ounces of water; then add five or six drops of No. 3. The quantity of water may be increased or lessened, and so with the Pyro. More water makes a thinner negative — one with less contrast; more Pyro makes a stronger negative, but too much of it will fog the plate. If the developer works too quickly, add more of No. 3. Use this developer for one plate only; then throw it away, rinse the tray, and mix a fresh supply.

Pyro stains the fingers, and those who are fastidious about their hands may prevent this by wearing rubber finger-cots. When you are ready to develop, remove the plate from the holder and dust it carefully with a soft camel's-hair brush. This will prevent "pinholes." Nothing will be visible on the plate, which will look exactly as it did before exposure. Briefly, the theory of negative-making is that the composition which covers the plate is very sensitive to light, and wherever it has been touched by rays of light the chemicals cause it to become darker. Thus, when the image is reflected on the plate in the camera, the light from the different objects affects the composition much or little, according to the color of the object — much if it is white, and little if it is black. When subjected to the chemical action of the developer, the light-affected portions become dark, the degree of darkness depending upon the color of the object. The colors on a negative are, therefore, the reverse of those of the subject — white becomes black and black becomes white, hence the name "negative."



Put the plate into the developing tray. Flood it quickly and evenly with the developer from the graduate, and immediately begin to rock the tray gently so that the developer will cover every part of the plate at once. Look closely to see if there are any bubbles or spots where the developer does not cover the plate, and if there are such, touch them lightly with the finger-tip and they will disappear. Continue

rocking the tray and in a few moments the picture will begin to appear — the strongly-lighted portions first showing up as dark spots on the plate. Gradually the image will become more distinct until it stands out clear in every detail. The whole picture will soon begin to darken and grow less distinct. Now lift the plate carefully, without touching the film, and hold it toward the red light, but not too near it. If the details of the picture and the high lights are very dark, the development has proceeded far enough, and the plate may be removed and rinsed for the "fixing" bath.

Should the picture flash out quickly, as soon as it is placed in the developer, and then begin to darken, the plate has been over-exposed. The instant you suspect this, remove the plate and add from two to five drops of a solution of one part bromide of potassium and ten parts water. This will retard development and tends to prevent the "flatness" found in an over-exposed negative, but it will not wholly correct the error you made at the time of exposing the plate.

Strips of films may be cut apart before developing, or the whole strip may be developed at once. In the latter case, take one end in each hand and pass it through the developer from end to end, continuing the rocking motion until development is completed. The films can then be cut apart before fixing.

When the development is complete, all of the sensitive composition on the plate that was affected by light has been darkened by the developer, and that which remains unaffected must be removed before the negative can be exposed to light. The hyposulphite of soda accomplishes this, and renders the negative proof against light.

The face of the plate is now dark and the back is yellow. The next step is to immerse it in the fixing bath. This is made by adding to one part of hyposulphite of soda four parts of water. The following is a good formula, and produces a solution which remains clear for some time:—

### HYPO-ACID FIXING BATH

| | |
|---|---|
| Hyposulphite of soda | 16 oz. |
| Distilled or pure well water | 64 oz. |

Dissolve and add the following hardening solution: —

| | |
|---|---|
| Water | 5 oz. |
| Sodium-sulphite crystals | ½ oz. |
| Commercial acetic acid (25 per cent pure) | 3 oz. |
| Powdered alum | ½ oz. |

Let the plate remain in the hypo bath until all the yellow has disappeared from the back. After a thorough washing in at least fifteen changes of water, or in running water for about thirty minutes, the negative is completed and may be exposed to the light. It is most important that the plate be left in the hypo until all trace of yellow has disappeared, and that the final washing shall be so thorough as to remove all trace of hypo from the film. The permanency of the negative depends upon this.

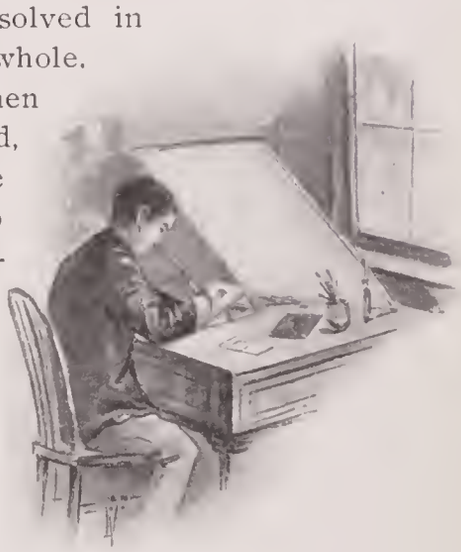
Films may be prevented from curling by giving them a final bath composed of one part glycerin and about ten parts water. When plates have

been thoroughly washed, swab them gently with a tuft of cotton and place them on edge in a rack to dry. Do not attempt to hurry the drying by placing them in the sun or applying heat in any way.

If the negative is too intense, that is, if the development has been carried so far that the high lights are opaque, it will make a harsh print and will print slowly. But it may be "reduced" by immersing it in a solution made as follows: Dissolve twenty-five grains of red prussiate of potash (potassium ferrocyanide) in eight ounces of water. Add a dram of this solution to another compound consisting of one part hyposulphite of soda and sixteen parts water. Immerse the negative, and rock the tray gently.

In time the plate will be reduced to the desired degree of thinness, and it should then be washed in at least fifteen changes of water, or in running water for an hour. If some parts of the negative are too thick and others are of correct density, you may reduce the plate locally by dabbing the too-opaque parts with a tuft of cotton, saturated with the reducing solution. This may take some time and patience, but the result will more than repay you for the trouble. In this way the sky may be reduced so that the natural clouds will print plainly. White-paper skies are a serious defect in a photograph, for they are glaringly untrue to nature. If your new negative has no clouds, they may be printed in from a separate negative.

If a negative be too thin, it may be intensified, and its printing quality improved by the following treatment: Prepare a saturated solution of bichloride of mercury in water. Pour this gradually into a solution composed of one-fourth ounce iodide of potassium and six ounces water, until the red precipitate that forms can no longer be dissolved by shaking. Be careful not to add more mercury than will make the solution very slightly turbid. Now add one ounce hyposulphite of soda, dissolved in enough water to make a twenty-ounce solution of the whole. This should be diluted with about three parts water when ready for use. If the plate has not been thoroughly fixed, the intensifying solution will produce yellow stains. Be careful not to over-intensify. Should the process go too far, the negative can be reduced by placing it in the fixing bath for a short time.



If your negative show pinholes or other defects, these may be spotted out with India ink applied with a fine-pointed, camel's-hair brush. The retouching of portrait negatives is an art in itself, though the method is simple. Those parts of the plates which are to be retouched are first coated with retouching varnish, which gives a "toothed" surface for the pencil. A hard lead pencil, ground to a fine point, is used. The negative is seen by transmitted light, and the pencil is applied to those parts which are too thin and would print too dark in the picture. Good taste and practice are essential in order to do this work well, but every amateur should learn to retouch his own plates.

## PRINTING

THE theory in printing from a photograph negative is the same as in making the negative itself. The paper is covered with a sensitive composition, which will be darkened by exposure to light. The negative is put in a printing frame, film side up, and the paper is placed over the negative, film side down, and held firmly in place by the back of the frame — much as an ordinary picture is framed. In printing from films, plain glass is put in first, then the film and last the paper. The whole is then exposed to the sun, and the light which passes through the negative darkens the paper. It will be remembered that white objects are black in the negative, and *vice versâ*; in printing, the whites and blacks are reproduced as in the original, because the sunlight penetrates only the lighter portions of the negative and turns the paper dark, while the darker parts protect the paper from the light, more or less, so that it remains white or shaded.

There are two general classes of photographic paper — "toning," or "printing-out," paper, and developing paper. Toning paper may be handled in subdued daylight; developing paper should be handled in gas or lamp light.

## BLUE-PRINTING

THE "blue-print" process is the simplest of all. Blue-print paper is placed in the frame with the negative and exposed to bright sunlight for several minutes. The process of printing may be observed by raising one end of the hinged back of the frame, care being taken not to allow the paper to slide or change its position against the plate. When a deep bronze tint appears in the darkest portions of the print, remove it from the frame and wash immediately in several changes of water, or in running water. The image will at once begin to be clear, and in a few minutes the print may be taken out and dried or mounted.

Blue prints are easily made, and serve to furnish inexpensive souvenirs of an outing. Silver or albumen paper is most commonly used. Print in the same manner as for blue prints, but do not remove from the frame until the picture is slightly darker than it is desired to be when finished. Then wash in clear water, and place, face downward, in a toning solution made from the following formula: —

### TONING SOLUTION

A

| | |
|---|---|
| Chloride of gold | 1 gr. |
| Water | 20 oz. |

B

| | |
|---|---|
| Acetate of soda | 15 gr. |
| Water | 1 oz. |

C

Saturated solution of sulphate of copper.

Add B to A, then add from ten to fifteen drops of C, and allow the mixture to stand at least twenty-four hours before using.

The prints will fade somewhat, changing from reddish brown to a deep, purplish color. When the desired "tone" is secured, wash the prints and place them in the fixing bath for twenty or thirty minutes. The fixing bath is a solution of one part hypo to four parts water.

Silver prints may be toned and fixed at one operation by the use of the following:—

COMBINED TONING AND FIXING BATH

| | |
|---|---|
| Water | 20 oz. |
| Hyposulphite of soda | 5 oz. |
| Citric acid | 60 gr. |
| Acetate of lead | 60 gr. |
| Sulphocyanide of ammonium | 240 gr. |

Mix these in the order given, dissolving the solids as added, and let the mixture stand twenty-four hours. A precipitate will form, and the clear solution should be poured off. To this add three grains of chloride of gold. Wash thoroughly for at least an hour after removing from the hypo bath. Use running water if available; if not, make frequent changes.

Prints toned in a combined bath are liable to fade, and the separate toning and fixing baths are recommended as insuring permanency. As many prints as desired may be made before beginning the toning process, for several may be placed in the toning and fixing baths at one time. They should be kept separated and in constant motion, to prevent uneven or irregular action of the chemicals.

There are many varieties of albumen paper, one of which, known as "self-toning" paper, is almost as easy to use as blue-print paper. The paper is toned by simply washing the print in a solution of common salt and water.

Developing papers may be divided into two classes — those printed by sunlight and those printed by artificial light. The best of the developing papers is that known as "platinum," or "platino-type." This produces the most beautiful of all photographic prints; the finished picture is a rich black and white, which surpasses a fine steel engraving in tone and depth. The process is simple but requires careful manipulation. The paper must be handled in a dim light — gas-light will answer. The exposure to sunlight is much shorter for platinum paper than for the other papers that have been described. Watch closely, and print only until the high lights are faintly defined. The developing solution for platino-types is simply and easily made. It consists of:—

| | |
|---|---|
| Oxalate of potassium (neutral) | 1 oz. |
| Water | 4 oz. |

The development is rapid, and should be promptly arrested when the desired shade is secured. When the development is complete, place the

prints, face downward, in a weak solution of chemically-pure hydrochloric (muriatic) acid. Prepare three separate baths and leave the print five minutes in the first, ten minutes in the second, and fifteen minutes in the third. Keep the prints moving while in the acid, and use a fresh acid bath with each batch of prints. Wash in running water for twenty or thirty minutes and spread the prints on papers to dry.

The developing papers which are printed by artificial light are generally classed as "bromide papers." Although they are less sensitive than plates, they are more so than sun-printing papers, and must be handled in fainter light. The exposure is made by gas or lamp light. The frame is held from six to eighteen inches from the flame, is given a slight circular motion to insure evenness and is withdrawn in from fifteen seconds to two minutes. The distance from the flame and the length of exposure are determined by the density of the negative. Like a plate, this paper shows no image until the developer is applied, and it is, therefore, impossible to observe the process of printing. Experience is the best teacher of the proper time of exposure. The development is very rapid, and is completed within a few seconds after immersion. The prints are then removed and given the same treatment as other papers. Following is a good formula for the developer:—

METOL QUINOL

| | |
|---|---|
| Water | 10 oz. |
| Metol | 7 oz. |
| Sodium sulphite, crystals pure | ½ oz. |
| Hydrochinon | 30 gr. |
| Sodium carbonate, desiccated | 220 gr. |
| (or 400 gr. crystallized carbonate.) | |
| 10 per cent bromide of potassium solution | about 10 drops. |

Use a fixing solution of one part hypo and four parts water.

The formulas given above for the treatment of plates and prints are all good ones in general use, but in many cases, especially in toning and developing prints, it will be found advantageous to use the formulas given in the instructions that accompany the various papers; or the chemicals may be bought, ready mixed, specially prepared for use with any particular kind of paper or plate.

Albumen prints and blue prints may be dried between blotters, but the so-called "gelatin" paper must be allowed to dry naturally, as gelatin will adhere to other substances if pressed against them while drying. Prints should always be mounted when wet. The professional, whose time is valuable, trims his prints before toning, and hurries them from the washing water to the mount. The amateur should allow his prints to dry naturally, then flatten them under pressure, and when they have thus been made easy to handle, they should be trimmed. This may be done with a very sharp knife and a straight edge, if a regular "trimmer" is not available. Do not try to trim prints with scissors. Who but a tailor can cut with shears in a straight line?

Trim the prints boldly. Do not hesitate to sacrifice half the matter in the picture. Leave only enough of the "surroundings" to serve as a fitting background. Ordinarily you will have too much foreground; cut off at least a half inch.

When the prints are ready to mount, put them in clear water for a few moments. When they are limp, lay them, face down, on a glass, or other smooth surface, covered with clean paper. Place them one above another, so that they will overlap slightly. Press out the free water. Apply the paste thinly and evenly. Lay the print on the card, and place a sheet of paper or smooth cloth over it. Rub it down with considerable pressure, rubbing from the center outward. Use a print roller if you can get one.

Excellent paste is sold for photographer's use, but none is better than that made from the following formula:—

| | |
|---|---|
| Flour | 3 oz. |
| Alum | ¼ oz. |
| Camphor | 40 gr. |
| Water | 20 oz. |

Mix well and boil. It is ready for use when cold.

If it is not desired to mount silver prints, curling can be prevented by the use of a glycerine bath like that used for films. In choosing mounts, avoid gilt-edged or other ornate cards; select those of subdued colors and plain edges. Dark mounts are best. Remember that the mount is merely to support and frame your print — it should not compete in interest with the print itself.

Start an album with your first picture, and add a print from every printable negative. This will give a complete record of your work and progress, and will insure you against irreparable loss if a valued negative is broken or damaged. Moreover, photographs mounted on cards are easily misplaced, and besides it is often hard to avoid giving them to friends. Your complete set is then broken, and it is sometimes difficult or impossible to restore a missing picture. It may be that you will not care to show all your pictures. If so, keep the choice ones in an album by themselves, or in a portfolio unmounted.

# HOME DEVELOPMENT.

# THE AMERICAN HOME

THERE are no happier homes on earth than ours. It is said that a happy country has no history. This is more true of homes than of nations. We hear much of divorces; yet they occur not more than once in a thousand marriages. Only the seed of discord will germinate and grow into a weed that will destroy the home.

The ideal home, especially if there are children, is to be found in the country rather than in the city. The woods and fields give physical strength and stamina, a clear brain, a strong will and, usually, good morals. But the city develops virtue to its full fruitage. A strong and true man or woman is more useful in the city than in the country. The influence of each is greater. The rough gem is cut, so that it glows and glistens. In the busy centers of human struggle and activity a man is found out, and he finds himself out. He reaches his level, be it high or low.

To speak personally, I have lived thirty-seven years in the country, and forty years in the city. Both lives have their value — the country for gathering in forces, the city for putting them out in the interest of our fellows.

But wherever they may be situated, I see no degeneracy in American homes. The divorces are merely the driftwood on the surface of home life. They in no way represent or reflect the clear depths.

Let a young man begin right by marrying the right woman, and by marrying her early in his life, and his home will be a great blessing.

ROBERT COLLYER.

AT THE present time, pessimists are making a great deal of capital out of what they are pleased to call the deterioration of American home life, which, they affirm, is evidenced in the weakening of family ties, the breaking up of the privacy and sanctity of home, the increase of divorce and kindred evils, which are depicted in lurid colors by these frightened moralists. Particular stress is laid upon the modern institution of the apartment house, women's clubs, and the different attitude which woman now holds to society, as

powerful factors in the disintegrating influences at work in the home.

Such apprehension is needless. If there is one subject about which more nonsense has been talked than about any other, it is that of the apartment house. The modern apartment house, with all of its scientific, sanitary, and labor-saving improvements, has reduced the drudgery of housekeeping and home-making to a minimum, and has increased the comfort and general well-being of the family in a proportionate degree. In the detached home, under the old conditions, the life of the wife and mother was a ceaseless round of toil, with no time for recreation, mental culture, or social intercourse. Her horizon was narrow, at best.

The wisest and broadest-minded sociologists tell us that we are going to have a perfect social or home life just in proportion as we coöperate and bring science to our aid. The modern apartment house is a move in this direction. What it needs to complete it is a large restaurant where people can take their meals together, if they desire, and a great common recreation, or living room, where all can assemble in the evening for lectures, music, games, conversation, dancing, and general social intercourse. How much better and more exhilarating this would be than the solitary, monotonous life which many, especially women, lead in separate homes! What a relief from the old dullness and drudgery!

As to the pitiful cry that family affection is decreasing, that is even more senseless than the apartment house wail. Men and women will love each other, love their children, and be loved by them in turn, no matter what happens. You might as well talk of the animal deserting its young, of the bird in the tree forsaking its unfledged little ones, because of a great thunderstorm or some other convulsion of nature, as to say that social upheavals or changes weaken or destroy human affection. None of these convulsions now sweeping over society will change what nature has made unchangeable,—love.

In the material world we have positive and negative electricity; the centripetal and centrifugal forces balancing each other. If these forces were thrown out of equilibrium for five minutes, we should have material chaos. So, in the moral world, we have the two diverse elements complementary to each other, the masculine and the feminine; and the perfect adjustment of these two great forces is as necessary to the preservation of the order of the moral world as the balancing of the centripetal and centrifugal forces is to the maintenance of order in the material world.

The reason conditions are not as harmonious in the moral world as they should be is that these forces have not been, are not, in

perfect equilibrium. The feminine has been unduly depressed, and disorder has resulted. When they stand in a relation of perfect equality — when, as Tennyson expresses it, we have —

"Two heads in council,
Two beside the hearth,
Two in the tangled business of the world,
Two plummets dropped for one, to sound
The abyss of science and the mind,"—

then only shall we have the ideal society and home.

Another cry is that the large family no longer exists; that woman's growing independence will lessen population. No doubt it will; and we shall have fewer idiots, lunatics, and criminals to be burdens on the state. A great deal of cheap sentiment has been indulged in regarding the large family. I think it is a wrong to the child and a wrong to society to bring into the world more children than the parents can comfortably provide for and educate; the average man and woman cannot do this for more than two or three,— four children at the most.

As to the increase in the number of divorces being an evidence of the weakening of home ties, I think it is quite the contrary. I believe it is due to the growing independence of woman and her recognition of what is due to her as the mother of the race. Her new dignity and self-respect will not allow her to maintain relations which can never be productive of anything but degradation and misery for herself. She knows, too, that the influence of unhappy relations between the parents will act most disastrously upon the children. There will probably be some abuses, but, on the whole, facility in obtaining divorce will result in strengthening all true relations and weakening all false ones.

In short, I believe that many of the things bemoaned as evils, including the apartment house, the woman's club, and less stringent divorce laws, are heralds of the good time coming — the ideal society and home of the twentieth century.

ELIZABETH CADY STANTON.

IS THE American home deteriorating? I think we are rapidly drifting away from the old, tender home life of the past, and substituting for it a more exciting and varied mode of existence, a more intense and highly colored life, but a life less satisfying. If this is to be regarded as an evil, then, undoubtedly, home life is

deteriorating among the great middle class of America. It requires time for men and women to adapt themselves to a new order of things; and, while actual unhappiness in the family cannot be charged to these altered conditions, I do think they are responsible for the weakening of home ties. The new order is, perhaps, better for the woman and worse for the man. The husband is no longer the central power in the home, around which everything else revolves, and the wife is not so wholly dependent as she was.

Apartment, hotel, and club life are, I believe, among the principal influences in the weakening of home ties, and perhaps greater than any of these is the growing desire of women for a wider field of action than that bounded by the limits of a home. I believe in higher education to the broadest possible degree of culture, for women as well as for men, but I am not a very strong advocate of what, in public parlance, is termed a "career" for women; for I think that in seeking and finding a career, as women do now, they give up a great deal in the way of that tender family life that meant so much in the past. As a general rule, the woman who leaves the home to follow a public career must lay many sacrifices on the altar of gratified ambition.

Club life among men, on the one hand, and the growth of independence among women, on the other, tend to make marriage less attractive to both sexes than it once was, and hence to a great extent to do away with home ties altogether. The bachelor finds all the creature comforts of life at his club and marriage ceases to be a necessity; while the young woman, at least in some instances, is so enamored of her career that she is not willing, even though she love a man, to give it up for the less varied and more confining life of the home. I do not think the increasing number of divorces has anything to do with the deterioration of the home. There are cases in which divorce is not only just but righteous. I think it the cruelest thing in the world to refuse to grant a divorce to two people who may be committing murder in their hearts, and violating the most sacred traditions of the home. I do believe, however, if it were more difficult to get married, divorce would be less frequent. In England, the marriage laws are much more stringent than they are with us. The simplest way to get a marriage license there is to go to a registrar's office and make formal application, but the sun must set twice on the application before the license will be granted. Even this forms a slight safeguard against marrying in haste and repenting at leisure, for the man and the woman must think at least two days about what they are going to do, which is not always the case in America.

English home life among the middle classes is, I think, superior to ours. The Englishman's home is still his castle; and, instead of living in apartment houses and hotels, the English family clings to the separate home of its fathers. The English woman, too, has less craving for excitement and change than has her American sister. She is more reposeful. She is content to be simply wife and mother, as were her mother and grandmother. She moves contentedly in her "sphere." The husband is still the sole power, to which all the family is content to bow. But, when everything has been said on either side, neither the American nor the English woman suffers by comparison. The American woman is, and always will be, the brightest ornament of the home; and, if it is not happy under the altered conditions, it is largely man's fault.

MRS. FRANK LESLIE.

## THE HOME

THE growth of civilization has been commensurate with the growth of the family ideal, with the recognition of the family as the foundation of the state.

The sentiment of home life is comparatively modern, but to find the first homes the student must go back to the cave-dwellers, to the primitive abodes of prehistoric peoples. Home to them was the fissure in the rock, the hole in the ground, to which they might creep when worn out with warfare or with the day's hunting. The age of building came centuries later, being preceded by the nomadic period, when men lived in tents and moved from place to place to find pasture for their flocks and herds. The growth of the family ideal was meanwhile apparent in certain nations and among certain peoples, preëminent among them the Chinese, who, perhaps of all nations, first conceived the sentiment of home life and home ties, and who carried this conception to such length that the result was ancestor-worship, a veritable religion, with the family as its pivot.

Among other peoples the recognition of home, and of what it implied of family union and obligation, was less keen, or of a different form. The patriarchal system of the Jews was a conspicuous example of the self-consciousness of the family, but it implied obligation only to the living. Among the Anglo-Saxons the family was likewise the unit of political organization, but the home in the modern sense was unknown to them. Although the Greeks had homes and family ties, the sentiment of home and family life was, as a rule, lacking among them. The real home of the social Greek was not the house where his wife sat spinning among her handmaidens, but

the portico, or the open square, where keen-minded men discussed philosophy and politics, and where bright-eyed boys looked on and listened.

Among the Romans the love of home was more highly developed, the sense of the importance of the family life was keener. But it was not until the birth of Christianity that the sentiment of home life was felt by the European peoples. In one sense, Christianity created the home by placing the first duties and obligations of men there and not in the market-place. Yet after the first hundred years of Christian development, the growth of the home sentiment was retarded by the ascetic ideals which crept into the Church, inclining its members to believe that the state of celibacy was more honorable and more pleasing to God than marriage. In consequence, men abandoned their family ties and fled to the deserts. Monasteries and convents were founded. The Middle Ages brought forth a society warped by this conception of the highest duties of life.

Chivalry itself was not founded upon the affections of the family, but upon mystic and unreal passions. The exigencies of the times produced homes, which could scarcely be called such if measured by modern standards. The feudal lord dwelt in his castle, with perhaps a hundred dependents, who sought shelter within its stone walls from the "violence of enemies." The peasant dwelt in his hovel, being little better lodged than the animals. The fortified towns were crowded to overflowing; and to the majority of the inhabitants their most congenial home was the market-place, or the street before their door-sill. Because human life was of so little value, because the dangers to society were so great, people lived more in common. The separation, the differentiation which separates family from family in modern life, were then unknown. The family, indeed, existed, but home life was subordinate to the life of the burg or the castle. But as the feudal ideal passed away, and with it the monastic ideals of the Middle Ages, the home came into greater prominence, and the sentiment of family life began to assume its modern importance.

With the Renaissance came a flowering of family dignities and honors, especially marked in England and in Italy. In England the ideal of the home was most clearly developed, and received, perhaps, its most beautiful illustrations. In Italy, the dignity and importance of families as powerful factors in the state received the greatest emphasis. The homes of the Medici, of the Borghesi, of the D'Este, stately palaces still standing, are embodiments in marble of this spirit.

In the century which has just passed, the whole conception of home and of family life has become at once more simple and more com-

plex than in any previous period of the world's history — more simple because it has been freed from the ideals of political power which are not possible in a democratic age, even in countries where class-divisions are recognized; more complex because the sense of moral responsibility in the family is keener than ever before. The home and the family are regarded as a training school for citizenship, for the cultivation of all those virtues upon which the welfare of society is founded. The genius of the age is social, but it is a socialism which makes the family, and not the individual, the unit of society. In England, in Germany, in Italy, in all the countries of Europe, the home is the bulwark of the nation. The attempt of France in the Revolution to establish the claim of the individual above that of the family only ended in the greater glorification of family life.

The American people has been called a homeless nation, by those to whom a home implies a permanent dwelling-place. The opening up of a new continent, the ever westward movement of American civilization, the evolution of an agricultural into a commercial nation, and the consequent growth of great cities, — all these causes have prevented the foundation of homes as permanent dwelling-places. But the home-spirit and the spirit of family life are stronger, perhaps, because of this nomadic element in American civilization.

The Englishman of rank is linked through his ancestral house to his remotest ancestor. The American is separated from his grandfather by, it may be, a score of houses, representing an evolution from poverty to riches, or *vice versâ*. His dwelling one year may be in a city flat, the next in a suburban cottage, the next on a ranch or a farm; but these changing conditions are not, of necessity, fatal to the home-spirit. This spirit in its essence is the sense of moral responsibility toward the persons who make up the domestic circle. This sense should be keenest in the mother of the family. American women are not without it, but it is too often subordinated to that responsibility whose chief care is material things — opulent housekeeping, the preserving of appearances, the effort to have a certain style and state in the daily domestic round.

These ideals of living, however worthy, should not overshadow those greater ideals, which found the happiness of the family upon gentle manners, chivalrous conduct, that aristocratic sense of obligation which flourishes nowhere better than upon republican soil. Courtesy throws a rose-light upon the most arid facts of daily existence. It provides that sense of romance in human relations so necessary to counteract the prosaic effects of intimacy. It is the subtlest and most stimulating flattery, since it assumes the presence of gentle elements in other people.

Yet it is of no value unless sincere, and to be sincere, courtesy must, first be cultivated in the home. Just because the members of a household know each other well, they should safeguard their intercourse with the entire array of the minor morals. For courtesy in its essence is not formality, but the recognition of, and respect for, the personal dignity of others.

The tendency of Americans as a nation is toward the omission of courtesies which in Europe are considered necessary to social well-being. The confusion of American life is partly responsible for this omission; but the root of this negative evil must be looked for in American homes. The habits of obedience, of respect for elders, of consideration for others, are sometimes wholly unformed. In consequence, the child emerges from his father's house with many virtues, perhaps, but crude, assertive, and ungentle.

The greatness of the American nation was due in part to the "plain living and high thinking" of the New England households. Its future greatness should be built upon the high breeding which is possible in the homes of both rich and poor, and which implies self-possession, self-control, and the kindly spirit.

## THE HOUSE

The choice of a house depends largely upon the circumstances of the family which is to occupy it. The occupations of the several members of the family, their incomes, their tastes, must be taken into account. As a rule, the location of a house should suit the convenience of the father, its interior arrangements the convenience of the mother and of the family. The father should decide how much time he can afford to spend in going from his home to his place of business, and whether it is better for him to live in the city or the country. If he prefers to reside in town, the matter of choosing a home becomes very complex.

In New York, and in the majority of the large cities, great wealth is required to own or to rent an entire house. People of moderate means must content themselves with a flat or with an apartment. In "A Hazard of New Fortunes," Howells describes the trials of a Boston family, hunting an apartment in New York — their encounters with janitors; their consternation over dark rooms, and over closets dubbed bed-rooms. Their early hopes and their final despair reflect the experiences of thousands of families.

The flat or apartment is usually depressing to the spirits. It looks crowded before there is a piece of furniture in it. The decorated ceilings, corpulent plums in the dining-room and hot-colored

flowers in the drawing-room, are suggestive of plush and of weary Philistine dinners. The bed-rooms suggest stuffy dreams, and the kitchen seems made for a little gehenna of heat and bad temper. A penitential servants' room squeezed into a corner, and opening on darkness, is the last weight on the conscience of the prospective housekeeper.

But even a flat has its possibilities; it can be made to look home-like upon compulsion. To produce this home-like effect, it is well, as a beginning, to secure a flat which has never been lived in, and which has not been papered or "decorated." The decorated ceiling is an abomination. An arrangement may be made with the agent by which the family intending to rent the flat may choose the wall-papers.

Furniture purchased especially for a flat produces a much better effect than the promiscuous furniture which might do duty in a large house. In furnishing the flat, the first object is to produce an effect of spaciousness. This can be done by carefully economizing every inch of room. Box couches and chiffoniers are better for the bed-rooms than beds and bureaus. The dining-table should be circular. Divans built into the corners of the drawing-room are cosy in effect, and, by doing away with a certain number of chairs, increase the apparent size of the room. Tables are not desirable, nor thick hangings, nor many ornaments. The chairs should be small and light in design, and not many in number. Shelves for holding books can be built against the wall, and save the space of heavy bookcases. The whole effect should be as light and free and spacious as it is possible to make it.

A flat should not be chosen which has dark sleeping-rooms, nor should a servant be assigned a dark sleeping-room. Flats facing south and west are warmer in winter and cooler in summer than those which face east or north. The higher the flat, the purer the air, and the greater the amount of sunshine; but, unless there is an elevator, the good effects of air and sunshine may be counterbalanced by the fatigue incurred in climbing the stairs.

Choosing a home in the country or in the suburban town is a far less difficult matter than choosing a home in the city. Space and freedom belong to country living, and should on no account be sacrificed; better a small house with large grounds, than a large house with but little ground. The dweller in the country should have a house with a broad porch and a garden; otherwise he is no better off than in the city.

The cultivation of the garden should be a labor of love shared by the entire family. No one who has read "Elizabeth and Her German Garden" can fail to feel the charm of working among flowers. Works

on gardening have become very popular and should be owned by every family dwelling in the country. Every country house, however small, should have a little porch or conservatory, inclosed with glass and facing south, where the garden plants may flourish through the winter.

The house should face east and south, or south and west, and should stand on high ground commanding, if possible, a view of the surrounding country. A central hall or living-room is desirable in a country house; or a small reception-room opening into a large library, which may also serve for a general sitting-room. The bed-rooms should be large and airy, with broad windows, framing the landscapes outside. The ideal country house differs in many respects from the city house. It should be low and broad, not high and narrow; it should be made for comfort, not show.

## TASTE IN FURNISHING

INDIVIDUALITY of taste is more pleasing in the arrangement of the appointments of the home, than the most elaborate copies of the house furnishings of more pretentious homes. The first thing to be considered is how much outlay can be expended in adornment, and the next is how to obtain the most satisfactory results with that amount.

Cheap imitations are never desirable, and show a lack of refinement in matters where taste is required. If one must practice economy in furnishing his house, let it be in quantity, not in quality. There are at the present time so many really beautiful things to choose from, some of which are both fine and inexpensive, together with the great possibilities which can be accomplished by the handiwork of women, that there is no reason why the cottage or apartment should not be made attractive and homelike, as well as the home of the possessor of ample means, who can indulge each fancy as it arises.

The newest designs in furniture and decoration are not always the best. Novelties in both branches appear each season, until it becomes a difficult matter to choose among the great number offered

for inspection. The purchaser who possesses good taste avoids all startling and extravagant effects, and selects only that which harmonizes consistently with the other furnishings of the home. The desire to finish a room within a certain period of time leads many into the grave error of buying a great deal of furniture at once, instead of purchasing article by article, and thus making the home an expression of the owner's individuality.

Of later years there has rapidly grown a desire for more unconventional and less formal treatment of the interior of houses, but this, if a certain fitness is preserved throughout, should add to, rather than detract from, their artistic beauty. The fashion of creating a series of rooms furnished and ornamented after those of foreign countries, destroys a full harmonious effect. Those styles of decoration, if transferred to our own homes, demand both correct representation and suitable setting to demonstrate their full beauty and worth.

## THE HALL

The hall, even though but a passageway, should receive especial attention in its appointments, as it is the first room entered, and consequently leaves an impression on the mind which adds to, or detracts from, the beauty of the other rooms. In the modern houses, the reception-halls are of such generous dimensions that there are many opportunities for developing artistic effects in the furnishings. Nor are the smaller, less pretentious hallways entirely devoid of possibilities in pleasing effects.

In the selection of wall decoration, panels are the most popular style in wall-paper, woodwork and tapestry, or tinted walls. Burlap is an excellent substitute for tapestry, and makes a safe and satisfactory wall covering for a hall in neutral tints, or in dull reds, blues, or greens. China matting or canvas, which is much like burlap in texture and appearance, may be obtained in several desirable shades, and is inexpensive. It is a simple and pleasing method of wainscoting, which can be made more elaborate by painting the panels in some delicate design. It is, however, safer to leave the plain surface, which can be finished with a handsome molding, the width of which must depend upon the height of the walls.

The ceiling should be light in color, with very little, if any, decoration, unless the reception-hall is a large room. Where it is not

practicable to follow the inclination in selecting the material one's taste suggests, it is always possible to find neat, effective styles in wall-paper which are inexpensive, and a good substitute for the more costly decorations.

A few good pictures on the wall are a pleasing addition to the furnishing of the hall. They give a homelike appearance to the house that will be appreciated the moment the outer door is opened. These pictures should be plainly framed, and the subject of the engraving or water-color should be of general interest. It is better to have one good engraving than half a dozen inferior pictures.

Hardwood floors are found in nearly all of the houses recently designed. These floors can be highly polished, and need only a few rugs which harmonize with the walls in the prevailing tint. Where a carpet is preferred in the hall, it should be of some neutral tint, with conventional figures in subdued colors. Draperies hanging in the doorways should match the prevailing tint, or combine contrasting colors. The furniture of a hall which is used merely as a passageway must necessarily be very unpretentious. If possible, banish the old-time hat-tree to the end of the hall. A small table and one or two high-backed chairs are generally all that the space allows in the way of furniture in the small hall.

In the square reception-hall, you may gratify your taste in the matter of furniture to a greater extent. In addition to the high-backed chairs, there may be a comfortable old-fashioned sofa with inviting sofa pillows in colors to match the draperies. Two large armchairs and a handsome hall-table complete the furnishing.

## DRAWING-ROOM OR PARLOR

The word Parlor, which at one time conveyed the idea of the best room in the house, has been almost entirely superseded in dwelling-houses by the more dignified name of drawing-room. The fact that the word Parlor is now used in various lines of business — those devoted to the care of the hair, complexion, etc., has brought about this disuse of the word, and the adoption of the more English term for the "best room" of even a modest house.

In furnishing the drawing-room, above all things avoid stiffness of effect. A large rug or carpet, harmonizing with the prevailing tints of the walls, should be selected. The polished hardwood floor with handsome rugs is undoubtedly to be preferred to the carpeted room, though much more difficult to keep in good condition. In the selection of furniture for the drawing-room that is in daily use, avoid the

purchase of showy, useless pieces. The most expensive furnishings are usually found in the drawing-room, but there should not be too marked a difference between this apartment and the others.

There are many houses in which the elaborate decoration of the drawing-room is achieved only through the sacrifice of much that is needed for the adornment of the sleeping-rooms. The furniture should be in keeping with the size and shape of the room, and should be chosen with a view to comfort, as well as to artistic effect. There is such a variety of style in furniture to-day, that it is not difficult to make a choice suited to your means.

Several easy chairs, one or two small sofas, a small reception chair, and two or three others of odd design, are more desirable than the complete suites. There is a large variety of fancy tables from which to choose. The present taste is for quaintly carved mahogany or rosewood, but many pretty tables are made of less costly woods. The size of your center table must be in keeping with the size of the room; if the latter be large, two or three small fancy tables will add to its attractiveness. They may be used to hold flowers, books, or pretty pieces of china.

The wall covering should be light and dainty, and the paper, or other material, as rich as can be afforded. If inexpensive, let it be as simple in design as possible. The pictures should be fine engravings or etchings, or photographs from the old masters. Pictures are indicative of the taste of the owner, and for this reason should never be purchased by the wholesale, nor hurriedly. Oil paintings should be omitted from the collection, unless really fine work can be afforded.

Massive gold-leaf frames are not so popular at the present time as they were a few years ago; they should be used only as a setting to oil paintings. Lighter frames, which form a graceful finish to the picture without being a conspicuous part of it, are more in vogue and are comparatively inexpensive.

After having selected your pictures, it is well to consider the art of hanging them. To hang and group pictures properly is not within the ability of everyone. A good eye for distance, straight line, and harmony of grouping are essential requirements. A few general principles may be kept in mind which will tend to assist the amateur in picture hanging and grouping. A room may be made to appear less high by lowering the picture molding. The space above may be filled with plaster or metal bas-reliefs. Those pictures conveying an impression of space or distance, such as landscape or marine views,

should be hung on a level with the eye. Definite subjects, such as figures, heads, and floral designs, may be hung low or high. Harmony of coloring and style should be observed; for instance, a very rich oil painting will detract from a pale water color, or a pronounced figure piece is likely to weaken the effect of a delicate etching, or pen-and-ink sketch. One of the most important matters to be observed in the hanging of a picture is to have the proper light strike it.

By skilful arrangement, frameless paintings, etchings, engravings and photographs may be effectively used in any but the most formal apartments, such as drawing-room and hall. An irregular grouping of sketches, in imitation of the decoration of an artist's studio, gives, in some cases, a much better effect than does a uniform arrangement.

Mounting-cards and mats may be obtained in a number of different shades of green, red, buff and gray, and these make artistic backgrounds for sketches, or for prints of heads or figures which may be attached, with paste, by the two upper corners. Unframed pictures may be secured to the walls by means of the brass-headed "thumb tacks" to be purchased in any art-material shop. A set of pictures framed alike may be grouped, or placed one below the other.

Perhaps nothing in a house adds so much to the general good effect as do the pictures. Expensive paintings, etchings, and engravings may be out of the reach of the householder of modest income, but the excellent reproductions of fine works now to be obtained from any art dealer, possess much artistic value and are worthy of a place in any home. Handsome bric-a-brac, china, bronzes, curios, pretty statuettes and vases are now sold at prices to suit even a light pocket book, and when chosen with a discriminating eye, and with careful reference to their harmony with the general character of the room, they add an invaluable finishing touch to the whole.

Mirrors are always in favor; they should not, however, find a place in the drawing-room unless of fine quality and handsomely framed. The old-fashioned colonial mirrors, in one or three sections, are very desirable for drawing-room or parlor decoration, and can always be found in the antique shops.

Cabinets, either for wall fastenings, or made to stand upon the floor, are excellently adapted for holding curios and objects of art. Inlaid Turkish and Syrian tabourettes, octagonal-shaped low tables, chairs, divans, easels, pedestals and screens are to be had in innumerable shapes and designs. Foot-rests are as welcome in a drawing-room as is the inevitable down pillow.

Candles and lamps should, when possible, be used in preference to gas or electric lighting, as their light is infinitely softer and more

effective. Dark papers and dark draperies absorb an immense amount of light, and one can manage with half the quantity of artificial light, if a reasonably cheerful tone prevails in the general decoration of the room.

## THE LIBRARY OR LIVING-ROOM

THE custom of uniting the offices of several rooms in one large apartment is becoming more general each year, and to-day a library may serve also as music-room, study or living-room.

Warmth and comfort should be the keynote in the decorating and furnishing of the library, and a personal, rather than a general, taste may be followed in the arrangement of books, family portraits and individual possessions. In the treatment of the library walls, we are permitted much latitude. Book cases — when a structural part of the room — may be arranged on all four of its sides, fitting in recesses and ranging from four to six feet in height. The wall above the shelves is covered with reference to the wood used; the material may be canton flannel, heavy felt paper, tapestry or embossed leather, in rich full tints. The ceiling should be of a light shade of the predominant color of the wood work and wall-covering, or may be paneled in wood or with cross-beams. The hard-wood floor, oiled, painted or stained so as to be easily cleaned, should be covered with a large art square or with center rugs. Small rugs — Indian or Oriental — may be laid about before fireplace, couches or window-seats.

The library is the place for family portraits, oil-paintings, old engravings and for a general commingling of many schools and subjects of art. The window and door draperies of a library should be strong in color and firm of texture. Inner wash curtains in ecru tints are more desirable for sitting-rooms than are those of white material. Library chairs should be large and comfortable. The center table should be large and of substantial build. A lounge should also be provided, on which may be heaped cushions harmonizing with the color scheme of the room.

## THE DINING-ROOM

THERE are people in this busy world who, looking upon the hour spent at table as so much time lost, would, were it not for the necessity of sustaining life, leave it out of the day's program. They eat their meals hurriedly and in silence, without giving a thought to their surroundings. But to the large majority of home-loving

families, the dinner hour is one of happy reunion, when the members of the family may chat over the events of the day, with the peaceful consciousness that they can lay aside its busy cares and enjoy the restful hours of evening.

The dining-room, for this reason, as well as for others, should be one of the brightest and most attractive apartments in the house. Where economy must be observed in furnishing the dining-room, its appointments should be selected with great care, so that both furniture and all minor details will harmonize with the walls and woodwork, and also with the shape and size of the room.

If the sunshine has access to all parts of the room, a dark green and straw-colored matting, with a handsome design in conventional figures, is one of the most effective floor-coverings you can select. Two or three rugs scattered about the room add to its appearance; but we would advise the sparing use of small rugs in a dining-room. If the floors are of hard wood, highly polished, or stained, one large rug of shaded green and oak, with a dash of color interwoven, is very handsome. If green is not a favorite color, dark blue, or any rich tone which the quiet taste may fancy, and which is in keeping with the other furnishings of the room, will answer the purpose.

The furniture of the dining-room should consist of a sideboard, extension-table, and chairs. A small side-table and one of the pretty corner china-closets with beveled glass front, add greatly to the attractiveness of the room, as do also window-boxes of well-kept flowers and ferns. In choosing pictures for a dining-room, it is well to avoid those subjects which represent dead game or fish. These have long been accepted by many people as peculiarly appropriate for dining-room decoration but they are really in very bad taste.

In selecting the furnishings for your table, fine napery and delicate china and glass are more desirable than an abundance of showy silver. The family silver should always be chosen with a view to its usefulness, never for vulgar display.

Where the matter of expense does not interfere with one's choice, there are several methods of wall treatment suitable for a dining-room. In one instance, the field was hung with heavy felt paper of a warm golden brown, the woodwork was of antique oak, the panels of the doors and shutters of a lighter shade of brown than the general surface. The frieze was relief ornament on a yellow ground, the ornament in two shades of brown. The dado — there should always be a dado in a dining room — was of wainscoting. The floor, to follow out this scheme, was of hard wood, partly covered with a large Eastern rug in tints of blue and brown. The curtains and covers for the

window-seat (which were the only textile fabrics in the room) were of blue velours, in a pattern of golden chrysanthemums.

Wainscoting is admirably adapted to a dining-room, and not infrequently is carried up to a wide frieze, from which it should be separated by a shelf for holding jugs, platters, china and glass, of various patterns.

Embossed leather papers are often used with good effect in the dining-room. The walls of this apartment should never be hung with tapestries, silk, or similar stuffs. The general woodwork should be somewhat darker than the walls. The sideboard and mantel may be made to harmonize with the decoration by being built with reference to the dado line, and with that of the frieze. To preserve the architectural effect, the tops of the sideboard, mantel, and doors should continue on a level with the frieze rail, presenting an unbroken line on which ornaments may be arranged.

When the sideboard is not a structural part of the room, it may be of various designs. Perhaps the most pleasing and satisfactory of all styles is the Colonial. The lines are simple and graceful, harmonizing well with most furniture. Colonial sideboards may be had in various woods, those of mahogany being the most desirable. There are also the old Dutch dressers, with decorative copper hinges and handles; but these require special harmony of environment. As a rule, the solidly handsome buffet, no matter how plain, is preferable to the more ornamental styles for the arrangement of plate and glass. An artistic touch may be added by placing copper or brass sconces for candles, which, when lighted, bring out the beauties of the glass and silver with delightful effect.

The furniture should harmonize with the general character of the room. Dining-tables of polished wood, carved chairs, side-tables, closets and cabinets for china and glass, are to be found at all prices and of all qualities. The round table, for those who have a dining-room large enough for its accommodation, is the most serviceable and the prettiest, as it not only seats guests to the best advantage, but displays the table service and decoration better than does any other.

The foot-rest should not be omitted from the dining-room. The chairs should be strong, broad, and comfortable; those covered in leather being altogether the most satisfactory. Closets for choicer pieces of china or glass are eminently suited to the dining-room. Those with mirrored backs that form a background for the display of each dainty article are preferable. A pretty conceit is a cabinet or shelf devoted to pieces of one kind, such as jugs, teapots, steins, and other bits of ware in pretty or odd designs. If there be no room for a cabinet, a corner cupboard or some hanging shelves will serve as a substitute.

## THE SLEEPING-ROOM

The simpler the arrangement of a sleeping-room, the better. The furniture, especially, should be characterized by simplicity and lightness. Anything that will harbor dust, absorb impurities, or prevent perfect circulation of the air, should have no place in a sleeping-apartment. Heavy curtains or hangings are particularly objectionable in a bedroom. In case of illness, one may be confined to the sleeping-room for days, and there should be, therefore, no opportunity for the lodgment of odors, microbes or any form of insect life.

Physicians advise against ponderous furniture and heavy enveloping curtains; many would even banish wall-papers from the bedroom. A substitute for the last is found in paint, varnish or cotton hangings. Painted walls, plain or with delicately stenciled ornamentation, are admirable; they provide effective decoration, and perfect sanitary conditions, and require but little care. Many, however, object to this painted surface as appearing cold, and prefer walls covered plainly with some material made for such purposes.

A New York firm has lately imported some entirely new Japanese silk hangings for wall decorations. They are made of soft, loosely-woven silk fibers, and somewhat resemble Shikic silk. Some of them are backed with paper to give them stiffness. They may be either mounted on the wall, as is wall-paper, or draped on slender wires run through top and bottom. Cretonnes of delicate pattern are sometimes stretched on walls in the place of paper, producing a very satisfactory result. A room paneled in hard wood two-thirds of the way up, and then finished with a frieze of cretonne, presents an attractive appearance. The ceiling may be either painted, or simply whitewashed, or tinted. It is preferable that a bedroom should be decorated in light tints, but it must be remembered that white produces a chilly effect, and is to be used only in combination with tints of a warm hue.

The window and bed draperies perhaps contribute more than any other feature to the general effect of the sleeping-room. Swiss muslin curtains are much used and may be quite simple or very elaborate, according to the general character of the furnishing. Cretonnes and *crêpes* are a little more substantial, but equally pretty; they may be obtained in a vast variety of colors and designs. Lace or muslin curtains are beautified by having a foundation of silk or cambric, harmonizing with the general color of the room.

For the outer covering of beds, there is a large variety of pretty and inexpensive spreads. The most popular covers are those which can be laundered, and if one is skilled in needlework or can afford to pay for the skill of others, the handsomest are in heavy linen elaborately embroidered by hand. These have wide borders, with graceful vines and flowers; the center may be in flowers or in any dainty conception of the owner's fancy.

For a young girl's room, pretty covers and bolsters can be made of silk or of lustrous cotton, such as sateen or silkaline, covered with lace. The color of the lining should match the prevailing tints of the walls and furnishings. This room should be light and as dainty as possible, and it can be furnished with a modest outlay. A brass, or white enamel bedstead, a dressing-table covered to match the bed-spread, a willow rocker, two small enamel chairs, and a couch with a removable cover of dainty, figured cretonne, in which the prevailing color is that selected for the linings of the curtain and bed covering, will furnish this room charmingly.

The couch may be covered in heavier plain material of neutral shade, with gay pillows of silk or cretonne, and if the top is made to open with hinges, the box should be lined carefully so that it can be used to store away clothing not in daily use. This is especially useful to women and young girls who live in apartments where they have limited closet room.

The beauty and attractiveness of the bedrooms depend but little upon the depth of one's purse, for exquisite effects may be obtained here with comparatively little outlay. For an unpretentious bedroom, nothing is prettier than plain pine furniture, enameled. The enamel may be bought ready for use. By following the directions and using care, any one can paint a pine chamber set. Colored paints, unless harmoniously combined with white and gold, or white and bronze, are not so desirable on the whole as white paint. The walls, floors and draperies of a room containing such pieces of furniture, may be of any color, but delicate shades are more in harmony with white and pale tints.

Besides the ordinary furniture of a bedroom, there are several desirable additions that lend a touch of individuality to this part of the house. Among these is that delight of the feminine soul — a cheval mirror. In lieu of the cheval glass, a long mirror in wardrobe or bureau should be substituted in a woman's bedroom.

No bedroom is quite complete without the addition of a lounge and pillows. A screen or two, a revolving table for pitcher and glass, for book and candle, all combine to contribute to the comfort as well as the beauty of a sleeping-room. A guest-room should also

contain a writing-desk, fully equipped with paper and envelopes, pen and ink and stamps, and a basket with sewing-materials. Pictures on the walls are not desirable. Like the reception-room, the guest-room should be impersonal in character.

## THE BATH ROOM

The proper furnishing and care of the bath room are matters of vital importance. This apartment may be a source of comfort and a preserver of health, or an unpleasant and unhealthful place that is likely to foster disease. To insure cleanliness, the room must be properly furnished. Carpeted floors and papered walls should be avoided, as they absorb impurities from the atmosphere and do not admit of the free washing that is essential to cleanliness.

To those whose purses admit, there is nothing to equal the pretty tiled floor and walls, which may be white, delicate blue, a dainty green or any favorite color. Yet for the room which now has and must retain its wooden floor and plastered walls, two or three coats of good paint will serve the purpose admirably. A rug or two is necessary for comfort, and can be put out of doors for frequent airing; cotton rugs may be purified by washing.

The tub or closet should never be boarded around, but should be exposed on all sides, and all plumbing should be open to the air. Materials suitable for bath tubs have been fully considered in connection with bathing. Of whatever material, the tub should be thoroughly cleansed after each use.

Each morning and evening the water-closet should be freely flushed, and the basin should be washed with sand soap. If by carelessness or accident any bits of hair, burnt matches, lint, rags, coarse paper or anything that can possibly obstruct the pipes finds its way into the basin, the only safe way is to pick it out. A seemingly very little thing in the pipe may call for the services of the plumber. The hand basin must be well washed and the pipes flushed. Any lint that collects about the strainer in the pipe may be removed with a small wire hook, or with a shoe buttoner, kept for the purpose.

The attention which the floor needs will of course vary from day to day. Once a week, tub and hand basin should be washed with hot water in which some washing soda has been dissolved, and a generous quantity of the hot solution should be poured down all the pipes. If the tub is of zinc it should be cleansed with whiting and ammonia, rinsed well and wiped dry. Much less scouring will be necessary if the tub is carefully dried after every cleaning. Any ordinary stains on marble, porcelain or enamel may be removed by

the use of sand soap. For old stains that will not yield to this treating, muriatic acid should be used.

There should always be an ample supply of towels and wash-cloths in the bath room. They may be kept in a small cupboard or on a set of shelves with a curtain arranged in front. Huckaback, crash, and Turkish toweling for bathing purposes, divide favor with one another so that it is desirable to have some variety. Whatever the material, try to be generous enough with it to make towels of convenient size; scrimpy bath towels are a trial and a nuisance, poorly compensated for by the small saving of cost or of work in laundering.

Wash-cloths may be of any of the toweling materials, of stockinet, or pieces of old table linen. The knitted ones are liked by many. A towel rack is necessary for the proper drying of towels and cloths. A good quality of soap will of course be provided, and every one has his own idea as to the most satisfactory kind.

In some bath rooms hot water is not provided during the warm weather. Generally this is a great mistake. Nearly every one wishes a warm or a tepid bath at intervals, while many feel a chill from a quite cold bath at any time. With the many devices for heating water by gas, coal oil and wood alcohol, it is easy to make provision for a comfortably warm bath at any hour of the day or night. Proper heating arrangements are, of course, an absolute necessity to health and comfort. There should be, besides, a small oil or gas heater that can be used at pleasure on chilly mornings and evenings, when heat is not required in the entire house.

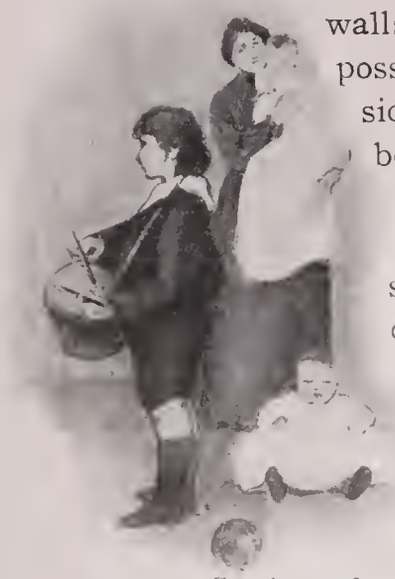
In no part of the house is proper attention to ventilation more necessary than in the bath room, and it is well to have some arrangement by which there is a constant change of air, the size of the opening to be adjusted, of course, according to changes of temperature in the outside air.

## THE NURSERY

There is no room in the house more important than the nursery. It is the child's first home, the spot which represents the world that he has so recently entered, and much depends upon his earliest impressions. For that reason great care should be taken in making his surroundings not only comfortable, but bright and happy. Even an infant is susceptible to the influence of cheerful or gloomy environment.

The furniture of the nursery should be simple and substantial, not easily destroyed. Rugs that may be shaken daily are to be preferred to carpets; and a painted, oiled or hardwood floor is recommended

for cleanliness. The wall surface may be dealt with in several ways, but preference is given to the nursery papers, on which are illustrated the fairy tales and Mother Goose melodies so dear to the hearts of little children. They are possibly not so esthetic as painted walls, or those of some floral or figured designs, but they possess the merit of interesting children — an important consideration in a room where so many of their hours are to be spent.



The fire-facings may be of picture tiles descriptive of some scriptural or historical events, which will furnish subjects for endless conversations, and will open up a wonderful field of information. Upon the walls should be hung only those pictures which appeal to the interest and emotions of these little lords and ladies of creation. Let the subjects be cheerful and attractive, and above all, artistic. The training of the eye and the imagination to a sense of beauty cannot be begun too early. Copies of many masterpieces, colored or in black and white, can be obtained at little expense, and, when framed in the light woods so much in vogue, form the daintiest decorations for a nursery wall.

Windows should be provided with moderately dark shades, to shut out glaring light; and with white curtains that may be easily laundered. Window-seats, which may also be lockers, serve as receptacles for childish possessions. Shelves and drawers built into the recesses of the walls are absolutely necessary for the storing away of books and playthings.

It is never well to permit children to sleep in the rooms in which they spend the day; but when limited space makes this a necessity, the selection and furnishing of beds and cribs are of the utmost importance. Each child should have a separate bed; those of brass or iron, with woven wire springs, are not only the most hygienic, but the most attractive in appearance. The mattress should be of a good quality of curled hair, and if the pillows also be of hair, they will be found less heating to the little heads than those of feathers. The room should be thoroughly aired before putting the little ones to bed each night, and while they are taking their morning walk.

It is important that the location of the nursery be where it will have plenty of sunlight and good ventilation. If your house is too small to admit of a room being set aside as a nursery, let the children spend all the time possible out of doors, or in a bright, sunny room where their earliest impressions of life will be cheerful. It is said, and we believe truly, that the first imprint on the child's mind will never be entirely effaced.

As to the simple nursery furniture: A long, low table with rounded corners, and little chairs with straight backs and with seats sufficiently high to permit the children to sit around the table with their picture-books and kindergarten work, should be placed where they will not interfere with the daily romp. A strong, wide couch with small pillows, both couch and pillows covered with bright, washable goods, is a desirable addition to the nursery, and affords both a resting-place for tired babies and a fine field for pillow fights and acrobatic feats.

Nurse should have a comfortable rocking-chair, a small sewing-table, and a basket for her mending. The rockers in a nursery should never have sharp points, with which small feet and legs may come in contact, bringing their owners to grief. The rockers of both the large and the small chairs should be so curved over in the back that they will not be a source of annoyance and danger to the children when they are romping.

## THE KITCHEN

When the housekeeper has the selection or planning of the house which is to be her home, the first part of the building she looks at critically is the kitchen. This room should be as attractive in its way as the drawing-room, and if economy must be used in furnishing any part of the house, the kitchen should be favored, as it requires more attention to detail than the best room in the house. Upon its construction and arrangement depends the comfort of not only the housekeeper and servants, but of the entire family.

Everything should necessarily be secondary to cleanliness and utility, but it is essential that the kitchen should be pleasant to the eye as well as convenient. A bright, cheerful kitchen with plenty of sunlight and fresh air will insure better service than the small, dark, badly ventilated rooms often dignified by the name of kitchen in some of the houses built solely for the purpose of renting.

The woodwork and walls of the kitchen should be such that they cannot readily harbor insects. Walls of hard plaster that can be cleaned with soap and water are the best. This may be painted and varnished so that it will resist dirt, and will look bright and new when cleaned with a damp cloth.

An iron sink is to be preferred to any other, and can be made to look well by coating with enamel paint. Woodwork around the sink

is particularly objectionable, as it is sure to be a favorite hiding-place for the persistent water-bug, against which nearly all housekeepers have to battle when living in rented houses.

If the kitchen is large enough to admit of movable cupboards, they are desirable when provided with glass doors so that their contents may be readily inspected. If the back and the removable shelves be covered with oilcloth, they will be more easily cleaned.

The range or stove should be a good one, and, if possible, should be placed where the light will reach it from all sides, so that there will be no difficulty in cleaning every part where soot and ashes accumulate. In most rented houses, the range is set into the chimney, so that there is no choice in placing it, but in these cases the back is solid, and the stove opens entirely from the front and top. The subject of the range or stove is one of importance because it is impossible for the best of cooks to prepare a palatable dinner when the fire refuses to burn properly.

The pantry, opening into the kitchen, should have tin boxes arranged along one of the lower shelves for flour, sugar, meal, salt, etc. A large, closely covered box for bread, and one or two smaller ones for cake, are a part of the necessary kitchen furnishing.

The kitchen should have gas jets, or other lights, so placed that everything in the room can be seen easily without carrying a lamp from one part of the room to another. If oil lamps are used, brackets to hold them can be placed against the wall. The floor of the kitchen should be covered with linoleum or heavy oilcloth, unless the floor is of hard wood, and the housekeeper prefers having it kept bright by frequent scouring.

If your kitchen is large enough, it is wise to have one comfortable wooden or wicker chair in addition to the regular hard-bottomed chairs that belong to the kitchen furniture, so that the tired worker may snatch a few moments of rest at intervals during the day when she may not leave the kitchen to seek it elsewhere. The work will seem lighter, and better service will be rendered.

The pots and kettles should have a place out of sight. Hung on hooks under the lowest shelf in the tin-cupboard, they will be convenient and out of the way. The tables should be so placed that one will be near the stove, another near the door leading into the dining-room. We are writing of the kitchen found in modest homes. In stately houses a butler's pantry is indispensable, and so are numberless other conveniences which are impossibilities to the renters or owners of small, unpretentious homes.

The ice-box should be kept in the pantry or in the cellar. Brooms

keep their freshness longer when carefully hung in the cellar-way or shed. Tubs and pails not in constant use should be kept on the cellar bottom with a little water in them; this prevents shrinking on account of dryness, and consequent leaking.

## THE LAUNDRY

The wise housekeeper so arranges the work of wash-day that there shall be as little waste of force as possible. Wringer, washboard, clothes stick, boiler, and an abundant supply of soap, starch, and bluing will be at hand, and there will be a generous supply of tubs in good condition.

The first thing to be considered is the water: When hard water must be used for washing purposes, care should be taken to "break," or soften it. As mineral waters differ widely, it is impossible to give directions for this process that will serve in all cases. Sal soda, ammonia, or lime water will soften water that contains carbonate of lime. The proportion of the alkali used must be governed by the amount of lime in the water. If a large quantity is to be "broken" at once, and there is time for it to settle, quicklime is perhaps the best agent. Pour enough water on the lime to cause it to fall to a powder. After it is slaked, add water enough to make it like thin cream, and then stir into the vessel of hard water. No undissolved lime should be allowed to go into the water. The exact proportion will, of course, depend on the degree of hardness. The water should then be allowed to stand for twelve hours, when the lime will have settled to the bottom, leaving the water soft.

If sal-soda is used, dissolve it in boiling water; when cold add a sufficient quantity of the solution to soften the water. The water is softened when the soap used readily makes a lather.

If the hardness of water is due to the presence of sulphate of lime, it can be softened only by boiling. In boiling hard water, for either laundry or cooking purposes, an oyster shell or a piece of marble placed in the vessel will collect the lime. The shell or marble should be scraped and cleaned frequently.

Proper attention to the breaking of hard water saves soap, labor, abuse of the hands, and injury to the fabrics laundered. When a chemical analysis of the water is practicable, much experimenting may be avoided; but the intelligent housewife will persist in her efforts until she has reached a solution of this important question.

Muddy water, if it cannot be allowed to settle, should be put through a canton-flannel strainer.

Opinions differ in regard to mixing soiled clothes on wash-day. One fastidious woman, who might be called a "crank" on this subject, keeps a special tub, or a very large granite pan, exclusively for napkins and tablecloths, soaking, washing, and rinsing them in it, and using the pan for boiling. Her table linen is never placed in the common boiler.

Towels, pillowcases, and sheets are soaked, washed, boiled, and rinsed separately from body linen. Handkerchiefs have a small tub to themselves for soaking purposes, and so have stockings. Dish-towels are washed and boiled in the same pan as is the table linen, but separately. As dish-towels should be scalded and rinsed after every dish-washing, they should not be very much soiled in any case. The same rule applies to dish-cloths, if such are used instead of the wire contrivances and dish-mops which many housewives prefer. There is also a wide difference of opinion among housekeepers as to the treatment that will bring best results in the washing of white clothes.

Probably the most tiresome method is that of placing the soiled garments, a few at a time, in the suds and rubbing the dirt loose. Some housekeepers soak the clothes over night in cold water; others, for a short time in the morning, in the warm suds. Others, again, startle the advocates of the other methods by placing the dry, soiled articles, when free from stains, into the boiling suds. The one who has not tried it usually declares that such treatment will "set the dirt"; while the one who practises this method cannot be induced to use any other. Many housekeepers think that the soaking of clothes over night tends to "yellow" them. Some boil the clothes for several minutes, while others protest that to secure the best results, scalding only is necessary.

If the clothes are to be boiled first, a bar of any good laundry soap is shaved, put into the boiler of water, and allowed to dissolve. A tablespoonful of kerosene added to the water will aid in dissolving the dirt, but care should be taken that the water boils before any clothes are put into it, else they will be yellowed instead of whitened. The cleanest of the white clothes, from which all stains have been removed, should be placed in the boiler first and be allowed to boil for from fifteen to twenty minutes. Such parts as rise above the water in boiling should be pressed down with the clothes stick, and all should be stirred a little to aid in loosening the dirt.

When sufficiently scalded, the clothes are lifted from the boiler and put into a tub of cold water. The hot clothes and the water that accompanies them heat the water in the tub, and produce a good suds; soap is then rubbed on the places most soiled. It may be surprising to find that now little or no rubbing is needed for the cleaner

things. Washed from this water, they receive another scalding in clear water and from this they are washed out of a second suds; then follows the rinsing water and, finally, the blue water.

When there are two pairs of hands available, the white clothes can be hung to dry much earlier in the day,—thus getting more sunshine,—if all of the waters are arranged at once, so that the clothes may be taken through each in turn instead of waiting until all are washed through the suds.

If the clothes are to be soaked over night, all the fine things should be put in one tub, and the coarser and more soiled articles in another; the table linen in a third. The clothes should be well covered with water. In the morning, when ready to wash, the boiler should be full of clean, warm suds. Soft soap, or a bar of hard soap dissolved in hot water, may be used. All the water in which the clothes have soaked should be drained off and the hot suds is then poured into the tubs. The cleanest articles should be washed first, and when this is done they are wrung and placed in a tub of warm water. In this they are well rinsed. Then soap should be rubbed on the parts that are most soiled and the clothes are ready to be placed in the boiler, which must contain cold water enough to cover them.

For fine clothes, allow the water to boil up once. The garments should then be taken out, and should be placed in a tub of clean, cold water, from which they are rinsed and put into water made slightly blue by means of an indigo bag or liquid indigo. Too many of the prepared bluings contain Prussian blue, which has iron in it; and this sometimes produces iron-rust spots on the clothes. From this water the clothes are wrung; and, after such as need be are starched, they are hung out of doors.

The clothes-lines must be perfectly clean. A galvanized iron wire is best for the purpose, as it can remain out of doors without rusting, and needs only to be wiped carefully before being used. If rope lines are used, they should be taken down after each wash-day; a weather-stained line will often ruin a good garment.

A good soap is always the most satisfactory for laundry purposes. A poor soap is dear at any price. If a considerable quantity of soap be bought and the bars arranged so that the air can circulate between them for a time, they will harden so that less waste will ensue from careless use.

The best of all bleachers is an abundance of sunshine and fresh air. If the clothes are left on the line in the sun, even after they are dry, they will be the whiter for it. It is well to be cautious in the use of washing powders and the various chemical bleachers. Many contain injurious substances that whiten, but weaken, the

fabrics. Borax, turpentine, and kerosene are the safest bleaching agents. Two tablespoonfuls of ammonia, one of borax dissolved in boiling water, or one tablespoonful of turpentine, may be added to a tubful, or boilerful, of clothes. Special attention must be given to removing stains. Some will be set by hot, and others by cold, water. Blood stains are easily removed by soaking and rinsing in tepid soapsuds before the article is scalded.

With proper attention to the care of flannels and knitted woolens, including stockings, much of the common shrinking and hardening of the fabrics may be avoided. Some who have given careful attention to the subject prefer to use borax instead of soap, except for delicate colors that might be faded by the process. About two tablespoonfuls of borax is dissolved in a pail of tepid water, and the garments are soaked in this for twenty minutes. They are then washed, preferably with the hands, as rubbing on a board tends to full them. The rubbing should be done as lightly as possible. Pressing them with the hands and turning them about in the water will remove much of the dirt. When quite clean they are rinsed twice in clear, tepid water, and dried, if possible, in the sun; otherwise, in a warm room.

Another method of washing woolen garments, which many find to give satisfaction, is as follows: Soak the garments for twenty minutes or half an hour in warm suds made with castile soap, or with some good soap manufactured especially for the purpose. The soap should be dissolved in the water and never rubbed on the articles, as the soap in direct contact with flannel hardens and shrinks it. Some add a little borax to the suds. Wash with the hands, and if very much soiled, wash through another suds, then rinse through two warm waters, and dry in the sun or in a warm room.

When a garment is very much soiled, and the dirt is settled in spots, as is sometimes the case, it is well to partially cleanse the spots before wetting the whole article. Lay on a board the piece to be cleansed; take a cloth or soft brush, wet it in warm water, rub it on the soap, and then rub or brush the spots. This will greatly facilitate the washing, and will save other parts of the garment from unnecessary wrenching.

Ecru or cream-colored curtains or other articles may be washed as satisfactorily as white ones. Soak them in clear water, and wash clean. If the articles are ecru, boil a little saffron in water, strain, and add enough to the rinse water to restore the color to the desired shade. For cream color, a very little saffron may be used, or yellow ocher may be dissolved in water, and enough of the strained solution added to the rinse water to produce the original tint. The natural color of linen can be preserved by adding coffee to the water.

Coffee-colored laces can be restored in the same way. Tea is sometimes used to retint laces.

It is scarcely possible to give the exact proportions of any of these materials to be used, but with a little practice, the desired result may readily be obtained. It is usually the safest plan to experiment with a small piece of the goods, until the right shade is produced. If this is not practicable, be very careful not to put in too much of the coloring material at first, as more can easily be added.

To wash summer silks, first clean all spots that can be removed with chloroform, gasoline, or benzine. Add a teaspoonful of ammonia and a little white soap to a pail of tepid water and soak the goods for a short time. Then dip it until it looks clean, but do not rub. Press the water out, so as to make as few wrinkles in the material as possible. Rinse once or twice in water slightly warmed—never use hot water for silk—and then hang it in the shade until partly dry. With a cloth laid over it, the garment should then be ironed until quite dry. Corded silks look richer if pressed on the wrong side. China silk may be washed as above and ironed at once, on the wrong side. No part of the silk must be allowed to become dry before ironing; if it should dry before pressing, dampen it again by rolling it in a wet cloth. Doilies and centerpieces of silk embroidery may be treated in the same way. Use several thicknesses of the ironing blanket over the board and press hard on the wrong side with a moderately hot iron. The embroidery will stand out and look much richer than if ironed flat.

The satisfactory laundering of colored cottons is an operation calling for much care. Too hot water, the free alkali in some soaps, and sunshine, are all ruinous to delicate colors. If soap is used it should be of mild quality, and should be dissolved in the water instead of being rubbed on the goods. These goods are sometimes washed without the use of soap. They may be washed in starch water instead of suds, then rinsed twice in clear water. No other starching is necessary, unless it is desired to have the goods very stiff.

Starch may be either raw or boiled. Boiled starch is made by adding cold water to raw starch in the proportion of one cup of water to three-quarters of a cup of starch, and then pouring on boiling water until it has thickened to a smooth mass. Stir this constantly as you pour on the water. Many laundresses add a bit of butter or lard not larger than a filbert, and others a teaspoonful of kerosene, to prevent the starch from sticking to the irons. A lump of spermaceti dissolved in it gives a good gloss to the laundered garments. A piece of sperm candle may be used for this purpose. All starch should be made slightly blue.

On some deeply colored goods the ordinary white starch shows in splotches. For such goods, colored starches can be purchased which will obviate this difficulty. For some colors, making the starch very blue will suffice. Anything starched with boiled starch must be dried and sprinkled, before ironing. With raw starch this is unnecessary. To make raw starch, allow four tablespoonfuls of starch to a half pint of cold water. Collars and cuffs, or anything to be made very stiff, should be dipped into this and then well clapped between the hands so as to distribute the starch evenly. Articles that are to be starched by this process should be first dried and then dipped into the starch but a short time — certainly not more than half an hour — before they are to be ironed. Roll the articles in a damp cloth, as this will give better results in the ironing.

The various prepared starches now so much used, always have full instructions printed on the packages. Many of these are entirely satisfactory, and are fast taking the place of old methods of starching for fine articles, and for those that are to be made very stiff. It is not necessary to wait for the clothes to dry before using these preparations, and the ironing can follow immediately.

If convenient, fold the clothes for ironing at the time they are taken from the line, as the ironing will be easier than if the articles are crumpled into a basket and have more wrinkles pressed into them. Everything that does not require starch is drawn into shape, lightly sprinkled with clear water, folded smoothly, and pressed down into the basket. Sheets, pillowcases, towels — everything — will iron more easily for being first evenly and smoothly folded.

To fold a sheet properly for ironing requires two pairs of hands. With the right side of the sheet up, let each person take hold of and put together an upper and a lower corner of the sheet. This will fold the sheet in halves, crosswise, with the wrong side out. Now, each holding the two corners in one hand, run the other hand along the edges in such a way as to smooth out the selvages. Take hold of the corners formed by folding and stretch the sheet crosswise. Then, retaining the present hold, gather into the hands from six to ten inches of the selvage edges, and stretch again; then another reach of selvages; stretch again, and so on until all of the edges have been gathered into the hands, and all parts of the sheet smoothed by being stretched in opposite directions. Next, releasing all but the holds of the corners, bring the two corners of one end of the sheet to the corners made by the fold, and the corners of the other end to the other side of the fold, so that the hems lie right side out against the middle fold. The selvage edges are now brought together, making a fold in the middle, and another turn brings the selvages to the fold.

Finally, turn the selvage ends of the folded sheet outward and bring them to the second or last fold, and turning the first or middle fold outward, bring it to the opposite side of the second fold. When ready to iron, it will be found that all the hems can be reached without unfolding the entire sheet, and the result will be quite as satisfactory, with much less labor than if the sheet had been folded lengthwise and then crosswise, as is sometimes done.

In ironing table linen, the wrinkles left by the wringing process can only be removed by thoroughly dampening the articles. The irons should be used very hot, but always be sure not to scorch. The linen must be ironed on both sides until every thread is perfectly dry. Only in this way can the satiny gloss of the damask be brought out. If it is merely pressed smooth and left to dry afterward, the best of damask will look dull and the satin figures will show but dimly. Do not attempt to draw the linen into shape while dry. After sprinkling roll it in a cloth or coarse towel. Just before ironing, while the starch is soft, the napkins are easily drawn into proper shape.

Dinner napkins are folded squarely, always with the initial showing. The first fold is made by bringing the selvages together; the second by bringing the selvages to the middle fold. Next, the hems are brought together, and finally, the hems to the middle fold, with the initial on top.

Handkerchiefs are softer, and look quite as well as if starched, if they are made very damp and then ironed until thoroughly dry. As with napkins, the first and second folds must be lengthwise of the goods, followed by two crosswise folds, so that the result is a square. The initial is, of course, on the outside. Towels must be folded into three parts lengthwise, and then crosswise at the middle.

Many kinds of goods can be made to look like new material by ironing them on the wrong side. The hems and seams must be pressed well again on the right side. This is especially true of corded or figured goods, either white or colored, ginghams, and other colored cottons. In very hot weather, clothes must not be dampened many hours before they are to be ironed, as they will sour, and may even mold. In cold weather this work may be done the night before. If the sprinkling be properly done, the labor of ironing will be much less than if the things have been made either too wet or too dry. It is easy to make the mistake of getting them too wet, and having to iron much longer in order to dry them, than would otherwise be necessary.

For your ironing outfit you will require a half-dozen flatirons with good steel bottoms, a skirt board, sleeve board, and bosom board. These boards should be covered, first with an old blanket, then with

thick, strong, cotton cloth, and finally with a cover or lighter cloth, so fixed that it may be removed for washing. It is well to wash the flatirons once a month in warm water in which a little lard has been melted. This should be done while the irons are warm. Do not let them stand day after day on the stove; and be careful not to spill water on them, as it tends to roughen them.

The use of ironing wax or a little Bristol brick, will prevent the clinging of the starch to the irons. If irons become rough from neglect they should be rubbed on a cloth or paper saturated with coal oil. Rubbing the irons on a branch of cedar laid on a board or table aids in keeping them smooth. This may be done to advantage at frequent intervals during the ironing. If through carelessness or accident an article is scorched, lay it in the sunshine. If the fiber is not burned this will generally remove the mark.

Clothes should hang in the air for at least twenty-four hours after ironing. Unaired sheets may cause serious sickness. Examine all clothes as they are sent up from the wash, and see that all necessary mending is done before they are put away. A word may not be out of place here in regard to the receptacle where soiled clothes are placed during the week. A wicker hamper, allowing circulation of air, is infinitely to be preferred to a laundry bag.

## CARPETS AND RUGS

Rugs have to a great extent superseded carpets, not only in parlors and halls, but also in living-rooms and bed-rooms. There are sanitary reasons for this; rugs can be beaten, aired, and exposed to the sunshine more frequently than carpets.

At the time rugs first began to displace carpets, the carpets were as a rule inartistic. The design of the fabric was at that time in decided contrast with the ground; the figures were bold and were so clearly defined that the carpet sometimes became the chief adornment of the room, instead of a neutral background for the things placed upon it. Doubtless the introduction of rugs is one reason for the recent improvement in the designing of carpets. The manufacturers have been forced by this competition to secure artistic designers, and the result is that some American carpets now compare favorably with those of foreign make, even though the designs are often but copies of the subdued Oriental patterns.

Mats were doubtless the original form from which carpets and rugs have grown by a natural process of evolution. These originated in the Orient, where the practice of sitting cross-legged made and still

makes them a necessity. In ancient Egypt carpets were used in religious ceremonies and also for furnishing the palaces of the Pharaohs. They were not introduced into Europe until about the beginning of the seventeenth century, when they were brought from Persia into France in the reign of Henry IV. In England their manufacture was begun about the year 1750, by artisans who came over from France. The varieties now in use are almost numberless, the most familiar being the Chenille, Wilton, Axminster, Moquette, Velvet, Brussels, Tapestry Brussels, Ingrain, and Venetian.

The best grade is the Chenille. In this the weft is composed of chenille instead of yarn. The pattern is dyed in the chenille and nothing shows on the surface of the fabric except the ends of the chenille fringe. This carpet is very heavy, soft, and of a luxurious appearance. It is manufactured chiefly in Glasgow.

The Moquette and the Axminster carpets are practically the same, the chief difference being that the Axminster is of a slightly better grade than the Moquette. They both admit of unlimited variety in pattern and color.

The Wilton and the Brussels carpets are woven alike and of the same materials,—that is, with a linen back and worsted surface. Wires are inserted between the threads of the warp so that when they are withdrawn they leave a series of loops upon which the design appears. In the Brussels these loops remain, but in the Wilton they are cut open and sheared smooth, leaving an effect similar to that of velvet. In the worsted portion of the material of these carpets, each color requires a separate frame, five such frames being the limit of advantageous manufacture. From this come the grades of this style of carpet, called three frame, four frame, or five frame.

The Velvet and Tapestry Brussels are made like the Brussels and the Wilton, with the difference that only one thread of worsted warp is used, and upon this all the colors are printed before the carpet is woven. That which is cut and sheared is called Velvet, while that which remains uncut is called Tapestry Brussels. These manufactures were brought into England in 1842, and into the United States soon afterward. Owing to some difficulty about the patents, the industry did not flourish at first, but now more Tapestry carpets are used than any other kind except ingrains.

Ingrain is the only carpet which was originally made exclusively of wool. To-day much of the ingrain is part cotton. The threads are dyed before weaving, and it is the interweaving or "ingraining" of the colors which give it the name. These are two-ply or three-ply, according to the number of the intermingling layers. The name ingrain is now applied only to the "two-ply," the other being

distinguished from it as "three-ply." The latter is chiefly of historic interest, for it is practically out of the market to-day. Of the ordinary grades of carpet, the cheapest is the Venetian, which is used almost exclusively for stairways.

The purpose of the carpet and the rug is almost precisely the same. The difference is chiefly mechanical. When the fabric is made for one particular room, it is fitted to that room and is made as a rug. When manufactured in large quantities for the market, it is evidently a matter of economy to make the carpet in a narrow strip, which may be cut to any length, and widened by sewing strip to strip. The rug is still made in one piece, but it is not necessary to fit the rug to the room. It is common to use large numbers of comparatively small rugs, which may be arranged at pleasure. Because of this mechanical difference, rugs are made richer and more elaborate than carpets. A good rug is suitable for almost any room, while the changing of a carpet from one room to another involves both labor and expense.

Rugs are divided into so many classes and bear so many different names, that one is at a loss sometimes to know just what to select. Although most of our rugs come from the Orient, the rug district is confined to a comparatively limited area. The Turkish, Persian, and Daghestan are the prominent Oriental weaves, and from these a great variety of others borrow their principal characteristics.

The Turkish rug is a large square, with thick tufts of red and blue in two or more shades on a greenish ground. They are very little used in this country.

The Persian rugs are the handsomest, richest, and most valuable of the Oriental family. They involve a great deal of fine detail and are very ornamental in patterns of graceful figures, flowers, and birds. The Persian rugs are much more finely woven than either the Turkish or Daghestan rugs, and are exquisite in their marvelous coloring.

The Daghestan rugs are not so valuable nor so fine as the Persian, but very much superior to those of Turkish weave. They are chiefly designed in geometrical patterns in a great variety of well-arranged shades.

All these rugs are made from the wool of the sheep of Asia Minor, and are colored with vegetable dyes by primitive methods. Other rugs come from Japan, and from the Indian districts, but they are much lighter in quality and are composed of few colors.

The Navajo blankets are much in vogue at present. These beautiful fabrics are made by the tribe of Indians whose name they bear, for their own use. The "pale-face" does not use them as blankets, however, but as rugs. In expense they cost from five to

ten per cent of the price of Persian rugs, and in beauty they are not to be compared with them.

A handsome rug is an expensive luxury. It may, however, be classed among the products of the fine arts, like painting and sculpture. It never wearies the eye or mind, but grows continually more satisfying. Time tones down, mellows, and improves the colors. Such a rug will last a long time, improving with age, and destined to be a valuable inheritance.

## WINDOW SHADES AND DRAPERIES

THERE is perhaps no more important consideration in the furnishing of a room than that involved in the treatment of its windows.

How often we enter an apartment that lacks nothing from a decorative standpoint except the tasteful selection of its window shades! In too many cases, they form a disturbing element of the whole effect. For this there is little excuse, as shade cloth is made in a countless variety of colors and tints, and the proper shade may easily be found in any well-selected stock.

All window shades that show from any one point of view from without should be of the same shade. Nothing is more inartistic or displeasing than a variety of window coverings seen from the exterior of the house. Neutral tints are preferable where the shades must be of one color throughout the home, as they harmonize successfully with almost all interior decorations.

At most of the best upholsterers it is possible to obtain hangings for window curtains of many materials. Some of the cheaper kinds of cretonne, jute, and cotton hangings are not only artistic, but extremely moderate in price; there need be no difficulty in providing good and tasteful curtains for any window. In choosing draperies, great care should be exercised as to the colors and general appearance, as most patterns change very greatly under gas and candlelight.

Lace and soft silks are the proper curtains for drawing-rooms. Very often only heavy lace curtains are used. These are hung in straight folds to the floor. When silks are used, they should not conceal more than a third of the lace curtains. Silk outer curtains may be either hung straight or festooned over the poles.

Nottingham lace curtains are the least expensive, and are pretty and serviceable, but better suited to the upper windows of the house. Swiss lace curtains are equally desirable, and come at the same price. Irish point lace curtains are very popular, and may be had

in a variety of grades. Madras curtains, though not as much used as formerly, are excellent for both wear and color effect, their soft tints blending well with almost any style of furnishings.

Among silks, and silk and cotton materials, the China and Indian silks are the cheapest. They make graceful and appropriate draperies for windows that are not too large. The silk and cotton damask curtains now offered for sale, come in rich designs and are made up with or without linings of soft contrasting silks. Ecru curtains are more desirable for sitting-room and dining-room, than those of white. Simple muslin curtains should be used in bedrooms and bathrooms, as they require frequent changing.

## TAPESTRY

A MARKED increase in the use of tapestries for upholstery has taken place in this country within the past generation, the material being employed, as in its original usage, for covering the walls of apartments, and also for covering the backs and seats of furniture.

The better tapestries of modern weave are the product of several famous factories. The Aubusson tapestry is made in the city of Aubusson, and is used principally for wall-hangings and curtains. The greater part of the tapestry offered for sale in France is said to be of this make. In general, old designs are copied, or modified to suit the size of the rooms for which the hangings are ordered.

The Cluny tapestry is a strong, thick cloth of wool and silk, made in England. Gobelin tapestry is produced at the establishment of that name in Paris. The designs are very complicated, and are produced in brilliant and permanent colors.

There are many imitations of the famous tapestries, some in printed worsted cloth, for chair, table, and sofa coverings; but unless good tapestry can be obtained, it is better to restrict oneself to less pretentious materials for hangings and upholstery.

## DECORATIVE WOODS

AMONG the woods most used in the furnishing and decoration of houses, are mahogany, rosewood, satinwood, oak, cherry, maple, cedar, butternut, walnut, and pine.

*Mahogany* is a very hard wood, susceptible of high polish and remarkable for its beauty of grain and its great durability. It is of a reddish brown color and is largely used in the making of fine furniture.

*Rosewood* comes principally from Brazil; it is used chiefly in veneers for pianos, cabinets, tables, etc. The wood is fine and hard,

and of a dark reddish brown color, streaked with black. When first cut, the wood gives out a faint odor of rose, from which characteristic it derives its name.

*Satinwood.*— This tree is a native of India. Its wood is very hard, fine, and durable, and possesses a luster like that of satin. It is of a yellowish color and is valuable for fine cabinet work and interior decoration.

*Oak.*— Though a very light wood in weight, oak is sufficiently tough and durable to make it extremely desirable for the manufacture of furniture, flooring, house-trimmings, and for all kinds of cabinet work. This wood is among the least expensive of furnishing and decorating materials.

*Cherry.*— There are several varieties of cherry wood used in furniture making and house decoration. That of the wild black cherry is highly esteemed. Its wood is light and hard, of a brown or reddish tinge that becomes darker with exposure. Cherry wood has become scarce of late, so that stained birch is often used as a substitute.

*Maple.*— Several varieties of maple are highly valued for their wood. Bird's-eye maple, so called from the small round spots in its grain, is much used in cabinet work for fine furniture, paneling, etc.

*Cedar* is very valuable, light in weight, straight-grained, durable and fragrant. It is used for closets, storage chests, boxes, and flooring.

*Butternut*, also called White Walnut, is of American growth and bears a strong resemblance in its general appearance to the black walnut, although not so hard and durable. It is susceptible of a fine polish, and is largely used in interior finish and cabinet work.

*Walnut.*— Walnut wood is not as much used as formerly, and has been superseded by other lighter-toned woods. It is heavy, very ornamental, and susceptible of high polish; it is of a purplish brown when first cut and grows darker with age.

## THE GROUNDS

The grounds surrounding the town or country house add so much to the attractiveness of its appearance that they should be carefully laid out and well kept. A smooth, green lawn, with a few flowering shrubs or small trees, is far more pleasing to the eye than one with a number of flower beds.

Flowers should have a place of their own at the side or rear of the house. A climbing rose, a honeysuckle, or a Madeira vine, looks well when artistically trained over the veranda; and the brilliant foliage plants near its base furnish enough bright color to relieve the unbroken green of the lawn without destroying its beauty.

Fruit and vegetables from your own garden will possess a flavor not found in any that you may buy from the greengrocer, and will well repay you for the care bestowed upon them.

In modest city houses, where there are no grounds to beautify, one may have window-boxes, or small conservatories, made by building a frame the length of the window, extending beyond it in width, and covered with open wirework. It should have a substantial floor and shelves of wood. Arrange the plants along the shelves so that the heavier pots will be on the bottom. This must be securely fastened and braced with iron rods, to prevent its breaking down under the weight of the potted plants. If glass be fitted into your "flower cage" late in the fall, you may enjoy the fragrance and beauty of blooming plants all winter.

## INCOME AND RENT

An important consideration in the selection of a house is its adaptation to the circumstances of the family; its suitability to their financial and social standing. If the rent is out of proportion to the income, it expresses what the family is reaching after, not what it has attained. Comfort should be the first consideration; then as much luxury as can be paid for with ease, but no more. Every young woman in beginning her housekeeping should make the most of the means at her command, but should never sacrifice her physical and moral well-being to a desire for display.

With the majority of families who rent, the amount paid is the first thing to be considered. As a rule, people are tempted to expend too large a part of their income in rent. One fourth is a reasonable proportion, but in the city, one-third is sometimes devoted to rent. The income of some families is so small that one-fourth of it would hardly allow room for privacy. But if more than one fourth is paid, this expenditure should be made up by economies in other directions. It is desirable to own one's home. The combined amount of the interest and taxes will hardly equal the annual rent. The repairs will be an item, but they will be for the improvement of the property, and can be made at the convenience and not at the caprice of the landlord. To own a house is a great incentive toward avoiding useless luxuries or ephemeral pleasures, that the house itself may be adorned or improved.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