A VOLLEY BALL MANUAL FOR COACHES AND PLAYERS

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A VOLLEY BALL MANUAL FOR COACHES AND PLAYERS

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TABLE OF CONTENTS

LIST OF ILLUSTRATIONS ........................................... iv

Chapter

I. INTRODUCTION TO THE STUDY ................................... 1

II. HISTORY OF THE GAME OF VOLLEY BALL ....................... 4

III. GENERAL POINTS CONCERNING VOLLEY BALL .................. 13

IV. COURT AND EQUIPMENT ........................................ 16

V. SERVING ...................................................... 23

VI. DEFENSE ...................................................... 32

VII. THE ATTACK .................................................. 37

VIII. SUMMARY ...................................................... 47

BIBLIOGRAPHY ..................................................... 50
<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Position of Referee and Lineemen</td>
<td>14</td>
</tr>
<tr>
<td>2.</td>
<td>Diagram of Court showing Position of Players and Order of Rotation</td>
<td>13</td>
</tr>
<tr>
<td>3.</td>
<td>The Net</td>
<td>20</td>
</tr>
<tr>
<td>4.</td>
<td>The Underhand Serve</td>
<td>24</td>
</tr>
<tr>
<td>5.</td>
<td>The Overhand Serve</td>
<td>26</td>
</tr>
<tr>
<td>6.</td>
<td>Modified Overhand Serve</td>
<td>27</td>
</tr>
<tr>
<td>7.</td>
<td>Cut or Side Spin Serve</td>
<td>23</td>
</tr>
<tr>
<td>8.</td>
<td>Side Arm Serve</td>
<td>50</td>
</tr>
<tr>
<td>9.</td>
<td>The Man Block</td>
<td>38</td>
</tr>
<tr>
<td>10.</td>
<td>Backing Up the Blockers</td>
<td>34</td>
</tr>
<tr>
<td>11.</td>
<td>Receiving the Serve</td>
<td>35</td>
</tr>
<tr>
<td>12.</td>
<td>Defensive Stance</td>
<td>36</td>
</tr>
<tr>
<td>13.</td>
<td>The Attack</td>
<td>37</td>
</tr>
<tr>
<td>14.</td>
<td>Set Up Practice</td>
<td>40</td>
</tr>
<tr>
<td>15.</td>
<td>Standing Jump</td>
<td>42</td>
</tr>
<tr>
<td>16.</td>
<td>Running Jump</td>
<td>42</td>
</tr>
<tr>
<td>17.</td>
<td>Cross Court Spike</td>
<td>44</td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION TO THE STUDY

During the ten years preceding World War II tremendous progress was made in the development of the game of volleyball. More and more teams were attending the National Tournaments. The rules have undergone so few changes since 1930 they may be considered very nearly perfected. During the war volleyball increased even more in importance. It was used as a means of recreation for the armed forces, and also as a part of the physical training program. Physical directors recognized the value of volleyball in developing and maintaining good health. Many people who had never played or seen a game of volleyball were introduced to the game. They liked it immediately. Very few had the time or opportunity to play enough really to become good players, but the desire is still there. Those who did have the time are now continuing the game in Y. M. C. A.'s and athletic clubs all over the country.

There is, however, a lack of skilled instructors and written material on the game. Many high schools develop a team for active competition with other schools. Most of the coaches have had very little, or no training in volleyball. The results is poor playing, which is often harmful to the game. It can easily discourage players, and would-be players. If these
coaches and players had some source of information to answer their questions about the game and help develop better techniques of play, it is reasonable to assume that the game of volleyball would eventually become as much a part of the athletic setup of high schools and even colleges as football and basket ball. The writer, in playing the game of volleyball both in the service and in schools, was aware of this need and took action to meet it.

Statement of Problem

The present study was undertaken to prepare a volleyball manual for coaches and players, based on the actual experience and instruction of the author during several years of playing and studying the game.

Purpose of the Study

The purpose of the study is to prepare a manual that will aid in the coaching and playing of volleyball in interscholastic, intramural, and amateur competition. It is hoped that a better understanding of the game, its fundamental procedures, and playing techniques will aid in arousing, and maintaining the interest of the public, both as players and as spectators in the game.

Limitations of the Study

This study will be limited to the fundamentals of the game and team strategy of volleyball, and the explanation of such rules as is necessary to present the material clearly. It is intended mainly for junior high school and grades above,
but may be used to instruct children below that age level.

Sources of Data

The documentary sources of data consisted of the latest published books on volley ball and the Official Rule Book of the United States Volley Ball Association.

The human sources of data were the experiences and observations which the author obtained over a period of approximately ten years by active participation in volley ball, including four years of amateur competition in California and Texas and from coaches and team instructors in these two states.¹

Procedures

The procedures used to develop the study were:

1. Collection of the data.

2. Arranging the data in the order that it is to be presented.


¹ The author was a member of the volley ball team at Willis Point High School during his junior and senior years. In his senior year he participated in both the county meet and district meet for volley ball. After graduation he attended North Texas State Teachers College, where he participated in intramural volley ball, there being no intercollegiate competition offered in the game. On graduating from college in 1942, he enlisted in the U. S. Navy. While stationed at Alameda, California, he became an active member of the Varsity team at the Oakland, California Y. M. C. A. He was a member of this team when it won the Northern California Y. M. C. A. Tournament in 1944 and again in 1945. After his discharge from the navy in the spring of 1946 he returned to North Texas State College to resume his college studies. During the past year he has been a member of the volley ball team of the Central Y. M. C. A. of Dallas, Texas
CHAPTER II

HISTORY OF THE GAME OF VOLLEY BALL

Volley Ball came into existence in 1895 in the Holyoke, Massachusetts, Y. M. C. A. It was started by William G. Morgan, the physical director, who was a graduate of Springfield College, Massachusetts, and a student of Dr. Naismith who had originated the game of basketball only a few years before.¹

The business men's classes at the Holyoke, Massachusetts, Y. M. C. A. were quite large and enthusiastic. William G. Morgan felt keenly the need of some form of recreation and relaxation. There was a need for something that could be played the year round. It must fit the limited floor space of a gymnasium. Basketball was well suited to younger men, but was too strenuous for the older ones. Tennis was considered, but this demanded too much equipment and space. But William G. Morgan still held to the idea of a net. The net was raised to six feet six inches from the floor. For a ball, they first tried a basketball bladder, which proved to be too light and too slow. A basketball was then tried, but it was too large and heavy. Finally it was decided to have a new ball made on the lines of the present one. It was made by A. G. Spalding Brothers², and proved very satisfactory.

¹Robert E. Laveaga, Volley Ball, A man's Game, p. 1.
²Ibid. p. 1.
At a conference of physical directors held at Springfield, Massachusetts, Y. M. C. A. College, William G. Morgan was asked to give an exhibition of the game. He took two teams consisting of five men on each team. After the playing, Morgan turned the game over to the convention to use as they saw fit. The physical directors decided it was a game that filled a place in recreation not filled by any other game. A set of definite rules was drawn up, and volley ball became a part of the Y. M. C. A. recreation program. From there it spread to other recreation organizations and to schools.

As the game developed, changes were made from time to time. The first rules were very brief. The game consisted of innings like baseball. Any number could play on each side provided both sides had an equal number. Each man on a side served in order in each inning, every man serving at least once before the other side got the serve. Each man continued to serve until his side failed to return the ball. The court was twenty-five feet wide and fifty feet long, with a net across the center. The top of the net was six feet six inches from the floor.  

The ball was a rubber bladder covered with leather. It was to measure not less than twenty-five inches or more than

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3 Ibid. p. 2
4 Ibid. p. 3
twenty-seven inches in circumference, and was to weigh not less than nine nor more than twelve ounces. The ball has changed very little since that time, and perhaps no difference in one then and now could be told except in the quality.

By 1900 the game was developing rapidly. A set of official rules was adopted by the Y. M. C. A. They had undergone enough changes to speed up the game and make it a really competitive sport. Between 1900 and 1912 there were a few changes in the game. However, it was rapidly becoming popular all over the country, especially in the Y. M. C. A.

In 1917 the first Volley Ball Guide appeared. It was published by the American Sports Publishing Company. The National Collegiate Association joined the Y. M. C. A. in the preparation and adoption of the rules. Certain changes in, and additions to the rules were made. A great deal of credit was due to G. J. Fisher of the Y. M. C. A. Physical Directors Society. He was editor of the first edition of the rules, and continues to hold that position.

In this same edition was an article by Edward S. Brown, one of the physical directors of the Y. M. C. A.'s foreign work. He wrote an article on volley ball in the Phillipines and mentioned one of the rules that was later adopted in this

5 Ibid. pp. 3-4.
6 Ibid. p. 7.
7 Ibid. p. 7.
country. "The ball may be touched only three times within a court before being returned, in case the ball is driven into the net one additional touch shall be allowed." The first part of the rule was later accepted as a vital development in the game.

In 1922 the first Y. M. C. A. National Volley Ball Tournament was held at Brooklyn, New York. There were twenty-three teams from eleven states. It has been held continually ever since except during World War II. Pittsburgh, Pennsylvania Central Y. M. C. A. was winner in 1922. Several changes were made in the rules, which added interest to the game.

The following were changes in the rules:

1. The ball may be touched only three times by one team before being returned over the net.

2. Center line. Two inch painted line and to extend across the court under the net. No player being allowed to touch the floor under the net.

3. Substitution. Player taken out of one game may be replaced at the beginning of any subsequent game in the same match.

4. Scorer. Is to keep score and watch center line for infractions.

5. Playing the Ball. Player not allowed to spike the ball when playing in a back field position.

In 1923 the National Amateur Federation officially adopted the rules to govern the play. The rule book for 1923

Ibid. p. 9.
Ibid. p. 11.
outlined the techniques and general principles of the game. The National Tournament for that year was held at the University of Chicago, Hyde Park Building, and the Chicago Y. M. C. A. College. Thirty-two teams from twelve states participated in a double elimination tournament. A trophy was donated by C. C. Robbins of Chicago, Illinois. It was to be awarded to the team winning the Y. M. C. A. National Championship, and to be kept for one year, or until a new champion was determined. Pittsburgh, Pennsylvania won this tournament.

The National Tournament was held at Pittsburgh, Pennsylvania in 1924. The Pittsburgh "Y" again showed its superiority by winning this tournament. The same rules were used in 1924 as in 1923.

In 1925 the scoring rule was changed from twenty-one points to fifteen points for a game, with the specification that the winning team must score two points more than their opponents to win. The 1925 tournament was played in Des Moines, Iowa. Pittsburgh won again for the fourth straight time. There have been very few changes in the rules from 1925 until now.

The Pittsburgh team won the 1926 Nationals at Philadelphia, Pennsylvania for the fifth, and up until now, the last time. It is a record that has not been broken or even tied for the Robbins Trophy. Houston, Texas has won it seven times, but not in succession. The winners of the tournament were invited to Porto Rico to give exhibitions, and play teams of that country.
Indiana entertained the Tournament at Fort Wayne on May 6th and 7th, 1927. A new volley ball winner was crowned, the Hyde Park Y. M. C. A. of Chicago, Illinois. During the tournament several outstanding instances of real sportsmanship were noted. This helped increase the popularity of the sport both with the audience and the players. Today it is taken for granted that players will play fairly without pressure. Teams that are poor sports are seldom if ever seen at the National Tournament.

During 1927 the Amateur Athletic Federation requested that a National Tournament and Championship be held in which other than Y. M. C. A. teams might participate. In 1928 the National Volley Ball Association was formed.

The first Open National Volley Ball Tournament was held in Chattanooga, Tennessee, in 1928. There were twelve teams from twelve different states. Germantown, Pennsylvania, won the tournament. They had been trying very hard since 1922, but had never been able to come out on top. They accomplished the almost impossible task of coming up through the losers' bracket to win after losing in the first round to Hyde Park, Chicago, Illinois. Other teams were Brooklyn, Central New York, who finished third, and Grand Rapids, Michigan, Selma, Alabama, Atlanta, Georgia, Kannapolis, North Carolina, San

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Ibid. p. 15.

The Veterans tournament was held at Chattanooga, Tennessee, a day before the Open tournament, and was the first of its kind in the Y. M. C. A. Participants had to be over thirty-five years of age. The Chattanooga, Tennessee Chamber of Commerce donated a trophy for this event. It was to be given to the championship team to keep for a year, or until a new champion was determined. Chattanooga won it that year.

(\text{The following changes were made in the rules in 1928:})

1. Net. One inch vertical marker the width of the net and parallel with the side lines. The ball striking outside this shall be dead.

2. Ball. Air pressure not less than seven and one-half nor more than eight pounds.

3. Players. Substitution made when the ball is dead, after reporting to scorekeeper. Not to converse with players until after play has resumed.

4. Officials. Umpire to take position opposite referee.

5. Time Out. On time out either team may have the ball for practice but only on their own court.\footnote{\textit{Ibid.} p. 17.}

The changes since that time have been so slight that one can almost believe that the rules have become permanent.

The 1929 National Tournament was held at the University of Chicago gymnasium. Hyde Park regained the laurels which
it had lost the year before. (This year the hard overhand serve was introduced by the western teams. The players and spectators, in general, voiced their disapproval. However, this serve has since become an accepted part of the game.) This year, also, a trophy for the Open Tournament was donated to the United States Volley Ball Association by Herbert L. Pratt of Chicago, Illinois. It was to be given in the same manner as the other two. It is possible for a Y. M. C. A. team to win both the Y. M. C. A. trophy and the Open trophy. An open team cannot win either the Y. M. C. A. trophy or the Veterans' trophy. In 1930 Hyde Park again won the National Tournament held at Columbus, Ohio.

San Antonio, Texas carried off the trophy in 1931 from Rochester, New York, by coming up from the losers' bracket after being defeated in the second round. (By now the hard serve was an accepted part of the game. Defense and methods of attack had become highly developed.

San Antonio went to Chicago in 1932 to win again the Robbins Trophy by way of the losers' bracket. Houston Y. M. C. A. of Texas won the trophy in 1933. They won it every year from 1933 through 1940 with the exception of 1937, when Duncan Y. M. C. A. of Chicago was the winner. There was no tournament from 1940 until 1946. In 1946 the National Tournament was held again in Chicago. Pasadena, California Y. M. C. A. carried off the honors, with Los Angeles, California Athletic Club placing second. Houston, Texas won the Veterans' trophy.
In no American sport is better sportsmanship displayed today than in volley ball. Perhaps one reason for this is the fact that volley ball has not been played professionally; however, the game itself seems to demand the best of its players. Since there is no intercollegiate competition, the interscholastic play is rather limited. In some parts of Texas there are county and district volley ball meets; however, they do not go past the district. High school girls play volley ball more than boys.

Since the end of World War II there seems to be an increase of interest in the game. The 1947 National Tournament is to be held at Houston, Texas and there is a possibility that some foreign teams will be represented there, thus making it an international tournament. Volley ball is being considered in the 1948 Olympic Games which will be held in London, England.13

CHAPTER III

GENERAL POINTS CONCERNING VOLLEY BALL

Before going into the techniques of play, certain general points about the game should be explained. Also certain commonly used terms should be defined.

In volleyball the main offensive consists of three movements, - the bring up, the set-up, and the spike. The player who receives the serve puts it in the best possible position for the set-up man. This is called "bringing it up". The set-up man plays in the position directly ahead of the spiker. This is called the "set-up". The spiker then plays the ball across the net in such a manner as to prevent its being returned if possible. This is called a "spike" or "kill".

All these movements require perfect timing. By "timing" is meant putting the ball in exactly the right place at exactly the right time, the player hitting the ball at exactly the right time, spot, and angle.

Blocking is the main point of defense. By "blocking" is meant getting the hands in front of the spiker in such a manner that the ball will rebound into his court.

"Serving" is putting the ball in play, it being driven from the serving area of one team into the playing court of the other team, without striking any obstructions on the way. There are six players on each team. They serve in order in a
clockwise manner. (See Fig. 1). The right forward drops back to the serving court, the left back goes to the net, each player moving one position clockwise. A player serves until the ball becomes dead on his side of the court. They do not rotate except on the serve.

![Diagram of court positions]

*Fig. 1. "Position of Referee and Linesmen"

The referee sits above the net and at one end of it where he can plainly see both courts. To help him is a linesman who sits beneath the net at one side, and outside, the court. He is usually opposite from the referee. He calls the center line, and helps call the net. He sometimes acts as score-keeper. It is best to have someone else to keep score, however. There are two other linesmen who sit diagonally across from each other at opposite corners of the court where each can see a backline and a sideline. In some Y.M.C.A.'s and athletic clubs electric scoreboards are coming into use. There is little need for them however except at a large tournament.
Fig. 2. Diagram of Court Showing Position of Players and Order of Rotation
CHAPTER IV

COURT AND EQUIPMENT

One of the advantages of volley ball is the relatively small amount of space required to play it, and the places it can be played. Almost any schoolground or playground, even in crowded cities, has room for at least one volley ball court. It may be played outdoors as well as indoors, if the weather permits. Quite a few gymnasiums are large enough to have two volley ball courts, although usually they have to be put crosswise, which might force them to be shortened in length. This would serve very well everyday play and practice, and at the same time handle twice as many players as a single court.

While outdoor courts are satisfactory for recreation, they are seldom suitable for developing a team for strong competition. Concrete or asphalt courts are easy to mark off and to keep up, but are very hard on the players' feet. They can also cause bad bruises, skin burns, and even broken bones in case of a fall. Courts that do not have a hard surfacing are very difficult to maintain if used often. The lines have to be remarked frequently, due to destruction by much trampling by players and by bad weather. A good grass court is perhaps the best. The sidelines can be more permanently marked by mowing the grass shorter. White lime can also be used to mark the sideline, as it will not injure the grass. A grass court
has the disadvantage of being rather slippery, making it difficult to move quickly. Also the grass may wear away in spots, then the soil underneath will continue to be kicked and worn away, thus causing holes in the court. This is most likely to occur along the net where considerable jumping is done by the spikers.

In considering dirt courts, sand is perhaps the least desirable. It offers very unstable footing, making rapid and skillful movement difficult and even impossible. However, beach volleyball is very popular in many parts of the country where a sandy beach is available. But in such places it is played merely for recreation and not as a competitive sport. As a means of recreation it serves its purpose admirably. Clay, or just plain dirt courts, do not stand up well under constant use. The surface soon becomes very uneven and full of holes. Usually a trench is worn out along the net positions. This makes skillful play difficult, and also makes it impossible to keep the net at the proper height.

The weather is usually an important factor to be considered in outdoor volleyball. Naturally rain, cold, or high winds prevent play. These weather elements cause courts and equipment to deteriorate, as in most places the nets stay up all during the season that volleyball is being played. In some places the nets stay up the whole year around. It is very difficult to keep the nets at the proper height, and properly tightened. Atmospheric conditions are continually causing them to stretch or shrink, depending on the weather.
It is difficult to light an outdoor court properly. Some parts of the court are in the shadow and other parts have too much light. There seems to be no way to light the outdoor court as well as an indoor one. Also there is the problem of dirt and dust to contend with. Shoes and socks, and even clothes or uniforms become soiled very rapidly, and soon wear out.

In spite of these many handicaps volleyball owes much to outdoor playing. Most players first learn the game there, either at school or a recreation area. A large majority of beginners do not have access to a gymnasium. As a rule the gymnasium is reserved for training a team, and for active competition. Most Y. M. C. A.'s have two volleyball periods—one for recreation only, when anyone can play, and one for the Varsity team, if the "Y" is large enough to back a Varsity team.

For developing a team for active competition a good gymnasium is desirable. There should be ample floor space outside the actual playing court, at least three feet on each side and six feet at the ends, since a player may leave the court to play a ball. A court may be drawn off in any gymnasium that has a basketball court, without interfering with the lines of the basketball court. The ceiling should be no less than fifteen feet from the floor, and higher if possible, and free from obstructions.\(^1\) It should be well lighted with

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as little glare as possible and with no lights directly above the net, as this interferes with both set-up and spike. Window lighting is undesirable, and window panes should be painted so as to exclude any bright outside light.

The court should be sixty feet long and thirty feet wide. The boundary lines are two inches in width. The floor should be free from any obstructions for at least three feet beyond the court borders, and preferably more at the end. There shall be a center line dividing the court into two equal halves thirty feet by thirty feet. This line is two inches wide and is considered to extend indefinitely beyond the side lines. Each playing court is divided into six positions in the following manner. Two small crosses are painted in each court on the floor, each being ten feet in from the sidelines and fifteen feet from the net. The crosses should be made of lines one inch wide and six inches long. They can, however, vary in size as long as their location is not changed. (See Fig. 2). The positions are named (1) Right Back, (2) Center Back, (3) Left Back, (4) Left Forward, (5) Center Forward, and (6) Right Forward.

Another line is drawn ten feet inside each side line and parallel to the side lines. It begins two inches from the net and extends six inches towards the back line. The proper width is about one inch, but this may vary. These lines are merely to aid the players and the referee.

On the service a player must be inside his proper part of the court, and remain there until the ball crosses the net.
He may then move about the court as he chooses. The serving area is behind the back line of each court and is ten feet wide. The right boundary of the serving area is a six inch line which is actually a continuation of the right sideline. The left boundary of the area is marked off by a line six inches long, one inch wide, parallel to and ten feet from the right boundary. The serving area is six feet in depth and should not contain any obstructions.

The boundary lines and all other markings should be kept clearly marked, and the floor kept clean. There is not as much running and sudden stopping in volley ball as there is in basketball, but a dirty floor can cause a bad fall just the same.

![Diagram of a volleyball court](image)

**Fig. 3. "The Net"**

The net should be three feet wide and thirty-two feet long when stretched. This makes it extend one foot beyond either side of the court. It should be of strong heavy cord, dyed black or dark brown, and bound top and bottom with a
quarter inch manila rope. A double thickness of heavy white canvas, two inches wide, should be sewed to the top and ends of the net. For the purpose of holding the net tight, a flexible steel cable three-eighths of an inch in diameter can be run through this tape. A rope cannot be drawn tight enough for best results. (Such a net can be obtained from reliable sporting goods companies). The bottom of the net can be drawn tight by the use of short lengths of rope.

The net should be tightly stretched by the four corners across the court and directly above the center line. The top of the net should be exactly eight feet above the floor for men, and seven and one half feet above the floor for women players. It should be stretched tight enough for the top to be as nearly level as possible, and for a ball to rebound from it while in play. The net should be fastened to the wall or uprights which are at least three feet from the sidelines. A two inch white tape should run from the top to the bottom of the net, one foot from each end and vertical to the sidelines. This is to aid the referee and players in judging balls that clear the net outside the court.

The ball is a round rubber bladder covered with a twelve piece, laceless leather cover. It must be not less than twenty-six inches and not more than twenty-seven inches in circumference. It must weigh not less than nine ounces and not more than ten ounces, and the air pressure must not be less than seven and one-half pounds or more than eight pounds. There are some rubber balls on the market which are suitable for recreational
purposes, especially out-of-doors, but they are not satisfactory for competitive play. They have too much bounce, are usually overweight, and soon stretch until they are too large. Their one advantage is that they are not affected by the weather. A leather ball should never be used out-of-doors on wet days or allowed to come in contact with water or oil at any time.

The uniform is usually identical to that of a basketball player. Some players use low topped shoes as they are lighter and may enable a player to move a little faster or jump a little higher. The difference is very small, however. The shoes should have a good, soft insole and strong arch, especially if the player is a spiker. He will do a lot of jumping, and good shoes will save his feet and legs. In National competition players are required to have numbers on both front and back of their jerseys. The numbers must be not less than six inches tall in the back and four inches in the front.\(^2\) These numbers would be desirable in any competitive game as an aid to the officials and scorekeeper. The use of sweat-suits is merely a matter of choice by the coach or players. If a player wears glasses he should have either unbreakable ones or a head guard.

\(^{1}\)Ibid. p. 129.
CHAPTER V.

SERVING

Serving is putting the ball in play by a player of one team who stands in the serving court and knocks the ball over the net into the other court. A team can score only on its serve; so the better the serve, the better the chance of scoring. Probably no two people serve exactly the same way, but there are many who use the same style. Though in strong competition few aces are served, they happen often enough to make developing a good serve worthwhile. Also the harder and trickier the serve, the more difficult it will be to bring the ball up for a good set-up. A really good serve can be acquired only by hard and diligent practice. A player should pick out the style he feels he can do the best and stick to it. It is better to be an expert on one style than to be able to serve many different ways only moderately. Since a team can score only when it serves, a bad serve could easily be considered the loss of a point. The player who makes a bad serve does not give his team mates even a bare chance to score. If a team plans to enter tournaments and play match games, it cannot over estimate the importance of the serve. Much time should be spent practicing it.

In serving, the player must stand inside the serving area. This area is ten feet wide and six feet long. (See Fig. 2).
The player must not step on or over the base line of the serving court until the ball crosses the net. This rule includes stepping over the line without letting the foot touch the floor outside the serving area.

The most common serve is the underhand serve. Practically all beginners start serving underhanded. It is the simplest and also the easiest. It is also the most accurate. While most expert players develop an overhand serve, they should also keep practicing on the underhand serve to fall back on in an emergency. In the underhand serve the player merely faces the net with the left foot ahead of the right in order to allow a more free swing. Some servers stand with the feet together, but this stance affords less balance and accuracy of serve. He holds the ball lightly in the left hand, in front and from knee to waist height, depending on which position suits him best. The ball is struck by swinging the right arm forward. The whole procedure would of course be reversed for a left handed player.

Fig. 4. "The Underhanded Serve"
With this serve the player should be able to make the ball just barely clear the net, or with as much clearance as the ceiling will permit, and still land in the opposite court. He should practice until he can serve to any member of the opposite team that he chooses to. In strong competition it is not considered poor sportsmanship to keep serving to a weak player. A slow floating ball is sometimes deceptive, and is not always as easy to handle as it may appear. The ball should not be served to the spiker first. It is better to serve to the set-up man. Then he must either set up the first ball, which is usually difficult to do with accuracy, or pass it to someone else who may not be in a good position to set it up properly. Always serve to the position that will make it the most difficult to bring up to the set-up man. Serve the ball to him in such a way that he will either have his back or side to the spiker. In a close game if the server frequently misses his hard overhand serve, he should resort to the underhand serve. It is better to have a sure serve and a chance to score than only a fifty chance of the serve being good. Quite often if the serve is high and deep or over to one side the opponents will misjudge the ball and allow it to fall unplayed, thinking it would be outside. A serve that just barely clears the net sometimes rattles the opposition and spoils a good set-up. It is possible to put a lot of forward spin or side spin on an underhand serve, but usually only at the sacrifice of accuracy. A spinning ball is harder
to handle, but a dead floater is frequently rather erratic in flight, and may cause the receiver to muff it. Both are difficult to judge as to speed and to where they are going to land. The spinning ball may jump out of the receivers hands in the wrong direction.

In serving underhanded the ball may be struck with the closed fist or open hand. The ball of the hand at the base of the thumb is perhaps used most. It must be a distinct blow; it is illegal to carry the ball in the hand long enough to make it appear to be thrown over the net.

There are several styles of overhand serves. Anyone interested in becoming an expert volley ball player should develop a good overhand serve. He should choose the style he feels he can do best and stick to it. It would probably be impossible to say that any one style was the best, although some are better than others. They are all good if the player will really develop them.

Fig. 5. "The Overhand Serve"
One of the most common overhand serves is where the player faces the net with the feet side by side or one slightly ahead of the other, tosses the ball up and strikes it when it is a little above his head and in front of the arm he strikes with. He may strike with closed fist or open hand. The open hand perhaps affords better control and delivers about as much force as the fist. With this serve the ball must not have much altitude or it will go on outside the back line. Neither can a person hit it as hard as he might desire, even though it just barely clears the net, because this type of serve floats considerably and does not lose altitude readily. If the player gets to where he can serve a dead ball, or one without any spin, it becomes rather erratic in flight and harder to handle by the opposition. It may make a sudden dip or side shift right in front of the receiver, causing him to miss it or to play it badly. It is practically impossible to serve a hard overhand serve to a net man, or frontline player, as the ball will not drop rapidly enough.

Fig. 6. "Modified Overhand Serves"
Practically all other overhand serves are modifications of the simple overhand serve just described. Some players toss the ball upward and slightly backward, striking it while it is still rather high with the hand open and slightly cupped. This gives the ball more altitude to start with and considerable forward spin. This causes it to drop rapidly. It can also be struck harder than a straight forward serve. Another method is to strike the ball when it is just above shoulder height and about two feet in front of the body. The arm is extended somewhat in the manner of a boxer striking a punching bag an overhand blow. This gives the ball considerable speed and a fair amount of drop. It is also possible to hit a dead ball in this manner.

Fig. 7. "Cut, or Side-Spin Serve"

A serve that is good, but seldom used because of difficulty in mastering, is the cut or side-spin serve. It is similar to a tennis serve that puts a lot of side-spin on the ball. Side-spin means the ball is spinning sideways as it goes through the air. Few people ever master this
serve and even if they do they often make a bad one. It is very difficult to judge and to play. The server stands with his left side to the net, tosses the ball up and almost directly overhead. It is struck with the arm almost fully extended, giving the ball plenty of height to start with. He may strike with either the closed fist or flat of the hand. He hits the ball on the backside with a glancing blow, with the arm moving almost parallel to the net. The procedure is reversed for a left handed player. Timing must be nearly perfect, the ball being struck at the same spot and angle as nearly as possible each time. A slight deviation may cause the serve to go almost anywhere. The player may swing as hard as he pleases. The accuracy and effectiveness of the serve depends mostly on the amount of spin put on the ball, as it does not require much forward motion to carry it over the net. This serve crosses the net spinning sidewise and curving rapidly to the opponents right if the server is right handed. If it has a lot of spin, it curves faster the farther it goes. Although it may clear the net with quite a bit of altitude, it will usually drop rather rapidly. The side-spin as well as the side slip makes it very difficult to judge and handle. It can be made to drop to a net man. It would be worth a player's while to spend a considerable amount of time developing this serve.
Another serve that is extremely difficult for the opposition to handle is the side-arm serve. It is also difficult to master, but can contribute much toward winning a game, once it is brought under control by the server. In delivering this serve, the player usually stands as far back in the serving area as possible. This allows him to strike the ball harder and allows a greater margin for elevation. He stands with his left side towards the net with his feet well apart and knees slightly bent. He tosses the ball almost directly overhead and perhaps a little to the right. The right arm is brought straight up from the side, slightly bent at the elbow, and the wrist slightly hooked inward. As he swings, the player leans toward the net to add more power to the blow. The ball is hit on the backside, and as the body has started shifting it is now almost directly above the shoulder or perhaps is even to the right. It is struck with
the fist or palm of the hand slightly cupped and the fingers held stiff. This stroke permits a very hard blow, giving the ball a great amount of speed and terrific overspin. After reaching the net, or even before, it drops very rapidly. It is possible to serve to the net man in this manner. The serve may clear the net at such a height that it will appear to the opponents to be going far outside, and yet drop so rapidly as to land in the court. The receiver can easily misjudge this serve. It will appear to be coming directly at him, and then drop in front out of reach. It may spin so rapidly that it will jump out of the receiver's hands and over his head. The player who really practices on this serve is sure to run up some points for his team.

In the excitement and nervous tension of a game anyone who uses a hard serve is almost sure to miss one occasionally. A player should spend about as much time on the serve as any other part of the game. Good set-ups and spikes cannot win a game without good serves. A player should try several ways out, pick the one he feels he can develop best, and then stick to it.
CHAPTER VI

DEFENSE

The need for a good defense has become more and more apparent in the past few years in volleyball. A team that does not build up a good defense is an easy target for a good spiker. On the other hand, a strong defense can often break down an opponent's morale and cause a good spiker to blow up and start losing points.

The most important part of the defense is good blocking at the net. It is almost the only way to stop a hard spike. It is very discouraging to a spiker to have the ball keep bouncing back at him time after time. Any two net men may block at the net, but a player cannot come up from the back court to block. Which two men block depends on the position of the spiker on the other side. If number 4 is spiking numbers 5 and 6 on the defense would block. (See Diagram, Fig. 1). If number 5 is spiking, numbers 4 and 5 on the defense usually block. Number 6 would seldom spike unless he is left-handed or the offense is pulling a sneak play. The defense must always be on the lookout for this. The two net men who find it the most convenient to do so should block. If one of the three men at the net is very short the other two should always block, with the short man watching for a tip-over. They should be so used to playing together that they would immediately know which two were going to block. It
would depend on where the ball was set-up. If the set-up is over three feet back from the net it is usually safer not to attempt a block. The spiker would likely not hit the ball too hard to be picked up by the backfield men. He would also have so much room to play the ball that he could likely miss the blockers anyway.

![Diagram of two players blocking](image)

**Fig. 9. "Two Man Block"**

In blocking, the two players should watch the ball carefully, and also the spiker to try to judge where he would hit the ball. Their hands should be close enough together and to each other to prevent the ball going between them. They should also be as close to the net as possible without touching it, or getting over it. The hands should form a shallow triangle to better guard against the spiker cutting the ball to the side. If the spiker hits the ball rather high, the blockers should tilt their fingers slightly backward. This way the ball will bounce up and back for the man backing the blockers to set it up for his own spiker. Otherwise the ball
may drop down between the blockers and the net, making recovery difficult. In case this does happen, it is now legal for either blocker to hit the ball again even if he touched it on the block. This can be done only if two men attempt the block. If one man blocks alone, he cannot hit the ball twice in succession.

![Diagram of offense and defense]

**Fig. 10. "Backing up the Blockers"**

As the two net men go up to block, the man playing center back should drop in close behind the blockers to back them up in case of a tip over. The two remaining backfield men guard against the possibility of the blockers missing the spike. Occasionally one of these two remaining men will go in to back up the blockers when it is impractical for the center back to do so. The backfield men must continually be on the lookout for a slow, easy tip-over by the spiker. Some points are made in this manner in almost every game. A coach should take his players two at a time and have them practice blocking. He should spend considerable time on this. Good
blocking at the net is the only way to stop a good spiker. Quite often it will get the spiker so rattled that he will begin hitting the ball into the net, or outside the court. Getting the spiker rattled is part of the game. However, stamping the feet and whistling are illegal.\footnote{Fisher, George J., ed., United States Volley Ball Association, \textit{Official Volley Ball Guide}, 1941, p. 138.} Unsportsmanlike conduct is frowned upon at all times in volley ball.

![Diagram](image)

\textit{Fig. 11 "Receiving the Serve"}

To receive the serve the men at the net should play as far back in their positions as is legal. The backfield men line up rather close behind them. They should all face the net with their arms extended in front of them and at an elevation at which they expect the ball. This way they are ready for the ball and will have to shift very little if at all. The net men play back because a serve seldom drops close to the net. If it does, it will be slow enough that there will be ample time to step forward under it. There is also no need for the backfield men to play very far back.
Any ball too high for them to reach would likely be outside. They can easily step back under a high floater.

![Diagram](image)

**Fig. 12 "Defensive Stance"**

When on the defense, a player should stand in such a manner that will enable him to move quickly in any direction. Unless it is impossible to do so always keep both feet on the floor. The spiker is the only one who needs to do any jumping. It is best to crouch slightly. The arms should be up and towards the ball. The palms facing the net. A hard driven ball that gets past the blockers can come faster than the eye can follow. It can hit a person, or go by before he can lift his hands. If he already has them up he stands a much better chance of stopping the ball. Considerable defensive movement becomes automatic after a player becomes proficient in the game. A person who studies the opponent can learn to anticipate his moves fairly well. Most spikers follow a fairly set routine, although a really good one will vary his attack from time to time to confuse the defense.
CHAPTER VII

THE ATTACK

Since the team serving is considered to be on the offensive, attack will be used to denote the team playing the ball. Actually, as soon as the ball crosses the net the team receiving is on the offensive.

![Diagram of volleyball court showing attack positions](image)

Fig. 13. "The Attack"

The basic principles of the attack are well established. It consists of three actions; (1) the bring-up, (2) the set-up, and (3) the spike. The man receiving the ball brings, or puts it up to the set-up man, who in turn sets the ball up to the spiker. It is up to the team to do this well enough and tricky enough to outplay the opposition.

The set-up man covers about sixty percent or more of the court. He is usually not as tall as the spiker and faster on
his feet. His position calls for perfect timing, and he frequently has to set the ball up from an awkward position. In developing a team a coach should pick the set-up man and spiker that seem to work the best together and keep them that way permanently. Occasionally, in practice he should shift them around so that each set-up man on the team can get a fair idea where every spiker plays the ball best. Then, in the event of a substitution, the set-up man will at least have an idea where to put the ball. For best results, however, the men should work in pairs. Most spikers like to have the set-up in a certain choice spot and only the man who works with him constantly can put it where he wants it consistently. Some spikers like the ball high, some low. Others like it very close to the net and others want it farther back. Some spikers like to get a running start at the ball while others take it from a standing jump.

No set-up man can set the ball up properly unless it is given to him in the right way. The way to receive a serve has already been described. The ball should always be struck with the palms up and facing away from the body, with the fingers and wrists stiff. The fingers should be bent as though the receiver were going to catch the ball. From this position the ball can be played upward and in any desired direction. (See Fig. 12). The ball should always be played before it drops below shoulder level if possible. Even if the player has to drop to his knees to do so. To play a low ball the hands must be turned up with the palms toward the body.
It is difficult to play the ball in this manner without holding it long enough for the referee to call it catching or lifting. Considerable control is sacrificed also. If the ball must be played in this manner, and this sometimes happens, it should be struck a quick, distinct blow, one that can be both seen and heard by the referee. The ball should not be twisted in any manner. If it is a slow, easy ball, it is sometimes safer to play it with one hand in the underhand manner. The player is not as likely to let it stick. This should not be resorted to very often as it is almost impossible to control the ball with one hand. It is to be used only as a last resort.

The person receiving the serve should pass the ball to the set-up man in the best manner possible. He should hit the ball with all fingers and thumb at the same time on the underside, and just enough off center to make it go in the direction he wants it to. He should arch the ball rather high and make it drop straight down directly above the set-up man. It won't make much difference if it is just a little in front of the set-up man, but it should never be behind him. All spin should be taken off the ball. A dead ball is easy to set up, whereas a spinning one is difficult and sometimes impossible. If the set-up man is in position he should not be forced to move more than a foot or two in any direction.

The position of the set-up man is similar to that of the man receiving the serve. He plays the ball the same way,
doing his best to make it drop where the spiker wants it, and keeping it dead. Instead of trying to put the ball in a certain spot, he should try to make it drop into that spot. Almost all spikers hit the ball as it is dropping. Occasionally a spiker who likes the set-up low will hit the ball as it reaches its highest point. The spot the set-up man puts the ball in depends entirely on where the spiker wants it. A set-up man has the most responsibility because he must adjust himself to the spiker. It is an exceptional spiker who can adjust himself to a set-up man.

![Diagram of set-up practice]

Fig. 14. "Set-Up Practice"

A good set-up man will spend hours practicing. He can do this without the spiker, once he gets an idea where the man he will be working with wants the ball. He should have someone around who can give him some helpful criticism. One good method is to practice setting the ball into the air in such a manner that it will drop through a basket ball goal. Most gymnasiums have this piece of equipment. It is possible
to build a framework above the net that will be parallel to the floor and have an opening about eighteen inches square. This could be made of bamboo or thin strips of wood. The player could practice dropping the ball through this opening. This is seldom used, however, and is not necessary to developing a good set up. Developing the set-up is merely a matter of much practice in controlling the ball and the body. A player should learn to set the ball either to the right or to the left. Sometimes a left handed spike is necessary, even for a right-handed spiker. And sometimes it is merely good strategy. Every spiker should also practice setting up. The set-up man might be out of position or could not set it up. Since the ball can be played three times on each side of the net this should always be done unless a very good opportunity offers itself for a score otherwise. The spiker should not try to kill the ball on the second hit unless it is in a good position and he is set for it. Part of the time there are two spikers at the net. One can set it up to the other one. Also most set-up men can spike rather well on a good team in an emergency. The team that follows a set routine all the time will run into trouble as soon as the opposition catches on to it.

When he has set the ball up, the set-up man should be on the alert to pick up the ball again if the spike is blocked. In fact, every man on a team should watch the ball at all times and be ready for it if it comes his way.

The spiker should not feel, that, since he is considered
the team's heavy artillery, his job ends with merely spiking the ball. He must play his part of the court both in the offense and the defense. He is especially responsible for blocking. He must be a steady player and not easily rattled. He plays the final part in scoring, and if he gets nervous and fails in that, his team cannot win.

The spiker is usually tall. Unless he is rather tall, he must be able to jump well. There are some excellent spikers who are only average height, because they have a good pair of legs and can get high off the floor. The top of the net is eight feet from the floor. The spiker must be able to get well above that height. It is not possible to tell a player exactly how to spike the ball since each man has his own way of playing the ball. It is a matter of the player's finding which way he can play the ball best and then practicing regularly.

![Fig. 15. "Standing Jump"

Fig. 16. "Running Jump"

There are several methods however that players use in spiking the ball. Some players use a standing jump. The ball
is set-up over him and he merely jumps straight up and strikes it. It is a good method to use for place shots since the player usually has plenty of time to pick the spot he wants to put the ball. It also leaves him in a fairly good position to recover a blocked spike.

The other most widely used method is the running approach. It is actually just a matter of playing back from the set-up, then taking two or three quick steps before jumping to hit the ball. In this method the spiker can usually jump higher than from a standing jump. It also increases the force with which he strikes the ball since he gets more body weight behind the blow. It requires much practice since perfect timing is necessary. The set-up must be very good. The angle at which the player approaches the net is a matter of choice. Some stay close to the net and take their steps parallel to it. Others approach the ball at an angle up to ninety degrees. The more head-on the approach is, the more careful the player must be to avoid jumping into the net or landing with his feet over the center line. With the running approach it is possible for a good spiker to hit the ball with such force that its flight cannot be clearly seen by the opponent. It will merely be a blur, or it can even strike a player before he sees it coming. A bad set up or bad timing, however, will result in the ball being driven into the net or outside the court. Since the spiker is moving at an angle, he moves on past the spot where he strikes the ball. If it is blocked, it may drop right into the spot the spiker just vacated,
whereas a standing jump would leave the spiker in the same spot to recover the block. The other players on the team must be on the alert to back up the spiker.

For a hard drive the spiker should use a closed fist to strike the ball, striking as if the palm were open. He can also deliver almost as much force, and have better control, by striking with the open hand, holding the fingers rigid. The blow is delivered in an over-hand swing, striking the ball on the downward swing. The ball should be struck on top and far enough on the backside to make it clear the net. The spiker should balance himself by holding the left arm in front of him with the elbow bent so that the forearm is parallel to the body. The position of the left arm, however, is mostly a matter of individual choice and each player should hold it where it suits him best. The same applies to the right arm if the spiker is left handed.

Fig. 17. "Cross Court Spike"

The spiker must not only watch the ball but must keep
an eye on the blockers. If he keeps hitting the ball towards the same spot all the time, the blockers will soon get on to it. The spiker must learn to hit the ball at an angle, both left and right, as well as straight forward. That way the blockers can never be sure where the ball is going. An angle shot, even if it hits a blocker's hands, may bounce outside or into the opponents' court.

If the spiker is having difficulty in getting the ball past the blockers, he should change his tactics. He can put the ball almost anywhere he wants to by using the open hand, only having the fingers slightly bent and rigid. He plays the ball much as if he were throwing it, but hits it a sharp, fast blow so that it does not remain in the hand long enough to be called throwing. In this manner he can play the ball to either side the blockers, or completely over them. He should be able to use either hand in playing the ball this way. Every spiker should practice using either hand. Most spikers are right handed, but they frequently get an opportunity to play the ball left-handed. It is rather awkward to play left handed set-up with the right hand.

A spiker doesn't have to hit the ball hard each time. Sometimes a gentle tip-over the net will get the best results. He should be on the alert for a player out of position and put the ball there. Either a high lob or quick push shot to the back court is sometimes good for a point. All the players should be on the lookout for an opponent out of position. A quick push shot may catch him off guard. It is justifiable at
such times to play the ball over the net on the first of second play. The team that can change its tactics to take advantage of any momentary weakness on the part of the opponent will most likely win.

Very few games, if any, can surpass volley ball for recreation. For genuine competition it can hold its own with the best of them. Volley ball requires long and regular practice. It is a six-man affair, and one bad or indifferent player can undo the best efforts of the other five. Perfect teamwork is necessary. The coach should play the six best men and substitute only if necessary. If the outcome of the game is of no particular importance, give all the men a chance. They will learn a lot more about teamwork and strategy of the game in a match game than in practice.

A copy of the United States Volley Ball Association rules should be available to every coach and player. The rules for girls volley ball may differ somewhat from men's rules. Especially if eight players are used in each team. However, the techniques of play and game strategy can apply to both men and women.
CHAPTER VIII

SUMMARY

The purpose of this study has been two-fold. First, to prepare a manual that will present the game of volleyball to the player in such a way that it will arouse his interest in the game and help him to understand it better. Second, it is hoped that it will aid coaches to better understand and coach the game for active competition, if they have not had an opportunity to learn the game thoroughly by having played it themselves.

The game of volleyball is completely American. It originated in this country as a result of the realization by William G. Morgan of the need for a new recreational game. It has never enjoyed the popularity of some of our other American games. This is largely due to lack of understanding of the game by the public and the lack of individuals trained in the coaching of the game. It increased in popularity during World War II and will continue to do so if properly backed by those already interested in it.

Volleyball offers recreation for a wide range of ages, from the young to the old. When properly played, it offers as many thrills and as much excitement as any of our other competitive sports, as is demonstrated in the National
Tournament. The game requires a tremendous amount of skill and energy when played competitively. As a means of recreation it is an excellent pastime.

As yet the public has had limited opportunities to see the game played by men who are highly skilled in it. The only games they have seen are those played by high school girls, some of whom are highly skilled at the game, their number being rather small however. Therefore, the public considers this a girls' game.

The cessation of intercollegiate competition among women perhaps kept volleyball from being developed among women in college. Another factor that causes lack of interest in volleyball among women is their rules. Women's rules simplify and slow the game down to a point that interest is hard to maintain by permitting too many players on a team and making the rules so easy as to take all the thrill out of the game. While it is possible for a woman to become a skillful player under such conditions, it is the exception rather than the rule. As a result of this most women now play by men's rules, the major difference being the height of the net. It is lowered six inches to compensate for the women's lack of height. This holds true in most high schools. As a result of using men's rules for women there seems to be more interest among high school girls in the game.

Volleyball may be played on the playground, the beach, recreational areas, anywhere room can be found for a court. When it is played merely for recreation no strict adherence to
the rules is necessary. The game may be varied on the spur of the moment to fit the need. If there is a large number of players and only one court, they may all play in a mass participation.

For the person who likes a fast and exciting competitive game volley ball has much to offer. The Y. W. C. A.'s have done much to increase the popularity of the game. (The interest in volley ball will also be greatly increased if the consideration to embody it in the Olympic Games materializes.)
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