

USGA JOURNAL

COMBINING TIMELY TURF TOPICS

FIRST OPEN CHAMPION AND PRESENT DEFENDER

First USGA Open Champion was Horace Rawlins, who won at Newport in 1895.

Open Championship trophy, duplicate of original destroyed in 1946.

Defending Open Champion is Lew Worsham.

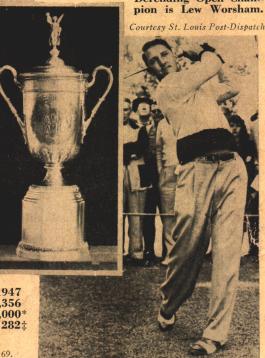


Courtesy of H. B. Martin

COMPARISON

Year	1895	1947
Entries		
First Prize		
Scores	137†	282‡

Excludes \$500 playoff prize. 36 holes. \$72 holes. Won playoff with 69. † 36 holes.





USGA TIMELY TURE TOPICS

PUBLISHED BY THE UNITED STATES GOLF ASSOCIATION

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USGA COMPETITIONS

Invitations for 1950

Invitations are welcomed from USGA Regular Member Clubs to entertain USGA competitions in 1950 and thereafter. Invitations for 1950 should reach the USGA office as soon as possible.

Schedule for 1948

(Dates entries close in the schedule below mean the last dates for applica-Public Links Championship. For possible except in the case of the Amateur Public Links Championship. For possible exceptions in dates of Sectional Qualifying Rounds, see entry application forms.

Championshit	Entries Close	Qualifying Rounds	Championship Dates	Venue
Open	Closed	June 1	June 10-11-12	Riviera C. C. Los Angeles, Cal.
Amateur Public Links	*June 16	**June 27 to July 5	Team: July 17 Indiv: July 19-24	North Fulton Park G. C. Atlanta, Ga.
Junior Amateur	July 8	**July 19 to 30	August 11-14	Univ. of Michigan G. C. Ann Arbor, Mich.
Amateur	August 2	Aug. 18	August 30- September 4	Memphis C. C. Memphis, Tenn.
Women's Amateur	August 23	-	September 13-18	Pebble Beach Course Del Monte, Cal.

^{*} Entries close with Sectional Qualifying Chairmen.
** Exact date in each Section to be fixed by Sectional Qualifying Chairmen.

THROUGH THE GREEN

Polonius Played from Scratch

The late Alfred Sutro, of San Francisco, was a student of Shakespeare and a golfer. For the edification of dinner guests at the Presidio Golf Club in 1920, he delved deeply into early Shakespearean quartos—more deeply than anyone else had ever delved, it is said—and came up with an entirely new version of Polonius' golden precepts to his son, Laertes, in "Hamlet." It had always been understood that Polonius delivered his advice as Laertes was leaving for Paris. Mr. Sutro's discovery—which will go unchallenged by the USGA JOURNAL—indicates that Laertes probably was leaving to play golf. With the kind permission of John A. Sutro, we give below the super-early version, which his father vowed he discovered on an old galley proof of the original Shakespearean quarto:

And these few precepts in thy memory Look thou character. Keep thine eye on the ball, And no ill-timed shot do execute: Be thou free, easy, but by no means jerky. Those shots thou hast and their adoption tried, Grapple them to thy game with hoops of steel; And do not spoil thy score with entertainment Of each new untried stroke. Beware Of entrance to a bunker; but, being in, Strike the ball that it may swiftly rise. Give every man thy hootch—have none thyself. Take each man's coaching; but reserve thy advice. Gay thy sweater as thy purse can buy, But not expressed in fancy—rich, not gaudy; For, the apparel oft proclaims the dub. Those amongst us who play really best, Wear mental raiments of hope and zest. Neither a boaster nor a crabber be: If thou crabbest, thou hast lost thy game, And boasting dulls the edge of fame. This above all: Raise not thy anxious head; Let the movement of thy rigid left arm coordinate with the dip of thy bended right knee, And it must follow as the night the day-That a great golfer thou shalt be: Enough—my blessing season this in thee.

Michigan PGA and Amateurism

The Michigan Section of the Professional Golfers' Association not only has adopted a policy of adhering fully to USGA rules, but has taken steps to protect the status of amateurs in its amateur-protournaments.

Among actions taken were a warning

that any professional found guilty of giving money to any amateur would be suspended from Michigan PGA tournaments, and a stipulation in accordance with USGA Rules of Amateur Status that amateurs may only receive prizes with a retail value of not more than \$100.

President of the Michigan PGA is Joe Devany, Grosse Ile Golf and Country Club.

The Open is for the Players

To the outward eye, the USGA Open Championship may seem to be just a show. The spectators, the marshals, the intense interest of press and radio representatives give it some of the aura of an exhibition. But Fielding Wallace, USGA president, points out in an article in the 1948 Championship program that it remains one of the few sports events conducted primarily for the players.

"In many sports today, more emphasis seems to be placed on side issues than on sport," Mr. Wallace writes. "Thus, the modern measure of success is how many spectators there are, or how spectacular are the trappings of the contest, or how much money is bet, or similar secondary features. In other words, sport in many cases has become simply an excuse for something else. The tail wags the dog.

"But to the players and to us of the United States Golf Association, the object is the play of the game—the end in view is the determination of a Champion.

"It is a players' tournament. It would still be a players' tournament even if there were nobody around but the players, Riviera's members and the USGA 'Badgers' (as one wag whimsically calls us wearers of badges)."



USGA Chairmen

The following are Chairmen of USGA committees for 1948 as appointed by Fielding Wallace, President:
Rules of Golf—Isaac B. Grainger.
Championship—Richard S. Tufts.
Implements and Ball—John D. Ames.
Amateur Status and Conduct—Edward B.
Leisenring.

Membership—Daniel A. Freeman, Jr. Green Section—James D. Standish, Jr. Women's—Miss Frances E. Stebbins. Public Links—Totton P. Heffelfinger. Sectional Affairs—Totton P. Heffelfinger. Handicap—William O. Blaney. International Relations—Charles W. Littlefield.

Museum-C. Pardee Erdman.

First Intercollegiate Match

Among the many tidbits of golf history uncovered in newspaper clippings presented to the USGA Musuem by Frank W. Crane (see "80s Could Win in the 90s" in this issue) is information regarding the first intercollegiate golf match in the United States. Mr. Crane, as golf writer for the New York Times, covered the contest, between Yale and Columbia, at the Ardsley Casino, near Dobbs Ferry, N. Y., on November 7, 1896.

The original invitation extended by the Ardsley club included Pennsylvania and Princeton, but Pennsylvania was not able to get a team together and Princeton's players were carried away by their enthusiasm for the imminent Harvard-Princeton football game and failed to appear.

Therefore, the competition became a match between two teams, and Yale won by 35 holes. As was customary in those days, the match was scored by having each pair play out the bye holes and adding the totals. Roderick Terry, Jr., of Yale, was the low scorer with an 88. The Intercollegiate Golf Association was formed the following winter, and Yale won its first championship at Ardsley in 1897.

The 51st collegiate championship, now sponsored by the National Collegiate Athletic Association, will be played in June at Stanford University, in Palo Alto, Cal.

Caddie Scholarships

Fred Brand, Jr., Secretary, reports that the Western Pennsylvania Golf Association now has six former caddies attending the University of Pittsburgh on scholarships provided by the Association.

Birdies and Dragons

St. George's Golf and Country Club, Stony Brook, N. Y., has an insigne representing St. George slaying the proverbial dragon with a golf club.

Injury to Caddie

The New Jersey Supreme Court has ruled that a caddie injured during a caddie tournament is not entitled to workmen's compensation.

Trees and 3s

The USGA Executive Committee was having a three-day Spring business meeting at the Pine Valley Golf Club, Clementon, N. J. John Arthur Brown, Club president, was telling how par of 70 over the beautiful, world-renowned course had been equalled only once by any amateur in stroke play competition and never broken—how the late George Rotan in 1922 stood on the 18th hole one under par but finished one over for the hole and had an even 70, the amateur course record.

Mr. Brown was telling how, for several years, Pine Valley has had a pro-amateur tournament, inviting about 20 pros for 72 holes of stroke play—how, in more than 1,000 rounds of professional play, par has been broken only twice—Ed Dudley with a 68 and Craig Wood with a 69.

As Mr. Brown casually mentioned a 69 he had in a friendly game last August, there was heard in the showers the ghost of the voice of Charles Yates. The voice was singing a paraphrase of Joyce Kilmer's lovely poem "Trees" which Charley concocted when playing in the 1936 Walker Cup Match at Pine Valley; it goes like this:

I think that I shall never see A golf course tough as Pine Vall-ee, With trees and sand traps everywhere And divots flying through the air; A course laid out for fools like me, Where only God can make a 3.

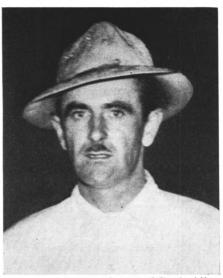
Never a Dull Moment

Minnesota golfers apparently have found effective methods for placating golf widows and operating businesses by remote control. The Minnesota Golf Association, in any case, has gone ahead and published a schedule of 178 tournaments between April 26 and September 26, including USGA, PGA and WGA championships.

A study of the list discloses that 28 days have been left free for putting on screens, mowing lawns, calling on relatives and visiting the office.



SPORTSMAN'S CORNER



Courtesy of Cleveland News

Lloyd Mangrum

In the 1948 Masters Tournament, Lloyd Mangrum led the field through the first round with a 69 and continued his good play through seven holes of the second round

The eighth is a long, uphill par 5. After a good drive, Mangrum hooked his second shot into the woods. As he was taking his stance, with branches surrounding him, he stepped on a twig which extended from his foot to the ball. Before he could prevent it, the ball turned over.

The minor movement of the ball might have gone unnoticed, but Mangrum played his shot, walked quickly out to the fairway and announced to his playing companion, Byron Nelson, that he had incurred a penalty stroke. He went on to take a 7 on the hole and a 73 for the round, losing the lead and eventually the tournament.

(The USGA JOURNAL will welcome nominations for the Sportsman's Corner in future issues. The calibre of the player does not matter.)

Championship Broadcasts

The National Broadcasting Company has been granted exclusive right to make radio broadcasts, both aural and visual, from the clubs where USGA Championships will be played during the next five years.

How the Open is Prepared

By GEORGE E. ARMSTRONG

CHAIRMAN, RIVIERA C. C. EXECUTIVE COMMITTEE FOR 1948 OPEN CHAMPIONSHIP

When we estimated the time required for planning, preparation and conduct of the 1948 USGA Open Championship at the Riviera Country Club in Los Angeles, I was amazed to find that more than 10,000 man-hours will be spent. This is exclusive of work by the USGA and sectional associations in conducting Sectional Qualifying and Championship play.

Fortunately, Riviera has had the invaluable cooperation of the Los Angeles Junior Chamber of Commerce. That organization is composed of about 1,000 active young businessmen who are interested in sports and other community activities. At least 100 of them each will have devoted an average of 75 hours to the Cham-

pionship.

The Los Angeles Junior Chamber of Commerce has the accumulated experience of 22 years in conducting the Los Angeles Open Tournaments, and has built an organization experienced in all phases of such an endeavor. As a result, the work has been widely distributed, with a large number of sub-committees each assigned to particular duties. Another favorable factor is that the Los Angeles Open has been held at Riviera eight times in the last 19 years—four times in the last four years.

In 1925 the late Mr. Frank Garbutt, president of Los Angeles Athletic Club, which owns Riviera, and Mr. William May Garland conceived the idea of building what they visualized would be one of the finest golfing layouts in the world. They determined upon a site about 17 miles west of the main business district of Los Angeles. They purchased extensive acreage, including a wide branch of Santa Monica Canyon.

Mr. George C. Thomas, Jr., was employed as the golf architect. He had as his assistant Mr. William P. Bell.

The terrain required extensive grading and filling. Thousands of cubic yards of fine soil were hauled in. Locations for various greens were built up as much as 26 feet above original grade.



Lansing Brown Photo
George E. Armstrong

Riviera perhaps was the first golf course completely piped for irrigation without use of hoses.

Several thousand trees were planted to mark off fairways. In many places the fairways are rather narrow, and these, together with the 7,020-yard length and dozens of sand traps, make the course a real championship test.

As soon as the USGA formally awarded the Open to Riviera, an executive committee of nine was formed. Mr. Thomas Marr was appointed chairman of all the activities under the Junior Chamber. That work in turn was subdivided among about 27 sub-committees.

Committeemen of the Junior Chamber distributed pre-season tickets to golf clubs, driving ranges, business clubs and other outlets. Through the Industrial subcommittee, several hundred industrial plants, motion picture studios, etc., were given opportunity to buy blocks of tickets. Publicity was given by various means, in-

Ready for the Open



Lathrop-Silvera Studio

Willie Hunter, professional at the Riviera Country Club, Los Angeles, stands at the first tee as if to welcome contestants to the course for the 48th USGA Open Championship. He was British Amateur Champion in 1921.

cluding the Speakers' Bureau.

Riviera members will make a great contribution to the Championship through the exacting work of marshalling.

Innumerable other details were connected with the planning, such as arranging and setting up scoreboards, communications from the course to report scores, telephone and telegraph wires, roping and marking the course, hotel accommodations, transportation, designing and securing tickets and badges, traffic and parking. The parking problem is simple because Riviera's builders arranged three full-sized polo grounds adjacent to the golf course, and

they provide ample parking.

The very important work of scoring for the competitors is being handled by Mrs. George Midgley and her corps of women.

Mr. Willie Hunter, Riviera professional, supervised the work of putting the course in tip-top condition for the Championship, in accordance with USGA suggestions and specifications.

The USGA has contributed greatly in making our work easy and pleasant, particularly through advance visits by officers and through its Golf Championship Manual, which sets forth the experience gained in 54 years of conducting championships.

80s Could Win in the 90s

The first golf reporter in the United States is believed to be Frank W. Crane, who joined the New York Times late in 1894 and covered all tournaments in the New York area until World War I. Recently, while browsing through his effects, Mr. Crane discovered a book of clippings he had preserved for reference during the earliest years of the USGA. Thinking they might be "of some interest" today, he presented the book to the USGA Museum through Mr. Charles C. Auchincloss of the Museum Committee.

When Mr. Crane, who is now 81, said the book might be "of some interest," he understated the case. The clippings were taken not only from his own writings in the Times but also from the Herald, World, Sun, Tribune, Philadelphia Times, Utica Observer, Chicago Tribune and Harper's Weekly.

The earliest is dated October 19, 1894, and describes the victory of Lawrence B. Stoddard over Charles Blair Macdonald in the "Amateur Championship of the United States" at the St. Andrew's Golf Club, Yonkers, N. Y. This was one of two such events held that year, the other having been at the Newport Golf Club in September.

The existence of two "champions" in the same year led to formation of the USGA, and Mr. Crane's clippings cover all aspects of the game in those days, including the birth of the USGA and its first two years of championships in 1895 and 1896.

Almost every report is lengthy and detailed. It would be difficult to imagine a more valuable contribution to source material on the early history of American golf. Even for those who are not historically minded, the descriptions are good for many a quiet chuckle.

Many golfers know, of course, that King James II persuaded his Parliament to make the playing of golf unlawful in Scotland in 1457. But it is not so commonly known that early American clubs were waited upon by the law for violating the Sabbath by playing golf.

In 1896, the Greenwich (Conn.) Citi-

zens Association became "scandalized by prominent and wealthy men dressed in red coats, white trousers and red hats going to the golf club grounds through public streets while the church bells are ringing," and petitioned the club to close on Sundays without requiring the Association to resort to the law.

A 20-Foot Drive

In the same year, the New Jersey Vice and Immorality Act was called down on the heads of Englewood Golf Club members, and Edgar Jewett was haled into court for having violated the Sabbath laws by playing golf. The chief of police testified that he had seen the defendant "hit at a little ball with a shinny stick." He added that it went about 20 feet, at which the assembled golfers laughed uproariously.

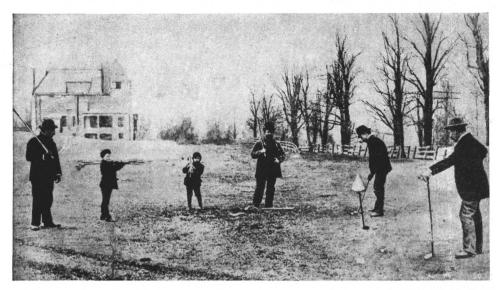
The judge, a non-golfer, was unimpressed. After pointing out that, if the obsolete statute were enforced, nobody could sing to the baby, give praise to God by means of organ music, or walk in the streets on Sunday, he praised golf for its ethics, freedom from boisterousness and its salutary effect on businessmen of sedentary habits. He found that the playing of golf on private grounds on Sunday did not *per se* constitute the offense charged.

A year before, in 1895, a story in the Sun stated that "golf is swinging upward" and claimed 15,000 players in the United States

"The St. Andrew's club was formally organized on Nov. 14, 1888," the report states. "The first links consisted of six holes on the pasture behind H. O. Tallmadge's residence on Palisades Avenue in Yonkers. . . .

"The advance guard was not long left alone . . . August Belmont is building a 12-hole course on his property at Babylon; Bayard Cutting has links at Islip, John Jacob Astor at Rhinecliff. . . . On the Hudson, too, are the links of Stattsburgh Golf Club, with Ogden D. Mills, Archibald Rogers and William Brown Dinsmore, Jr., as the ruling spirits, and at Poughkeepsie there are links on the grounds of E. N. Howells. . . . The game is also played at the Country Club of Westchester.

First Known Golf Picture Made in the United States



Courtesy of H. B. Martin

This photograph was made in 1888 at the first green of the original St. Andrew's Golf Club, Yonkers, N. Y. The players were Harry Holbrook, Alexander P. W. Kinnan, John B. Upham and John Reid. Mr. Reid was the club president, Mr. Upham the secretary and Mr. Holbrook a governor of the first permanent golf club established in this country. The caddies were Warren and Fred Holbrook, sons of the player. The photo was made by S. Hedding Fitch.

"In the New York group, too, are the links of the Meadow Brook Club, the Rockaway Hunting Club and the Richmond County Country Club. The Tuxedo links are also in this group . . . and two more, each having the distinction of having been first projected by women, the Orange Mountain Golf Club and the Morris County Golf Club. . . .

"Three more New Jersey clubs may claim a place—at Paterson, Hohokus and Glen Ridge, and there are junior golf clubs, a healthy sign, at both Summit and Morristown. Lakewood and Asbury Park have flourishing clubs.

"The Boston group, in prominence and numbers, is next to New York, with the game well established at The Country Club of Brookline, the Essex County Club, Lowell Country Club, Myopia Hunt Club and about fifty other points. The game is well founded near Washington, Chicago, St. Louis, Cleveland, Pittsburgh and Philadelphia, in the latter group being the Philadelphia Country Club, the Bryn Mawr College links, Devon Golf Club, Merion

Cricket Club and the Germantown Cricket Club.

"Then, by their importance and location, sufficiently prominent to mention individually are the Newport Golf Club, the Kebo Valley Golf Club, the Bridgeport Golf Club and the Shinnecock Hills Golf Club. There is a club at Denver, Col., and at Colorado Springs, while California has the game at San Francisco and San Mateo. . . .

"Winter golfing was tried under unique conditions by the members of the Hohokus Golf Club, who played in January on the crust of the ice, using red balls and having excellent sport. (Winter golf also was played at Baltusrol and Lakewood). . . .

"At Newport last year the championship muddle began that was one of the causes leading to the formation of the United States Golf Association . . . Newport's championships were held in September, and the winner was W. Lawrence of the Newport club, who defeated C. B. Macdonald of the Chicago Golf Club by a stroke. Later in the season, an amateur champion-

ship was held at St. Andrew's, which was won by L. B. Stoddard, and again C. B. Macdonald was second. Arrangements for Messrs. Lawrence and Stoddard to play a decisive match fell through owing to the lateness of the season. . . .

"An equal uncertainty marked the standing of the professionals at the end of the season. Willie Dunn and Willie Campbell had beaten each other in turn. . . . This season the advent of Willie Park, Jr., has upset all calculations, and Joe Lloyd, another high class player from abroad, is also a factor. . . .

Start of the USGA

"The United States Golf Association, which has made the Newport championships next fall possible and which is to regulate the sport generally, was formed on Dec. 22, 1894, at a meeting in the Calumet Club attended by Theodore A. Havemeyer and Winthrop Rutherfurd of the Newport Golf Club; Thomas H. Barber and Samuel L. Parrish of the Shinnecock Hills Golf Club: Laurence B. Curtis and P. S. Sears of The Country Club of Brookline; John Reid and H. O. Tallmadge of the St. Andrew's club; and Charles B. Macdonald and J. A. Ryerson of the Chicago Golf Club. The officers elected were Theodore A. Havemeyer, president; Laurence Curtis, vice-president: Charles B. Macdonald, vice-president: Henry O. Tallmadge, secretary, and Samuel L. Parrish, treasurer.

"At present the associate members are the Chicago Golf Club, Country Club of Brookline, Newport Golf Club, St. Andrew's Golf Club, Shinnecock Hills Golf Club, the Essex County Club of Manchester, Mass., and the Philadelphia Country Club. . . . The playing rules of the Royal and Ancient Golf Club of St. Andrew's, Scotland, have been adopted with a few local changes."

The story of the first USGA Amateur Championship final at Newport in October, 1895, ran about a half-column in the Times and describes a one-sided contest to an expected result, Charles Blair Macdonald of Chicago defeating Charles E. Sands of St. Andrew's, 12 up and 11 to play.

"Sands opened nervously, foozling his drives for the first and second holes," it

was reported. "Macdonald was by allaround good play 5 up at the end of the morning's two rounds. After lunch the play for the second eighteen holes was in order, but it was entirely without feature, except that the Chicagoan won seven straight holes." The nine-hole scores were: Macdonald, 44-44-44—132; Sands, 54-47-60—161.

In an editorial comment, Mr. Crane reported: "Both men had professionals follow them over the course to coach them and to advise, a questionable proceeding in what should be strictly amateur in every respect. Dunn and Tucker advised Sands, and Foulis coached Macdonald."

The first USGA Open championship was played on the same course the next day, when "the wind blew half a gale over the links . . . and fine play was impossible. . . . The champion proved to be a darkhorse—Horace Rawlins of the Newport club, whom Davis brought over last January. He is a mere lad of 19, who was born on the Isle of Wight, but put up a great game of golf, especially in his two rounds this afternoon, each of which he made in 41."

Rawlins scored 91-82—173 and received \$200, \$50 of which was expended for a gold medal. Willie Dunn of Shinnecock Hills was second with 175 and won \$100.

"All that is latest and chic in golfing attire was seen in the costumes of the players" in the first USGA Women's Championship at Meadow Brook in November, 1895, the Sun reported. "Tweed skirts, cut plain and close and falling to the boot tops were generally worn, with silk shirtwaists, stiff linen collars and black silk ties formed into bows. . ." Mrs. Charles S. Brown, of New York, who learned her golf at Shinnecock Hills, was the winner. The twelve entrants played nine holes in the morning and nine in the afternoon.

"Mrs. Brown's score was 69-63—132, making the women's record for the links," the Sun reported. "It was said that the 132 strokes of Mrs. Brown was the best score for 18 holes that any American woman has yet made," the Herald expanded.

Editor's Note: Another article on the infancy of American golf, based on Mr. Crane's scrapbook, will appear in an early issue.

HINTS ON PLAYING

APPROACHING THE BALL

By ROBERT H. (SKEE) RIEGEL
USGA AMATEUR CHAMPION 1947
MEMBER OF USGA WALKER CUP TEAM 1947

Volumes have been written on how to swing a club but very little about the best method of approaching the ball preparatory to striking it.

Your manner of walking to your ball should be casual. Whether your drive was good or bad, your pace should be the same, your mind relaxed. Don't sap your energy by worrying about your shots.

When you reach your ball, study your lie. Judge the distance to the green, taking contour and wind into consideration. Decide whether your shot should be a fade or draw, high or low. If there is a crosswind, select a point to left or right of the pin at which to aim.

After you reach these decisions, select your club.

The rhythm and pace of your swing are interdependent with your speed of walking and, more important, with the few steps you take, club in hand, preparatory to taking your stance. Those steps and the "waggle" are an integral part of the swing—they affect the pace of the swing.

The immediate approach to the ball begins by taking an approximate grip on the club. Place the right foot first if you are right-handed. Before bringing the left foot into position, sole your club, making sure it is lined properly, and look up at your objective. Then bring the left foot into position.

As your left foot touches the ground, glance at the ball, waggle the club, look up at your objective and back at the ball, meanwhile adjusting your feet and grip to get the right feel. Then start your swing.

The waggle—long, short; low, high; inside, outside—has a bearing on how you take the club back.

Establish a definite pattern of thought and mechanics preparatory to hitting the ball, just as you try to groove your swing.

PATIENCE AND PRACTICE

By MRS. JULIUS A. PAGE, JR. USGA Women's Amateur Champion 1937 Member of USGA Curtis Cup Team 1938-48

I learned golf in a manner quite different from that of most of my golfing friends. I never had a lesson from a professional—not that I do not have faith in our pros, but after I had started alone and developed beyond the beginner stage, Dad took me to several pros, and they advised that I was a "natural swinger."

However one may learn to swing, there are two words which describe the development of every champion: Patience and Practice.

You must have patience with yourself, first. Do not expect perfection in a day. If a pro is teaching you, be patient with him. He cannot teach you in one lesson. And do not force yourself until you are physically exhausted.

The saying "practice makes perfect" has real meaning for a golfer. But the practice must be intelligent. Five minutes of thoughtful practice is worth hours of plain ball-hitting. Take a correct stance, use a firm grip, especially with your left hand, visualize the flight of the ball in relation to your stance so you know you are aiming at your objective and, above all, swing. Do not stop. Carry through and finish each practice shot.

Another important quality is relaxation. This can be acquired. In addressing the ball, the feet should be flat, knees slightly flexed to release tension through the legs, and the waist bent to relax the abdominal muscles. The arms hang. The muscles of the fingers and hands grasping the club are the only muscles under contraction.

The backswing moves into action the muscles of the right side by shifting the weight to the right leg. The left side remains relaxed. On the downswing, this order is reversed. Thus the swing can be explained in terms of relaxation.

An Elder Statesman's Warning

By JOHN ARTHUR BROWN
PRESIDENT, UNITED STATES SENIORS' GOLF ASSOCIATION

Late in June, about 400 golfers ranging in age from 55 to the 90s will gather again at the Apawamis Club, Rye, N. Y., for four days of serious play and not a little lighthearted by-play.

The occasion will be the 44th annual Championship of the United States Seniors' Golf Association, which was started in 1905 and now provides an outlet for the golfing enthusiasm of 850 members from every State in the Union.

Except as an ally in guarding the best interests of golf, the United States Seniors' Golf Association is not connected with the USGA. Its members enjoy their own annual reunion and crown their own champion. In their role as an ally, however, the Seniors take active interest in everything that pertains to the good of the game as they have known it for nearly half a century. And, in this connection, there are three matters on which I should like to voice opinions.

First, I think there must be a firm stand on the question of proper amateur status. There has been criticism in recent years about the amateur qualification of some players who have taken part in Walker Cup Matches and in amateur tournaments. You can't temporize with a violation of the letter or the spirit of the amateur rule. The sooner this is recognized by our amateurs, the better it will be for all. A breakdown of enforcement would be fatal to the game, and I am sure the USGA is in full accord with this.

The second matter to which I wish to refer is the professional circuit tournaments. The small group of professionals who take part have disregarded the rules of the game, both in the manner of play and the type of clubs used. I am glad to see that the Professional Golfers' Association has recently indicated an intention of following the Rules of Golf as laid down by the USGA. In my judgment, some of the wanderers have failed to realize that their livelihood is dependent on the good



A. Chase Holmes Photo

John Arthur Brown

will of the golf clubs of America, who are represented by the USGA. Without the golf clubs, there would be no professionals.

The last matter is the Calcutta pool. I realize this is beyond the USGA's and the Seniors' jurisdiction, but both organizations should do everything possible among their members to eliminate this evil. A pool of \$180,000, for illustration, is a bad thing for the game. We all know why, so let's do our best to stop it. It is foolish to condone something which is harmful to the game.

Let me emphasize that the USGA is the ultimate authority in the conduct of golf in America. All other associations, amateur and professional, are subject to its final jurisdiction. This is as it should be. If the USGA exercises firm control over the game, meets squarely the difficult questions which are bound to arise, and retains the spirit of the game, we will all benefit.

The USGA has the whole-hearted support of the United States Seniors' Golf Association in doing this.

Women's Handicapping

By MISS FRANCES E. STEBBINS CHAIRMAN, USGA WOMEN'S COMMITTEE

Since the USGA's adoption of a new Golf Handicap System last December, the Women's Committee has received numerous inquiries as to whether it applies to women. At present the system applies to men only.

We are, however, now forming a special committee to determine whether a separate course rating procedure for women could be established feasibly and if it would make handicaps more equitable.

Our present handicap system for women is based on women's par. In computing women's par, the yardage figures recommended are not arbitrary, because some allowance should be made for the configuration of the ground and any other difficult or unusual conditions. Further, the severity of the hazards should be considered, especially on a hole where the par is doubtful. These provisions have made it possible to add a *full* stroke to par on an unusually difficult hole.

However, under the men's new system, which is based on the playing ability of a theoretical scratch golfer, each hole is rated on a *fractional* basis. The rating is the average score the golfer should make for every ten times he plays the hole. Ratings are made in tenths of a stroke.

This part of the system appeals to me inasmuch as it gives flexibility to course rating.

For the sake of discussion, let us take a 185-yard hole with a small green, severely trapped, and with a prevailing crosswind. Under our present women's system we would have to call it either a par 3 or a par 4. Par 3 probably would be too low and par 4 too high. But under the principles of the men's new system, we could rate it 3.5. Using this procedure for the entire 18 holes, we would arrive at, I feel, a more accurate course rating.

After determining the course rating, we would then take a player's ten best scores over a year or a full season and apply the *total* of them to a special table for stroke play handicaps designed for use only with such a system of course rating. Under the



Bachrach

Miss Frances E. Stebbins

men's system, the ten best scores should be selected from a period of play covering at least 50 rounds.

Using a player's ten best scores, instead of five as under our present women's system, also appeals to me as it would seem to give a better picture of the player's ability.

As we handicap players for the purpose of establishing a fair basis of competition when players of different abilities compete, I would heartily endorse any system that would bring us closer to that objective.

However, much study should be given the subject, and we propose to examine it thoroughly this season, meanwhile continuing our present women's system. If we are to change later, we must be sure of full cooperation from all women's golf associations. Without this, it would be most difficult to introduce a new system successfully.

The USGA Family Grows

When delegates to the 1948 annual meeting amended the USGA Constitution, they made it possible for all clubs and courses to be members. Since then, the USGA family has grown to the verge of exceeding the all-time record of 1,154 members established in 1934.

The significance of this is not growth for growth's sake. What really matters is a wider distribution of the Association's services and increasing ability to improve them

Recently Fielding Wallace, USGA President, wrote the presidents of non-member clubs and courses and said in part: "To serve golf is the USGA's sole aim. The USGA is a non-profit Association. Our officers and committees contribute their work just because they love the game—without pay or expenses. . . . Do you want a national authority for golf?"

Most of the new members are Regular Member Clubs, composed of individual members who manage their own affairs through officers and committees whom they select. Most of them own or control their own courses; some are regularly organized clubs whose members play at public courses.

The other class of USGA membership is Associate, created in 1948. It is open to courses not controlled by regularly organized clubs.

The first Associate Member was the Beverly Hills Public Golf Club, Warren, Mich., of which Victor H. DeBaeke is Secretary and Treasurer. An interesting reaction came from Mrs. E. E. Vantine, owner and manager of the Twin Lakes Golf Course, Pontiac, Mich., who said: "Associate Membership is the answer to a long-felt need among clubs of this size."

A constitutional change made at the annual meeting was dissolution of the Public Links Section. It was originally established with the aim of eventually requiring that Amateur Public Links Championship entrants be members of such clubs so that the Championship's organization would be improved. However, as only 79 clubs had joined the Public Links Section after sev-

eral years, the original object was considered impractical. Several former Public Links Section members are now Regular Members.

For the first time in many decades framed USGA membership certificates are being issued to all members. As new certificates will be issued annually, members should retain the frames.

CHAMPIONSHIPS Amateur Public Links

As far as is known, this is the largest major golf competition in point of entries, with 2,633 last year and 3,586 the year before. To reduce the field, there will be 44 Sectional Qualifying events in the period June 27-July 5, with 210 players qualifying for the Championship at the North Fulton Park Golf Course, Atlanta, July 19-24. The Team Championship is July 17.

Entries must reach Sectional Qualifying Chairmen by 5 P.M. on Wednesday, June 16. Entry fee is \$3, of which \$2.50 will be used for expenses of Championship competitors up to \$6 per day plus travel; the 50¢ remainder is the USGA portion. (The Public Links and the Junior are the only events in which competitors may accept expenses without forfeiting amateur status.) Entries are open to men amateur golfers who, at all times since January 1, 1948, have not had the privileges of private clubs maintaining their own courses.

Junior Amateur

Forty-one Sectional Qualifying Rounds have been scheduled late in July for the first USGA Junior Championship. The Championship will be held August 11-14 at the University of Michigan Golf Course in Ann Arbor.

Entries must reach the USGA office by 5 P.M. on Thursday, July 8, filed on USGA forms, along with \$3 entry fee. Entries are open to male amateur golfers who will not have reached their 18th birthday by midnight of August 14.

TIMELY TURF TOPICS

from the USGA Green Section

POA ANNUA — FRIEND OR FOE?

By FRED V. GRAU

DIRECTOR, USGA GREEN SECTION

Annual bluegrass is best known by its scientific name, *Poa annua*, which, among golf course superintendents, frequently is shortened to "Po' anna." This grass has a number of remarkable characteristics which force us to place it in the class of desirable turf plants rather than in the weed category where it is placed so often. Let us review these characteristics, pro and con, and attempt to arrive at a logical conclusion.

Pros

Poa annua stands close cutting. It thrives at 3/16 inch on putting greens. It thrives in fairway turf cut at ½ inch.

- ..thrives on compacted soils. The compacted condition of many soils under turf has destroyed most of the turf grasses which we try to grow.
 - ..thrives in shade or sun.
- ..adapts itself virtually on a worldwide basis where moisture conditions are adequate.
 - .. reseeds itself naturally.
- ..produces a highly desirable turf for many uses so long as it is growing.
 - .. is soft and easy to cut.
 - ..has an attractive color.
 - ..thrives under continuous moisture.

Cons

Poa annua is an annual grass which disappears during extremes of heat or drought but returns spontaneously with the return of moisture and more temperate climate. The disappearance of Poa annua in summer is the only black mark against this grass where excellent turf in summer is needed.

It would seem that our desire to berate *Poa annua* and to class it as a weed is to admit our inability to grow a companion grass with it which will provide desired turf conditions when *Poa annua* is resting. It also represents our failure to modify the conditions which do not permit the growth of the turf grasses which we would like to grow. Perhaps the answer is a *dual* approach.

It is obvious that the demands of golfers to have green turf have greatly encouraged Poa annua by virtue of the large quantities of water applied to turf to "keep it green." Under natural conditions bluegrass, fescue and bent become brown during their resting stage when summer drought hits. The playing quality of brown turf is unimpaired, but golfers dislike brown, crackly grass so a water system often is installed. Once a water system is installed, the tendency is to use it to excess. Green committee chairmen have been known to say. "Why do we have this \$30,000 water system if we don't use it?" This is the first step to a Poa annua turf which, because it is poorly understood, is unsatisfactory.

With increased use of water, the soil is saturated most of the time and the grass must be mowed more often. Heavy machinery operating frequently on wet soil causes compaction by forcing the air out of the pore spaces. With reduced air in the soil, the perennial turf grasses disappear and *Poa annua* and weeds are free to develop unhindered by competition. When *Poa annua* produces seeds in early spring and the plants become yellow and die, crabgrass, knotweed and clover are the logical invaders. Then golfers protest about the condition of the course, forget-

ting that, in large measure, they have been responsible.

There never have been sufficient funds to conduct the extensive research needed to answer many problems induced by the demands of specialized uses of turf grasses. Part of our trouble today is inadequacy in our research program and in the service or extension teaching. Production of turf is a highly specialized form of agriculture, and it is therefore entitled to a legitimate share of funds for agricultural research.

We can cite many instances of nearly ideal combinations of *Poa annua* with other turf grasses. They suggest avenues of practical research which can be of lasting benefit to the millions of taxpayers who love and enjoy good turf. It is hoped that several experiment stations, working with the USGA Green Section, may make a coordinated approach to this national problem.

Modifying Soil Conditions

This approach to the *Poa annua* problem is direct, but we do not have the data on which to base definite recommendations. In general we know that, by relieving soil compaction by cultivation, and by aerating the soil to provide more natural growing conditions, we can do a better job of growing the turf grasses we would like to have. This principle is basic to all types of turf the world over.

To reduce *Poa annua*, it is necessary to reduce moisture in so far as it is practicable and feasible. *Poa annua* will not thrive when moisture is deficient, but we cannot control *natural* moisture.

Research in progress at present may help us to give better recommendations on modification of soil conditions. Meanwhile, we urge wider, more frequent use of soilconditioning machines which aerate the soil but do not interfere with use of the turf areas.

Other Turf Grasses

Poa annua disappears when the soil becomes dry, when temperatures rise and when the grass finishes seeding. There are exceptions, of course. In Minnesota it may be possible to hold *Poa annua* turf throughout the summer. In Washington, D. C., this is very unlikely.

What are some of the turf grasses that thrive under the same conditions as *Poa annua* grasses and that are at their best when *Poa annua* is at its worst, and vice versa?

- 1. Bermuda Grass: Bermuda is one of the best turf grasses in existence. It has been damned for its persistence and aggressiveness, but of such, good turf is made. Bermuda grass is not confined to the southern States. There are large areas of excellent Bermuda turf on the campus of Michigan State College at East Lansing. Isolated areas of Bermuda strains occur in New Jersey, Pennsylvania, New York, Ohio, Iowa and other northern States. A casual observation of these areas indicates that some strains are natural companions of the bluegrasses. It is a "natural" because. when the bluegrasses are weakest during the heat of the summer, Bermuda is at On many Bermuda putting greens in the South, Poa annua is the natural invader in the fall when Bermuda goes dormant. Golfers brag about the putting conditions on these greens during the winter. At Pinehurst, N. C., considerable progress is being made in growing bluegrass in Bermuda fairways. In this direction, the possibilities of combining a winter-hardy, good turf strain of Bermuda with bluegrass for fairways, tees, lawns, and other purposes are very promising.
- 2. Zoysia Grasses: Less is known about the Zoysias than about the Bermudas, but in general their characteristics are similar to the Bermuda grasses, both in habit of growth and in their ability to produce excellent turf. Among the Zoysias are many strains, some of which have good combining ability with the cool-season grasses. As yet there is no seed of Zoysia grasses, but there is a great possibility ahead in combining Zoysia with a cool-season grass such as Poa annua, bluegrass, red fescue, bents or others. At the Audubon Country Club, Louisville, Ky., the Zoysia tees fill with Poa annua in the fall and provide

nearly ideal playing conditions throughout the winter. In the spring when temperatures rise, the *Poa annua* disappears and the Zoysia assumes command. Its great drought- and heat-resistance makes it a valuable turf grass.

- 3. ALTA FESCUE: Experiments with Alta fescue as a fairway or tee grass have not progressed far enough so that we can recommend it for these uses. It appears, however, to have excellent possibilities in this direction, particularly finer-bladed strains are developed through breeding and selection. It, too, has the drought- and heat-tolerance of Zovsia and Bermuda; also it is able to grow better than do most grasses in compacted soil and under an excess or deficiency of moisture. There are already a number of observations which would indicate that where *Poa annua* is a severe problem, trial plantings of Alta fescue might be made with considerable confidence.
- 4. Bentgrasses: Among the turf grasses, the bents require the most highly specialized management. They usually will not, however, thrive under precisely the same conditions under which *Poa annua* thrives. Where the soil is too compact, bentgrasses cannot compete with *Poa annua*. Where the soil conditions are modified, bentgrasses offer much help in combatting *Poa annua* because, with careful management through the summer, they can be encouraged to occupy the soil completely when *Poa annua* is dormant or dead.

In our present stage of research with turf grasses, we cannot yet say which of these possibilities offers the greatest promise. Perhaps it may be a combination of grasses. Our great problem area today, so far as fairways and tees are concerned, is the great Middle Belt across the country commonly referred to as the "crabgrass belt." This is the area where the southern grasses have not been encouraged to move northward and where it has been extremely difficult to grow good turf of the northern grasses.

Happily for the future of lovers of good turf, a coordinated effort is being made to discover the principles of combining northern and southern grasses and to learn to manage the combination for best results. Work of this nature at present is being conducted at the Beltsville Turf Gardens, at Purdue University and recently in the St. Louis district through the University of Missouri.

Assistance in this phase of the program is being rendered by the Georgia Coastal Plain Experiment Station, where northern strains of Bermuda grass are being bred with good turf strains so that the progeny can be tested in northern latitudes. Additional work is being carried on at Belle Glade, Fla., and is contemplated at Raleigh, N. C. It is anticipated that further work of this nature will be conducted at Michigan State College, Pennsylvania State College and other northern colleges.

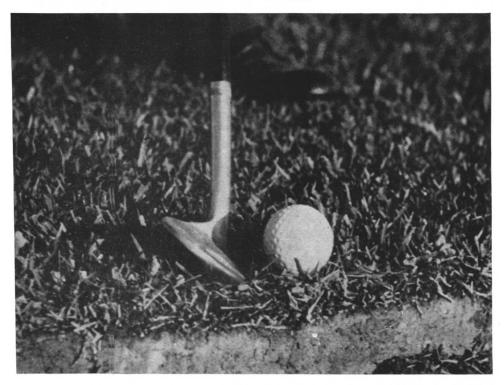
Vegetative planting of highly desirable strains of turf grasses is very much in the picture today because the difficulty involved in producing seed of certain species is almost out of the realm of immediate possibility. Without a doubt, machinery designed for rapid, economical planting of vegetative material into permanent turf areas will be developed in the near future. It is essential to maintain turf areas so that they can be used continuously, even when a new species is introduced into existing turf. Considerable progress already has been made in this direction.

Let us not despair, then, of *Poa annua* as a turf grass. Let us learn to use it and encourage it where it deserves encouragement and where we are able to grow it on a base of a sturdy, summer-growing turf grass.

Not all of this practical research can be accomplished at experiment stations. It is the responsibility of the golf course superintendent on every golf course in the country to take advantage of samples of new grasses offered to him and to make trial plantings under actual playing conditions. This is research in its final form. It is the practical, applied phase of research.

Superintendents are urged to keep in close contact with their State experiment stations for developments along these lines. Through coordinated effort, the answers can and will be found to virtually every problem in the production of better turf.

Is This the Kind of Lie and the Type of Turf You Want?



USGA Green Section Photo

This turf in the Beltsville Turf Gardens is dense, firm, and virtually weed-free. The ball is at rest one-half inch above the soil. Shots played from this turf can be controlled with great accuracy.

SALUTE TO THE SOUTH

The following quotation is from the Southern Golf Association Year Book for 1947:

"The Southern Golf Association is deeply grateful to those Member Clubs and other organizations who have shown themselves so vitally interested in the success of the Experimental Turf Work at the Georgia Coastal Plain Station, Tifton, Georgia, by their generous and willing appropriations and contributions to the fund now being sponsored and collected by this Association.

"Additional appropriations and donations will be accepted by the Southern Golf Association from all Golf Organizations whether Association members or not, who wish to aid and support a project for the development of Southern Turf under typical conditions and capable supervision."

The USGA salutes the Southern Golf Association for its magnificent pioneer work in developing support for the program of Better Turf for Better Golf in the southern States.

SOIL SAMPLES

The Green Section cannot accept soil samples for chemical tests because of limitations in personnel and facilities. This sort of testing is best done in the laboratories of State experiment stations or of fertilizer and seed firms which maintain this type of service.

Samples intended for the examination of physical characteristics will be welcomed, because the physical nature of the soil for specialized turf areas is basic to a proper chemical and nutrient balance and to the desired growth of turf grasses. This is especially important in construction or in the renovation of important turf areas.

Special physical studies of putting-green soils are in progress at the Saratoga Laboratories, Saratoga Springs, N. Y. Results of these studies will be reported at the American Society of Agronomy meetings in Fort Collins, Colo., August 24-27, 1948, and will be published in the Journal of the American Society of Agronomy.

HUNGER SIGNS

The National Fertilizer Association, 616 Investment Building, 15th and K Streets, N.W., Washington, D. C., is revising the book, "Hunger Signs in Crops." It will be available at a later date.

A great deal of work has been reported (on the various food crops) supported by excellent color illustrations, but virtually no information is given on how to recognize hunger signs in the grasses. Recommendations for the nutrition of grasses largely are based on empirical data, observations and experience. Surely the grass family (of which corn and the cereals are members) must exhibit characteristic symptoms of malnutrition with respect to N, P, K, Ca, Mg and other nutritive elements if we but knew where and how to look for them.

A grass symptom of N starvation is a yellowing of the blades. In some species, this occurs after the starvation has become so acute that weeds already have gained a foothold. Phosphorus deficiency produces a purpling in corn leaves, but who has seen this in the minute blades of bentgrass?

Potash requirements in turf grasses are being studied at Pennsylvania State College and Purdue University; they offer some real hope in the future. Purdue University has reported excellent work on two bentgrasses (Notes: The Journal of the American Society of Agronomy, Volume 40, No. 3, March, 1948), with respect to Ca and P, but it is only a start.

Tissue testing is being explored with some promising indications, but it still is a laboratory procedure and has not gained a firm foothold among turf superintendents.

The Green Section supports the trend whereby the research workers in grasses pool their efforts from the forage and the turf standpoints. It has been our contention that the forage grasses, when mowed closely and frequently as turf is managed, exhibit their weaknesses more quickly and more prominently. In a study of the nutritional requirements of any single grass, it would appear that the growth requirements of that grass would be a constant factor, regardless of the use to which the grass would be subjected.

Balanced nutrition is the goal in the production of grass for whatever purpose it is used so that the full capabilities of the plant can be utilized to the maximum. Management of the grass always will be a particular problem of the purpose for which the grass is used.

WHAT PRICE RYEGRASS?

A recent visitor to the Green Section office was Dr. Davies, Director of Agriculture, Canberra, Australia. A great deal of ryegrass has been imported from "Down Under" for use in the United States. Apropos of recent work reported in The Journal of the American Society of Agronomy (Timely Turf Topics, November, 1947, p. 2), the question of the use of ryegrass in permanent seed mixtures was raised. Dr. Davies stated that ryegrass has been eliminated from all mixtures of perennial species for turf in Australia.

Similar action is being contemplated by the Turf Committee of the American Society of Agronomy. The Green Section will welcome your experiences and your statements regarding the use of ryegrass (Italian, common or perennial) in mixtures with bluegrass, bents, fescues, Bermuda and other permanent species.

At the Beltsville Turf Gardens, the most troublesome weed is ryegrass, which volunteers in all plantings. The field where the turf plots are located once was seeded to ryegrass as a cover crop, and seed was allowed to mature.

Agronomists in Oregon and Washington, where ryegrass seed is grown, deprecate the use of ryegrass where turf is the objective. By no stretch of the imagination can ryegrass be considered a turf grass. It is a special-purpose grass and as such has a special place for winter turf, particularly in the South where the summer heat and the competition of southern grasses eliminate it completely after it has served its purpose. In mixtures with cool-

season grasses in the North, it appears to be little else than a detriment and a nuisance which defeats the purpose for which it was included—as a "nurse" grass.

A number of leading seed firms have eliminated, or plan to eliminate, ryegrass from the seed mixtures they sell. It appears to be a step in the right direction. If all seed firms would agree to act similarly, there no longer would be the need for competitive mixture, at low price but high cost, which would be green in five days. If protection of the new seeding is needed, a straw mulch, or similar material, would be cheaper and more effective and the resulting turf would be far more satisfactory to the user.

The Green Section will appreciate your vote on this question: "Should ryegrass be eliminated from mixtures of permanent turf grasses?"

Send your vote, YES or NO, on a penny post card to:

> USGA Green Section Plant Industry Station Beltsville, Md.

Please give your name and address. Results will be tabulated and reported.

INTERESTING READING

"Newsletter" for Iowa Greenkeepers, March, 1948. H. L. Lantz, Iowa State Col-lege, Ames, Iowa. Report of the 14th An-nual Greenkeepers' Short Course.

"Putting Theory," by Leonard Crawley, London Daily Telegraph, in The Professional Golfer, March, 1948, p. 18. Golf course superintendents in the United States can well be proud. Of our courses, Mr. Crawley concludes: "Gentlemen, I wish we had your putting greens."

"Retiring President's Report" in the Greenkeepers' Reporter, Vol. 16, No. 1, January-February, 1948, p. 2. This article by Mr. Farnham merits re-reading and a permanent

place in every superintendent's files.

"Control of Fall Army Worm," by Glenn W. Burton, The Greenkeepers' Reporter, Vol. 16, No. 1, January-February, 1948, p. 50. "Control of Soil Insects," by John C. Schread, The Greenkeepers' Reporter, Vol. 16, No. 1, January-February, 1948, p. 7.

"Chlordane Rates High in Insect Control Tests," by John C. Schread, Golfdom, March,

1948, p. 39.

"We Discuss Shady Lawns," in Blades of Grass, XVII, and "Renovating the Established Lawn," The Lafkins Golf and Lawn Supply Corp., White Plains, N. Y.

BERMUDA GRASS TEES

The following quotation is reprinted in its entirety from Turf News, the official organ of The Heart of America Greenkeeping As-

sociation, Volume 2, No. 3:
"Like many other golf courses, we are continuously trying to improve the quality as well as the toughness of grass for use on grass tees. Tees at Hickory Hills Country Club receive quite a beating each season, and it is almost impossible to keep them covered with grass and maintain a worthwhile appearance.

"We have debated the wisdom of planting Bermuda grass as a means to improve the condition, but have been encouraged to do so by observing several large patches scattered over the course. The patches of Bermuda which we have on the course have been spreading quite rapidly, and have not experienced any winter kill whatsoever. It is dormant from November until May, and although it takes on a brown appearance during these months, it still makes a fairly good playing turf. Two strains of Bermuda have been found on the course. One is quite coarse and does not seem to mat very well, while the other is much finer and produces a closer mat. The appearance of this latter strain during the growing season is quite beautiful, and it is the one which we have decided upon for the tees which we are going to rebuild.

"Just what the outcome will be is for time alone to tell. Since we have never planted Bermuda, we have no idea as to how long it will take to root well and to grow into fine turf. As soon as the frost is completely out of the ground and growing has started in the Bermuda patches on the course, we will obtain stolons and go to work. It is hoped that in the next several months we will be able to report our results at one of the monthly meetings of the Greenkeepers."

(JOHN ARROWOOD, HICKORY HILLS COUNTRY

CLUB, SPRINGFIELD, Mo.)

SLUDGE OR MANURE

The following quotation is from "Potash News Letter for Northeast Territory" No. 44, April, 1948, published by American

Potash Institute, Inc.:

"Is Sewage Sludge a Good Fertilizer? Used at the rate of 20 tons annually for three years, sewage sludge was found to be not so effective as cow manure. When extra potash was applied with the sewage sludge, there was little difference in the crop-producing powers of these two types of material. This is to be expected since most of the potassium in sewage escapes with the water. Thus the potash content of the manure averaged nearly 1.2 per cent on the oven-dry basis, whereas that of sludge averaged 2 per cent, or only one-sixth as much. The nitrogen and phosphoric acid content of sludge averaged about 1.5 per cent each. (Science and the Land, New Jersey Ann. Rpt., 1944-45.)"