



# USGA JOURNAL

AND  
TURF MANAGEMENT

## THE OPEN TURNS BACK THE CLOCK



The older generation can still look back to the days of Harry Vardon, the stylist, and Ted Ray, the flamboyant golfer. The tales of Ray's prodigious hitting, miraculous recoveries and delicate putting, now legendary, are recalled on page 16. Still in his prime at 43, he is shown winning the Open Championship of 1920 at the Inverness Club, Toledo, Ohio, a far cry from the appearance of the winner there this month.

JUNE, 1957



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Published by the United States Golf Association

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**VOL. X, No. 2**

**JUNE, 1957**

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Published seven times a year in February, April, June, July, August, September and November by the

UNITED STATES GOLF ASSOCIATION  
40 EAST 38th ST., NEW YORK 16, N. Y.

Subscription: \$2 a year. Single copies: 30c. Subscriptions, articles, photographs, and correspondence should be sent to the above address.

Entered as Second-class Matter March 3, 1950, at the Post Office at New York, N. Y., under the Act of March 8, 1879. Additional entry at Post office in Sea Cliff, L. I., N. Y.

Edited by Joseph C. Dey, Jr., and John P. English. All articles voluntarily contributed.

## USGA COMPETITIONS FOR 1957

### Championships

| <u>Championship<br/>or Team Match</u> | <u>Entries<br/>Close</u> | <u>Sectional<br/>Qualifying<br/>Rounds</u> | <u>Date of<br/>Event</u> | <u>Location</u>                        |
|---------------------------------------|--------------------------|--|--------------------------|--|
| <b>Open</b>                           | Closed                   | June 3                                     | June 13-14-15            | Inverness Club<br>Toledo, Ohio         |
| <b>Women's Open</b>                   | June 14                  | None                                       | June 27-28-29            | Winged Foot G. C.<br>Mamaroneck, N. Y. |
| <b>Junior Amateur</b>                 | June 14                  | July 2                                     | July 17-20               | Manor C. C.<br>Washington, D. C.       |
| <b>Amateur Public<br/>Links</b>       | *June 20                 | †July 7-13                                 | July 29-<br>Aug. 3       | Hershey Park G. C.<br>Hershey, Pa.     |
| <b>Girls' Junior</b>                  | July 26                  | None                                       | Aug. 12-16               | Lakewood C. C.<br>Denver, Colo.        |
| <b>Women's Amateur</b>                | Aug. 2                   | None                                       | Aug. 19-24               | Del Paso C. C.<br>Sacramento, Cal.     |
| <b>(1) Walker Cup Match</b>           | —                        | —  | Aug. 30-31               | Minikahda Club<br>Minneapolis, Minn.   |
| <b>Amateur</b>                        | Aug. 8                   | Aug. 27                                    | Sept. 9-14               | The Country Club<br>Brookline, Mass.   |
| <b>Senior Amateur</b>                 | Aug. 30                  | Sept. 17                                   | Sept. 30-Oct. 5          | Ridgewood C. C.<br>Ridgewood, N. J.    |

Dates entries close mean last dates for applications to reach USGA office, except in the case of the Amateur Public Links Championship. For possible exceptions in dates of Sectional Qualifying Rounds, see entry forms.

\*Entries close with Sectional Qualifying Chairmen.

†Exact date in each section to be fixed by Sectional Chairmen.

(1) Walker Cup Match—Men's Amateur Teams: Great Britain vs. United States.



### *Not the Half of It*

Mrs. Tom Angove, a South Australian State golfer, was practising at the Koo-yonga Golf Club, Adelaide. Her eight year old son was gallantly picking up the balls for his mother. When he had retrieved the balls several times he was told not to go far away, she was going to hit some half eights.

"But mother," queried the child, "why don't you use your No. 4?"

### *Age In The Open*

The currents of history could come together at the Inverness Club, in Toledo, Ohio, this month.

When Ted Ray, the Englishman, won the Open Championship there in 1920, he was 43 years, 4½ months old. He was born on March 28, 1877, and the Championship was held on August 10, 11, 12 and 13, 1920.

No one so old has won since, or before for that matter. However, there are at least two older than Ray who are fully capable of winning as the Championship returns to Inverness.

Ben Hogan is 44 years, 10 months old. He was born on August 13, 1912.

Sam Snead is 45 years, 1 month. He was born on May 27, 1912.

Even the 46 year old Jimmy Demaret can not be over-ruled as a serious contender on his present showing.

But while golfers speculate on the older school, there is no youngster on the horizon

likely to upset the long standing record of Horace Rawlins, who won the first Open Championship in 1895 at the age of 19.

The following list of other young and aging champions prove that major events can be won from the teens to the fifties:

Miss Beatrix Hoyt, 16, U.S. Women's Amateur, 1896.

Miss May Hezlett, 17, British Women's, 1899.

Miss Nancy Jupp, 13, British Girls', 1934.

Tom Morris, Jr., 18, British Open, 1868.

John Beharrell, 18, British Amateur, 1956.

Louis N. James, 19, U.S. Amateur, 1902.

Harry Vardon, 44, British Open, 1914.

Jack Westland, 47, U.S. Amateur, 1952.

Hon. Michael Scott, 54, British Amateur, 1933.

### *John B. Beck to Take the Chair*

John B. Beck has been nominated by the past Captains of the Royal and Ancient Golf Club of St. Andrews, Scotland, as Captain for the year 1957-58. He will play himself in in September.

Mr. Beck has been one of Britain's leading players and administrators for the past thirty-five years. He captained Britain's only winning Walker Cup Team in 1938 at St. Andrews and was chosen again to lead Britain in the first post-war matches in 1947. He played on the 1928 team which lost to the United States at the Chicago



## NEW MEMBERS OF THE USGA

### Regular

Antelope Valley Golf Association, Cal.  
 Berrien Hills Country Club, Mich.  
 Bradenton Country Club, Pa.  
 City Golf Club, Ore.  
 Clinton County Country Club, Mich.  
 Country Club of Peoria, Ill.  
 Dayton Meadowbrook Country Club, Ohio.  
 DeAnza Desert Country Club, Cal.  
 Dunedin Isle Country Club, Cal.  
 Elizabethtown Country Club, Ky.  
 Fort Bliss Golf Association, Texas  
 Fox Meadows Country Club, Tenn.  
 Golf Club of Wayne, N. J.  
 Graham Air Base Golf Club, Fla.  
 Hendersonville Country Club, N. C.  
 Itasca Country Club, Ill.  
 L. & N. Golf Club, Ky.  
 Lakeside Golf and Country Club, Okla.  
 Laurel Country Club, Miss.  
 Meadowbrook Country Club, Ohio  
 Moses Lake Golf Club, Wash.  
 North Conway Country Club, N. H.  
 Panama Country Club, Fla.  
 Portland Country Club, Ind.  
 Putnam Country Club, Texas  
 Riverside Country Club, Texas  
 Rock Creek Golf Club, D. C.  
 Rolling Hills Country Club, Colo.  
 Scranton Canoe Club, Pa.  
 Sedalia Country Club, Mo.  
 Sepulveda Men's Golf Club, Cal.  
 Spencer Golf & Country Club, Iowa  
 Top Notch Country Club, Colo.  
 Valley Country Club, Colo.

### Associate

Brookfield Golf Course, Conn.  
 Carson City Golf Course, Nev.  
 Cherry Point Golf Course, N. C.  
 Dayton Golf and Country Club, Tenn.  
 Langhorne Golf Club, Pa.  
 Par 3 Golf Club, Fla.  
 Paskamansett Links, Mass.  
 Tahoe City Golf Course, Cal.

Golf Club, Wheaton, Ill.

He and his wife have set a precedent which may never be equalled. Mrs. Beck emulated her husband by captaining the last Curtis Cup team to visit this country in 1954, but she stole a march on him by being elected Chairman of the Executive Council of the Ladies' Golf Union in 1955.

She just stepped down from office this year. Now it is his turn to take the chair.

## Skirts For Women's Open

The accent will be on decorum when the competitors in the Women's Open Championship tee off at the Winged Foot Golf Club, Mamaroneck, N. Y. on June 27-28-29.

Entrants have been asked to observe the Club's ruling that shorts will not be worn, and so for the first time in four years all competitors will step skirted onto the first tee.

The controversy over shorts has been raging now for twenty-three years, since a furor arose when a shorts clad competitor took part in a Metropolitan New York Women's event in 1934.

The USGA banned shorts in 1953 but withdrew the ban the following year. The USGA now has no clothing regulations of its own but always requests players to honor any such regulations in effect at Clubs where it is conducting Championships.

## A Break With Tradition

The Country Club, Brookline, Mass., which this year celebrates its seventy-fifth anniversary, has broken with tradition surrounding its famous old championship course in order to provide a longer test and better facilities for the Amateur Championships.

When the qualifiers gather there for the match-play stages in September, they will be faced with a new, par-72 alignment measuring close on 6,700 yards, 300 yards longer than the old course which has played host to one Open, three Amateurs, two Women's Amateurs, one Girls' Junior and one Walker Cup Match.

The new course, which comprises the best features of the Club's three nine-hole units, will also afford additional parking space and a practice area near the clubhouse.

The Amateur was last held at The Country Club in 1934 when Lawson Little, Jr., won the title which he successfully defended the following year. It was there, too, that Francis Ouimet became the first amateur to win the Open, in 1913, when he streaked away to a clear-cut victory in



the play-off with Harry Vardon and Ted Ray. Yet despite the strong sway of sentiment, Ouimet himself was forced to admit that the change now is for the best.

### ***Mrs. Vare's Portrait in "Golf House"***

The USGA headquarters in "Golf House" is gradually acquiring a portrait gallery of golf's greats. Now, in addition to the canvases of Robert T. Jones, Jr. and Francis Ouimet, comes a striking picture of United States' six times Women's Champion, Mrs. Glenna Collett Vare.



One hundred and ninety-five of her golfing friends from Providence, R. I., to Philadelphia subscribed to a fund to sponsor this newest portrait in confirmation of the warm esteem in which Mrs. Vare is held. The Committee which obtained the funds comprised Mrs. Harrison F. Flippin, of Ardmore, Pa., Mrs. Warren B. Pond, of New York, N. Y., and Mrs. J. Albert Hayes, of Rosemont, Pa.

Through the good office of Erwin S. Barrie, of New York, Director and Manager of the Grand Central Art Galleries and member of the USGA Museum Committee, the well-known artist Frank C. Bensing was commissioned to paint the portrait. All who see it will agree that the choice was a happy one.

The work was done from a photograph taken in her championship days of the

young Miss Collett sitting on a bench at a golf course. She could have been waiting to tee off or watching others coming to the last green. The result is natural and alive and will recall for posterity the young woman who set an unprecedented record in women's competitive golf in the United States.

The picture now hangs at the top of the first flight of stairs. It was unveiled at a simple ceremony in "Golf House" in the presence of Richard S. Tufts, President of the USGA, and a small gathering of Mrs. Vare's close friends.

### ***Champions Were Spring Brides***

Our Women's Amateur Champion is now Mrs. J. Douglas Streit. The former Miss Marlene Stewart was married in April and will live in Toronto.

Miss Barbara Romack, Women's Amateur Champion in 1954, was also an April bride to Mr. Edward Wayne Porter. They have set up home in Sacramento, Cal.

### ***USGA Insignia***

The Association has taken the occasion during the winter to review its sartorial system of blazers, pocket emblems and neckties. As a result its committeemen will be modeling new insignia and regalia this summer.

The Executive Committee will continue to wear the familiar navy blue blazers and blue, silver and scarlet regimental neckties. However, the blazers will bear a new pocket emblem, the official seal of the Association. Retired members henceforth will wear their years of service below their pocket emblems.

Committees which conduct competitions—the Public Links, Junior Championship, Girls' Junior, Senior Championship and Sectional Affairs—will wear a brand-new tan blazer bearing an equally brand-new pocket emblem featuring the American eagle, with a tan and green regimental necktie.

Other committees are authorized to wear the necktie but not the blazer.

The Walker Cup Team will continue to wear the traditional green blazers but will display a new pocket emblem and

necktie, both featuring the American eagle with a silver background. The Americas Cup Team, next year, will wear exactly the same regalia, rather than the brown blazers of the past. Only the words encircling the pocket emblem will distinguish the two teams' regalia.

The Curtis Cup Team, next year, will continue to wear the traditional white blazers, but they will bear the new pocket emblem of the other international teams.

### ***Calling All Caddies***

Metropolitan Golf Association's recently published "A Manual of Caddie Instruction" is really a companion piece to "Caddie Management and Control" which was published a year ago. The 1956 booklet was addressed to Caddie Committees at golf and country clubs, whereas the present one is addressed to the Caddies.

Written in a down-to-earth vein and profusely illustrated with comic sketches from the pen of Tom Paprocki, of the Associated Press, it will be easily understood by caddies of any age. The table of contents includes chapters on Rules Which Affect Caddies, Often-used Terms, Advice and Instruction from Tee to Green, Carrying Double and many more. Boys are given such rudimentals as, how to watch and locate a ball, how to help a younger and less experienced caddie and what benefits they may expect from caddyng.

Orders in lots of ten copies at \$3.00 the lot may be sent to Metropolitan Golf Association, 40 East 38th Street, New York 16, N. Y.

### ***National Golf Day***

The two Open Champions, Cary Middlecoff and Mrs. Kathy Cornelius, are devoting Saturday, June 8 to playing the nation's golfers on National Golf Day. Middlecoff is playing at the Inverness Club, Toledo, Ohio, site of the Open Championship the following week. Mrs. Cornelius will be competing in the Women's PGA Championship at Churchill Valley Country Club, Pittsburgh, Pa.

Sponsored by the Professional Golfers' Association for many worthy golfing projects and charities, not least among them

turf research and education which has benefited by \$47,700 in the past five years, golfers will have the opportunity of pitting their full handicap strength against the reigning champions during the week commencing June 2 and "investing" \$1 for the good of the game.

### ***Patty Likes Winged Foot***

Miss Patty Berg has been over the East Course of the Winged Foot Golf Club, Mamaroneck, N. Y., in preparation for the Women's Open. Here are her comments and predictions:

1. It's a great course.
2. The gal who wins will have to be a mighty fine iron and sand player.
3. The last three holes are great, and the Open will be won on those last three holes.
4. Spectators will see two of the biggest hitters in the game in Miss Mickey Wright and Miss Betty Dodd.

### ***PGA Liaison Officer***

Marty Crompt, president of the Northern Ohio Section of the Professional Golfer's Association of America, has been appointed by the PGA as its liaison with the USGA Championship Committee in matter relating to the Open Championship at the Inverness Club, Toledo, Ohio.

### ***Golf's "Queen Mother" Passes Away***

A few weeks ago a little old lady of seventy-nine passed quietly away at her home in Elmsford, N. Y., where she had lived for over fifty years.

She was known to few golfers, yet her donation to the game will be talked of for generations to come.

Her name was Anna Antonia Turnesa; her gift, her six golfing sons, Willie, Jim, Phil, Joe, Mike and Doug.

She has been aptly referred to as the "Queen Mother" of golf's "Royal Family," yet she was just as proud of the many local achievements of her boys as of the Walker and Ryder Cup honors accorded Willie and Jim.

Hers had been a life of self-sacrifice, and because of that a happy one.

# A HAPPY SUBJECT FOR THE ARTIST

by

**ERWIN S. BARRIE**

*Member, USGA Museum Committee*

Gautier once said, "All passes. Art alone endures." I would like to amend this statement by saying, "All passes. Art and golf alone endure."

I think the happiest day that I can remember was at the Yale Golf Course, in New Haven, Conn., where a friend and I played 18 holes in the morning and after luncheon sat down at the ninth tee and spent the entire afternoon making a sketch of that famous 225-yard hole, which requires a 190-yard carry over water. Mixing the colors, making an accurate drawing and observing the lengthening afternoon shadows, I also had the secret pleasure of seeing other players make even more generous contributions to the water than I had.

Golf is a game with a great background of tradition and golf paintings, whether portraits of famous golfers or famous holes. "Golf House," the USGA headquarters in New York, is honoring the great names in United States golf by exhibiting golf portraits of distinguished American artists.

One of the first to be so honored was John Reid.

Then came the very attractive portrait of Robert T. Jones, Jr., at the finish of his swing, by Thomas Stephens and the stunning portrait of Francis Ouimet in his red coat as Captain of the Royal and Ancient Golf Club of St. Andrews, also by Mr. Stephens who, because of his many portraits of President Eisenhower, has been called "the Gilbert Stuart" of this administration.

The mention of Bob Jones recalls to my mind very distinctly my first meeting with this great golfer. It was just a few weeks after he had completed the "Grand Slam," and O. B. Keeler brought Bob in to meet me. I had received a commission to have Wyman Adams do a full-length standing portrait of Bob for his club in Atlanta. I



*Photo by Courtesy of the  
Grand Central Art Galleries*

**A recent portrait of Findlay S. Douglas, of New York, former Amateur Champion and USGA President, painted by Commander Albert K. Murray.**

was so impressed with his clear, tan complexion, his blond hair, bright blue eyes and above all his modesty and boyish manner. The artist, usually a quick painter, spent nearly a week on this portrait, and poor Bob had to stand nearly all of that time. Years later he told me it was one of the most difficult tasks he had ever been assigned.

There is also in "Golf House" a painting of the First hole at the Apawamis Club, Rye, N. Y., done from the clubhouse terrace by the writer.

Mrs. Glenna Collett Vare, the great woman amateur, has been painted recently by the distinguished portraitist, Frank C. Bensing. This canvas, approximately the same size as the Jones and Ouimet canvases, now hangs in "Golf House," too.

A particularly interesting portrait of



Richard S. Tufts, President of the USGA, has just been completed by John Lavalle, a Harvard classmate of Mr. Tufts. This portrait has been installed in the main lounge of the Pinehurst Country Club, Pinehurst, N. C.

The National Golf Links of America, Southampton, N. Y., has become the recipient of a most remarkably fine portrait of Findlay S. Douglas, of New York, former Amateur Champion and former President of the USGA, by Commander Albert K. Murray. In my opinion, this is one of the finest portraits ever done by an American artist and should add greatly to the importance of golf art beautifully displayed at the National Clubhouse which, as I recall, also boasts a fine portrait of Charles B. Macdonald by Gari Melchers and a painting of the 17th hole, by my old friend, Albert Sterner, a distinguished National Academician.

The Greenwich Country Club has, over the mantle in its ballroom, a quite satisfactory portrait of dear old Julian W. Curtiss, one of the prominent pioneers of American golf; and for many years the locker room of Boca Raton Club, Boca Raton, Fla., has displayed a portrait of

Tommy Armour.

Of course, the full-length portrait of Charles B. Macdonald with his caddie, by Gari Melchers, famous Virginia artist, in the card room of the Links Club, in New York, is one of the outstanding contributions to golf art.

During the last ten years I have been making paintings of famous golf holes throughout the country, including the fifth, fourteenth and eighteenth at the Pine Valley Golf Club, Clementon, N. J.; the fifth and seventh on the No. 2 course at Pinehurst N. C.; the tenth at Augusta National Golf Club, Augusta, Ga.; the ninth at Yale Golf Course; the fifth at St. Andrews Golf Club, Hastings, N. Y.; the tenth on the West Course of the Winged Foot Golf Club, Mamaroneck, N. Y.; the seventeenth at Gulf Stream Golf Club, Del Ray, Fla., and about thirty-five others. It is my intention to do the eleventh at Merion Golf Club, Ardmore, Pa., and then, of course, decide on the most important holes from such courses as the Pebble Beach and Cypress Point courses, in Del Monte, Cal. This collection which I call "Famous Golf Holes I Have Played," is on exhibition at Pinehurst, N. C.

## GOLF ON CANVAS FROM EARLY TIMES

by DEAN O. M. LELAND

*Member, USGA Museum Committee*

**W**HILE Dutch paintings of Winter scenes in the 17th century show men on the ice with clubs somewhat resembling hockey sticks, the game, as such it was, had nothing in common with golf, and there is no reason to believe that golf was ever played anywhere before it was played in Scotland.

Early golf paintings were oil portraits of captains of golf clubs, in full uniform of their clubs, painted at the club's expense and hung in the clubhouse halls. The following pictures are well known, have been variously reproduced, and were published in color in London in 1927 in the collection entitled "A Golfer's Gallery by Old Masters," with an introductory text by Bernard Darwin:

William St. Clair of Roslin, by Sir George Chalmers, 1771, for the Honourable Company of Edinburgh Golfers.

John Taylor, by Sir John Watson Gordon, for the Honourable Company of Edinburgh Golfers, about 1825.

William Innes, by Lemuel Francis Abbott, 1790, for the Blackheath Golf Club, London.

Henry Callender, by Lemuel Francis Abbott, 1807, for the Blackheath Golf Club, London.

Francis Bennoch, of Blackheath, about 1860.

"Old Alick" Brotherson, hole-cutter at Blackheath, by Mr. Gallen of Greenwich School, about 1835.

In 1850, a British artist named Charles Lees painted a picture of the finish of a match at St. Andrews, between Sir David Baird and Major Playfair, which included a gallery of more than fifty people, well known in that day, each of whom was named in the key diagram accompanying



**"Old Alick' Brotherson, painted by Mr. Gallen of Greenwich School, Kent, about 1835, from the collection "A Golfer's Gallery by Old Masters."**

the picture. This plan of showing actual portraits of persons in a golfing scene was adopted by various artists and became popular. Lees painted another golf picture in 1859, called "Evening on Musselburgh Links," but it never achieved the fame of its predecessor.

A notable series of landscapes in water color was painted by the eminent artist John Smart, etched by George Aikman, and published in 1893 under the title "A Round of the Links," in a limited edition. Twenty of the older greens of Scotland are represented.

During the years 1892 to 1916, the Association of Scotland published each year a calendar bearing a golf picture. Most of these were scenes on celebrated courses of the British Isles and included portraits of well-known golfers. The artist

was Michael Brown of Edinburgh and the original paintings are still in the possession of the association. When I commented upon the wonderfully accurate likeness in the portraits of prominent golfers whose pictures have been familiar, I was informed by my friend, the late Mr. D. M. Mathieson who had known the artist, that Mr. Brown used to have these golfers sit for him while they were attending the golf competitions so that he could sketch their portraits directly from life.

Worthy of mention here are the illustrations in color, about sixty in number executed by Harry Rountree for the book "The Golf Courses of the British Isles" by Bernard Darwin (London, 1910). All are views on certain holes of British courses.

Golf has ever been a fertile field for humor and it has been cultivated by numerous artists and cartoonists as well as the writers. As a matter of fact, a large number of the golf paintings of the nineties and thereafter have the element of humor which would fit them for the walls of clubhouses and locker rooms.

In America, during the early days of golf in the nineties and the following decade there were several prominent artists who gave much attention to golf. Among the leading illustrators were A. B. Frost, A. I. Keller, Edward Penfield, and T. de Thulstrop. C. D. Gibson made a number of golf drawings in his well-known pen-and-ink. Both Frost's and Gibson's work was published in book form.

Some excellent reproductions of golf paintings have been produced by manufacturing companies for advertising purposes. The Acushnet Company issued a copy of the Blackheath portraits of William Innes in full color. Also, it has published attractive calendars illustrated by a series of cartoons painted by Harry Backhoff. Two large pictures of old golfers painted by L. K. Earle, about 1905, were published by the Stetson Shoe Company and are familiar to members of many clubs around the country.

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# INVERNESS PIONEERED USGA GREEN SECTION

by

CHARLES K. HALLOWELL  
*Mid-Atlantic Director,  
USGA Green Section*

**H**AD the Open Championship not been held at the Inverness Club, Toledo, Ohio, in 1920, there might never have been a Green Section of the United States Golf Association, or at best its formation might have been long delayed.

The then chairman of the Inverness Green Committee, E. J. Marshall, and the golf course superintendent, W. J. Rockefeller, got together on the job of getting the course into first-class condition. They drew up a schedule, presented it to the Board of Governors and in due course received the necessary funds to go ahead.

But chairman Marshall and superintendent Rockefeller were startled by the lack of substantial facts as they started the job. According to their writings, only a few opinions were available and most of these related to selling some special supplies but were not necessary in helping to improve the condition of a golf course.

It was while hunting for real information about golf course soil, grasses and management in 1920, that E. J. Marshall encountered others interested in developing a central clearing house for golf course maintenance facts. His correspondence with Hugh and Alan Wilson, of Merion Cricket Club, near Philadelphia, and Dr. Walter S. Harban, of Columbia Country Club, near Washington, D.C. during that period was lengthy and heavy, the result being the formation of the Green Section of the United States Golf Association. After the organization meeting on November 30, 1920, Dr. C. V. Piper was selected Chairman, and E. J. Marshall, Vice-Chairman.

## *Help for Small Clubs*

Mr. Marshall supplemented his letter-writing by frequent trips to Washington to aid in starting the turfgrass plots and

## USGA FILM LIBRARY

The USGA Film Library has added "Play Them As They Lie" to its two previous films, "Inside Golf House" and "The Rules of Golf—Etiquette".

The latest addition, a 16 mm. color production, runs for 16½ entertaining minutes in which Johnny Farrell, the Open Champion of 1928, acts as intermediary between Wilbur Mulligan, a beginner of unimpeachable integrity, and Joshua P. Slye, a past master in the art of breaking the Rules. The film was made at the Baltusrol Golf Club, Springfield, N. J., where Farrell is professional.

"Inside Golf House" gives the viewer an opportunity to see the many interesting exhibits in "Golf House," USGA headquarters in New York, and to re-live golf triumphs of the past with many of the game's immortals. The film is a 16 mm. black and white production and runs 28 minutes.

"The Rules of Golf—Etiquette" also has proved popular. The film stresses the importance of etiquette by portrayal of various violations of the code in the course of a family four-ball match. Ben Hogan appears in several scenes, and Robert T. Jones, Jr., makes the introductory statement. A 16 mm. color production, the film has a running time of 17½ minutes.

The distribution of all three prints is handled by National Educational Films, Inc., 165 West 46th Street, New York 36, N. Y., which produced the films in cooperation with the USGA. The rental is \$15 per film, \$25 for combination of two and \$35 for all three in combination at the same time, including the cost of shipping prints to the renter.

the publication of the Bulletin of the Green Section of the United States Golf Association. He was a contributor, usually writing under the guise of "Dear Bill." He had a burning desire to aid all, and especially the nine-hole and isolated golf courses, to secure facts to enable the management to give the golfers better playing conditions. The Green Section has continued since Mr. Marshall's time to inten-



sify its efforts to serve the member clubs of the United States Golf Association.

Superintendent Rockefeller was as intensively interested in securing new information and aiding others in having better golf courses. He both traveled to and talked in other areas and designed a number of courses in Ohio, including Heather Downs, Napoleon, Lakemont, Catawba Cliffs, Defiance, and Mohawk golf clubs. He often referred to "his boys" who, after their training and work at Inverness, became superintendents of other courses—namely, Joe Mayo, Al Schardt and Charles Meyers.

### *The Same Spirit*

The determination of Green Committee Chairman Edward J. Searles and Superintendent Wilbert Waters to have Inverness ready for the 1957 Open was just as keen as was that of Marshall and Rockefeller. The striking difference reported by Messrs. Searles and Waters is the fund of information that is available to them to aid in having the soil, grasses and general condition of the course in championship caliber.

Superintendent Waters renovated the tees in 1955, stepped up the fall fertilization program the past two years, mowed the rough at a uniform height all through 1956, and applied fertilizer wherever the turfgrasses were thin. Aeration has been the normal practice on all areas to develop deeper roots and to increase the water-holding capacity of the soil.

Slow-acting and long-lasting nitrogen is the regular diet for the upstanding grass growing on the greens. The mowing schedule calls for close cutting with both the vertical and reel-type mowers. Freedom of mat, thatch and grain is Superintendent Waters' specialty.

Wilbert Waters secured all the necessary "know how" for putting Inverness into championship form by his long experience in work at Inverness, and having been the top man at Highland Meadows for twenty years. Seven years ago he returned to Inverness to take the position as Superintendent. He is a regular attendant

## DEFENDING CHAMPION



Cary Middlecoff, Open Champion of 1949 at Medinah Country Club, Medinah, Ill., and 1956 at Oak Hill Country Club, Rochester, N. Y., will be bidding for his third title at the Inverness Club this month, the third time that Inverness has entertained the Open Championship.

at the National and Mid-West Turfgrass Conferences and is a leader of his fellow superintendents in the Toledo area. With Chairman Searles and other committee members of Inverness he attended the 1956 Open at Rochester, N. Y. He listened to Superintendent Elmer Michael tell the problems which he encountered in preparing Oak Hill during an extremely wet season for the Open.

Messrs. Marshall and Rockefeller did more than have Inverness in the best possible condition for the 1920 Open Tournament; they led the way to making it easier for others to have their courses ready for their members as well as the USGA Championships.

# HOW TO ORGANIZE WOMEN'S GOLF

by  
MISS NANCY JUPP

**T**HE 1957 revised edition of the United States Golf Association's booklet, "The Conduct of Women's Golf," compiled by the USGA Women's Committee, is far from being a reprint with a different colored cover. It has a very definite new look about it. All the material relating to a women's golf committee has been extensively revised and expanded or replaced.

Although it has increased its bulk by ten pages, it carries no superfluous weight. The new or revised material has been carefully considered and concisely set out.

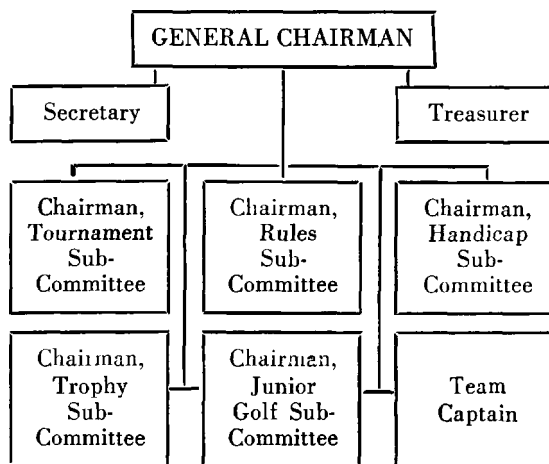
The opening section dealing with the constitution of a women's golf committee, and in particular the work of the General Chairman, suggests the following nucleus:

lowing headings: "Responsibilities of Chairman," "Responsibilities of Players," "Preparing for a Competition," "Conducting a Competition," "Match-Play Events" and "Stroke-Play Events."

Section 6, dealing with the Handicap Chairman states: "Her position... is of great importance and on her depends much of the success of the entire program." It also draws a helpful character sketch of the woman best suited to the position.

The section on junior golf has been suitably expanded and given prominence alongside other committee work.

The latter half of the booklet devoted to the recommended handicap and course rating systems for women has not been changed in substance.



The eight ensuing sections are devoted to the duties of each individual member.

Emphasis has been placed on the role of the Tournament Chairman to which thirteen pages have been devoted. This section has been sub-divided into the fol-

By listing in detail the duties of a women's golf committee, the USGA Women's Committee has established a formula which may in time be profitably emulated by males. The pattern can readily be adapted to meet the requirements of all golfing organizations.

# ANCIENT AND MODERN IN "GOLF HOUSE" LIBRARY

by

PAUL R. MacDONALD

USGA Executive Assistant

**T**HE more than one thousand volumes and bound magazines that comprise the "Golf House" library provoke the interest and imagination of the golf scholar, collector or duffer.

The collection covers golf course architecture, fiction, history, humor, club management, instruction, miscellany, poetry, records and rules.

For scholars and collectors there is the 1774 edition of "The Muses Threnodie" by Henry Adamson. It is believed to be the first book to contain a reference to golf. The original edition appeared in 1638.

Of similar interest is the 1597 edition of the "Lavves and Actes of the Parliament of Scotland" which contains the famous decree of James II's XIII Parliament, issued in March, 1457, in which golf was declared illegal. A 1682 edition also is in the collection.

Of historical interest is "The Rules of the Thistle Club," published in 1824. This book contains the first actual history of the game, written by John Cundell, Secretary of the Thistle Club which played over Leith Links, near Edinburgh.

C. B. Clapcott's "The Rules of Golf of the Ten Oldest Golf Clubs, 1754-1848," published in 1938, traces the development of the Rules of the game from the earliest time down to the middle of the last century.

The beginner would perhaps marvel at the instruction books. More than one hundred volumes are available from "The Golfer's Manual" by H. B. Farnie, published in 1857 and considered to be the first book of instruction, to the current "Tips from the Top," a collection of articles contributed by leading professionals, compiled by Herbert Warren Wind.

Two unique instruction books are "Hints

on the Game of Golf" by Horace Hutchinson, 1886, which is said to have started the popularity of golf instruction literature, and "The Art of Golf" by Sir Walter G. Simpson, 1887, considered a golf instruction classic because it was the first book to use photographs to supplement the text.

The first American document on golf was published here in 1893, and was entitled "Golf." It was a pamphlet belonging to the Spalding Athletic Library. "Golf In America" by James P. Lee, appeared in 1895 and is considered by many to be the first real book on golf published in this country. A very early reference to the game in America, probably the first, appeared in Benjamin Rush's book "Sermons and Exercises for Gentlemen," 1772.

The library also contains two of the outstanding books on golf history in America, H. B. Martin's "Fifty Years of American Golf" and Herbert Warren Wind's "The Story of American Golf."

Such works as "The Bobby Jones Story," by O. B. Keeler and Grantland Rice, "The Walter Hagen Story" by Walter Hagen, "Thirty Years of Championship Golf" by Gene Sarazen and "This Life I've Led" by the late Mrs. Mildred Didrikson Zaharias are a few of the outstanding biographical or autobiographical volumes in the collection.

Current copies of most of the leading golf magazines may be found in the library.

Bound volumes of many of the golf magazines fill the shelves.

Records, annuals and year books form another invaluable part of the golf library for research purposes.

Visitors are cordially invited to use the "Golf House" library whether to study or just to browse. The library is open daily Monday through Friday from 9 A.M. to 5 P. M. Bibliographies are available on golf architecture, history and instruction.



# POST-WAR REVIVAL IN JAPANESE GOLF

*Golfers  
Number  
300,000*

**G**OLFERS are too apt to think of the United States and Britain as the sole trustees of the game of golf, that other nations merely dabble in the game. But they get a pleasant shock when they take their clubs to the Continent and sample the several first class courses in the Paris area, Royal Antwerp or Le Zoute in Belgium, Eindhoven in Holland or Villa D'Este, Italy.

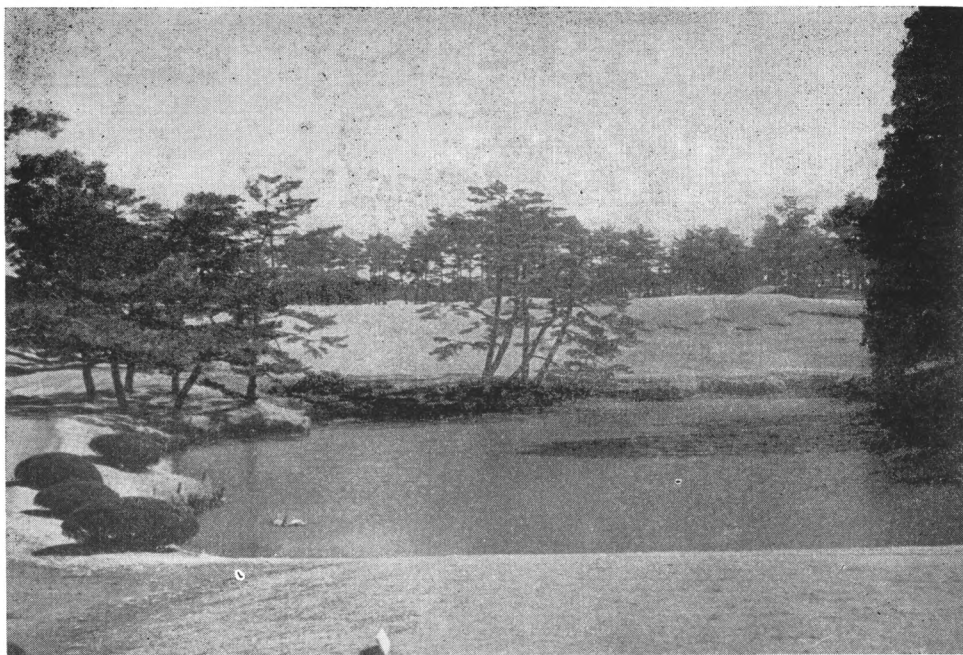
If business takes them out to Australia they can play the dozen or more excellent courses on the sand belt outside Melbourne and realize where the Peter

Thomsons come from. The Union of South Africa has produced Bobby Locke and the promising young Gary Player.

Now the spotlight is swinging right around to the Far East and focusing on the land of the Rising Sun.

Japanese professionals have occasionally visited the United States, many servicemen have played in Japan, but apart from fragments of information the average golfer is hardly aware that golf is popular in the Orient.

Yet golf was introduced to Japan about fifty years ago when British settlers in



Many good courses are remembered for their water holes. The Kasumigaseki Country Club, Tokyo, where the Canada Cup will be held in October, is justly proud of its tenth hole. Here you see it viewed from the tee; the green is in the distance.

Yokohama and Kobe each laid out nine hole courses. It caught on and the first all-Japanese Club, the Tokyo Golf Club, was formed in 1913.

In the 'twenties and 'thirties the game gained in popularity to such an extent that it rivalled baseball as the premier sport. Prior to the war there were 62 courses throughout the country, but by the time that some had been given over to agriculture and others to military needs, only 18 survived the war.

The intervening decade has been one of tremendous golfing revival. Helped in several instances by the United States occupational forces, Japan now boasts 59 private clubs and 16 public courses for its upwards of 300,000 enthusiasts.

If golfers in this country feel that they have a course shortage problem, their worries are slight in comparison. Nearly every club in Japan has a membership of over 1,000, and in some instances as many as 2,000.

Golfers who cannot join a club are flocking as guests of members, and most clubs have reluctantly had to bar visitors at week-ends.

New courses are constantly being designed, twelve are at present under construction, but that is chicken feed compared with the estimated 5,000 new golfers who are taking up the sport each month. Driving ranges have sprung up around all the big cities and professionals are teaching from early morning to late at night.

Shun Normura, Vice-President of the Japan Golf Association and President of the Tokyo Golf Club, to whom we are indebted for this information, foresees Japan as one of the great golfing nations of the future. It has a nucleus of first class courses, its scenic splendor can hold its own with courses throughout the world, and its enthusiasm has probably never been equalled.

What matters more in the immediate future is that as host to this year's Canada Cup in October it should be absorbed into the great fellowship of golfing nations which have done so much to foster goodwill among the world's citizens.

## USGA PUBLICATIONS OF GENERAL INTEREST

**THE RULES OF GOLF**, as approved by the United States Golf Association and the Royal and Ancient Golf Club of St. Andrews, Scotland. Booklet, 25 cents (special rates for quantity orders, more than 500).

No charge.

**USGA GOLF HANDICAP SYSTEM FOR MEN**, containing recommendations or computing Basic and Current Handicaps and for rating courses. Booklet, 25 cents. Poster, 10 cents.

**THE CONDUCT OF WOMEN'S GOLF**, containing suggestions for guidance in the conduct of women's golf in clubs and associations, including tournament procedure, handicapping and course rating. 25 cents.

**HANDICAPPING THE UNHANDICAPPED**, a reprint of a USGA Journal article explaining the Callaway System of automatic handicapping for occasional players in a single tournament. No charge.

**TOURNAMENT FOR YOUR CLUB**, a reprint of a USGA Journal article detailing various types of competitions. No charge.

**PROTECTION OF PERSONS AGAINST LIGHTNING ON GOLF COURSES**, a poster. No charge.

### MOTION PICTURES:

"Play Them as They Lie," an official USGA film (16 mm. color, with sound, runs 16½ min. Rental \$15.) Descriptive folder. No charge.

"Inside Golf House," an official USGA film (16 mm. black and white, with sound, runs 27 min. Rental \$15.) Descriptive folder. No charge.

"The Rules of Golf—Etiquette," an official USGA film (16 mm. color, with sound, runs 17½ min. Rental \$15.) Descriptive folder. No charge.

These three films available in combination at \$25 for two or \$35 for three.

List of films on golf available from other sources. No charge.

List of films on golf course maintenance available from other sources. No charge.

**HOLE-IN-ONE AWARDS**. No charge.

**GAMBLING IN GOLF TOURNAMENTS**, a reprint of a USGA Journal article by Richard S. Tufts. No charge.

**MISTER CHAIRMAN**, a reprint outlining the duties of the Chairman of the Green Committee. No charge.

**TURF MANAGEMENT**, by H. B. Musser (McGraw-Hill Book Co., Inc.), the authoritative book on greenkeeping. \$7.

**USGA CHAMPIONSHIP RECORD BOOK**. Detailed results of all USGA competition since their start in 1895. \$2.

**USGA JOURNAL AND TURF MANAGEMENT**, a 33-page magazine published seven times a year. \$2. a year.

# WINGED FOOT AND ITS GOLF FAMILY

by

LINCOLN A. WERDEN  
*Golf Writer,  
The New York Times*

OVER the years, the Winged Foot Golf Club, in Mamaroneck, N. Y., has been the scene of many important golfing events. The Open, the Amateur and a Walker Cup match have been played over one of its two courses, and this month the Women's Open is to be played over the other.

On the stone terrace in front of the clubhouse, a Winged Foot president led a happy gathering in song after Bob Jones had scored his 1929 Open victory. On display near the main lounge are trophies of many Champions. Occasionally on a bulletin board you may also see photographs of youngsters swinging golf clubs.

They are all hallmarks of a club where everyone seems to have more than a casual interest in golf. One of those who spurs the spirit of activity now is Claude Harmon, the club's professional.

## *A Handshake From Jones*

A native of Georgia, Claude recalls the days when his, as well as everyone's hero was Bob Jones. In the crowd at the Atlanta railroad station in 1925 when Jones returned home after losing the Open title in a play-off with Willie Macfarlane was a small, dark-haired lad. Claude rushed up and asked his idol for an autograph. He beamed when Jones not only signed his name but also shook hands.

Harmon never did forget the handshake. Living across the street from the Piedmont public course in Atlanta, Claude became more and more interested in golf. Before he became a professional, at the age of 19, he often played the game for as much as ten hours a day.

"But they were wasted hours," com-

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CLAUDE HARMON

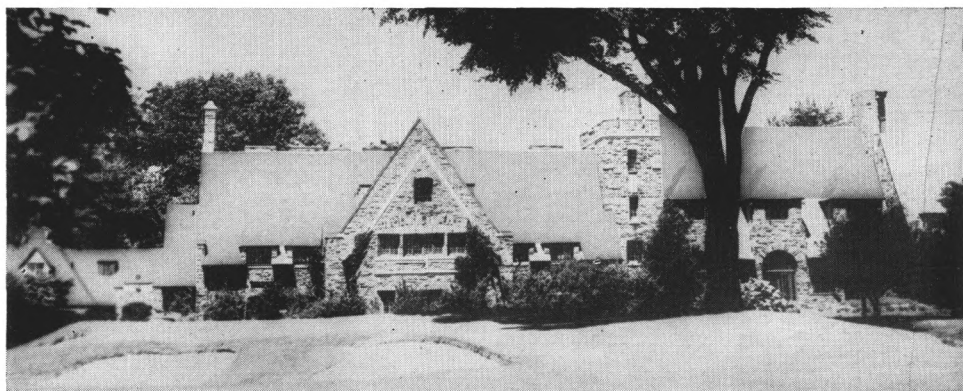
mented Harmon the other day. "I had little guidance and I learned nothing. It was not until later that I realized what a difference good coaching meant. Craig Wood hired me as his assistant in 1941 and taught me how to hit a golf ball."

## *Stepping Stone to Greater Things*

One of the successes attributed to Harmon is that those who have served as his assistants have gone on to greater things in golf. "I do spend a lot of time with them, trying to improve their games. And I also emphasize that there are lots of qualities that go into the making of a top-flight professional golfer," admits Harmon. When the Open Championship comes to Winged Foot in 1959, many of these former assistants will return as famous players.

An assistant must conform to Harmon's idea of gentlemanly behavior. He must be able to withstand taunts or disappointments if he is to become a proficient tournament competitor. And Harmon also believes that a pro must look and dress the part. "He





The Winged Foot clubhouse forms a stately background to the tenth green on the East course where the Women's Open Championship will be held at the end of this month. It will be the first time that Winged Foot has played host to a women's event.

must know how to select his clothes with good taste," is a Harmon precept.

"Yes," added Harmon, "and his language must be such that I can take him home to supper with the kids and no one will feel the least embarrassed." Harmon and his wife Alice have four sons, ranging in ages from 8 to 13. And the Harmons have a knack of making everyone feel at home.

"Winged Foot is the reason why my assistants have done so well," said Harmon. "The members are pretty wonderful to them. They take an interest in their golf game and in their ambitions. It isn't long after an assistant of mine comes from the South or West that he is immediately adopted into the Winged Foot family. It helps him a great deal."

It is easy to agree with Harmon after inspecting a list of his former aides

Jack Burke, Jr., now the Professional Golfers' Association Champion, worked on his game constantly and never wanted to take his regular day off while at Winged Foot. His youngest brother, Jimmy, along with Jay Revere, are Harmon's current assistants.

Mike Souchak is a graduate of the Harmon shop. "His football training at Duke was a great help in my opinion," observed Harmon. "Mike was an adept golf pupil. He absorbed everything you told him."

The list of ex-Harmon aides is formidable. It also includes Otto Greiner, Shelley

Mayfield, Al Mengert, Buck Worsham, George Schoux, Harry Dee, Tom Burke, Dick Mayer, Ed Draper and Dave Marr. "We're always sure that when they leave us, they will go on to good jobs," Harmon stated.

Besides the professionals, there are amateurs, business men and youngsters who come under Harmon's golfing tutelage. Some of the ranking tournament players who have been Harmon pupils include Jimmy McHale, former Walker Cup player; Dick Chapman, former British and United States Amateur Champion, and Joe Gagliardi, ex-Metropolitan Champion.

#### *Clinic for Youngsters*

Harmon also runs a clinic for youngsters. That project receives his attention as well as that of the assistants on his staff. Once a week, the free instruction for club members' children goes to some twenty to thirty potential stars of varying ages from 5 to 18.

In addition to his unusual record as an instructor, Harmon has an imposing tourney record. He won the Masters at Augusta, Ga., in 1948 and three times has been a semi-finalist in the Professional Golfers' Association Championship. That puts him in the unique class of being both a teaching and playing pro. "I don't know anywhere I could accomplish all this, except at Winged Foot," noted Harmon. "There's no other club quite like it."

# TED RAY - GOLFER AND MAN

by

C. K. COTTON

*British*

*Golf Course Architect*

**E**DWARD R. G. Ray was a native of the Channel Islands like his great contemporary, Harry Vardon. He was born on the twenty-eighth of March, 1877. Until people got to know him, they called him Mr. Ray. To his friends he was never anything but "Ted."

He went to England as a young man and eventually became professional attached to the Ganton Golf Club in Yorkshire, having been appointed to succeed Harry Vardon there on the latter's removal to the South Herts Golf Club at Totteridge. In 1912, on the formation of the Oxhey Golf Club near Watford in Hertfordshire, Ted Ray was appointed professional to that Club. He served there until his retirement, which was caused by ill health, in 1941. He died August 26, 1943, and was buried in the Watford Parish Churchyard.

Let me recall briefly the record of this giant who won the USGA Open the first time it was played at the Inverness Club, in Toledo, Ohio, (scene of this year's Open).

Ted Ray won the British Open Championship at Muirfield in 1912 and was runner-up, equal with Archie Compston, at Prestwick in 1925.

## *Tied with Ouimet*

In 1913, he tied for first place in the United States Open Championship with his friend Harry Vardon, and a young gentleman named Francis Ouimet. As everyone knows, the young gentleman in question won the play-off and is happily still with us, held in esteem and affection on both sides of the Atlantic, for the immense services he has rendered to the game.

In 1920, Ted won the United States Open Championship at Inverness, where the



TED RAY

Championship is being held again this month.

He played for Great Britain versus the United States in 1921 and 1926, and captained Great Britain in the first Ryder Cup match in 1927.

It should be remembered, I think, that Ted was playing his best golf during the great days of Harry Vardon, James Braid and J. H. Taylor. His record shows that he came very near them in the quality of his golf and at times triumphed over all of them.

## *Boon to Cartoonists*

The golf he played in his best days invariably appealed to the spectators, both in America and the British Isles. He drove vast distances, often deep into the rough. But his powers of recovery were immense

and his prowess with his niblick became legendary. His recoveries with that club from seemingly impossible places had to be seen to be believed. Almost invariably, too, he smoked a pipe when playing. Ted's niblick and pipe were a perfect godsend to the cartoonists of his day.

Ray stood well over six feet, was big in proportion, and very strong. Never a stylist like Harry Vardon, he had a long and slow swing and stood like a rock. At the end of a full shot, however, especially with wood, his finish appeared anything but classic; for after the ball had been hit he was often to be seen standing with only his right foot on the ground and his left foot in the air. But this finish was deceptive, for at that vital split second when his club face met with the ball, his position was, in fact, entirely correct and orthodox.

Ted was never a good teacher of the game. Indeed, he disliked giving lessons and I think he realized that it was not in him to impart instruction to others. When asked for advice on, for example, the drive, his main contribution consisted in the words "it 'em 'ard, mate, like I do." If the pupil complained that he *did* hit hard but still did not obtain the desired result, Ted's comment was, "Well, then, 'it 'em 'arder." There ended the lesson.

There was one department of the game, however, in which he could give valuable advice and that was in putting. He was a beautiful putter with a most delicate touch, something one did not expect to see after his violent assaults on the ball with woods and long irons. Incidentally, he was a very good billiards player, where his wonderful touch put him far above the average.

I saw very little of Ted's play when he was at his best. It was only during the last ten years of his life, when I was Secretary to the Oxhey Golf Club, that I knew him well.

I do remember one occasion, however, when I was watching an exhibition match at a club on the south coast in which he was taking part. His partner had put him deep in touch on the left of the 17th green, and the ball was found only with considerable difficulty amongst the trees and thick

undergrowth. Ted, in the plus-fours he always wore, niblick in hand and pipe in mouth, his hat firmly crammed on his head, disappeared from view. All we could see was a swaying of branches and all we could hear was a distant muttering of words, which were, perhaps fortunately, unintelligible. Then a sudden crash, bits of heather and saplings shot forth, and the ball was seen to be on the green. After the ball came Ted, having lost his hat, but with his pipe still firmly between his teeth.

#### *Friends from the States*

I played many games with Ted while I was at Oxhey, often in foursomes in which he was a most admirable and forbearing partner. In those days we had many visitors at the Club from America who came to see Ted—as often as not just to shake him by hand and to have a chat, remembering him as a popular visitor to their own country.

Ted's friend, Harry Vardon, would often come over to talk over old times with him and to join him in a tankard or so of beer.

He loved an argument and would often start one for no apparent reason, but it must be admitted that he had not a strong sense of humor.

Many a time, in the evenings when golf was finished for the day, you would find him surrounded by half a dozen of his friends amongst the club members. Leaning forward in his chair he would be laying down the law, driving home his arguments with an admonitory forefinger, or, at more critical moments removing his pipe from his mouth and shaking it at the man who had dared to dispute what he had just said.

Ted was loved by many, respected by all, and his friends were to be found in all walks of life. He was entirely straightforward in all his dealings, and a very loveable character. Throughout his life he served faithfully and well the game he loved and the members of the Clubs where he was professional.

There were giants in those days and Ted was one of them.

# SECTIONAL QUALIFYING SITES

**A**LTHOUGH the Open and Women's Open Championships are being played this month, six Championships, four of which require sectional qualifying, remain to be held from July through October.

The season will be further augmented by the Walker Cup Match at the Minikahda Club, Minneapolis, Minn., on Labor Day weekend.

Spectators who can not attend the Championships are almost certain to be within striking distance of the various qualifying venues which are listed right. There, first class golf can be watched in comfort.

A total of 145 separate and distinct sectional qualifying rounds will take place in connection with the Junior Amateur and the Amateur Public Links Championships in July, the Amateur Championship in September and the Senior Amateur Championship running into October. An additional 25 trial rounds have already taken place in connection with the Open Championship.

There is no sectional qualifying for the Women's Open, Girls' Junior or Women's Amateur Championships. The sizes of the fields do not require it.

Intending entrants are requested to note carefully the closing dates of the various events (see inside front cover), and are advised to send in their entry forms as early as possible. Entries which arrive after the specified date can not be accepted.

Entry forms may be obtained from regular member clubs, local associations and USGA Committee Members, or direct from the USGA, "Golf House," 40 East 38th Street, New York 16, N. Y.

The sites for sectional qualifying in the remaining four Championships are listed above.

|        | <i>Junior</i> | <i>Public Links</i> | <i>Amateur</i> | <i>Seniors'</i> |
|--------|---------------|---------------------|----------------|-----------------|
| ALA.   | Birmingham    | Birmingham          |                |                 |
| ARIZ.  | Tucson        | Phoenix             | Phoenix        |                 |
| ARK.   | Little Rock   |                     |                |                 |
| CAL.   | Los Angeles   | Los Angeles         | Los Angeles    | Los Angeles     |
|        | San Francisco | San Francisco       | San Francisco  | San Francisco   |
| COLO.  | Denver        | Denver              | Denver         | Denver          |
| CONN.  | New Britain   |                     | West Hartford  |                 |
| D.C.   | Washington    |                     |                | Washington      |
| FLA.   | Gainesville   | Fort Lauderdale     | Coral Gables   | Jacksonville    |
|        |               | Jacksonville        |                |                 |
| GA.    | Atlanta       | Atlanta             | Atlanta        | Atlanta         |
| HAWAII |               | Honolulu            |                |                 |
| ILL.   | Chicago       | Chicago             | Chicago        | Chicago         |
|        | Decatur       | Peoria              |                |                 |
| IND.   | Indianapolis  | Indianapolis        |                | Indianapolis    |
| IOWA   | Des Moines    |                     | Des Moines     | Des Moines      |
| KANS.  | Wichita       | Wichita             |                |                 |
| KY.    | Louisville    | Louisville          |                |                 |
| LA.    | New Orleans   | New Orleans         | New Orleans    |                 |
| MD.    | Baltimore     | Baltimore           | Baltimore      |                 |
| MASS.  | Boston        |                     | Boston         | Boston          |
| MICH.  | Detroit       | Detroit             | Detroit        | Detroit         |
| MINN.  | Minneapolis   | St. Paul            | Minneapolis    | Minneapolis     |
| MISS.  | Laurel        |                     |                |                 |
| MO.    | Kansas City   | Kansas City         | Kansas City    | Kansas City     |
|        | St. Louis     | St. Louis           | St. Louis      | St. Louis       |
| NEB.   | Omaha         |                     | Boonton        |                 |
| N. J.  | Haworth       |                     | Great Neck     | Pelham Manor    |
| N. Y.  | Albany        | Albany              | Rochester      | Rochester       |
|        | Buffalo       | Farmingdale         | Rye            |                 |
|        |               | High Point          | Charlotte      | Greensboro      |
| N. C.  | Fayetteville  |                     |                |                 |
| N. D.  | Fargo         |                     |                |                 |
| OHIO   | Cincinnati    | Cleveland           | Cincinnati     | Columbus        |
|        | Cleveland     | Dayton              | Cleveland      |                 |
|        | Columbus      | Toledo              |                |                 |
| OKLA.  | Tulsa         | Oklahoma City       | Oklahoma City  | Tulsa           |
| ORE.   | Portland      | Portland            |                |                 |
| PA.    | Philadelphia  | Philadelphia        | Philadelphia   | Philadelphia    |
|        | Pittsburgh    | Pittsburgh          | Pittsburgh     | Pittsburgh      |
| S. C.  | Florence      | Charleston          |                |                 |
| S. D.  | Sioux Falls   |                     |                |                 |
| TENN.  | Memphis       | Chattanooga         | Nashville      | Memphis         |
|        | Nashville     | Memphis             |                |                 |
| TEXAS  | Dallas        | Dallas              | Dallas         | Dallas          |
|        | Houston       | Houston             | Houston        |                 |
|        | Midland       |                     |                |                 |
| UTAH   |               | Salt Lake City      |                |                 |
| VA.    | Roanoke       |                     | Richmond       | Richmond        |
| WASH.  | Seattle       | Seattle             | Seattle        | Tacoma          |
|        | Spokane       | Spokane             |                |                 |
| W. VA. | Parkersburg   |                     | Huntington     |                 |
| WIS.   | Milwaukee     | Milwaukee           |                |                 |

# DO YOU KNOW YOUR GOLF?

Answers to questions below will be found on page 20.

Scoring: Answers right: 4 (par 36). For every answer wrong: 5

- |    |  |       |
|----|--|-------|
| 1. | Two women have won the United States, British and Canadian Women's Championships. Who are they?  | Score |
|    | .....  | ..... |
| 2. | Ben Hogan holds the 72 hole scoring record for the Open Championship. Can you give the score and state where and when it was established?  |       |
|    | .....  | ..... |
| 3. | If a player finds his ball in a water hazard 50 yards in front of the green and prefers to play a full shot rather than a half shot to the flagstick, is he permitted to drop his ball as far back as he wishes? |       |
|    | Yes..... No.....   | ..... |
| 4. | Can you give the nationalities of the donors of the Walker, Curtis and Ryder Cup trophies?.....  |       |
|    | .....  | ..... |
| 5. | What countries now hold these trophies?.....   |       |
|    | .....  | ..... |
| 6. | What is the name of the American who invented the rubber golf ball?  |       |
|    | .....  | ..... |
| 7. | The game of golf has been divided into three distinct eras according to playing equipment. Can you name them? .....  |       |
|    | .....  | ..... |
| 8. | Would you be permitted under the Rules to tee your ball on a dime if you so desired?   |       |
|    | Yes..... No.....   | ..... |
| 9. | Which of the following can be termed loose impediments?  |       |
|    | worms .....  |       |
|    | leaves .....   |       |
|    | ice .....  |       |
|    | dung .....   | ..... |

# BIRTHDAY HONORS FOR OLDEST OPEN CHAMPION

*Columbia C. C.  
fete  
Fred McLeod*

**F**RED McLeod is the United States' oldest living Open Champion. He has also served the Columbia Country Club, Chevy Chase, Md., as professional for the past forty-five years. These two factors, combined with the fact that he is universally popular, were more than sufficient grounds for his Club to fete him in the grand manner on his seventy-fifth birthday.

Over 500 turned out to pay tribute to the 1908 Open Champion at a testimonial dinner in the clubhouse. Prominent among them was Vice-President Richard M. Nixon, a Columbia member who had previously partnered Freddie in an afternoon four-ball match.

Other distinguished guests included General Omar Bradley and Maj. Gen. (Msgr.) Patrick J. Ryan, Chief of Army Chaplains.

During the evening McLeod was presented a check to cover an all-expenses-paid trip to his native Scotland — he hails from North Berwick, East Lothian — and an opportunity to see the Ryder Cup Match at Lindrick Golf Club, Notts., in October.

Through the courtesy of NBC, messages of goodwill were recorded and relayed from his nieces and nephews in Scotland. These were augmented by a message from J. H. Taylor, five times British Open Champion now in his eighty-seventh year. Taylor recalled how, in an international match in 1921, he had been 2 up with three to play on the Scotsman but had lost on the last green to one of the finest finishes he had ever seen.

Wires came pouring in from many sources. President Eisenhower sent his personal congratulations, and similar messages were received from Robert T. Jones, Jr., Jock Hutchison, Lew Worsham, Bobby Cruikshank and Charles Evans, Jr.

## DO YOU KNOW YOUR GOLF?

*(Answers to questions on page 19)*

1. Miss Marlene Stewart (Mrs. J. Douglas Streit); Miss Dorothy Campbell (Mrs. Hurd).
2. 276 at Riviera Country Club, Los Angeles, Cal., in 1948.
3. Yes. See Rule 33-2a and Note 3.
4. United States, United States and British.
5. United States, British Isles and United States.
6. Coburn Haskell.
7. The feather ball, gutta percha, and the rubber ball eras.
8. Yes. See Definition 31.
9. Worms; leaves; dung.

Professionals from all eras attended.

Long-hitting Jimmy Thomson, himself a native of North Berwick, acted as master of ceremonies, adding a touch of nostalgia as he lapsed into Scottish dialect.

The years have not taken too much roll on Fred McLeod's golf. Although he failed to score his age, he turned in a very respectable birthday card of 80, an inspiration to the Vice-President, who surprised himself by shooting an 85.

New fangled contraptions are not for the former champion. Golf is still, to him, a recreation and an exercise, as Nixon found to his cost on the way round.

Between the 13th and 14th holes at Columbia there is a bridge across a ravine. The canny Scot has never trusted that bridge and took his usual long uphill climb with the Vice-President in his wake.

Fred McLeod is the epitome of the men who made United States golf what it is today. Harry Moffitt, President of the PGA, called him "the foundation of the game of golf," and urged club and tournament pros to follow in his footsteps.





# THE REFEREE

## Decisions by the Rules of Golf Committees

Example of symbols: "USGA" indicates decision by the United States Golf Association. "R & A" indicates decision by the Royal and Ancient Golf Club of St. Andrews, Scotland. "57-1" means the first decision issued in 1957. "D" means definition. "R. 37-7" refers to Section 7 of Rule 37 in the 1957 Rules of Golf.

### ***Water Hazards Not "Through the Green"***

USGA 57-5

Def. 14b,c,d; R. 11-3, 22-2,  
29-1a, 2; 33-2,3

**Q1:** A question arose concerning play at the 16th hole at Cypress Point Club at Pebble Beach, Cal.

For your information, all the water, rocks, sand, and banks are "through the green." There is no hazard or water hazard rule involved.

Suppose a ball is hit from the tee toward the hole and falls short into the ocean (as most of them do). The tide is high and there is no beach. The normal procedure is to proceed under Rule 29-1a.

If the player wished to proceed under 29-2b, would it or would it not be permissible to drop the ball on the top of the bank to the left of where the ball was lying in the water? There is no ground between the water and the top of the bank where a ball could be dropped without putting it in another unplayable lie, and it would obviously be impossible to drop a ball and keep the spot where the first ball came to rest between the player and the hole.

**A1:** The areas in question seem by

nature to be water hazards under Definition 14b, but it is stated that they are played as "through the green." It appears that play was conducted other than in accordance with the Rules of Golf. In view of Rule 11-3, it would be inappropriate for the Rules of Golf Committee to give a specific ruling.

In a similar situation "through the green," if the ball could not be found, it is lost and Rule 29-1a applies.

Under Rule 29-2b, if, from the standpoint of golfing reason and fair play, it is impossible to drop a ball so that the point from which the ball was lifted remains between the player and the hole, the player must drop a ball as near as possible to the spot from which it was lifted, not nearer the hole. "As near as possible" is explicit. Thus, under facts similar to those in the question, if the ball were found, a player proceeding under Rule 29-2b might be entitled to drop a ball on top of the bank to the left of the place where the ball lay.

Rule 29-2b refers to "the point from which the ball was lifted." To term a natural water hazard as "through the green" would generally prevent applying Rule 29-2b unless the ball is found and lifted.

## **Unplayable Ball Must Be Found**

**Q2:** Must a ball be found and identified in order for it to be declared unplayable?

**A2:** Yes, generally; Rule 29-2b refers to the point from which the ball "was lifted" and this presumes finding it. If this were not so, a player might have no basis to determine where to put a second ball into play under Rule 29-2b. However, we can conceive of unusual cases where the location of a ball is positively known but the ball itself is not obtainable; in such rare cases, the committee could, in equity, waive the requirement of lifting the ball; but we emphasize that such permission should be granted only rarely.

## **Player Must Accept Dropped-Ball Lie**

**Q3:** Is or is not a player who has proceeded under 29-2b and has taken a two-stroke penalty entitled to drop his ball in a playable lie?

**A3:** He is entitled to drop the ball in a reasonably playable area, but he must accept the result of the drop except as provided for in Rule 22-2.

## **No Playable Place On Beach**

**Q4:** Suppose in Question 1 above that the tide was out and there was a sand beach and the ball had come to rest here. The player decided that his ball was unplayable. He could then not find a playable lie anywhere on this beach. Could he then under 29-2b drop his ball on top of the bank?

**A4:** See Answer 1 above.

Questions by:

BRIG. GEN. STANLEY E. RIDDERHOF  
Newport Beach, Cal.

\* \* \*

*Comment: The United States Golf Association has been concerned over the years with proper application of the Rules of Golf to situations such as those described above, and particularly in conducting championships at the nearby Pebble Beach Course in 1940, 1947 and 1948. In 1940 the USGA classified the ocean and its arms,*

*banks and beaches as water hazards; in 1947 and 1948 the same areas were classified as "through the green."*

*Since then, however, the Rules of Golf have been amended, and provision is now made for lateral water hazards.*

*By Definition 14b, "A 'water hazard' is any sea, lake, pond, river, ditch, surface drainage ditch or other open water course (regardless of whether or not it contains water), and anything of a similar nature. All ground or water within the margin of a water hazard, whether or not it be covered with any growing substance, is part of the water hazard."*

*Therefore, after full consideration by the USGA Rules of Golf and Executive Committees, we beg to recommend that areas such as those described in the questions be defined and marked as water hazards and lateral water hazards, as may be appropriate, and that Rule 33-2 and 33-3 apply. In certain cases where it is not feasible to proceed exactly in conformity with Rule 33, special areas should be established on which a ball may be dropped, under penalty of one stroke; for instance, it might be well to establish such a "ball drop" on the 16th hole at Cypress Point. See recommendation 4 for Local Rules in USGA Appendix to 1957 Rules of Golf booklet, page 57.*

*Definition 14d obligates the Committee in charge of a course to define accurately the extent of the hazards and the water hazards where there is any doubt. For the 1940 USGA Women's Amateur Championship at Pebble Beach, the following applied, and we now suggest similar treatment:*

*"Where margins of hazards may be indefinite, they are defined either: (a) by lines on ground, lines themselves not being in hazards, or (b) by places where banks of ocean and its arms break down from 'through the green' (thus, banks and beaches beyond such places are parts of water hazards; if ball lie or touch there, club shall not touch ground, etc.)."*

*The questions reveal some of the complexities which can arise under the Rules when natural water hazards are not clas-*

sified as such. Further, the present treatment of certain natural lateral water hazards as being "through the green" requires a more severe penalty of two strokes for relief from an unplayable lie under Rule 29-2b than the one-stroke penalty for relief from a lateral water hazard under Rule 33-3.

### **Outside Agency Moves Ball After Address**

USGA 57-3

R. 27-1a,d

**Q.:** A player has addressed his ball in play and a stray ball played from elsewhere strikes the player's ball, which is thereby moved.

Is the innocent player penalized a stroke under Rule 27-1d on the ground that he is deemed to have caused that ball to move, even when it is so clear that an outside agency moved the ball, simply because the incident has arisen after he had addressed his ball in play?

Rule 27-1a primarily envisages cases when a ball in play is moved by an outside agency. Rule 27-1d primarily envisages cases when a ball in play moves by itself or otherwise for any reason whatsoever after the owner of the ball addressed it. Neither Rule 27-1a nor 27-1d covers a case when a player has addressed his ball in play and the ball is moved by an outside agency prior to his play.

In equity, does Rule 27-1a override Rule 27-1d in the case cited as an exception?

Question by: S. TAKAHATA, *President*

Hirono Golf Club

Kobe, Japan

**A.:** Yes.

### **Location of Ball Not Advice**

USGA 57-4

D. 2,8,17; R. 9-1,9-2,

10-2, 29-1b, 32-1c, 35-1b, 37-7

**Q:** In match play can a player ask spectators in general the distance his opponent's ball is from the flagstick? Is this advice under Definition 2 and Rule 9-1?

**A1:** Information concerning the whereabouts of a ball is not advice under Defi-

nition 2. A player may seek such information, without penalty. The matter of a ball's location is public knowledge; in fact, Rule 29-1b provides in part: "A person outside the match may point out the location of a ball for which search is being made". To seek the information in question is no more contrary to the spirit of the Rules than to have the line of play indicated, as is permitted by Rule 9-2.

### **"Information" Defined**

**Q2:** What is considered "information", as used in Rule 10-2?

**A2:** As used in Rule 10-2, "information" refers to the number of strokes the opponent has played.

### **Slow Play**

**Q3:** Re Rule 37-7, what is considered slow play? In our 1955 Championship the last match to come in was fully 45 minutes behind the match immediately in front. In this instance the match did not hold up any other play. Would either player be subject to penalty?

**A3:** There is no hard-and-fast test which may be applied to determine whether play is unduly delayed. Circumstances can alter cases — for example, a match can be prolonged by comparison with another match due to such factors as a lost ball, an unusual amount of ball-lifting and replacing, delay for a ruling, or various difficulties in play. Conversely, even though a match may not delay play following, one player in the match could be subject to penalty under Rule 37-7 if he unduly delayed play to the detriment of his opponent.

### **Casual Water May Not Be Brushed**

**Q4:** Can player in match or stroke play brush across the line of putt through casual water, no loose impediments present? The player in brushing through the water was reducing the amount of water to putt through, not wishing to take advantage of Rule 32 as the position of the ball would have been affected by a slope. I ruled that

the player would lose the hole in match play and would be penalized two strokes in stroke play.

**A4:** We agree with your ruling. Casual water (Definition 8) is distinct from loose impediments (Definition 17). Rule 32-1c provides for the only relief possible from casual water on the putting green. If a player brushes casual water from the line of putt and is not brushing away loose impediments, he violates Rule 35-1b which prohibits touching the line of putt.

Questions by: WARREN ORLICK  
Tam O'Shanter Country Club  
Orchard Lake, Mich.

### **Attending Flagstick**

R & A 56-40  
R. 34, 40

**Q.:** A and B are partners in a four-ball match.

A approaches his ball to putt and B, unasked, approaches and stands near the hole. As A strikes his putt, B takes hold of the stick and is holding it when the ball strikes the stick.

I take the view that B must be deemed to be attending the stick and that A loses the hole. Rule 34-1 and 34-2. My opinion, however, has been challenged on the ground that A did not ask B to attend the stick and did not know that B was holding or attending the stick until after he (A) had struck his ball.

It seems, however, that B is not penalized (Rule 40-3b) unless Rule 30-3h can be made to apply. For my part, I cannot see how Rule 40-3h can possibly apply in such a case. B is certainly assisting his partner's play but not "so as to assist his partner's play". Rule 40-3h appears to me to apply only when there is an intentional infringement, i.e., when the player's ball is moved by the partner intentionally and not accidentally (see Rule 40-3d).

**A.:** The flagstick is always under the control of the player about to play. The player, before playing, should make it clear whether he wishes the flagstick to be attended or left alone. If, without making his wishes known, he plays his stroke when another player or caddie is standing near the flagstick, he must be assumed to have given

his tacit assent to the flagstick's being attended. If his ball then strikes the flagstick, he suffers the penalty laid down in Rule 34-2. Accordingly, A cannot come into the reckoning at this hole.

The penalty in this case does not apply to A's partner, Rule 40-3i. Since B's infringement of Rule 34 did not help his partner's play, Rule 40-3h does not apply.

### **Re-Trying Putt On Nine-Hole Course**

R & A 56-6-1  
R. 8

**Q:** I have been asked to write requesting clarification of the new Rule 8-2 so far as it applies to nine-hole courses.

Is it permissible for a player who has holed out on the first green to play a practice putt on that green before moving on to the second tee, in view of the fact that he will again have to play on that green as the 10th hole.

**A:** When the number of holes in a "stipulated round" exceeds the number of holes on a course the word "round" in Rule 8-2 should be read as applying to a round of the course. A player is therefore entitled to play a practice stroke on the green of a hole which he has already played during that round, even though he may play the hole again in a second or subsequent round.

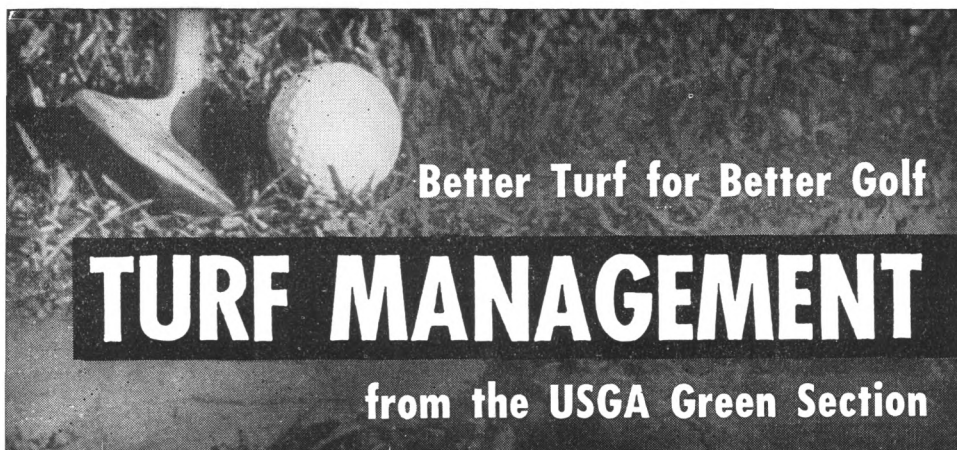
### **Ball Played From Out of Bounds**

R & A. 56-55-26  
R 29, Note 1

**Q:** Having completed a medal round, a player discovers that he played a ball from an out of bounds position during the round.

The penalty for a breach of Rule 29 in stroke play is given as two strokes, but Definition 21 gives out of bounds as ground on which play is prohibited, which indicates disqualification. What is the penalty under these circumstances?

**A:** The competitor is disqualified for a serious breach of Rule 29. He did not play the stipulated round as provided for in Rule 1. (see note to Rule 29).



## SOIL STERILIZATION PRACTICES IN TURF

by GENE C. NUTTER

*Assistant Turf Technologist, University of Florida, Department of Ornamental Horticulture.*

THE control of soil borne pests is becoming one of the most critical problems in turf management. The propagation of turfgrass nurseries, the construction of golf greens and tees, and the establishment of improved lawns are examples of situations where these pests are threatening. Soil sterilization practices hold the answer to such problems in many cases and should be more widely utilized as a turf production tool.

### *What Is Soil Sterilization?*

At one time soil sterilization referred largely to the control of weed pests. Today, this field has been broadened to include eradication or control of any major class of soil borne pests. Included would be weeds, weed seeds, nematodes, insects, and plant diseases as they occur in the seed or plant bed prior to planting. The control of nematodes or broadleaf weeds in established turf would be considered as nematocidal and herbicidal rather than sterilization problems.

Soil sterilants may be classified as selec-

tive or non-selective. Selective type materials are effective against only certain kinds of pests. For example, some chemicals will control weed seeds in the soil but not nematodes. Some sterilants are even more specific, being effective against broadleaf weeds, but not grasses. On the other hand, non-selective materials render the soil sterile to all forms of living matter. There is need in turf for both selective and non-selective types of sterilants depending upon the proposed use of the turf and the particular pests involved.

Sterilants may be classified further as temporary or permanent. A temporary sterilant will kill the pests involved in short order. Soon thereafter the material will lose its effectiveness through decomposition, vaporization, leaching, or soil fixation. On the contrary, the effect of the permanent soil sterilant is retained in the topsoil for a long time. This long period of residual sterility renders the soil unfit for use for such an extended period that this class of sterilants is usually impractical where efficient turf propagation or production is involved. As a result this discussion will deal only with the temporary class of sterilants.

*Talk before 10th Annual Southeastern Turf Conference, Tifton, Georgia, 1956.*

### *Where Is Soil Sterilization Needed?*

Obviously sterilization is not needed everytime a new turf is planted. It would not be practical to recommend methyl bromide sterilization of a forty-acre nursery of zoysia or bermudagrass if broadleaf weeds were the principal pests. One of the 2,4-D type herbicides applied after planting would offer by far the simplest and cheapest control. There are many cases, however, where the problems are more complex and where soil sterilants are needed.

In fact, sterilization should be considered in planning for the development, and construction, or renovation of any turf project. If after careful examination no serious pest problems exist, or if anticipated problems can be satisfactorily handled otherwise, sterilization will not be needed. The "ounce of prevention" afforded by *sterilization* may seem costly. Nevertheless, if this process is omitted and serious pest problems later develop, other corrective measures may prove far more expensive in the long run, and turf quality may never reach its potential.

Weed control is probably the primary need for soil sterilization in turf. Common bermudagrass, nutgrass, dallisgrass, and other Paspalum species, pennywort, water sedge, and dichondra are major noxious weeds in turf. All are more or less difficult to control. Most of these are perennials which spread from both seeds and vigorous growing rhizomes. In addition there are many common, but less serious weed pests which will be controlled incidentally by suitable sterilization measures. Where these and other serious weed pests occur, soil sterilization should be considered an essential part of the propagation program.

Nematodes are now recognized to be serious parasites on turf grasses in the Lower South. The well known "root knot" group of nematodes has been a serious parasite on many kinds of plants for years, but has not been a problem in turf. Recent work in Florida has shown that sting (*belonalaimus gracilis*), stubby-root (*Trichodorus spp.*), lance (*Hoplolaimus coro-*

*natus*), dagger (*Xiphenema americanum*) and ring (*Criconemoides spp.*) nematodes are encountered frequently in areas of damaged or reclining turf. All major species of turf grasses appear to be susceptible to damage. Undoubtedly other parasitic species will be found as this new field of turf investigation continues.

In areas where proper diagnosis has established nematodes to be parasitic on turf grasses, it may be futile to attempt turf reestablishment without nematode control. Fortunately a number of good nematocidal type sterilants are available. As nematode damage becomes more extensive, more consideration will need to be given to the use of such materials. While information is relatively limited as to the ecology of these worm-like microbes, it is known that they may be readily disseminated by the movement of topsoil and topdressing materials, sod, and other forms of turf and equipment.

Normally insects are not considered important in the consideration of soil sterilization in turf. In general, most insect pests can be controlled by routine insecticide measures. Nevertheless, certain soil borne insects are becoming of considerable importance in turf propagation. Ground pearls are becoming more prevalent and damaging to centipede and zoysiagrass turf in Florida, Georgia, and Alabama. Since conventional insecticides have not given control of these subterranean scales, soil sterilization is being considered. In cases where St. Augustinegrass is being replanted in areas formerly destroyed by chinch bugs, soil sterilization may be used as a safeguard against reinfestation.

Plant diseases are not known to cause serious concern in turf propagation at the present time. Accordingly, disease control does not compel serious consideration in the selection of soil sterilants although some of the materials effective on other classes of soil borne pests are also good fungicides.

### *Selecting the Sterilant*

Since a number of soil sterilants are available (and the number is increasing steadily) and since these materials vary



greatly in properties and usefulness, the choice of the best sterilant for a given situation may become a problem. A number of factors may enter the matter of selection. Among them would be (1) toxicity, (2) adaptability, (3) cost, (4) residual period, and (5) hazard.

#### 1. *Toxicity*

As mentioned, sterilants vary widely in their chemical and physical properties, mode of action, and degree of selectivity. These and other factors determine the toxicity of a given material. Some chemicals are toxic in their natural forms, (allyl alcohol, methyl bromide, D.D., etc.) Other materials depend on decomposition products for sterilization properties (vapam). With still other materials the decomposition products may be retained in the sod for considerable periods as harmful residues to certain crops. A change in the physical state of a chemical may improve the effective toxicity. Methyl bromide is formulated as a liquid, but when the pressure in the container is released, it reverts to the gaseous form and readily penetrates the upper soil layer.

The range and degree of selectivity is of paramount importance in selecting a sterilant. Within the herbicidal class of sterilants, materials are quite specific in the degree of control of certain weeds. Some species of nematodes react differently in their susceptibility to D.D. and E.D.B.

To avoid useless expenditure of money and labor for soil sterilization, it is necessary to have a thorough knowledge of the toxic properties of the material. In case of experiment materials, where general recommendations are not available, it would be wise to test the materials carefully under local conditions before attempting extensive usage.

#### 2. *Adaptability*

Some sterilants are more adaptable to one kind of operation than

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another. Because of chemical cost, equipment involved and time and labor required, it is not practical to consider some sterilants for extensive work. On the other hand these same materials may fit readily into a soil bin or compost operation. The physical state or condition of the sterilant may render it more suitable for a particular kind of operation. For example, fumigant type materials such as steam or methyl bromide are most effective for compost or bin sterilants. Here the higher operations cost is justified by the quick, effective job accomplished. For some types of compost sterilization, solid materials such as calcium cyanamid and uramon are used. However, these materials are not effective on the more serious southern weedpests such as nutgrass and bermudagrass. In general, liquid materials are more suited for field sterilization than for bin or compost work.

Ease of application is another factor to be considered in adaptability. Some sterilants require complex and lengthy procedures such as covering the soil or applying a water seal. Other materials need specialized equipment such as release adapters in the case of gasses, and drop or plow sole applicators in the case of liquid materials. With still other chemicals only a simple spreader or sprayer may be required for application. Some liquid materials are now being applied through irrigation systems. Where adaptable

## COMING EVENTS

### June 10

Central Plains Turf Foundation Field Day  
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### August 8

Rutgers University Turf Field Day  
Rutgers University  
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Dr. Ralph E. Engel

### August 15-16

26th Annual Golf Course Superintendents Field Day  
University of Rhode Island  
Kingston, R. I.

Dr. J. A. DeFrance

### September 10

St. Louis Field Day  
Link's Nursery  
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this latter method is probably the simplest and least expensive means of applying sterilants.

### 3. *Cost*

Chemicals, labor and equipment must all be considered in estimating the cost of a sterilization operation. The cost will vary widely according to the chemical used, the size of area treated and the nature and degree of pests involved. Since sterilization may affect production costs considerably, it is important carefully to evaluate this practice in terms of the value and importance of the end product. In the case of turfgrass nurseries, putting green construction and lawns planted to the more expensive grasses, sterilization costs are usually justified if the sterilant is carefully selected and effectively used. In many cases the initial cost of sterilization will be returned several fold in the form of improved turf quality and reduced maintenance costs.

### 4. *Residual Period*

This term refers to the waiting period required between treatment

and planting to allow for dissipation of the sterilant. This time factor is of great importance in field sterilization because of the cost and inconvenience involved in holding extensive areas out of production during the sterilization operation. Similarly, storage space may become a factor in bin or compost sterilization if the residual period is unreasonably long.

Residual periods vary from a few hours in the case of steam to several months with the slower materials. Soil type, temperature and the method of application are factors which may affect the residual period of any given sterilant.

The residual period for the given soil and climatic complex must be thoroughly known for each chemical. Valuable turf may be killed if planted before the toxic properties of the chemical are allowed to dissipate. On the other hand, there is no point in holding up propagation any longer than necessary. Periodic planting of susceptible crops such as radishes or tomatoes in the sterilized area will indicate when planting may be started safely.

### 5. *Human Hazard*

Toxicity to man and/or animals may be the deciding factor in choice of a soil sterilant. Some materials are too hazardous for use in public areas, but may be adapted to isolated field operations where specialized application equipment can be used. Allyl alcohol is such a material. It is a severe lachrymator (tear producing substance), and is a deadly poison. Complete protective clothing should be used whenever allyl alcohol is handled. Methyl bromide is also a serious poison but it is merchandized in such a form that the risk to the user is greatly reduced if normal precautions are followed. Other materials such as D.D. and E.D.B. do not offer use hazards if reasonably handled.

Table I  
COMPARATIVE CHARACTERISTICS OF SOIL STERILANTS FOR TURF

| Sterilant  | Relative Toxicity                  |                                    |                                    |                                    | Residual Period   | Form and ease of application                            | Adaptability (field, lawn, compost) | Relative cost                   | Human Hazard                   |
|--|------------------------------------|------------------------------------|------------------------------------|------------------------------------|-------------------|---|-------------------------------------|---------------------------------|--------------------------------|
|  | Weeds                              |                                    |                                    | Weed Seeds Nematodes Misc.         |                   |   |                                     |                                 |                                |
|  | Bermuda Nutgrass Paspalum spp.     | General Broadleaf types            | fair to good                       |                                    |                   |   |                                     |                                 |                                |
| Allyl Alcohol  | questionable                       | fair                               | fair to good                       | no                                 | 10-14 days        | liquid requires H <sub>2</sub> O seal                   | field                               | moderate to high                | very toxic—difficult to handle |
| Calcium Cyanamid   | poor                               | fair                               | fair to good                       | quest'able on turf nematodes       | 2-6 months        | dry spreader  | field, compost, or lawn             | moderate                        | non-toxic                      |
| Chloro-picrin  | very good                          | good                               | good                               | very good                          | 7 days            | liquid requires airtight cover or H <sub>2</sub> O seal | field                               | very high                       | poisonous (fear gas)           |
| D.D.   | no                                 | no                                 | no                                 | good                               | 14 days           | liquid requires airtight cover or H <sub>2</sub> O seal | field lawn                          | cheapest                        | not serious                    |
| EDB  | no                                 | no                                 | ?                                  | good                               | 10-14 days        | liquid plow sole application or injection               | field lawn                          | cheap                           | not serious                    |
| Methyl bromide pref. with chloro-picrin as warning agent | very good                          | very good                          | very good                          | very good                          | 2-4 days          | gas—requires air-tight cover & special adapters         | compost intensive field operations  | very high                       | poisonous                      |
| Steam  | very good                          | very good                          | very good                          | very good                          | 4-6 hours         | gas—requires special equipment                          | compost limited field use           | very high for initial equipment | non-poisonous                  |
| Dalapon  | promising but needs more research  | no                                 | research needed                    | no                                 | 14-28 days        | spray   | field lawn                          | moderate ?                      | not serious                    |
| Vapam  | promising but more research needed | promising but more research needed | promising but more research needed | promising but more research needed | 14-21 days        | spray   | field lawn                          | high                            | irritating to eyes             |
| Nemagon  | no                                 | no                                 | no                                 | ditto                              | 0                 | spray   | field lawn                          | high                            | not serious                    |
| VC-13  | no                                 | not generally                      | no                                 | ditto                              | 0                 | spray   | field lawn                          | high                            | not serious                    |
| Alanap   | no                                 | not generally                      | promising but more research needed | promising but more research needed | research needed   | spray   | field lawn                          | low                             | not serious                    |
| SES (Craig Herbicide I)                                  | no                                 | no                                 | promising but more research needed | promising but more research needed | ? research needed | spray   | field lawn                          | low                             | not serious                    |
| Craig 974  | promising but more research needed | promising but more research needed | promising but more research needed | promising but more research needed | 14-21 days        | dry spreader  | field lawn                          | ?                               | not serious                    |

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*Soil Sterilant Materials*

While none of the available sterilant materials meet all of the desired requirements, some offer certain features which should render them useful in the turf management operation. Table I summarizes

some of the comparative characters of a number of sterilants, new and old.

Since soil sterilization has been largely overlooked as a turf management tool in the South, information is lacking on adaptability and effectiveness of many of these materials. To avoid serious turf damage or useless expenditures of money and labor it is necessary to have a thorough knowledge of soil sterilization principles and materials. When complete information and recommendations are not available, it would be wise to test carefully under local conditions any contemplated soil sterilization practices before attempting extensive usage.

**POTASSIUM GLASS FOR PUTTING GREENS**

by DR. O. R. LUNT

*Department of Irrigation and Soils, University of California at Los Angeles*

THE development of a special type of glass or frit containing 36%  $K_2O$  is promising as a means of maintaining fertility levels on putting greens under difficult conditions. The unique properties of this new fertilizer material are low solubility, thus providing a margin of safety against the hazards of over-fertilization, and relatively rapid weathering to provide adequate levels of potassium for prolonged periods. Potassium becomes available as the glass slowly dissolves.

Tests indicate that a single application of 20 to 30 pounds per thousand square feet on sandy soils may normally be expected to maintain adequate potassium levels for about a year even though irrigation or rainfall may be high. Under less extreme leaching conditions, yearly applications of 5 to 20 pounds of the frit, depending on climatic and soil conditions, would be sufficient to maintain adequate potassium levels. In use, the frit should be worked into the green by watering so as not to interfere with mowing.

The relative effectiveness of potassium frit in supplying potassium for prolonged periods as compared to a soluble source of

potassium is shown in figure 1. These data were obtained by packing 45 grams of well aggregated Diablo clay soil, into which had been mixed 375 mg of potassium from the sources indicated, into glass tubes to a depth of three inches. At intervals, three inches of tap water were added to the tubes and the solution passing out the bottom analyzed for potassium. Essentially all of the potassium from the muriate of potash was removed with the first leaching while in the case of the frit substantial quantities of potassium appeared in the leachate after 16 leachings or after leaching with four feet of water. Small quantities of potassium originating from the soil were extracted in the first two or three leachings but potassium from this source was reduced to trace amounts thereafter.

The effect of frit particle size on potassium availability can be clearly seen in the two graphs for frit. Maximum availability of the coarser size frit occurred considerably later than did that of the finer mesh size. The particle size distribution in the frit now being commercially produced is wide with the bulk of the material in a size range much closer than that in the study summarized in figure 1. This particular size distribution tends to flatten out

*The USGA has supported research work for several years on turf grass problems in the Department of Irrigation and Soils of the University of California for which appreciation is expressed.*



The Midwest Regional Turf Foundation held a two day Conference at Purdue University, Indiana, in March, which drew a record attendance of 512. Here are most of the delegates who attended.

and extend the release of potassium substantially.

In tests designed to evaluate the recovery of potassium from frit by plants as much as two-thirds of the potassium applied has been recovered by plants. Thus, the potassium from frit is readily utilized by plant.

Soil temperature conditions have negligible effect on the availability of the frit and surface applications are preferable to mixing into soils.

#### *Potassium Fertilization Practices*

With good justification attention has been focused principally on programs for maintaining nitrogen levels in putting greens. Nitrogen is required by turf grass in larger amounts than any other fertilizer element and the forms available to the plant are relatively readily leached.

The requirement for potassium by turf grass is about one half to three quarters that of nitrogen. Thus, if 25 pounds of nitrogen are removed per year in the clippings of a green the potassium content

would be about 15 pounds plus or minus a few pounds. The ability of soil to supply potassium to the green may vary from essentially zero to a very liberal supply depending on the soil. However even in areas where the potassium supply in the soil is normally very high such as Southern California, potassium deficiency may develop in a period of 5 to 10 years on putting greens unless potassium is included in the fertility program. Since potassium does not leach as readily from fine textured soils as does nitrogen sources, potassium applications of approximately 35 to 40 percent of the nitrogen applications are usually sufficient. Thus, if a green were to receive 100 pounds of nitrogen during a year about 40 pounds of  $K_2O$  would be required. In very sandy greens the proportion of potassium should approach the value of two-thirds the amount of nitrogen applied. The foregoing observations are generalizations which of course may be modified depending on the particular potassium supplying power of a given soil and rainfall or irrigation.

## The Possible Role of Potassium Frit In Green Fertilization Programs

Potassium frit is relatively expensive although it is appreciably less expensive per unit of fertilizer than the specialty sources of nitrogen being offered for turf grasses\*. Cost of materials cannot be entirely ignored in developing fertilizer programs. On the other hand, studies now in progress show that the efficiency of utilization of potassium from frit even when nominal applications are made as compared to soluble sources is substantially greater under typical putting green practices. Furthermore, the actual cost of potassium materials is a very small part of the maintenance of a golf course, † and the assurance that potassium levels are adequately controlled through the use of potassium frit without resorting to soil or tissue tests may well be worth the difference in cost. In brief, the relative value of using potassium frit under conditions where leaching is not extreme will depend on a number of factors including personal judgment, and a considerable amount of field testing will be required to determine if the advantages outweigh the additional cost.

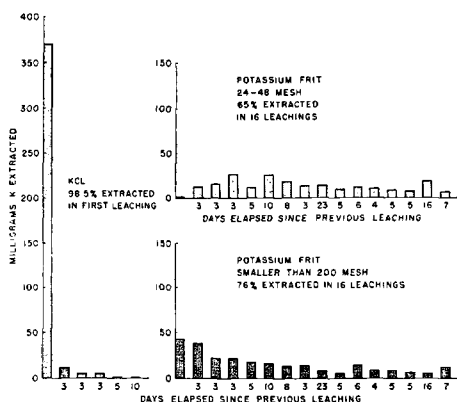
It is in sandy soils, low in potassium and in relatively high rainfall areas, however, where potassium frit would appear to be particularly advantageous. Under these conditions it is possible for most of the available potassium in the root zone to be lost during a single rain. This, of course, can adversely affect the quality of the turf grass besides result in an increased labor cost for replacement. Recent studies indicate that potassium is not only leached out of the soil but also out of the plant to an appreciable extent during a heavy rainfall. (1).

With the development of potassium frit it is now possible to add all six of the elements required by plants in large quanti-

\*Manufacturing processes currently being evaluated show promise of reducing manufacturing costs substantially.

†Potassium frit used at the rate of 10 pounds per 1000 square feet per year would cost about \$300.00 for an 18 hole golf course whose greens averaged about 8000 square feet each.

Note. The potassium frit discussed was developed jointly by the University of California and Glostex Chemical Co., 3056 Bandini Boulevard, Los Angeles 23, California. The commercial product has been trade named Dura-Ka.



Leaching losses of potassium from muriate of potash and two mesh sizes of potassium frit when mixed with soil. The soil columns were three inches in height and three inches of water were applied in each leaching.

ties from the soil in forms which are resistant to leaching. The following is a partial list of fertilizer sources which are resistant to leaching.

Nitrogen. Sewage sludge, or other organic forms or urea formaldehyde.

Phosphorus. Any phosphorus source is normally precipitated by one of several soil constituents and in the precipitated form is resistant to leaching.

Potassium. Potassium frit.

Calcium. Limestone, gypsum.

Magnesium. Dolomitic limestone.

Sulfur. Gypsum, single superphosphate.

### Summary

A potassium glass frit fertilizer material is discussed which is capable of supplying potassium at an adequate rate of turf grass for prolonged periods even though leaching conditions may be severe. While this material appears to be particularly advantageous under conditions where soluble potassium sources are readily leached, its advantages may well merit its consideration under less extreme conditions of leaching. Studies indicate that rates of application of 5 to 20 pounds of frit (36 %  $K_2O$ ) per thousand square feet, depending on soil conditions, maintain adequate potassium levels for approximately one year under most conditions.



# IT'S YOUR HONOR

## **Local Tax Problem**

TO THE USGA:

It occurs to me that city or county governments are looking upon golf courses as housing developments and are appraising them as such and are not placing the value as a golf course. It is reaching a point where clubs are being forced to sell their courses because of high real estate taxes. The local governments do not take into consideration that private clubs are providing recreation facilities for their members, also sponsoring local, state and national golf and tennis tournaments that are not restricted to their membership only. If such clubs were forced to sell their courses, then the people would certainly expect the city or county to provide them with such recreation facilities.

Golf courses, in my opinion, should be appraised as golf courses, not as possible building sites. There are several ways to restrict property in deeds, such as stating that the property cannot be used except as a golf course. It is also possible that, when courses are sold for housing developments, it reduces the value of homes located in the general area of the course, therefore reducing the assessment and desirability of those existing homes. If courses are forced out of the cities, we would lose a certain number of members because in some cases it would require being away from one's work for an entire day in order to get in a round of golf. Also, in twenty years the facility would reach a value that would be too expensive to use for playing golf.

Since the USGA devotes some time to tax problems, such as locker rents, club cleaning and dues for memberships, I do not think it would be out

of order to make a study of this problem, as we may be of some help to clubs that are now confronted with this situation.

A good offense is the best defense. I believe with the proper information in the hands of club officers and members, we could in many cases have our courses appraised as golf courses and not as real estate housing projects. It is also possible for people owning homes near or bordering on a golf course to have it remain as a golf course by signing petitions and presenting them to their city and county officers. In many cases they have purchased their land with the thought that they would not be surrounded by other homes.

It is high time that the people be taught to look upon country clubs, their golf courses and tennis courts as assets and as fine, healthful recreation facilities that are most needed by every community. These facilities are provided for members at no expense to the taxpayers.

These are the items that have crossed my mind and there must be many other ideas on this subject. I do hope that USGA will at least investigate or make an effort to outline some type of program that would help solve this problem.

CHARLES E. KNIGHT  
Chairman, Green Committee  
James River Country Club  
Newport News, Va.

## **Service to Golf**

TO THE USGA:

I enjoy your USGA Journal very much. Its a great service to golf and to the golf professionals.

JACKSON BRADLEY  
Houston, Texas

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James B. Moncrief, Southwestern Agronomist

Mid-Western Office: Room 241, LaSalle Hotel, Chicago 2, Ill.

James L. Holmes, Mid-Western Agronomist

#### WESTERN REGION

Western Office: 1709 West Eighth Street, Los Angeles 17, Cal.

William H. Bengueyfield, Director, Western Region