



### SWINGING SINGERS

Bob Hope, flanked by Jimmy Demaret, left and Ben Hogan, right, who appeared on a recent Hope NBC program originated in Hollywood. In the Hope radio show, Demaret was featured in a duet singing number with Jerry Colonna. Hogan, 1946 leading money winner in pro golf admits he's not "quite up to" Demaret in voice. Demaret and Hogan are members of the MacGregor Golf Pro-Technical Advisory Staff.

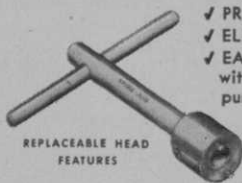


Gene Sarazen, left, talks Wilson golf clubs with blind golfer Boswell during recent Sporting Goods Show.

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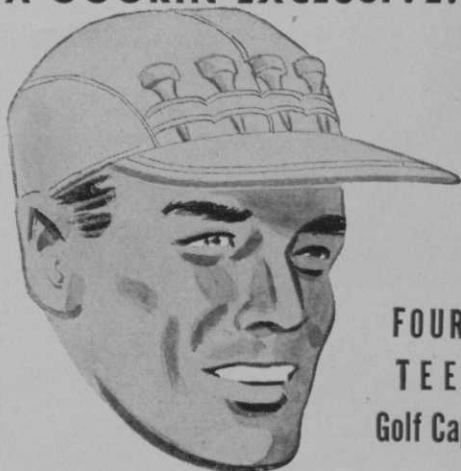
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## Avoid Watering "Schedules"-- Says Jack Counsell

That watering practice requires special treatment for each fairway on some courses rather than a set uniform schedule was emphasized by John L. Counsell in his discussion of watered fairways at the GSA meeting. Counsell, Supt., Salem CC, Peabody, Mass., also is treasurer of the Greenkeepers Club of New England. Said Counsell:

"It is common knowledge that grass will grow most luxuriantly when it receives the proper amount of moisture. Water has been said to be the life blood of plants since most of the food is taken up in solution by the plant roots. For steady growth it is important to have a continuous supply of moisture in the soil. Applying the optimum amount of water to provide the most favorable conditions for healthy fairway turf requires an understanding of fundamental principles plus common sense. The problem of supplying sufficient water to turf for its best growth and development becomes one of supplementing water supplied by nature. The solution requires recognition of local conditions such as kind of grass, soil, drainage, elevation, climate,

etc. The need for water can be judged by the appearance and behavior of the grass and it should be applied generously at each application in a manner that the ground will absorb it thoroughly.

"Overwatering is wasteful and injurious. There is no schedule for watering. Each fairway is an individual problem and some valves may not be used during the entire season. We have been told that evaporating soil moisture carries some of the soluble plant nutrients to the surface of the soil and the water leaves the plant food on the surface. In the absence of rain the plant cannot use the food unless artificial water is available to carry the food elements down to the plant roots. Water is essential to keep turf from suffering badly during periods of prolonged drought. Remember that a grass that grows vigorously throughout the season can resist the invasion of weeds.

"Irrigated fairways will produce a generous amount of grass clippings continuously during the season and the mineral elements in them become available during the process of decay. Chinch bugs and the grubs of the May and June beetle apparently do not like moisture, consequently there is very little damage from



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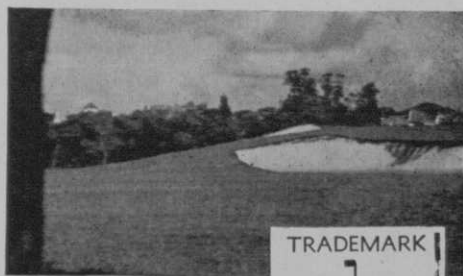
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these pests on watered fairways. Practically all of the turf injury from the grubs of the May and June beetle on our course is confined to the rough where the soil is usually dry.

"Watered fairways help to maintain the natural beauty of the golf course and the resilient turf provides walking comfort during long dry spells. Playing conditions are more uniform and fairway lies are better on turf that is kept alive in dry weather. Divots then can be easily replaced. You have probably heard of the golfer playing on a sun-baked fairway who could not replace a divot because he had swallowed it in powdered form. The most generally submitted reason for poor fairways is dry weather. In most sections it is practically impossible to maintain a constant growth of fairway turf by depending upon the natural rainfall.

"Anyone considering the installation of a fairway watering system should recognize the fact that where unfavorable conditions exist, fairway irrigation may cause complications. However, it has been our experience at the Salem CC, where we have watered the fairways for the past 10 years, that intelligent watering together with sensible maintenance practices will produce a dense healthy turf on bent fairways with improved playing conditions.

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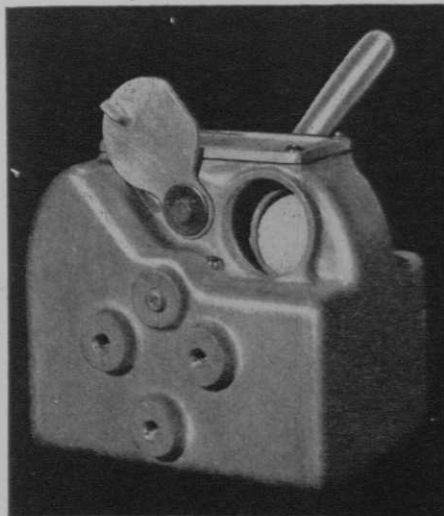
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**OLYMPIA FIELDS THRIVES**—Olympia Fields (Ill.) CC which had its troubled years as the world's largest private golf club has found that by reducing its courses to 2 from 4 and compacting the whole operation the establishment was put into sound financial condition and made so attractive to members that now 476 are on the roster from a low of 270. Under administration of Pres. W. E. Crocombe indebtedness has been reduced from a requirement of \$35,000 annual interest charges to present annual interest charges of \$5925. John Darrah, for 15 years gkpr., Beverly CC (Chicago district) has been signed as Olympia Fields' gkpr., and Alfred Cronberg, at Chicago's Racquet club for 17 years has been engaged as mgr.

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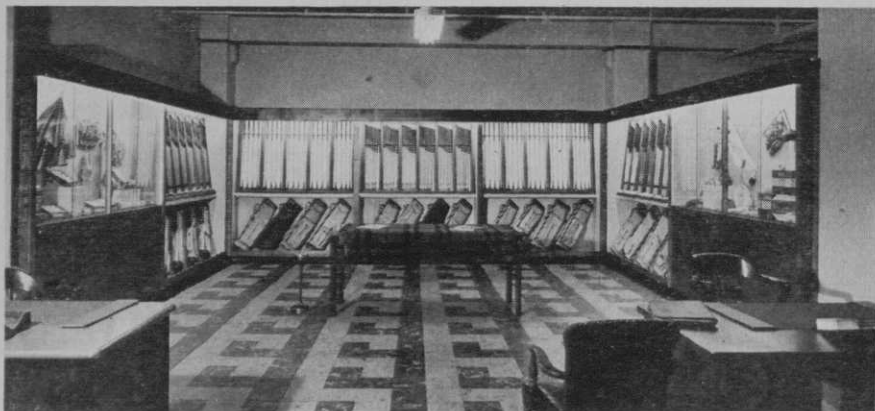
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### SPALDING'S NEW CHICAGO QUARTERS HAS MODEL DISPLAY

Large new wholesale offices of A. G. Spalding & Bros., at 180 N. Wabash Ave., Chicago, occupy nearly an acre of floor space and have exposures on 3 streets. Spalding's new quarters are superb in working convenience and as a demonstration of how to display golf goods. As you leave the elevator you pass through an oval foyer into the large reception room. Off this is the golf pro room and the dealer's room, both with extensive displays. Behind these are the desks of the salesmen for Chicago as well as those who cover the huge middle-west—from North Dakota to Texas, from Ohio to the Rockies.

"We're very fortunate to get these new quarters when it's so hard to find space," said George Dawson, Spalding's District Sales Mgr. "We designed and laid out these new wholesale offices for the benefit of our customers. They can really see our merchandise because we've got better display facilities; they'll get faster deliveries because we're better equipped to handle their orders; and, they'll get better service in all other ways because we're set up here just to give it to them."

**NEW CADDY MANUAL**—Clevington Productions, Inc., 216 High Avenue, Cleveland 14,

O., has a new caddy manual called "Caddy Savvy." It's pocket size, 24 pages. The manual is fully illustrated with the "do's" and "don'ts" of caddying. Booklets are written in a humorous vein to appeal to the youngsters. The firm is also introducing a syndicated golf score card for clubs which contains a condensed outline of the new USGA rules, briefs on golf etiquette, an explanation of how to use handicap figures for each hole, and a fault-checking chart.

### Robert Bruce Harris

Continued from page 38

exceptions when these traps were duplicated in this country far from the seashore, with perhaps a background of timberland instead of sand dunes, they seemed artificial and affected. The scale of the golf course is large and these little curlicues looked very much out of place without surrounding sand dune country. They didn't fit and they required an enormous amount of hand labor.

Luckily, the shortage and high price of labor has caused us either to remove or grass-in many of our unnecessary traps.

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Some of them have been re-designed so that the grass on their slopes may be entirely cut by fairway mowers and their sand raked by power equipment. Very often this simplification has resulted in a more effective and more beautiful trap. It is also less expensive to maintain.

I believe that a few large traps are much more effective than many small ones. Here again, in this phase of golf course design, we are dealing with the large scale of the golf course. Small traps look lost in the big landscape of the golf course and have little meaning from the playing standpoint. I think those sand traps which are necessary should be large and their outline should follow the swing of a fairway mower. Their slopes should be long and streamlined and should merge naturally into the landscape.

The word streamlined has been much over-worked by our industrial designers but as applied to golf course design, it is more effective. Streamlining and simplicity go hand in hand and make for more beautiful, more playable and more reasonably operated golf courses.

#### Tee Design Changing

Along with streamlined greens and traps, it is well to have streamlined tees and many of them. You have all seen the old small rectangular plateau that sat several feet above the fairway. We hope it is a thing of the past. These tees were ugly and unsightly and required much hand labor to maintain. On many courses where the play was heavy the grass on the tees could not be retained at all and large holes were worn in their surface.

If the tee is elevated just enough for drainage and visibility and if it blends into the surrounding terrain in a natural manner with no angles or steep slopes, it will appear well. It also can then be cut with a fairway mower. Alternate or several large tees for each hole are really easier to keep up than one small one and will give more interest and variety to the golf course.

Because of the golf ball shortage and player demand during the war years, the rough on many courses was entirely eliminated or it was cut just a little longer than fairway length. It may be that a happy medium between fairway length and the old fashioned hay field will be the best length. I feel sure that it is for the crowded public course. With more and more players using bag carts, it is important that the rough be kept short enough and thin enough so that the lone player can easily find his ball. Those of you who work on public courses know what a handicap it is to have a rough where many balls are lost with a resulting tie-up in play. Yet, we mustn't forget that some rough will almost always play an important part in the design of the golf hole.

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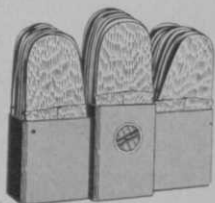
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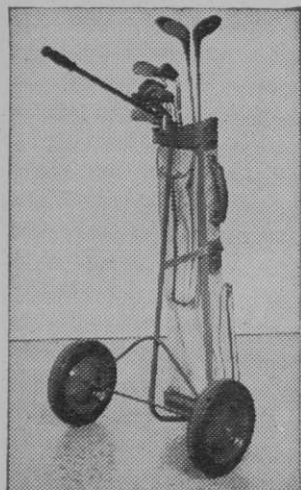
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And that brings up another thought. Once the design of the golf hole has been established on the ground, the fixed outline of that hole should be closely adhered to and should not be changed by the notion or carelessness of every man operating the fairway mowers. Many a good golf hole has been completely spoiled and its yardage shortened by careless mowing of the rough. Now is a good time for you to check up the rough and fairway outlines on your own course. It is an inexpensive way of creating and maintaining a good golf hole.

Another factor that we have to contend with in present day design and maintenance, is the bag cart. It looks like the cart is here to stay and it brings up many problems. Last summer on one of my own courses, we averaged more than 170 bag cart rounds on each Saturday and Sunday. You all know what damage that many carts can do to a course when it is wet. In placing tees and traps and in contour-scaping around the greens, the carts can no longer be ignored.

### Tree Placing Important

One of the most important design features on a golf course is the placing of trees. They greatly affect the appearance of the course and cost of maintenance. Only an expert should direct the planting of trees and shrubs. The location, selection and planting of trees is as much a factor in golf course design as the placing of traps or the outlining of fairways. Here, again in considering the planting, the scale of the golf course is an important factor. The distances are big and small clumps of shrubs or tiny evergreens and little trees dotted in a pepper and salt manner over the landscape, are unattractive and very expensive to maintain. They are also disturbing to the golfer. Always select good long-lived trees native to your own region. They fit better with the surrounding countryside and look more natural. Most shrubs or small evergreens should be confined to the clubhouse grounds and should not be used on the golf course itself.

For a good many years, much of the golf course architecture in this country suffered from a finality complex. That complex was that the zenith of golf course

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design had been reached in Scotland and everything we did had to be an imitation of their courses. It has been very gratifying to see the fine research on turf improvement by our Greens Section of the USGA and by the experimental stations and agricultural colleges with whom the greenkeepers have closely and effectively cooperated. You can read the results of all this research as it is constantly published.

Because of our Scottish finality complex, for many years our golf course architecture did not keep pace with our turf research. I think it is high time that we stopped imitating the old traditions in golf course design and build golf courses that will satisfy our own player demand, our pocketbooks, our maintenance machinery and our own peculiar American climatic and topographical conditions. Unhampered by tradition, we can develop golf courses of the highest architectural standards and which will be far better suited to Americans and modern American maintenance machinery.

There is one point of greenkeeper-golf architect relationship that I would like to bring out. If the greenkeeper can be on a new course with the golf architect from the day that construction of that course starts, a much better result will be obtained. The greenkeeper will then have an excellent working knowledge of the course that he is to look after. It is bound to result in more satisfactory maintenance.

At present I am designing many clubs in various parts of our country. One of the things that has impressed me, is that all of my clients, whether they are municipal, private, or daily fee, and whether they are rich or poor, have all expressed a desire to have their layout designed so that it will be fun for all classes of players. They do not want courses that will be hard work for most of the membership to play. Not one of these clients has expressed a desire

for the old time, tough, sporty tournament course. They want a beautiful, pleasant course, suitable for everyone, that can be easily and economically maintained. And judging from the foresighted concern about year after year maintenance costs, the greenkeepers on these new courses will have a happier existence.

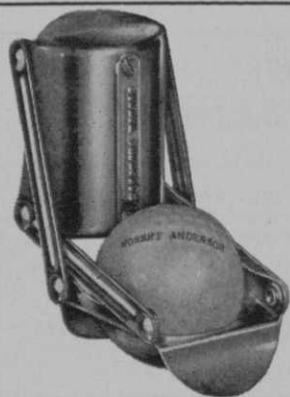
If at any time any member of the Greenkeeper Superintendents Association can offer the golf architect ideas or suggestions that will contribute to the advancement of golf course construction or management, please send them to the American Society of Golf Architects.

## Care of Bent Greens

Continued from page 37

can be grown each year. Winter cereal rye is excellent for fall and early spring, and a mixture of soy beans and sudan grass is a good summer crop. The winter rye is seeded in the fall and allowed to grow until late April or early May when it is plowed under. The area is disced once a week, or when sprouting weed seedlings appear, from then until time to plant the summer crop. Soy beans and sudan grass are planted when the ground becomes warm in May. A small seed variety of soy beans is generally used and seeded at 1½ bushels per acre. The rate for the sudan grass is 12-14 pounds per acre. This combination makes an ideal warm weather cover crop. The soy beans provide organic matter, and add a little nitrogen because it is a legume. The sudan makes a heavy growth and has a very extensive root system which helps granulate the soil. The soil should be tested for reaction, and lime should be applied and disced into the soil if it is acid. A 3-12-12 or 0-14-14 fertilizer should be applied about a week before seeding at 400 lbs. per acre. The fertilizer will help pro-

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duce a better cover crop and the phosphoric acid and potash will benefit the turf when greens are topdressed. The use of cover crops, and cultivation, improves soil structure and rids the soil of weed seeds within a single season.

Some clubs without good soil on the property import soil and spread it in an out of the way spot. It is improved by cultivation and green manure cropping. Sometimes the sand is spread over the surface and mixed with the soil by plowing and discing, or by the use of an Ariens, or Roto tiller.

Many clubs in eastern Pennsylvania purchase screened spent mushroom soil from mushroom growers in the Kennett square area and use it in place of local soil. Sand and additional humus are mixed with it.

### Avoid Fine Sand

Fine sands and those of uniform size particles are not suitable for topdressing mixtures. They should be avoided because they pack and have a cementing action. There is very little difference between a very fine sand and a coarse silt. Both are apt to make the soil tighter and more compact than before.

The sand used should have a variety of different sized particles, with the majority varying from medium to coarse. The larger particles help provide passageways which are needed to facilitate the downward movement of surplus water. The medium and smaller size granules aid granulation and by improving soil structure provide a better ventilated soil.

The Green Section of the USGA made an examination of sands and prepared specifications for a desirable one. They cooperated with the National Sand Gravel Assn. and found a specification of the American Society for Testing Materials (ASTM) which is acceptable, and is one any sand and gravel dealer understands. It is the specification for a concrete sand and

hence is one the dealer can comply with when he furnishes sand. The specification is as follows:

100% passing a 3/8 sieve.....	0.371 in.
95-100% passing a No. 4 sieve.....	0.185 in.
45-80% passing a No. 50 sieve.....	0.0118 in.
2-10% passing a No. 100 sieve.....	0.0058 in.

All ranges of particle size in the above specification have been examined by the staff of the Green Section and have been found satisfactory. The finest grade is not too small, and the coarsest has only a small percentage of aggregate larger than 0.185 inches diameter. The Green Section findings were reported in October-November 1946 issue of *Timely Turf Topics*.

### Organic Matter Sources

Manure and commercial humus or peat are the principal sources of organic matter. Cocoa hulls, rotted sawdust and other materials may be used in regions where they are obtainable. Manure is overrated as a source of organic matter. Barnyard manure contains 60 to 80 percent of water so the actual quantity of organic matter in a ton is only 400 to 800 lbs. It is readily decomposable and does not persist in the soil. At least half the original amount disappears in a single season, so a ton, or 2,000 lbs., of manure does not furnish more than a couple hundred lbs. organic matter. Manure has other disadvantages. Unless it has been composted for several years it is apt to introduce weeds and clover into the greens. Most manures contain much clover seed and may have many weed seeds in addition. When enough manure is used in the topdressing to furnish all the organic matter needed to make a good topdressing it supplies altogether too much nitrogen. This makes the grass too soft if greens are top dressed regularly.

### Dairy Loam Bad

In Oklahoma and Texas a 50-50 mixture of fine sand and dairy loam is commonly used to topdress greens. The dairy loam is manure from nearby feeding lots. This kind of topdressing is bad for bent grass

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greens and is not good for the rye grass used in bermuda greens for winter play. It is not the right kind of topdressing for bermuda greens even though bermuda grass may seem to thrive and make a good growth. The dairy loam undergoes rapid decay during hot weather, and the resulting nitrogen produces a succulent bent grass turf which cannot withstand the hot weather. The use of dairy loam in the topdressing applied in the fall before seeding rye grass aggravates "damping-off" of the young seedling grass. Nitrogen should not be used until after the young rye grass becomes well established. The fine sand-dairy loam mixture does not produce a soil of desirable structure. The dairy loam undergoes rapid decay and after it disappears the fine sand packs. Surfaces become hard, and root systems shallow because of the absence of air in the soil. A topdressing made up of soil, coarse sand and a resistant type of humus is needed for bent and rye grass. It is also better for bermuda greens. The bermuda greens will be more resilient, and the turf will have a deeper and more extensive root system.

The present tendency is to depend upon a good quality of cultivated peat as the source of organic matter in the topdressing and rely upon fertilizer to supply plant food when needed. This method gives the greenkeeper better control of growth. There are times when topdressing is desirable but plant food is not seeded and might be detrimental. Under such conditions a soil-sand-peat humus mixture is preferable to one containing large amounts of manure.

All peats are not alike. Their properties differ depending upon the conditions under which they are produced. The lacustrine peats are formed first and are at the bottom of the swamp or bog. They are produced in shallow water from floating aquatic plants such as lilies. The reed and sedge peats are formed next, and then come the woody peats produced from tamarack and other woody plants that grow on marshlands. Moss peat comes from dome-like deposits in northern regions where the weather is cool and humidity favorable. Moss or sphagnum peat is derived from the sphagnum plant which is a bog type of moss. These plants are not dependent solely upon the soil or rainfall for moisture. They can absorb and utilize the moisture in a humid atmosphere.

The lacustrine peats are plastic and dry to a hard rock-like mass. Once they become thoroughly dry they do not re-absorb water and are what the chemist calls an irreversible colloid. The lacustrine peats have a bad effect on the structure of a soil and should not be used. The woody peats are undesirable also. The sedge, and reed peats are the best ones to use. Sphagnum

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peat can be used but it does not stay put in the mixture and tends to float out and form ripples when the green is watered. Some greenkeepers prefer this kind of peat and put it through a hammer-mill before mixing with the soil. Then it does not separate.

There are three good reasons for not using over 20 to 30 percent of peat by volume. Peats have a high water holding capacity, ranging from several hundred to a thousand times their weight of water. When the proportion of peat in the soil becomes too high the green may become and stay water-logged because of the tremendous water holding capacity of the peat. Then scald and algae appear and cause trouble. A dry peat resists wetting. It tends to shed water. When a green of high peat content becomes dry it is very difficult to restore moisture by sprinkling. Deep forking followed by several drenchings with water are necessary before the green will take water in a normal manner. Greens that have too much peat have soft springy surfaces and are objectionable from the standpoint of play.

The subject of topdressing will be completed in the next installment. How to determine the amounts of soil, sand and humus to use, methods of mixing, the killing of weed seeds, as well as rate and frequency of topdressing will be discussed.

# DISTANCE AND TERRAIN FACTORS DETERMINE INTERESTING PAR

By W. L. LANGFORD

To avoid easy par holes and resulting low handicaps, many clubs do not build holes just over the par change distances, i.e., holes measuring from 445 to 465 yards or 300 to 330 yards. This is a mistake, as such holes frequently provide most interesting play and are inherently variable; a 450 yard hole should not be considered an

This contour map of a hole showing interesting problems in shot and stroke placement may be puzzling to you but it can be read and explained easily by any fellow who was an army combat officer during the war.

## GREEN #13 ELLIS PARK MUNICIPAL GOLF COURSE CEDAR RAPIDS, IOWA

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