

Design and Its Relation to Maintenance

By **ROBERT BRUCE HARRIS**

Member: American Society of Golf Course Architects

I haven't any doubt that most of you have many times cursed the architect that designed your course and perhaps justly so. I am sure everyone here is more aware of golf course design as it applies to maintenance than they were 20 or 30 years ago.

However, in defense of the golf course architect, one of the important phases of design that influences the upkeep, is the selection of the site on which the course is built. Too often in a club development the site is selected and bought before the golf architect is employed. He then takes the property and does what he can with it. The result is frequently a dull, uninteresting layout that is expensive to maintain. More times than not, a layman group without expert assistance will select a site that is too small, and too rugged and they will not take the trouble to have its soil analyzed. I have walked over many golf courses that should never have been built and no doubt you have all had the same experience.

In the days just after World War I, most people thought that to have a good golf course, they had to have a very hilly piece of property, cut up by many ravines and streams. This sort of land was called "sporty" and in those days it was a very much over-worked word. It was commonly used to describe a tract of ground where a mountain goat would be more at home than a golfer. Many times, golf architects were called in to design a course on that kind of a site. In most cases, the result was bad and very costly and the poor greenkeeper had to suffer with it for many years. The selection of the proper site has much to do with the layout of the course and it certainly has much to do with your upkeep. This phase of golf architecture is seldom mentioned but it is a most important one and one that should be handled by the golf architect.

During the depression, many of you, through economic necessity became very conscious of the golf course design as it relates to maintenance. With the recent war years, you have become more aware of it. Through these trying years, all of you in the golf game have done a remarkable job of operating with a scarcity of help, high prices, and broken-down equipment. Bad as this has been, it may have been a blessing in disguise as far as golf course architecture is concerned. Back in

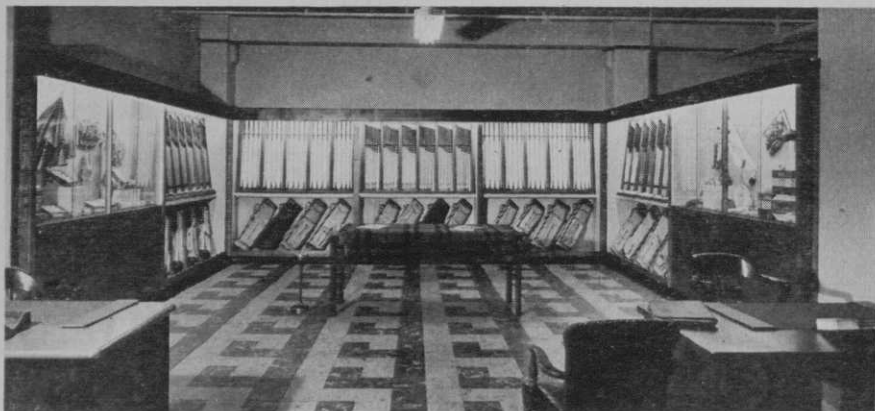
the early 20's, it was customary for golf architects to build large mountainous-looking greens. They had steep shoulders and mounds and the sand traps surrounding them were very near, or right against the putting surface. In most cases, they did not merge with their surroundings, but appeared very artificial and as you all know, they required an enormous amount of hand labor to keep up. Because of these steep slopes, they were frequently subject to sun scald and tight spots. The surface of the greens sometimes had so many severe undulations that it was difficult to find a fair place to put the cup. These steep hills had to be hand-mowed and hand-watered. Many of these greens were much larger than they needed to be.

Green Design Changes

The depression and the following war years have done much to change this style of green. The lack of labor and the need for maintaining with power equipment has caused us to plan our present day greens with long gradual slopes and very gentle undulations. Their surrounding sand traps are now built far enough away from the putting surface to permit mowing with fairway mowers. Power mowing of putting surface has been a good influence on the design of the green. No longer do we build those sharply elevated bumps that require so much maintenance and are so unfair to the player. Greens are now designed for economy of upkeep without sacrificing beauty and the test of golfing skill. Because of this, they also blend better into the surrounding topography.

There is an old saying that "there is nothing surer than change" and that applies to golf course architecture, too. I am sure I don't need to tell you that golf course design has been going through an evolution as a result of scarce high priced labor, power machinery, bag carts, and player preference. In the days of cheaper labor, you saw many sand traps made to look like those on the sea-side courses of Scotland. You will even see many of these in use today. Traps were built with many curves and angles in their general outline. Tongues of sod protruded into the trap or fancy little islands of sedge grass or ground cover dotted the sand. This fussy kind of design was often a copy of some famous foreign golf hole. Unhappily, with few

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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,

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Robert Bruce Harris

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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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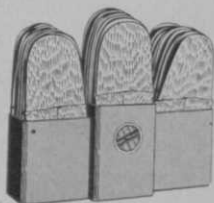
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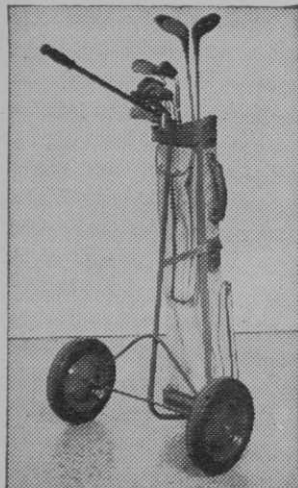
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And that brings up another thought. Once the design of the golf hole has been established on the ground, the fixed outline of that hole should be closely adhered to and should not be changed by the notion or carelessness of every man operating the 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.

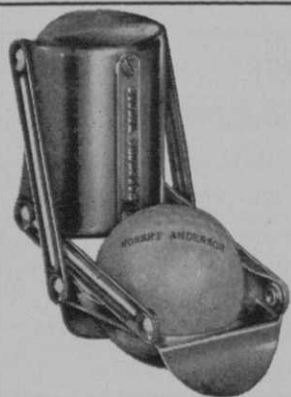
If at any time any member of the Greenkeeper Superintendents Association can offer the golf architect ideas or suggestions that will contribute to the advancement of golf course construction or management, please send them to the American Society of Golf Architects.

Care of Bent Greens

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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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