Course Construction

In the following series of articles which I am to have the privilege of writing for THE "PRO," it shall be my endeavor to put as plainly as possible the several methods which I have found from a long experience to be the most successful means of securing the best results in laying out, building, etc., a modern golf course. I wish it to be understood, however, that I do not mean my remarks to be taken as hard and fast rules to be followed out to the letter, but simply my own ideas, gained by practical experience. I also trust that the articles may be of some help to my fellow greenkeepers and aid them in their none too easy task of giving to their members a course over which it is a pleasure to play, with the result that complaints against this long suffering individual will be reduced to a minimum. Golf today, compared with what it was, say ten years ago, is entirely changed and no comparison can be drawn between the links of today and what they were then. A few years ago the golfer was quite content with anything so long as he could get around the course in comparative comfort. If the putting greens were anything decent at all he did not mind and little grumbling was heard.

The person in charge of the course then was in most cases the professional, who, though perhaps a very fine exponent of the game, knew very little about the culti-

vation of grasses. His time was for the most part taken up with playing round and giving lessons to the members of the Club. This was generally the condition of things, but as golfers got better educated in the game, the desire for the more up-to-date conditions all round asserted itself.

Courses have to be laid out in a more scientific manner. A golf architect has to be called in to inspect the site of the proposed links and is entrusted with the lay-out. He has to supervise the construction of the course, which must be laid out according to the very latest principles. In the old days it was the common custom to lay out the course, taking full advantage of the natural conformation of the ground. The popularity of the game now has changed this however, and the modern golf architect is expected to improve on what nature has placed at his disposal in the way of a fine natural lay-out. He is expected in some, to copy other famous holes, with, in perhaps a few cases, very good results, but in very many with disastrous failures. There is no rule that I know of where it says that a certain hole has to be constructed in a certain way, therefore I maintain that in laying out a course, the very fullest advantage should be taken of the natural features of the ground on which it is proposed to lay out the links.

By following out this plan, a sameness, which soon becomes apparent to the golfer when he plays over those courses where copying has been resorted to, will disappear. It is the custom with some Clubs to first fix the

site of the Clubhouse and when this has been fixed to tell the architect he must lay out the holes so that the first and tenth tees, as also the ninth and eighteenth greens, are situated near the Clubhouse. In some cases this idea will fit in all right, owing to the shape of the ground on which it is proposed to lay out the course, but in others it gives the architect some very serious trouble to work this out and at the same time take full advantage of the conformation of the ground. I admit it is a very great advantage where it is possible, to put this scheme in operation, as it gives two starting points, which on a busy day will get the players off much more quickly. I think it is a mistake, however, to carry out this plan to the detriment of the lay-out. I could name many famous courses where the ninth hole is a long way out from the Clubhouse and where large numbers of players are on the course daily. Let me not be misunderstood in what I have said in regard to the lay-out, and it must not be taken for granted that the greens may not have to be built up in some cases. It is extremely likely that a few of them may. If so, my idea is that they should be constructed to fit in with the surrounding ground and be made to look as natural as possible. To some it may seem an easy task to be given a tract of land and told to get busy and lay out a golf course. It looks easy, especially after it has been worked out by an expert, but it takes an expert to do it.

In my early days at the game I have seen a golf

course laid out in a few hours, greens, tees, etc., all staked off, and this work carried out by a person who had not previously had an opportunity to inspect the ground. And a first-class lay-out at that. To be a successful golf course architect a great essential is to have what is called the golfer's eye, in other words, be shown over a tract of ground and picture in your mind just how it should be laid out. I personally think a great deal of success or failure depends on this.

Another great asset to the golf architect, and one that will be of very valuable assistance to him in his work, is to be able to play the game itself well. This will help him a great deal in laying out the course. He knows just what is required and he sets about to make the very best of the ground at his disposal. When a golf club acquires a portion of land, it is sometimes, in fact, very often the custom, to have a survey made of it. A map is drawn out strictly to scale. This is a great help to the architect. The plan or map may give him the contours of the ground, but I hold that to take advantage of every natural feature the course has, it must be laid out on the ground itself. This is the only way to gain the very best results. The lay-out of a course is just like the foundations of a house, and as important, as no matter how much labor and money is spent on its construction, if the foundation is not right all the other work is simply wasted on its construction. So much for the lay-out, which I have tried to put as plain as possible.

CARE OF THE GREEN

There are, as all golfers know, two kinds of golf courses, namely, the inland course and the seaside. The two are quite different in every way. In the old country the championship was always played on a seaside links although there were many first-class inland courses that could compare favorably with them, and perhaps in one or two cases provide a better test of golf. In this country things are very different. Inland links are predominant and the championship is always played on one of them. There are only one or two seaside courses in this country up to date. I shall treat with the inland course first and endeavor to explain my various methods in constructing it. As a large number of the new courses at present being built all over the country have to be seeded down, I shall take them first. It is not so many years ago when, if one should have mentioned the fact that he was about to build a golf course on a site which was then a thickly wooded forest he would have been pronounced crazy. Yet now at the present time some of the finest links in this country are situated on what was once forest land.

In writing the series of articles, I shall deal with all the different kinds of courses and to begin with I shall make it my endeavor to give some idea of what is required in the way of building a course laid out on forest land. The other types I shall deal with later.

We will presume that the architect has finished his rather laborious task of laying out the course. He has

the fairways, greens and tees all staked out. In some cases the work of removing the trees and the rough grading is given out to some contractor, who carries out the work under the supervision of some one appointed by the Club or the architect, who I may say cannot always be on the job, as he may have several more courses under construction at the same time. In other cases the Club itself has the work carried out under the supervision of their own greenkeeper. The initial work to be carried out is the removal of the trees. If the trees are of any use at all the club should be able to sell them at a price that should help a long way towards paying for the actual cost of building the course. The cost of building a golf course is regulated very much by what the Club is prepared to spend and the class of course aimed at. I do not know if it can be put down to the war. Everything is laid down to it at present, but the cost of building a modern golf course is very much more now than it was three or four years ago. Labor is very much more expensive than it was, and good men are scarce, the price of materials has gone up, grass seeds, fertilizers, etc., are all more expensive than they were before the war broke out, but nevertheless the construction of new courses goes on apace. As I have stated, the trees first of all have to be got rid of, the stumps being removed by blasting with dynamite, which is the cheapest and quickest method if the trees are of any size. If, however, there is any mound work

to be carried out to break up the flat surface of the ground, the roots will come in handy for the foundation of this work. As I have already stated, it may be possible that several of the greens may have to be built up in some way and the golf architect who knows his business will see to it that the party in charge will be supplied with a model of the desired contours of the green so that it may fit in with the fairway and surrounding ground.

To make a successful job I think this is very important. It might be possible to carry out the construction of the green by the eye, but I think the easier and safer plan is to build from a model. Fewer mistakes can occur and more progress made with the work, with less expense as well. In working from a model, all that the person in charge has to do is to stake off the green, first to the size given him. Then with stakes driven in all over, giving him the elevations of the different contours, the work afterwards is easy. I myself find it a good plan to first of all run a line of stakes all around the outside of the site of the proposed green, and with the aid of a cord, show the proposed elevations on the outside. The inner portion can then be graded to stakes driven in to the required elevations. In starting to build the green the first and very important point to be considered is drainage. If the work is being done on low lying ground, a system of drainage has to be installed. To those in charge of the work this has to be seen to.

If the green is being built on the side of the hill the wash from the higher level has to be diverted in some way, if possible, by the back of the green. There are many ways of draining a green, but I think a very good way and amongst the best is the method of herring-bone draining. Run a main drain down the center and put off shoots on either side running into it. The depth of the drain should be regulated by ground to be drained. The system of draining I prefer is to first lay the agricultural pipes in the bottom of the trench and cover over to a depth of at least six inches with rough ashes or small stones. So much for the drainage of the green.