

The Cost of Golf Course Construction

(Continued from December)

V

THE FAIRWAYS

THE ideal fairway would be built on the same elaborate plan as the putting greens, but the expense of such a method would make the cost of the course prohibitive, except in the most exceptional instances. In some cases it has been necessary to practically build large sections of land, especially in one or two seaside courses and in a few which have been built in very marshy country. Here, of course, the character of the soil may be determined largely in advance and fairways built in the most approved way. Ordinarily, however, the general method for the construction of the fairways is the simple one of plowing, harrowing, smoothing and rolling.

After the plowing and preliminary harrowing to break up the clods has been done, lime should be applied in amounts suited to requirements in various parts of the course. An average of from one to two tons to the acre will be found necessary in most parts of the country. After spreading this dressing, the ground should be again harrowed so as to thoroughly incorporate the lime into the soil. If time is available the fairway should be allowed to rest for a time with the object of permitting as many weed-seeds to germinate as possible. Then go over the ground again with the harrow, thus uprooting the weeds and exposing them to the action of the sun, which will kill them. If time can be spared, this should be done a couple of times at least, or more if practicable. In hot

weather, no more effective method of removing weeds from new ground can be used. In a very wet season, this way is not always successful, but in all events it should be tried. The aeration given to the soil will be invaluable.

The next thing is to condition and fertilize the soil. If it can be afforded, a dressing of natural humus, from three to ten tons to the acre, should be applied and thoroughly disked in. Three tons of humus to the acre will add about 1 per cent. to the humus content of the soil. In most cases humus on the fairways will be found too expensive and cattle or horse manure will have to be used. This should be used in as large quantities as can be afforded. The best method is to pulverize the manure as finely as possible, spread it over the ground and harrow in. The more thoroughly it is harrowed in the better will be the ultimate results.

It is useless to put the manure or humus too deep into the soil, despite the oft expressed opinion. If put too far down the grass roots will not receive any of the benefits. Grass is a shallow rooted plant and seldom penetrates more than six inches. The best depth is the top four inches, the material being thoroughly mixed with the soil.

The fairways will usually require some chemical fertilizer, and this should be procured from a reliable grass seed firm. Farm fertilizers should not be used, as they are usually rich in phosphoric acid and potash, which

encourage clovers and cause coarse growth. Grass needs nitrogen and fertilizers intended especially for use on grass are therefore made up with nitrogenous compounds. It is preferable to allow a seed firm to suggest the best fertilizer rather than to attempt to do it oneself, but as a rule about 200 to 500 pounds to the acre is used.

On very heavy soils as much sand as possible should be used in order to increase the porosity of the soil and permit better ventilation. Improved growth will always follow the use of a suitable quantity of sand on soils which have a tendency to bake hard and it should be used on all portions of the fairways where the turf is expected to be first-class.

It is difficult to give a satisfactory estimate of the cost of fairway construction owing to the great variations in soils and the diverse opinions regarding how good the final results should be. As far as plowing is concerned, assuming that the soil is in average condition, the cost will be from five to ten dollars to the acre. If the ground is very easy to plow it may be far less than these amounts. A team should be able to plow at least an acre a day at the very minimum. Experiment will soon show how much the teams will be able to do and the cost of plowing figured in that way. Local farmers will be able to give valuable advice on this point and should be consulted when planning this part of the work.

Disk harrowing will have to be done several times and the necessary amount will cost from \$2.50 to \$4.00 to the acre. A team can disk up about five acres per day, providing none of the area is covered more than once. The

latter diskings will not cost as much as the initial one.

As far as smoothing is concerned, teams can cover more than ten acres in a day and the cost per acre will therefore be around 50 cents. Manuring will cost somewhere around \$50.00 to the acre or perhaps less if less manure is used, and less trouble is taken.

The cost of seed and seeding will be about \$60 to \$75 or more to the acre.

All told, the cost of fairway construction will be from \$400 to \$1,000 each or from \$7,500 to \$20,000 for an eighteen-hole layout. Exceptional local conditions or lavish expenditures with the idea of getting the best possible results regardless of expense may run these figures up out of sight.

VI

THE TEES

In constructing the tees most of the earth necessary will be obtained from nearby putting greens. They should be made as large as possible, both in width and in length. Often the architect will make it possible to entirely change the character of a short hole by using an especially large tee, so that the plates may be changed from one end to the other and the hole approached from different angles. Occasionally a long tee will be placed diagonally with this same object in view. If the tees are of ample size and the plates moved about frequently they will be subject to far less wear and can be kept in good condition throughout the season.

Practically all the cost of building the tees represents the labor of shaping them, top-dressing with good soil, seeding and sodding. The various opera-

tions are rather difficult to separate. Tees will cost from \$40 to \$75 each, depending principally on their location.

VII

THE HAZARDS

It is also difficult to place any exact figure on the cost of the hazards owing to the fact that many of them are constructed somewhat incidental to the other work (from the standpoint of cost) and also because a considerable number of them are often left until following seasons so that the ground may have a chance to settle and "find itself." In all, however, the cost of the average number of hazards on the modern eighteen-hole course will run from \$1,000 up to perhaps \$3,000 or \$4,000. This includes excavating, mounds, sodding, draining, etc. The hazards should be drained with particular care in order to prevent water from collecting in them.

(To be continued)

The Devil's Disciple

The Golfer stood in his room at night,
Pitching balls to a padded chair.

He could work his mashie there all
right,

But on the links he was in despair;

'Twas top and scloff,

Till a horse would laugh,

And the best he'd get was a measly half.

"I never shall learn this game," quoth
he.

"And I'd sell my soul for a seventy-
three!"

No sooner said, on this fateful night,
Than the Devil walked in, with a bow
polite,

"Pledge me your soul, my friend," said
he,

"And tomorrow you'll shoot a seventy-
three.

Don't think at all

Of stance or grip;

Just swat the ball

And let her rip.

Leave it to me: I'll turn the trick;

You pin your faith to your Uncle
Nick."

"Done!" said the Golfer—"gladly,
too."

"You're on," said the Devil. "Good-
night to you."

Next day, when "Mac" drove off the
tee

For the first long hole, he was down in
three;

And every other, or near or far,
Was played, somehow, in exactly par.

He sliced, he hooked, he scloffed, he
topped,

But somehow or other he always
copped.

If he hit a bunker he blundered o'er
And rolled to the pin for an easy four.

Over the green, or short, or up,

He trickled the next one to the cup.

Once, when he pulled to a bunker tall,
Which promised to grab and hold his
ball,

A caddie said, as he rubbed his eye,
That a hoof had caromed the pellet by;

But none suspected, who saw it kick,

'Twas the cloven hoof of your Uncle
Nick.

Hole by hole,

To the eighteenth goal,

Walked the man who had sold his soul.

Drive and iron, and pitch and poke,

Till, matching his card, his friends
went broke.

For, adding his score, they found that
he

Had shot the course in a seventy-three!

Whether his bargain he ought to rue
Depends of course on the point of view.

At least "Mac's" happier now by far
Than when he was eighteen over par.

He never worries about the trade,

Or ever gives it a thought at all,

And the only sign of the pact he made
Is a puff of smoke where he hits the

ball.