club, a large proportion of the members are inclined to object to all the difficult features on the course. But if the architect is sound, these same objectors will be the very ones to "point with pride" afterwards.

Consequently the architect must exercise tact and persuasiveness to convince the committee that his ideas are reasonable and that they will prove satisfactory.

I can assure you that golf course architecture is a question of study and education just as much as law, medicine or any other scientific profession and is not simply a question of muscle or physical skill as some still believe.

The club should not expect the architect to submit plans and specifications and then not supervise the work, because in nine cases out of ten, the men engaged to build the course do not or cannot interpret the ideas of the architect's plans. It is practically impossible to put on paper or incorporate in a model, some of the ideas that fit in well with the general landscape. Many must be worked out on the ground or in the progress of the construction.

Begin at the bottom and build up. That will be the key to what it will cost to maintain courses in the future. Too many courses have been built in the past from the top down and have gone through constant remodeling and reconstruction.

However, no two courses are alike. Consequently every golf course has particular features which may be easily destroyed if an attempt is made to introduce imitations of some other course.

## The Greenkeeper on a New Course

The same principles apply to the maintenance of the course. Obtain a thoroughly reliable and competent greenkeeper and give him full charge of the supervision of your course. The supreme error of golf course management is that after the club has secured the best architect possible, they turn the upkeep problem over to some man who probably worked on the construction and has no knowledge of cost upkeep or the problems of turf maintenance:

There can be no course maintained properly without sufficient knowledge of the difficulties of greenkeeping and turf culture. A greenkeeper who has confidence and skill to go ahead and plan his work in advance has the instincts of good greenkeeping. Knowledge of the qualities of soil; the use of fertilizers and top dressings which are free from weeds; seeds, and the use of proper seed, all are vital elements in efficient turf maintenance.

If one general law of turf management is laid down, it might well be the one that turf needs first of all suitable conditions for growth rather than medicines. A greenkeeper with a knowledge of what are the standards of good golf with regard to the condition of the course, including tees, greens and fairways, rough and hazards, will with intelligent effort keep the course in better condition than if he has no standard by which to judge.

Editor's Note: This article will be followed by another by Mr. Dearie in the coming April issue, covering the unit cost system applied to course maintenance.

## Draining an Established Course

By WILLIAM PHILIPSON, Willowdale Country Club, Williamsville, N. Y.

CUT sod 14 inches wide and any length easy to handle. Lay sod to left of drain about 15 inches from edge, then remove top soil 9 to 12 inches and lay this between sod and edge of drain.

Now remove sub soil to the required depth and put this on the opposite side of drain.

Lay tile carefully and cover joints with old grain bags cut in strips, back fill on tile with 7 to 9 inches of top soil and finish fill with sub soil. A good method to prevent settlement is to run the wide wheel of the tractor lengthwise of the drain, refill the drain with sub soil and repeat rolling with tractor. This will then allow enough depth for the last few inches of top soil.

When replacing sod finish 1 to 2 inches above grade. Now use the tractor for final rolling.

We have a heavy clay sub soil, and we find that putting the top soil over tile results in better drainage.

During the last two years over 20,000 feet of tile have been placed successfully as above.

## GOLF CLUB OFFICIALS!

If You Are Looking For AN EXPERT GREENKEEPER Address Headquarters, Giving Full Particulars The National Association of Greenkeepers of America 405 Caxton Building, Cleveland, Ohio