

We think we can move turf as well in July or August as any other time, but naturally it requires more care. If it is very dry, the turf must be prepared for removal by being soaked with water two or three days and then being allowed to dry out till it can be handled nicely. The ideal time, however, in our experience at this place is May or June.

We do not feel that good results can be obtained in this climate by moving turf late in the fall, as it seems to be "set back" and does not recover so quickly as turf moved in the spring or summer, and though we do not doubt that good results were obtained by winter turfing at Columbia, we should be fearful of results from even late fall turfing on our course, but still the winter is much more severe near Toledo than at Washington, and we have frequent freezing and thawing, which of course is hard on all plant life.

We would not think of chopping our strips of turf into chunks—say a foot square—as we can cut them into even strips 12 by 36 inches. By using an edger and care, we get all edges even and ready to lay. By so cutting the strips, it is not necessary to lay the turves in the order in which they are lifted—ours are interchangeable, all alike.

We do not leave spaces between the strips, and we should be horrified if a space one-eighth to one-quarter of an inch was left any place. We never saw sod buckle, though we have seen it shrink.

We believe it pays in results and saves time and expense to prepare for the job and to work carefully to a surface, and that it is much easier than fussing around later trying to accomplish what might have been done in the first place.

We want to make it plain we do not contend that our method is as good or better than any other. We offer it primarily for comparison.

A Novel Sprinkling Device

We are indebted to Mr. C. H. Moss, chairman of the green committee of the Wawonowin Golf Club, Ishpeming, Mich., for a description of a sprinkling device which he has designed and used with excellent results at Ishpeming. We quote Mr. Moss' letter:

"In the last number of THE BULLETIN we noticed several inquiries as to the best make of sprinkler. I shall endeavor to describe a device made under my direction with which almost any simple sprinkler can be used.

In the making of new greens a real problem is the shifting of the sprinkler; if you get near enough to lift it there remain footprints, and if you drag it even the hose itself will injure the new grass. To solve this problem of shifting we have resorted to the use of carbide cans. Any large round can should answer the purpose, but the carbide can possesses the advantage of being less susceptible to denting on account of its surface being corrugated. The accompanying photographs illustrate the arrangement. Carbide cans are a gift here when empty, and with wooden ends placed in them and centered with a hole that will admit a $\frac{3}{4}$ -inch pipe they can be made into light rollers. Using a simple type of sprinkler, which never clogs or gets out of order, we place a sprinkler each end of a length of pipe, the distance to be determined by the water pressure at the given locality, and by connecting the hose at the middle, we have a double sprinkler supported on rollers 12 inches in diameter. We have a pressure at the golf grounds permitting the sprinklers to be placed 26 feet apart, and thus they



A novel sprinkling device in action—Wawonowin Golf Club.

sprinkle a zone 52 feet in width. We use hose 75 feet in length, serving any green not more than 150 feet in width, from faucets on each side. Starting the sprinkler as far away as the length of hose in use will permit, when the green is sufficiently wet in one place the apparatus is pulled toward you and gently rolled over the new grass. The extra carbide can nearest where the hose is attached to the pipe has to be removed after a revolution or two, but the can has then reached dry ground. The other cans, serving as idlers, support the line of hose. A few extra carbide cans, not attached, at intervals under the hose, would be helpful if the ground is powdery. The illustration showing the hose supported by the extra cans is No. 2 on the Wawonowin course.

“Any competent workman can construct one of these sprinklers in three hours’ time. There is nothing about the sprinkler used to clog or get



Showing hose supported by a row of carbide cans.

out of order. Any sprinkler that revolves begins to wear out with the first turn, and no matter how carefully made will soon give an uneven distribution of water. Our sprinkler can be carried in one hand when occasion requires the following of a footpath through the woods. They cost so little that we are making more of them, and the hose is therefore all that we carry any great distance. The past month (June) has been hot and dry and we have found the device particularly valuable in watering at night, when the workman can not so easily watch his step. We have yet to find a footprint on any of our new greens. Even on greens that are well established it is not unusual to find evidence of thoughtlessness in changing the location of a sprinkler, requiring heavy rolling to correct. Rolling is necessary at times, but it is the antithesis of cultivation, and many a new green has been rolled to death, the only plants surviving being dandelion, plantain and crab-grass."

Turf Nursery

E. J. MARSHALL

Pictures of turf gardens may lead to the thought that a turf nursery is an extravagance not to be indulged in even by the more prosperous clubs; but it is not so. Every well-maintained course should have its turf nursery, in which turf for repairs should be grown and experiments should be made. Tees and greens can not be kept in first-rate condition unless good turf is available for replacement. Certain types of weeds, such as chickweeds and pearlwort, should be cut out as soon as discovered, when it can be done with an ordinary hole cutter. It is much easier and cheaper to maintain a moderate-sized turf nursery and use it to replace turf cut out to remove weeds, than to let the weeds get beyond control. There is always risk of losing a green or part of a green by disease, misuse, weeds or what not, and it is only a reasonable precaution to have spare turf in good condition for replacement purposes. The conditions and soils at two clubs are seldom alike and it is not an extravagance to maintain a little nursery in which three or four kinds of grass are grown and kept under observation. It is not necessary to keep the nursery in the pink of condition all the time as a green would be kept, but it should be kept healthy and vigorous. The great likelihood that vegetative propagation will supplant seeding as the means of producing fine, uniform turf, makes it clearly reasonable to keep a nursery to grow what might be called the breeding stock. A few rows of bent fairly well taken care of will furnish enough stolons to plant a large area by the vegetative method. A turf nursery, say one hundred or two hundred feet square, is a real necessity and in no respect an extravagance.

Starting Bermuda Grass Turf by the Vegetative Method

The following interesting note on the starting of Bermuda grass turf by the vegetative method is contributed under date of June 3, 1921, by Mr. Leonard Tufts, president of the Pinehurst Country Club, Pinehurst, N. C.: "There is another thing we have learned down there in the sand hills in connection with Bermuda which might be of benefit to the people where conditions are similar. After planting the roots of Bermuda we put on an ordinary spike-tooth harrow and keep the ground harrowed until we have a complete mat of Bermuda. It seems as if the harrow tears