



View of Country Club of Detroit's Course, Showing Sprinklers in Operation.

What We Did to Get Our Course Watered Right

By *HERBERT W. HALL*

Manager, Country Club of Detroit

WHEN GOLFDOM asked me to write on golf course water systems for the purpose of giving pointers and advice to other clubs contemplating such an installation, I debated quite at length in my mind as to the best suggestion that I could offer, and finally arrived at the following conclusion:

Any club considering the installation of a golf course watering system could get its installation much more economically and would have a much more efficient system by employing the services of a competent golf course water system engineer. There are several such men in this country and they will save their fees many times over by figuring accurately the correct sizes of piping required to furnish the necessary volume of water at the proper pressure at the points of distribution and in addition there is the feature which can not be figured in dollars and cents, of knowing definitely in advance that the system will work properly when completed. We selected Wendell P. Miller and were more than pleased with his work.

At the Country Club we had three sources of water supply available: First, Lake St. Clair, upon which our property fronts; second, the local village supply with a maximum pressure of 35 pounds (both of these would have required a

booster pump in order to obtain the necessary pressure at the outlets); third, a high pressure system which runs by our property to supply a distant community. The water in the latter system is always kept at about 90 pounds pressure and would not have required a pump installation. We decided upon the latter source, and Mr. Miller designed our layout accordingly. Then after our pipe had been ordered and construction work had started, a political situation developed that compelled us to give up this choice. As our plans had progressed too far for us to change to the lake for our water, we were compelled to purchase it from the village, which was the costliest of all three sources.

No Dead Ends

The village water is fairly soft and comes to our pump house through an eight inch main at approximately 35 pounds pressure. It is then taken up by our 500 gallon per minute pump, which is driven by an electric motor, and boosted to a pressure of 100 pounds, which is the most satisfactory working pressure, as the water coming from the sprinkler nozzles gets good wide distribution and in addition is broken into a fine penetrating spray. The water leaves the pumping plant in two six-inch mains and from these branch off four-inch mains that carry the water to the outlets leading to the fairways, greens and tees. The whole system is laid out in a series of loops, in

A diagram of the Country Club of Detroit installation appeared on page 24, June GOLFDOM.

other words there are no dead ends. There are several reasons for this. In the first place dead ends tend toward the accumulation of whatever dirt gets into the system, and second, with the loop plan the water comes simultaneously through several lines to whichever outlet is being used and consequently a greater volume and pressure can be secured with a smaller size pipe. Our main distribution system is six-inch and four-inch cast iron pipe. Those sections which are kept alive the year around are laid at least five feet deep, and the balance about a two-foot depth. The pipe leading to the individual sprinkling outfits themselves is two-inch and one and one-half inch galvanized iron.

Our fairways are watered from fixed outlets by means of portable sprinklers. The piping layout is an adaptation of the Buckner California hoseless system to eastern needs, with all the fairway area from 125 yards in front of the tee to the green being served by the fixed sprinkler outlets. The outlets are placed in two rows, through the fairway on a triangular plane, all outlets being 80 feet apart. Our fairway outlets are laid out in batteries of five to seven each, according to the slope and size of the fairways, with the valves placed close to the distribution mains at the edge of the fairways. We installed unions at all valves so that in case of repairs becoming necessary the valves can be easily removed without cutting the pipe.

Outlets at Greens and Tees

The outlets of the greens are at the back slope and the water is carried to the sprinklers through one-inch hose. We originally installed sled type sprinklers on our greens but we found that the green surface was marred in moving them during sprinkling so we changed to a sprinkler with a roller base which has proven very satisfactory. The outlet at the tees are in the center of the tee and although our tees vary greatly in size, the proper distribution is obtained by adjusting the valve so that the pressure at the sprinkler is just sufficient to throw the water to the far corners of the tee. All of our outlets are of the quick coupling clamp type and are far superior to the old screw connections both in time saved and ease of operation. Our sprinklers are Golf King Number Six.

Our greens and tees are watered every day except when it rains and our fairways are done whenever they start to get dry. We water in the late afternoon and early evening. This is done for several reasons. First, it causes less interference with the play; second, the evaporation is much less when the sun is going down and consequently a greater percentage of the water soaks in and serves the proper purpose. The saving on this score is quite material when watering fairways; lastly, there are some grasses which sunburn when water is applied in the middle of the day due to the magnifying effect of the globules of water on the individual grass blades.

Our system has been in use for two years and has worked out most satisfactorily and we have found it unnecessary to make any changes whatever. We always have plenty of water at the proper pressure, even at the most distant outlets. This is in favorable contrast to our old system where the water would barely trickle out of the sprinklers on some of the far greens.

In conclusion let me repeat, get expert advice on the design of your system and do not be deluded into adopting the plans of some amateur who thinks he knows what is required.

"No Free Tees" Policy Works O. K.

L. H. GERSON, green chairman of the L. Oakwood Golf club (Cleveland district), cites that club's experience with the free tee proposition in a letter to Wm. Lowell, jr., to furnish evidence that sand may be dispensed with at the tees without the club going to the expense of furnishing free tees to the members.

Gerson tells Lowell:

"We decided to eliminate the tee boxes and further decided not to supply the members with tees gratis.

"We are very glad that we did so, as we find that the whole proposition works out very well. The members are purchasing their tees, and we haven't had a single complaint. We have saved the labor of placing the sand and water in the tee boxes together with repairs and painting.

"We are very much pleased with the whole situation."