





- 1. Material excavated from ditch was placed on corrugated iron sheets to keep turf clean.
- 2. Placing a 700-foot line of Armco perforated pipe through the affected area
- 3. Wyes were placed at frequent intervals to provide for placing laterals as needed.

Eliminating a Wet Fairway as a Play Hindrance

By ELTON MARINE Greenkeeper, Verity Park Golf Club, Middletown, Ohio

THE course of the Verity Park Golf club at Middletown, Ohio, is an example of a piece of land, previously useless, made available in itself and to surrounding property by well planned improvements. The course is on a strip of ground once periodically inundated by the Miami river adjoining, but now protected by a levee of the Miami Conservancy district. Thus insured, the property has been built up over a period of ten years until

it is now a garden spot enhanced by an attractive clubhouse and other buildings, and by a turf which represents constant care throughout this period.

However, one problem until recently continued to remain unsolved. That problem was subdrainage. Because of the proximity of the river, ground water rises during wet seasons, and longer time than normal is required after rains for the low spots to pass from the puddle or spongy



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stage to the dry stage suitable to playing.

One end of the course in particular gave trouble. This was due partly to the fact that the fairway is across a flat, low area and partly because it is at the foot of a rise from which comes both surface water and spring seepage.

Strangely enough, the matter of draining this wet area was brought to a head, not because of complaints from members, but because the turf never got quite dry enough to keep it from being rutted by the mower tractor. It seems that while many members were wont to venture over this course when it was still too wet for either its good or their comfort, few thought to report the matter other than by complaints among themselves.

Not until the turf began to get in such a condition that it could not revive between wet spells, and extra expenses for upkeep began to mount up, did the management seriously consider the matter of subdrainage.

Drainage Plan

The scheme finally adopted season of 1926 was install shourand consisting of 8 inch Armco corrugated from pine with perforation in the upper half to collect ground water. A line 700 feet long was laid across the middle of the area to be drained, leading from a catchbasin at its upper end to a city storm sewer manhole at the lower end. Possible future extensions of the drainage system were provided for by a number of intermediate catchbasins and wyes.

The pipe was supplied in 12-foot lengths with wye connections welded on and was provided with hook bolts for making field connections. The sod was neatly cut and rolled up in strips 18 inches wide. The trench was then dug to a depth of approximately two feet, the catchbasins placed, and the pipe laid and connected. Backfilling was made and the trench thoroughly watered, and after settling the trench for a few days, the sod was replaced.

The benefits of this line were immediately apparent, but the need for a parallel line was soon seen. An additional line. 200 feet long and approximately 40 feet away, was laid with a diagonal connection leading to a catchbasin on the main line. (Continued on Page 40)

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settled and ready for sodding over. Corrugated iron sheets were placed over Verity Park is an example of what can be done with reclaimed waste land.

The end catchbasins were provided with circular iron gratings, and all intermediate catchbasins covered with sheets of corrugated metal and overlaid with sod. The casual observer today will never know a drainage line is there, as the turf over the trench has now grown together.

To keep the trench material from working into the turf during the installation of the pipe, corrugated iron sheets were laid along the ditch and all excavated earth piled on them. Because of this precaution, the grass was in perfect condition when the

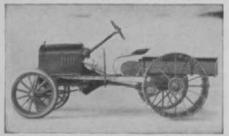
was about 39 cents a lineal foot of drain.

The success of the installation from the standpoint of the golfer was proved conclusively recently when a succession of heavy downpours occurred. An excursion over the course the following morning showed that, while elsewhere pools of water were still standing in depressions and a general condition of sponginess prevailed, the area drained by the corrugated pipe was practically solid underfoot, and after a few hours of sunshine would be ready for either player or tractor to negout damage to the turf.

> ent observations it is apparent ainage investment will pay for

in lessened cost of keeping irway in proper condition. Its success, it may

cavating, placing the pipe and catchbasins, backfilling, sodding over and dressing up,



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be said, is due to observing two general rules which are of value in connection with any drainage improvement. These are: (1) specify a drain which does not have to be dug up at periodic intervals for repairs or to maintain its drainage efficiency; and (2) make provision for extension of the system, should early experience indicate that this is required. By observing these rules, any course can in time make itself noted for being the first in the neighborhood to become playable after rains.

Crab Grass Treatment

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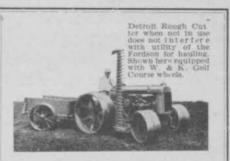
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