

**Correction**—Through an unfortunate error there is published a misleading statement in Dr. Harban's article on "Winter Work on the Golf Course" printed in the preceding issue. In line 12 the author is made to state that the club was "led to the permanent employment of a dozen or more of the most desirable men." The Doctor really wrote "a half dozen," but the copyist omitted the word "half." The greenkeeping at Columbia has been exceedingly efficient, and this was accomplished with a small force of men, not the large one that the error indicated.—Ed.

## Questions and Answers

All questions sent to the Green Committee will be answered as promptly as possible in a letter to the writer. The more interesting of these questions, with concise answers, will appear in this column each month. If your experience leads you to disagree with any answer given in this column, it is your privilege and duty to write to the Green Committee.

1. *How early is it wise to treat putting greens for earthworms? W. S. F.*

Here at Washington earthworms begin to work as soon as the frost is out of the ground. This year they were very active by February 14. It is quite likely that this habit of the worms becoming active even before the grass begins to grow is its normal behavior. Arguing from theory it has seemed that a worm-killer applied while the ground was still very moist would not penetrate well, but it seemed best to test the matter. Accordingly, on March 2 an area 3 by 5 feet was treated with corrosive sublimate in solution of the ordinary strength, one-half ounce to 15 gallons of water, applying three gallons of the solution. The solution soaked into the wet soil readily. Twelve worms appeared in 15 seconds and 20 by the end of one minute. This is about six times as many as is usually secured in our experience. Half of the worms were 2 to 3 inches long, the remainder 5 to 7 inches long.

It would seem, therefore, that worming might be done with great advantage just as soon as the frost is well out of the ground, even if the soil is still very moist. An extensive series of experiments is being carried out and will be reported on soon.

2. *Is a layer of cinders or rubble under a putting green desirable? H. A. L.*

Several clubs have built greens with such a layer, with the idea that it would furnish good drainage and also prevent earthworms from infesting the soil. The latter idea seems to be wholly fallacious as in at least one instance where an 8-inch layer of cinders is only one foot from the surface, the green is just as much troubled by worms as are others without a cinder layer. For drainage, tiles are to be preferred. Cinder layers in time become clogged with soil and fail to function. The clubs that have tried cinder or rubble layers are not enthusiastic about them, at least none have as yet given favorable reports. If any club has gotten as good or better results with cinders as with tile, it should publish its experience in the Bulletin. Theoretically there is a rather serious objection to such artificial layers as they completely destroy the normal structure of a soil as regards capillarity. The free movements of water in a soil both up and down are desirable characteristics of a well-drained soil.