

## The Bordeaux Treatment for Brown-Patch

LYMAN CARRIER.

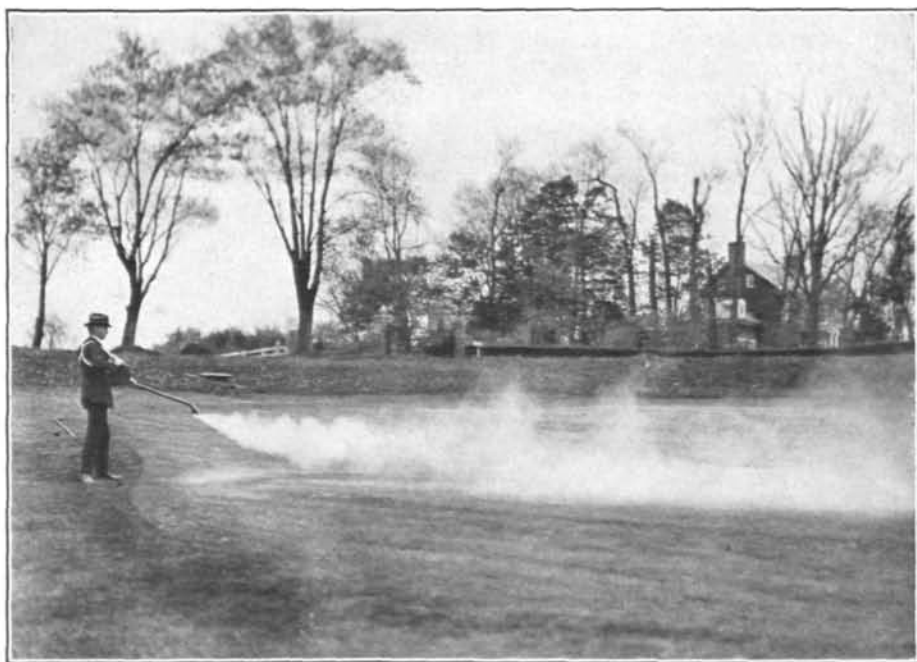
The season of the year has now come when greenkeepers should be on the watch for brown-patch. Many are able to recognize the ailment on sight but some fail to notice the disease until much damage has been done. Then they attribute the brown condition of the greens to sun-scald, drought injury, or various other things that had nothing to do with it.

There are two quite distinct diseases of fine turf which are called brown-patch. The one which has caused the most trouble will be discussed first.

### *Large Brown-Patch.*

**DESCRIPTION.** Large brown-patch is nocturnal in its habits and thrives best during hot, muggy nights. It makes its appearance in circular, smoky-looking spots six to eight inches in diameter. The grass in these spots has at first a cooked appearance as if scalded with hot water. A close examination reveals a fine cobwebby growth on the outer margins of the spots. Given a few hours of hot sunshine, the spots turn brown, hence the name "brown-patch." If no remedy is applied and the weather is favorable, some of these spots may spread in the course of a few nights over an entire green.

**TREATMENT.** This form of brown-patch responds very readily to the Bordeaux treatment. Bordeaux mixture is a standard, well-known fungicide which has been used for years by gardeners and orchardists. It is



Applying Bordeaux powder with a dust-gun. If a gentle breeze is blowing the whole green can be dusted from one side. The brown-patch spots should be given an extra shot from the gun.

often applied in liquid form as a spray, but it can be obtained on the market as a dry powder. It is made of blue-stone (copper sulfate) and lime properly proportioned, and is sometimes called copper-lime dust.

There are several ways of applying the dry Bordeaux powder. For ease in applying the powder and in moving from one green to another, the writer prefers the knapsack dust-gun, shown in the accompanying illustration. The dusting is best done when the grass is moist with dew or after watering. All that is desired is to get a protective covering of the powder on the grass leaves. For that reason it should not be applied just before watering; and if a rain washes the powder off the grass the greens should be dusted again.

**CAUTION.** We have caused very serious injury to some of the turf at the Arlington Experimental Farm from excessive use of Bordeaux. Reasonable applications have been just as effective in controlling the disease as the heavy doses, and no ill results have appeared. On other soils we have known Bordeaux to have been used in very heavy applications without showing any injury. To be on the safe side (for copper poisoning is worse than brown-patch) we advise waiting until the brown-patch appears before applying the Bordeaux. Then apply no more than is necessary to give a light coating to the grass leaves. From 1 to 2 pounds of the powder is enough for an average-sized green for each application. The frequency of application should depend on whether the disease appears to be definitely checked or not.

#### *Little Brown-Patch.*

There has appeared on a number of golf courses a disease which is apparently caused by a different organism than the large brown-patch fungus. Small brown spots not much larger than a silver dollar appear in the turf and make the greens unsightly. It has been our observation that these spots do not enlarge or spread after their first appearance, but there may be hundreds of them on a single green. The evidence indicates that this little brown-patch is not controlled by the Bordeaux treatment. Unfortunately we have not had a very bad infection of this variety of brown-patch at the Experimental Farm and so have been handicapped in our efforts to find a remedy.

For a more complete discussion of brown-patch the reader is referred to previous issues of THE BULLETIN, especially to Volume I, page 112, and Volume II, pages 109, 185, and 206.

---

**Ants.**—We are making a special study of ants with the aid of the best ant specialists in America. We want specimens, from every part of the country, of the ants that live in grass turf, especially in putting greens. Send us a dozen or more specimens of each kind. Put them in a small vial of alcohol or 5 per cent formalin solution. A label should also be put inside the bottle in the solution with the ants, indicating the place and date of collection; the writing on the label should be in lead pencil. In mailing the vial, pack it carefully so that it will not be broken. Also write us a letter telling us what kind of damage each ant you send us does. We should have a lot of interesting ant information to give you in return. Please give heed to this.—[EDITORS.]