just below the opening, and that the person standing there is using a towel, also attached to the box. The man is in such a position that he does not interfere if you want sand, and he is in a correct position to avoid interfering with you when you are driving. Note that whilst the box has a lid, players do not need to open it. Note that the box has tripod legs and is easily moved so as always to be kept in correct relation to the white ball used as a tee-marker. Note the figure showing the length of the hole, painted on the box in such a position as to be seen when you stand on the tee or approach the box. Note the convenient height of openings, brush, and towel.

From the illustration on page 247 it will be seen that the tee-box has no lines which the player might consider parallel to the line of play. If the box were somewhat twisted out of position there would still be no lines to confuse the player.

On pages 248 and 249 are drawings containing detailed plans for the construction of such a tee-box.

Color

Most boxes are painted white. There is no necessity for this, and it has the disadvantage of making ugly things more obvious. It shows up more plainly the scratches, pencil writings, and carvings of caddies. To my mind, tee-boxes should be painted a color which suits their surroundings, and for the average course an olive-green is perhaps most suitable; it looks well whether the paint is fresh or faded.

A Labor-Saving Device for Screening Top-Dressings

E. J. MARSHALL

It seems to be the consensus of opinion of the best qualified green-keepers that nothing is so beneficial to greens os frequent top-dressings. Everyone top-dresses spring and fall and many top-dress once a month or more frequently during the season, the amount and kind of material to be used depending upon conditions. In no other way can greens be kept true. Rolling will never do it any more than rolling can compress Pikes Peak to the level of the Great Plains. It has been proved that frequent top-dressings are beneficial in the restraint of brown-patch and that a heavy weeding should always be followed by a dressing. It is desirable also to top-dress tees and approaches and the spots on fairways where the wear and tear is heaviest.

To prepare and screen material for all this work is next to an impossibility and is entirely too expensive to be practical if it must be done by the old-fashioned method of working the material through screens by hand. There are on the market a number of small motor-operated riddles commonly used in foundries by means of which the screening can be done quickly and at a minimum cost. The illustration shows a gyratory type which is operated by a half-horsepower

motor connected to an ordinary lamp socket. The screens are interchangeable, so that any degree of fineness can be obtained, and the apparatus is so built that the coarse and refuse material is automatically separated from the fine stuff. Such a machine costs about $200, and will enable one man to do the work of five. A yard or so of material can be prepared in less time than it takes to talk about it; and with reasonable forethought, top-dressing material can be prepared on rainy days and a supply can be kept available in good condition for use at any time. Such a machine should save its cost in a year if the proper amount of top-dressing is done.[1]

Damage at Pine Valley From Grubs of the Southern Green June-Beetle

ALAN D. WILSON

In August, 1920, we began to notice small mounds of earth scattered over the greens and fairways. We knew these were caused by a grub, as we had had them in small quantities in previous years, but never until 1920 had they come in serious numbers. Then, however, we began to find them very generally throughout the course, and at once took steps to ascertain what they were and how they could be destroyed. The Department of Agriculture identified them as the grub of the southern green June-beetle. This species has only a one-year life-cycle. The beetles appear late in June or early in July, lay their eggs, which a few weeks later turn into grubs, which become active and begin to do damage in mid-August. This continues until cold weather, when they cease operations until early spring, and then again do some damage, but not to the same extent as in the fall. In June the grubs go into the pupal stage, to emerge as beetles late that month, or early in July, and so complete the cycle.

These grubs, which are nearly as big as one's little finger, and which make mounds of earth at the entrance of their burrows, must not be confused with the small white grub barely an inch long of the May-beetle, or June-bug, which has done so much damage at Merion and other golf courses in this vicinity this year.

The Department of Agriculture in their circular letter E-84 recommends a 7½ per cent kerosene emulsion as an effective cure. This we tried, with little or no success, due probably to the fact that our soil is so light and sandy that the grubs burrow easily and are apt to go down too far for the emulsion to reach them; we have found them six feet below the surface.

The use of carbon bisulphide squirted into the burrows with a long-nozzled oil-can was also recommended. This we tried, but not with much success until, after the injection of the bisulphide, we plugged each hole with clay to prevent the fumes from escaping.

We further tried picking the grubs by hand when they came to the surface morning or evening or after heavy rains; and also killing them by sticking a sharp iron implement down the burrow; but this latter was not very effective, as the burrows were not always straight. All in all, we succeeded in protecting our greens fairly well during 1920 by the use

[1] Information as to the types and cost of gyratory and other riddles can be obtained from any foundry supply house.