Individual plants under favorable conditions are usually about 4 inches in diameter, making a very dense turf. Often they are much larger, and not rarely die in the center. Sometimes an old putting green will become 75 to 100 per cent pearlwort. This condition has been observed near Southampton, Long Island; Portland, Oregon; San Francisco, California; and at Paris, France. Such turf is exceedingly "slow" in the golfer's sense and commonly bumpy.

A pearlwort plant 4 inches in diameter will produce each season from 300 to 500 flowers, each on a short stalk. Every ripe pod contains on an average 60 seeds, or from 20,000 to 30,000 seeds to a plant. These are carried about on the shoes of the players, so that it does not take long for a green to become thoroughly seeded with pearlwort.

The idea seems to prevail that pearlwort is introduced in fine grass seeds. There is no positive evidence for this notion, as pearlwort seed has never been detected in grass seed. Indeed it is difficult to conceive how it could get in grass seeds, as the plants are barely an inch high. The fact however that the plant is more frequent on putting greens than elsewhere justifies the suspicion that it comes in grass seed.

From the available facts the following conclusions seem justified: (1) that pearlwort is native and abundant from Newfoundland south to Long Island, and perhaps farther south especially near the seacoast; (2) that it is sparingly native from Alaska to California; (3) that in general it is an introduced plant in lawns and putting greens, but it is not clear how the seed gets to such places.

Pearlwort should be cut out and destroyed as soon as found. By this means it is easily kept in check. Once it has gained headway by permitting it to make seed it is very difficult to control. When a green has become badly infested with it, it can best be eliminated by lifting all the sod off the green and reseeding or replanting. The sod removed should be put in a compost bed or heap and the material not used for at least two years. The seeds apparently live that long.

Hand-Operated Compost Mixer

The accompanying cut and description of a hand-operated compost mixer, of their own design, is furnished by the Highland Country Club, Fort Thomas, Kentucky, who write as follows:

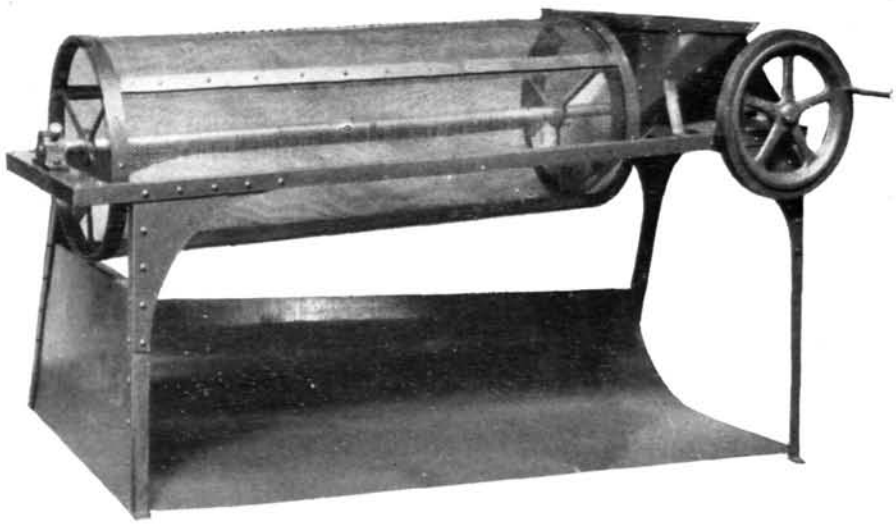
"We placed this rotary compost mixer in operation in the early spring, 1924, for the purpose of properly screening materials for topdressing our greens. We have not only effected a very great saving in labor through its use but are also in position to topdress our greens with screened material far superior to that obtained through the old process of hand screening.

"We built six new greens last year. In the process of construction the mixer was placed adjacent to the greens and easily supplied sufficient topdressing to keep six men busy during the planting of creeping bent stolons.

"The capacity of the mixer, when hand-operated, is 15 cubic yards per day. Two men are required to operate it, one spending his time shoveling the materials into the hopper and the other operating the handwheel. An attractive feature is the fact that the design is such as to eliminate all complicated mechanical parts, with the result that there are no adjustments to make. The main shaft is mounted on roller bearings,

thus making it an easy matter for one man to operate continually without tiring. If desired, the apparatus can be equipped with a tight and loose pulley for mechanical operation.

"The machine consists of a heavy rolled steel frame securely cross-braced and riveted. The cylinder is 26 inches in diameter by 6 feet long, and is of ¼-inch mesh No. 16 galvanized wire screen reinforced both



Hand operated compost mixer.

inside and outside with flat steel bars. The screen is mounted on spiders, which in turn are set-screwed to a cold-rolled steel shaft 1⅛ inches in diameter. The terminal bearings of this shaft are mounted in cast steel blocks and operate on roller bearings. The main shaft is driven through a gear and pinion from a countershaft, upon which is mounted a heavy cast steel fly-wheel of sufficient weight to insure a constant motion as the mixer is put in operation. The receiving hopper is 24 inches square, constructed of No. 16 galvanized blue annealed steel. The cylindrical screen is so arranged that it may be easily replaced. The entire apparatus is built most substantially and the completed weight is 750 pounds."

Converting Red Fescue Fairways Into Bent or Bluegrass Fairways

It is usually the case that fairways which have been sown to red fescue alone produce a cuppy or patchy turf. This is due to the fact that red fescue is under most conditions a bunchy grass, and bare spaces develop between the bunches. Little can be hoped for in the way of improving the turf on such fairways by sowing additional fescue seed, but the turf can readily be converted into bent or bluegrass turf by sowing seed on top of the fescue turf. Whether bent or bluegrass is used for this purpose will depend on how well the grass thrives under fairway conditions in the particular section of the country. In Canada, the New England States, and the Pacific Northwest, bent, as a general rule, will be found to be the best grass for the purpose. Elsewhere in the northern