

CHAPTER XIII

TURF MACHINERY

THERE is now a wide variety of machinery designed largely, if not wholly, for the care of greensward. These machines include mowers, rollers, sprinklers, and the like, each of many types. There exists, as is natural, much difference of opinion as to which particular machine of each kind is most satisfactory. It is proposed here to discuss the subject only in a general way, and not to enter into the merits or defects of especial makes of machines.

SEEDERS

It is often desirable to thicken or to better the stand of grass on putting-greens or fairways without interfering with play on the existing turf. If the seed be broadcast on the surface, it may be raked gently to bury it slightly, or a thin layer of good loam scattered upon the seed, to insure germination. In either case this interferes with play, especially upon the putting-greens.

In the illustration is shown a "cut-in seeder" (Plate VIII) especially designed for use on turf. With this the seed is dropped in the narrow furrows cut by the disks, so that the seed is well placed for germination. The disks do not injure the turf noticeably, especially if after their use the green is rolled with a light roller. Much better results are ordinarily secured with this machine than by other methods.

SPIKED ROLLER

The illustration (Fig. 29) depicts a very useful implement for treating turf previous to top-dressing or even to seeding. The spikes make numerous small depressions into which most of the applied material finds its way, especially if the turf be raked afterwards with the back of a rake, or swept. This implement is not well known, but there are many places on a golf course where it can be used advantageously.

SPRINKLERS

Numerous types of water sprinklers are in use. For the watering of putting-greens it does not appear that any one of them has a decided advantage over the others. Perhaps the one point in which a sprinkler may really excel is the area of ground that

it will water from a given place, and thus save labor in moving it about. On the other hand, with a fixed supply of water the amount sprinkled to each unit of area in a given time will decrease as the area covered increases.

It is generally believed that watering is most effective when large amounts of water are applied at rather long intervals, which is precisely what any sprinkler does not accomplish. There is no satisfactory evidence to show, however, that flooding a green with a solid stream has any particular advantage over sprinkling. Indeed, where the soil is more compact than is desirable, or where the green slopes much, slow sprinkling is preferable, as the water penetrates the soil more rapidly under such conditions after the surface soil has become well wetted. On sandy soils which absorb water quickly, flooding is perhaps preferable to any system of sprinkling.

On the whole, the question of method or machines used in watering does not appear to be of any particular importance. The really essential point is to water heavily at rather long intervals — the length of interval depending on the character of the soil, the amount of surface drainage, and the weather.

A preliminary light sprinkling to moisten the surface soil is usually desirable before watering heavily.

ROLLERS

Rollers for use on a golf course differ mainly in their respective sizes and weights. There are on the market, however, rollers which may be increased or decreased in weight as required. An excellent type of such a roller is constructed to contain water, the weight being controlled by the amount of water used.

Generally speaking, heavy rolling on clayey soils is injurious, except when used at considerable intervals; while on sandy soils it is never injurious and usually desirable. On clayey soils one heavy rolling early in the spring is to be recommended, while one or two more during the season when it may seem desirable will occasion no harm.

On putting-greens with soil of the proper texture, rolling should be just sufficient to secure a compact smooth surface. Heavier rolling than this is never desirable, although it may not cause any particular damage.

MOWERS

Mowing machines are most essential implements on every golf course. For use on fairways either

horse-drawn or gasoline motor machines are now used exclusively. Some of these machines are combined rollers and mowers. On level or gently undulating courses, the motor machines are most efficient. The only serious objection to them is their weight, which on clayey soils results in too great compacting of the surface soil, but this objection does not apply when used on courses with sandy loam soils.

When the soil on the fairways is clayey, horse-drawn machines are favored, because they are not so heavy as to cause undue compaction of the soil. The use of horses may involve some unevenness of the turf due to the footprints of the animals, but this can be largely obviated by mowing only when the soil is firm, or by using special shoes on the horses. Some of the horse-drawn mowers will cut at each passage a strip of turf seven feet wide, so that they are nearly as efficient as the more rapid-moving motor machines.

On putting-greens only small, light mowers should be used. Most of these are operated by man power, but there are available hand machines propelled by a motor, thus reducing the labor necessary to operate. A thoroughly satisfactory mower to cut the turf on putting-greens should be rather light, propel

easily, cut the grass close and evenly according to adjustment, and catch all the clippings. All of these requirements are fairly well met by machines now manufactured.

CARE OF MACHINERY

The efficiency of any machine depends on keeping it in as nearly perfect condition as is practicable. Many golf clubs find it profitable to have all of the machinery kept in order by the man best suited for the purpose, and forbid any other employee from adjusting a machine in any way. By this means the different machines used are kept as uniform as possible. In the case of mowers this is especially desirable, as otherwise the various machines operated would leave the turf in very different conditions of play.