fected are more than gratifying to the committee.

Commercial and chemical fertilizers are discussed. The changes in the formula as the season advances are subjects in which the men are interested and are technical and broad enough in scope for a series of lectures. Thus it can be seen that there are no end of subjects available interesting to the green-committee as well as the men.

Men's Ambitions Aroused

During the time when maintenance becomes a matter of routine, the theory of golf course design is taken under discussion. This subject changes the entire outlook of the worker, for it analyzes to him what golf is all about. He feels that the school is equipping him to some day become a greenkeeper.

Our motive was at first entirely selfish, for the committee desired greater efficiency and thereby a lower maintenance cost, wholly for the benefit of the club. This it has done to a remarkable degree in the face of these most trying times. But the men regard the school as a privilege and cooperate with the greatest enthusiasm.

In closing, I might point out that our efforts have also served to coordinate the committee as a whole. The club membership further realizes that it would not be wise to change the green-committee after each annual election and the committee has therefore been held intact from year to year. As long as it produces results it will be allowed to continue. This permanent arrangement saves the greenkeeper a multitude of difficulty. Differences exist within the committee from time to time, but they are ironed out by a majority vote; it would be impossible not to have diversified opinions between strong-minded and self-willed individuals. But they each stand on the firm foundation of desiring only the best for the club, and because of this each man's opinion is carefully weighed on its merits. The majority rules and the vote having been cast agreement prevails.

WATER vs. MOWING

Will Fairway Watering Hike Upkeep Cost of Mowing Machinery?

> By E. R. SAWTELLE Worthington Mower Co.

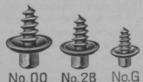
RRIGATION, by any of the accepted systems of watering fairways now being so widely introduced, will enable a club to maintain a far more uniform and desirable growth of turf than has ever been possible when depending solely upon natural rainfall. Many of these irrigation systems have proven eminently satisfactory. They arrest the very serious effects of summer droughts upon fairways and bring about an improved condition that cannot fail to be of immense benefit to the general interests of golf.

A few questions have naturally arisen regarding the effect of artificial watering upon the maintenance account, particularly with respect to mowing machinery. It has been asked, for instance, if it will not take more time and wear out tractors and mowers faster if a heavy growth of grass is to be cut during the whole season than if this grass were thinned and dried out as it always has been by our annual summer drought.

The answer to this is that while the machines may have to cut more grass than before, conditions surrounding mowing operations are more favorable.

The number of hours mowing machinery is in use is not the only factor that enters into the subject of its durability. There are many others, among them the kind of soil over which it travels and the state of the ground surface at the time the cutting is being done. If the soil is more or less sandy or its surface particularly dry, there will always be grit or dust thrown up by the passing of the machine. This gets into the knives and threatens to a certain

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extent other exposed or running parts. The amount of this flying sand and grit is greatly diminished, of course, if the ground is moist. In fact it has been found that watering fairways allows sand and other abrasive substances to remain undisturbed during the cutting operation.

As this watering continues throughout the dry periods, which have always been so hard upon the mowers, less wear will undoubtedly result and less depreciation.

Nor will the time which the machine takes to cut the grass on a watered course be any longer necessarily than on a dry one, because certain weeds continue to grow on fairways during droughts. These stand out conspicuously and seem to flourish no matter how burned and dry the grass may be. They are unsightly and often interfere with the lie of the ball. To keep these weeds down a mower must travel over the course nearly as often as during the season of frequent rains.

In discussing this subject of irrigation. the well known effect of water upon the surface soil in conjunction with mowing machinery should not be overlooked. Wet soil of course packs down under the weight of the mowing apparatus and becomes baked under the influence of the hot sun. This packing effect which prevents the necessary aeration of the roots, has been found by many investigators to prevent to a greater or less degree the proper and natural growth of grass. As the surface will be in a saturated state much more frequently through this watering process, it is not at all unlikely that experience will show that the equipment of watered courses may have to include some form of machine to combat this baking effect. Some one of the many forms of spikers may have to be called upon. They are being strongly recommended for the greens by prominent investigators, so if artificial watering is adopted, why should they not be as desirable for the fairways? From a machinery standpoint this may be easily accomplished and the time required for spiking an entire course will add but little to the work of maintenance force.

MANY WEEDS, common in the rough produce very light seeds easily blown about by the wind. To keep these seeds from lodging on the fairways and greens, smart greenkeepers order the rough mowed at frequent intervals, thus preventing maturity of the seeds.