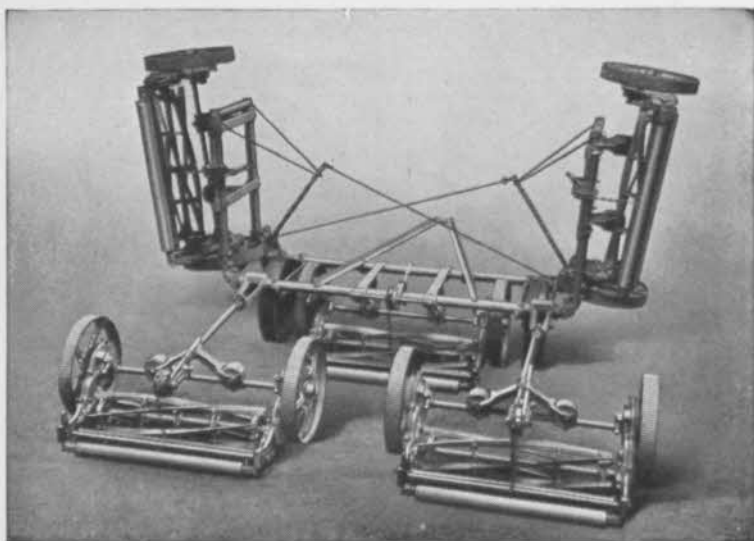


# Still More *Cutting Hours*



The simplified design of the PENNSYLVANIA "New" Fairway Mower lessens the time required for adjustments, as well as the need for minor repairs, and thus insures a maximum number of *cutting hours* from this lighter, faster Quint or Trio. Furthermore, both the adjustments and any minor repairs may be made by the average tractor operator.

The "New" Fairway gives the same efficient, flexible operation as our Super Fairway. For instance, as shown in the illustration, it has the

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# CALOGREEN or CALO-CLOR

(Special Finely Powdered Calomel)

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### The U. S. Dept. of Agriculture Recommends

these mercury salts. Their latest experiments prove conclusively that calomel (Calogreen), and calomel-corrosive sublimate mixture (Calo-Clor) give longer protection and better control.

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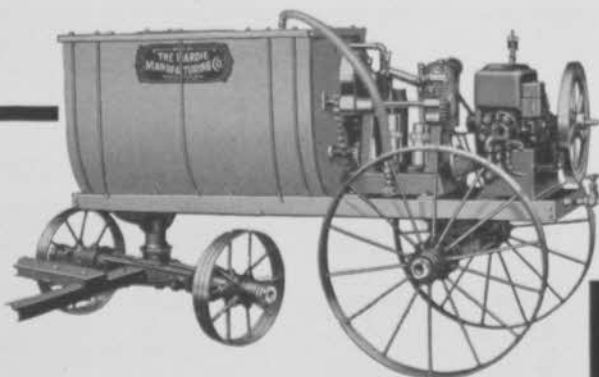
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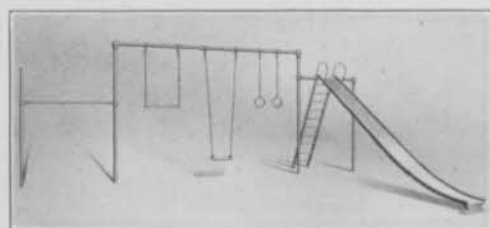


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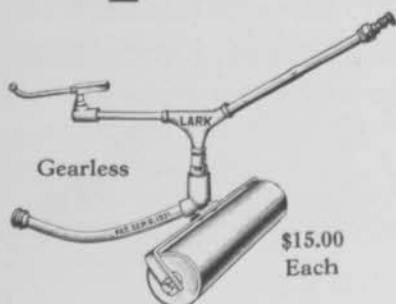
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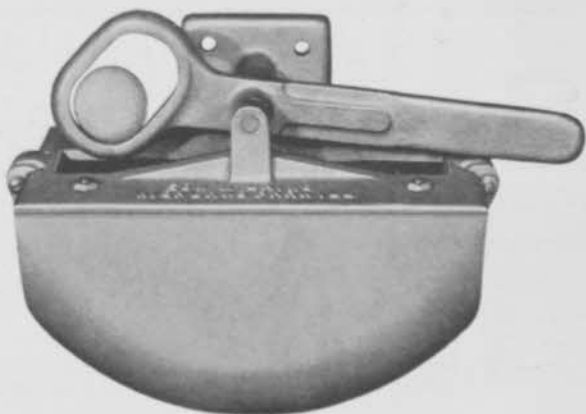
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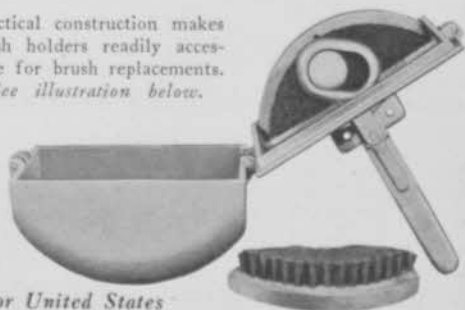
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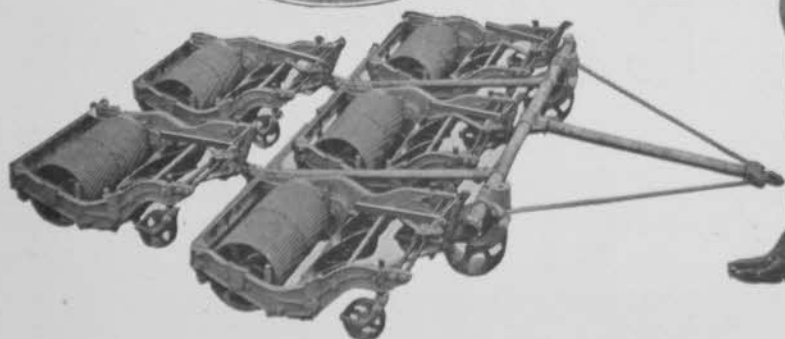


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Gang Rollers are sold by side wheel mower manufacturers, because constant rolling is now recognized as essential to the development of good fairways just as it always has been to Putting Greens.

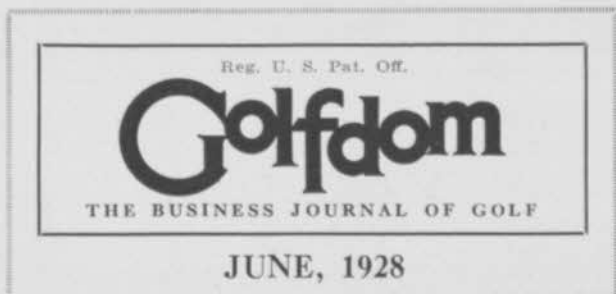
Roseman Hollow Roller Mowers roll as they mow—cost less than a gang of mowers plus a gang of rollers—cut operating cost in half—and last twice as long as any other kind.

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# Away With Worms

## Control Measures to Keep Greens Right for Putting

By B. R. LEACH

ON occasions when earthworms are unusually numerous on a particular golf course or in an extensive section of the country, as was the case last year in the middle West, there is considerable conjecture among greenkeepers as to the reason for their undue numbers. In many cases the preponderance of the pest is laid to conditions which have absolutely no bearing on the question. It is quite generally believed among a certain proportion of the greenkeepers that organic fertilizers, such as cottonseed meal, tankage, etc., encourage the presence of earthworms and should be avoided for that reason. As explained in last month's GOLF-DOM, the earthworm feeds on partly decayed vegetable matter, such as dried blades of grass, etc., hence the presence of organic fertilizers would not directly stimulate the earthworm population. Such fertilizers, or for that matter, any chemical applied to turf, influences the earthworm population only as it

improves the texture of the soil and renders it more friable and suitable for the earthworms' development.

Under normal conditions earthworms do not breed well, or increase greatly in numbers during seasons of excessive rainfall, this being especially the case in heavy or poorly drained soils since this pest heartily dislikes excess water in the soil. Conversely it does not breed well or increase in numbers during dry seasons when the soil is dry and hard. At these times earthworms usually are down in the soil at a depth where the soil is moist. Under the circumstances a season of sufficient rainfall to maintain the soil in good friable shape will, other things being equal, result in an abundance of earthworms in the fairways and approaches, with the consequent invasion of the greens from the surrounding turf.

The earthworm population usually increases rapidly on any piece of ground after it has been properly drained. On the other



Proportioning machine in operation using bichloride for control of earthworms

hand, greens built on very sandy soil soon begin to support a fair earthworm population as soon as the greens are top-dressed with a mixture of soil and organic matter, especially if the soil used in the topdressing is heavier than the native sand. In both these cases the increase in worm population is due to the making of the soil more conducive to their well being; in the first instance by removing the excess soil water and in the second instance by making the soil more capable of retaining sufficient soil moisture so that it does not dry out rapidly.

As stated in last month's article the better the soil of your green is for the growth of turf the greater will be the earthworm population. Under the circumstances artificial control measures are necessary to hold them in check on the choicer portions of the course, such as the greens and approaches.

### Extend Treatment

Before considering control measures it might be well to point out one fact which should always be borne in mind in connection with earthworm control and that is the fact that no matter how often you treat a green for earthworms they will nevertheless be constantly creeping into the green from the surrounding turf just outside the green proper. Consequently when you confine your earthworm treatments to the green *only* it is very improbable that your green will ever be entirely free from worm casts.

The system of stopping dead at the edge of the green when applying chemicals for earthworms is mighty poor business and false economy. Extend the application of the chemical for at least ten feet out beyond the edge of the green 15 or 20 feet is even better.

Another ill-advised attitude of many greenkeepers is their snap judgment on a worm killer or a job of worm killing based entirely on how many worms come up to the soil surface and turn up their toes within a short time after the chemical is applied. If you will just retire to a quiet, secluded corner for three minutes and do a little thinking you will realize that this method of judging a worm killer is abject bunk. When I am doing a job of worm eradication I don't give a damn if I never see a worm come up and croak. What I am interested in knowing is how many worm casts there will be on that green the second morning after I have ap-

plied the chemical. Dead men make no noise and believe me dead worms make no casts, and the *absence* of worm casts is the surest indication that the treatment has been successful.

Another point to bear in mind if success is to be obtained with the use of such worm eradicators as bichloride of mercury or mowrah meal; as stated previously the earthworm loathes dry soil and goes down to moist cool soil when the top soil is dry and baked. Consequently it is poor practice to treat soil in this condition for the control of worms because the liquid has to penetrate the soil to too great a depth before it reaches the worms. Keep the soil of a green in a moist but not wet condition for a week before the application of the chemical and the worms will be right up under the surface so that the chemical can flood the earthworm burrows and give you a first-class control. Failure to observe this important point is the cause of many failures in earthworm control. The chemical will do the work if you give it half a chance. Furthermore, grass which has been dry for several days is in a weakened condition and severe burning often results from treatment with bichloride under these conditions.

### Control Measures

*Mowrah Meal:* This is a first-class earthworm killer, its principal value resting in the fact that it is pretty nearly foolproof and can be applied with very little fear of burning the turf. It is, however, a very expensive method of worm control inasmuch as the meal sells around ten cents a pound and 35 to 40 pounds are necessary for a thousand square feet of turf. It is scattered dry over the green and then watered thoroughly.

*Bichloride of Mercury:* As a worm killer this chemical is damned by some and praised by many. It is a first-class material if you use a little horse sense along with it. There are two methods of applying it to turf; first, in solution by means of sprinkling cans, barrel sprinklers, etc., and second, dry mixed with sand. In the latter case the mixture of bichloride and sand is scattered over the green and watered in with a hose. Either method is good provided you know your stuff. In using the dry method ten ounces of the bichloride is mixed with a sufficient bulk of sand to insure easy spreading and applied to a thousand square feet of turf. After treating the green, water the green