

Showing the Toro tractor and five-unit hitch travelling from one fairway to another. Special hoist raises all cutters off the ground and elevates end sections for easy transportation. Manufactured by Toro Mfg. Co., Minneapolis, Minn.

ery. For seventy years they have specialized in seed for fine turf, as well as alfalfa and other grain crops. Their exhibit showed samples of various golf course grass seeds, and an interesting germination test similar to that used by agricultural experts. "Clean and reclean" is the Dickinson motto.

THE Rustic Hickory Furniture Co. of LaPorte, Indiana, furnished their booth with a most attractive line of hickory chairs, tables and settees. This was one of the most interesting exhibits at the show, and some of these "close to Nature" pieces would lend atmosphere to any club house veranda.

#### Flossmoor Nurseries

FLOSSMOOR NURSERIES term their bent the "Magic Carpet," and one of the features of their service to greenkeepers is furnishing sod ready to lay, at short notice. This sod is kept in close cut condition, and will make an established putting green in from two to three weeks. If a few weeks before a big tournament is scheduled the turf on a green goes bad, it is a comforting thing to know that with some quick work a satisfactory surface may be had from a few strips cut out of the "Magic Carpet."

### J. Oliver Johnson Co.

FOUR troubadours in black tams and orange blouses burst into song directly behind us, and we welcomed the diversion and another chance to rest on the big bench just inside the J. Oliver Johnson Company booth. "I've been looking for you for a week," affably exclaimed Mr. Johnson.

"Well, here we are, and what have you?" Looking down the length of the seventeen-booth space occupied by this company, there seemed to be nothing lacking with which to maintain the average golf course any-



California Concrete End Bench, distributed and shown by J. Oliver Johnson Co., Chicago

where. Among the items of chief interest were a 50gallon barrel spray cart, a distributor for dry commercial fertilizers, the well-known Thompson grass seeder, the Bendelow putting green cultivator, the Flex-Met top dressing drag, the Early Bird worm cast rake, the George Low sand trap rake, and the tee bench mentioned in a previous paragraph. Down at the far end of the booth space stood the entire Toro line of equipmen, for which the J. Oliver Johnson Co. is a distributor. Fertilizers, insecticides, golf flags, a tee stand and other small equipment filled all available floor room.

### Toro Mfg. Co.

T took the better part of an hour to go over the exhibit of the Toro Manufacturing Co., of Minneapolis. Two new items introduced this year are a hand tee mower and the new Junior tractor equipped with triple fairway units. "We have a tee mower that makes an even cut and runs so easily that a boy can do a man's work with it," said Mr. J. S. Clapper, president of the company. In line with the better known and heavier Toro, the Toro Junior tractor with its triple fairway mowers is finding favor with many courses. It is of the worm drive type, with special reduction gear. The Toro Park Special, with its sickle attachment, was also shown, together with their compost machine, top dressing spreader and the Toro putting green mower. All in all it was a well arranged and impressive display.

### Pennsylvania Lawn Mower Works

THE Pennsylvania Super Roller Putting Green mower came in for a good share of attention, and with it old favorites, the Great American, Pennsylvania Junior and Aristocrat. N. D. Perine, the Pennsylvania representative, brought to our particular attention the fact that in the 30 inch fairway cutting unit all moving

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### Some of the Greenkeepers Who Attend



AN ORIGINAL OF THIS PHOTOGRAPH MAY BE OBTAINED BY SENDING \$1.50

### ED FIRST ANNUAL CONVENTION IN CHICAGO



TO THE OFFICE OF THE ASSOCIATION, 407 CAXTON BUILDING, CLEVELAND

May, 1927

### Ideal Power Lawn Mower Co.

parts, even the ground rollers, operate on roller bearings. This reduces friction, so that the entire gang of mowers operates with minimum power.

#### The Bent Grass Co.

JOHN INGLE, of the Bent Grass Company, Hoopeston, Illinois, was in the process of getting a signature on an order, and we picked up from his table a nicely printed tribute to Grass. In the midst of the hurry and confusion we stopped to read. "Bursting anew into life from your Winter's semblance of death, you remind us of our own immortality, clothing once more with faith in our timid hearts, the promise of the great Giver of gifts." It cannot be said that the growing of bent, and the marketing thereof, is a cold business proposition, when it is done by a man who expresses the beauty of grass in such words.

### Roseman Tractor Mower Co.

"THE feature of the Roseman fairway unit," explained a salesman at the Roseman Tractor Mower Co. booth, "is that the motive power is transmitted by light hollow rollers, and these mowers are becoming daily more popular. There is very little need for rolling the average fairway when Roseman roller mow-



The Roseman tractor, showing dump body. Manufactured by Roseman Tractor Mower Co., Evanston, Ill.

ers are in regular use. Although the Roseman Co. manufactures several kinds of golf course equipment, the rough mower is one of the most important items. This mower will handle eight-inch grass, and as you know is built on the gang principle, a hitch of three units on a sturdy frame. It cuts a path seven feet wide and makes short work of mowing the rough."

These are heavy duty mowers, will cut the rough as short as 11/2 inches, and may be adjusted to cut at different lengths.

### Detroit Harvester Co.

A NOTHER type of rough cutter was shown by the Detroit Harvester Co., which operates on the same principle as the horse-drawn cutter bar. Attached to the pulley gear of the Fordson tractor, the cutter runs at motor speed instead of wheel speed, so we were informed by the Detroit representative. The Detroit rough cutter was shown attached to a Fordson tractor, which was equipped with wide tire golf course wheels manufactured by Whitehead & Kales Co., Detroit, Michigan.

M. EGLOFF, Chicago representative of the Ideal J. Power Lawn Mower Company, was checking off on his fingers the number of orders he had taken during the show, and we came upon him just as he ran out of fingers. We offered him a pencil and pad and patiently waited until he had done considerable figuring, then we timidly interrupted him to ask about a promising looking rake standing nearby. "What! You ask for rakes, and pay no attention to these mowers?" he somewhat indignantly asked.

We changed the subject at once, reserving the privilege of coming back to the rakes later. "Do your mowers stand up well?" we interjected quickly. "We call 'em Bull Dogs, and you know how long a good bull dog hangs on." We promised to read all about them in the catalogue, and once more asked for the rake. This proved to be designed similar to the well-known bamboo rake, with spreading teeth, but made of narrow flat strips of spring steel. "Ideal for raking up runners on bent greens," said Mr. Egloff, and it looked the part.

### Buckner Mfg. Co.

OMING back to sprinkling systems, the day is not far distant when fairways will receive the attention they should have in protection from summer drouth. Sowing seed from year to year to re-establish fairway turf burned out the previous year is a heavy expense to many clubs. Fairway watering systems are the order of the day, and your course may be next. The



These heads installed with an under-ground pipe system eliminate labor in watering large areas. Manu-factured by Buckner Mfg. Co., Fresno, Cal.

under-ground system offered by the Buckner Manufacturing Co. of Fresno, California, was shown by J. Oliver Johnson Co., and attracted much attention.

### Royal Metal Mfg. Co.

"CTEEL and rivets, no wood or glue, If you buy me, then I'll hold you," chanted a small folding chair standing at the side of the



### F. & N. Lawn Mower Co.

DID you know that we are the largest manufacturers of lawn mowers in the world?" asked Mr. Allen of the F. & N. Lawn Mower Company of Richmond, Indiana. "And that our mowers are shipped to every foreign country where they mow grass?" We visited him for information, and therefore started by asking, "Do you ship more every year than you did the previous year?" His reply seemed to close all arguments when he said, "More and more from year to year." This left us somewhat breathless, although we stayed long enough to have the patented self-adjusting bearings in the cutting reels explained to us. Our attention was called to the fact that the F. & N. fairway mowers were the only ones at the Golf Show shown complete with frame in a five-unit hitch.

### Fate-Root-Heath Co.

GRINDING all the different sizes of mowers used on a golf course demands a good deal of the grinder, but the Peerless, manufactured by Fate-Root-Heath Company, Plymouth, Ohio, in the hands of the average mechanic, will keep all mowers in perfect shape to make a clean cut. Mr. J. A. Root expressed himself as entirely satisfied with the attention which had been given the demonstration of the Peerless at the Show. "and we are receiving a number of orders since the National Association of Greenkeepers organized," he added. "It is a wonder they didn't get together before, but they are certainly making a good job of it now."

### O. M. Scott & Sons Co.

ROW of grass seeds in white boxes set before a A home-like model cottage caught our eye, and there we encountered Mr. C. B. Mills of the O. M. Scott & Sons Company, of Marysville, Ohio. "Where have you been this week?" he asked, ignoring our exhausted condition completely. "It is necessary to explain?" we asked calmly but with underlying menace. "What are you showing?" "Grass seed," said he. And so he was.

### Consider The Tee

DERHAPS in no other place on the course is creeping bent sod so much appreciated by golfer and greenkeeper alike as on the tees. Many an otherwise fine course is marred by the ragged, cut-up condition of this important area, and creeping bent, with its quickgrowing, close-knitting characteristics, is an ideal grass for the tee.

The greenkeeper who keeps a turf nursery, a part of which is mown daily as are the greens, is in a position to make perfect at short notice any tee on his course which has been badly cut up from play.

In cutting bent sod to repair or returf any area, the

thinner it can be cut and handled without breaking, the more quickly it will establish itself in its new home. One inch is plenty thick enough, and less than that is better. Cutting the sod thin will not injure a healthy turf of creeping bent, but rather strengthen the growth.

Tees should be rolled, cut and watered in practically the same manner as putting greens.

To sum it up, the tee is almost quite as important in developing good golfers as the putting green, and he is wise who knows that the old saying has already been changed by two words, "The good greenkeeper is known by his greens-and tees."

Staude Tractor with three-cutter hitch. Any make

of fairway units fits frame

upon keeping up with the horse. The Staude Mak-a-Tractor Co. evidently has followed along this idea in designing the neat three-cutter hitch displayed with their small tractor. Up hill and down, making the short turns often necessary in golf course mowing, this fairway outfit has found favor in many districts. Any make of cutting unit fits this frame, so Mr. R. A. Ferguson, in charge of the exhibit, assured us.



Derby Hat Putting Course, and we fell for it. It caught

us just in time, and we can vouch for its stability. In justice to the service rendered, we picked it up and

sought the manufacturer in order to pay a debt of grati-

tude. Somebody told us to look up the Royal Metal Manufacturing Company, and we did, with the chair

folded under our arm, "Every golf club ought to have

a supply of 'em," said the representative who met us at

the gate. "They are inexpensive, pack away in a small

space, and are always available for special entertain-

Staude Mak-a-Tractor Co. IN the old days of the top buggy and long whip, a

familiar sight was a white coach dog spotted with

ments at the clubhouse." He sounded convincing.

## Dreams Come True If Dreamers "Do"

By ALFRED E. LUNDSTROM

Greenkeeper, Saint Charles Country Club, Saint Charles, Illinois

HAVE read, with exceptional pleasure, the many wonderful articles printed in THE NATIONAL GREEN-KEEPER, written by men who are authorities in their various lines. The benefit therefrom is gigantic and not only helps the younger and less experienced, but it also jars

Who" among greenkeepers at that time will be the man who visualizes this now and prepares himself accordingly. I am sure that the extra duties will be appreciated by the employers in more ways than one providing that the work is done intelligently, and if that should

the memory of the older to a point where he has no excuse to offer, providing he has the financial backing to adopt and follow out this excellent advice.

If a greenkeeper is mentally capable and willing to extract and retain this advice and to put it into practice, then he automatically increases his duties, and that increased duty, in my estimation, is the only concrete method by which we can expect to increase our stipend and elevate our standing among men.

There are so many things to be taken into consideration in the management of a golf course that many object to the adoption of new methods, ideas and styles—I say "styles," for styles on the golf course certainly come as regularly as in any other line of endeavor—but the man who Compensation

I had no excuse, Bill, to join a golf club, For I'm not a golfer; I'm only a dub, And somehow the old game does not head the

list Of the pleasures I'm taking for those that I've missed.

- But I'm sticking around for the other things, Bill.
- That mean more to me than the game ever will. For the good fellowship that I feel all about, Where an old man's a "boy" and a boy an "old scout."

For my love of the open, and bits of the land Where old Mother Nature has played a lone hand.

Where God planted seed for each beautiful tree,

And they stand side by side as He meant them to be.

I'm learning the language of little wild things, And I know every bird by the song that he sings.

But there's some compensation in being a dub.

By Gertrude A. Farley.

cannot or will not adapt himself to these changes is doomed.

### Golf Courses Should Be Landscaped

A style that is bound to come, and it is remarkable that it has not come before, is the development of the golf course from an artistic standpoint (landscape gardening), and it is more remarkable when one realizes that although club members are invariably men of taste and wealth, who under no consideration would allow their residence grounds to look like barren pastures, still the great majority of our courses, especially in the West, are just that and nothing more. The exception is greatly in the minority.

When this style becomes universal then our duties again increase, for it will be, and properly, the greenkeeper's work and the man who will become "Who's not be the case then discharge the Club.

There is no reason why a proper planting should interfere with the game—in fact it will aid it, and not only that, it will increase 'the value of the course and surrounding real estate.

### All Club Members Do Not Play Golf

Again-what percentage of club members actually play golf and how are you to retain the interest of members who do not play unless you create something to hold their interest and patronage? I am sure that every reader of this magazine has at some time or other visited some place for the beauty of it alone, especially if he is a greenkeeper. I feel that everyone is inherently interested in just such a condition and when it is created the benefit will manifest itself

through new patronage, and it is through new patronage that we create new golfers and real fans.

I was very pleased to read the articles in your April issue entitled "Building Beauty into the Bunkers," by F. W. Sherwood and the various articles on trees and their care by C. M. Sherer, both of which have a vital bearing on what I am trying to explain.

### Start a Tree and Shrubbery Nursery

I would suggest that where space allows and soil conditions warrant lining-out stock be bought for a suitable nursery for future development. This makes a tremendous saving in the finished product. This, however, is slow and not advisable unless one has experience in nursery propagation. The future of the greenkeeper is in his own hands. Much more will be demanded of him in the future than in the past. Therefore *prepare!* 





Author is an Expert

Almost every greenkeeper has

trees to take care of and loses a

certain number every year. That's

why we have enlisted the aid of

Mr. Scherer, a nationally noted tree

doctor, to tell us what happens to

the trees through all seasons of the

year. It's a precious work, saving

trees, and we believe the green-

keepers of America will appreciate

Mr. Scherer's contribution to our

worthy cause .- EDITOR'S NOTE.

"APRIL Showers Bring May Flowers." It can well be added that April showers bring May leaves. However, those leaves will not stay green, healthy and vigorous unless there is an abundance of food and water for the trees throughout the year.

It is really remarkable that trees grow on the lawns, golf courses and other wholly or partly developed sections of ground, especially when one remembers that the natural home of the tree is in the woods, where the soil is always loose and cool and damp. Outside of the woods the soil is usually hard and hot and dry. The

dead leaves which make the protective blanket in the woods are either carefully raked and destroyed or blown away by the wind, so that little or nothing is added to the soil which soon becomes exhausted under such unusual conditions. To help the tree in its constant struggle for existence, it is necessary to develop artificially a soil condition which approaches as nearly as possible that which prevails in the woods.

### Loose Soil Around Trees Holds Moisture

The first consideration in the fertilization of trees is to bring about a

physical condition of the soil that will form a congenial home for the roots. If the soil is hard the roots will be cramped and almost invariably one finds them winding around one another and around the base of the tree is a truly strangulation process. When the soil is loose, this suicidal process is eliminated. Loose soil will hold moisture far better than compacted soil and the danger of the trees dying of thirst is to a large extent alleviated. Loose soil allows the air and water supplied by nature to permeate the area occupied by the roots. A constant weathering process is in operation which makes the food elements in the soil more readily available. The materials ordinarily used for loosening the soil around trees are compost and manure. Of these, manure is, by most authorities, considered best. Of the various manures, cow manure is superior to any of the others. Manures in general are better than compost because of the fact that the breaking down processes have just commenced and the continued chemical action tends to break up the soil particles into finer and more readily available plant food. Cow manure is better than the others, because there is little or no danger of burning the roots as is the case when sheep or horse manure

> is used. If either of the latter is used, care should be taken to use only small amounts at one time or else the preliminary stages of rotting should have taken place so that the period of burning has to a large extent been past. The adding of either manure or compost does not supply any great amount of plant food to the trees. The primary purpose is for the improvement of the exceedingly unfavorable soil conditions existing around trees which are prized, first for their shade and the beauty which they give to the landscape they occupy. Food material has to be added in some other form.

### Trees Need All Food Elements

Just ten food elements are necessary for the perfect growth of any plant. First, there is nitrogen which the plant gets in the form of nitrate from the soil. Second, there is hydrogen and oxygen which also come from the soil as water, then there is carbon recognized by most of us in the form of charcoal, coke and similar materials, which comes wholly from the air through the leaves. Sulphur in the form of sulphates, and phosphorus as phosphates come from the soil. Besides these the trees need iron, calcium, magnesium and potassium, all of which are absorbed by the roots from the soil.

Of the ten plant foods, there are just three, the lack of which in most all cases, causes starvation in plants. These three are nitrogen, phosphorus and potassium. Thin and more or less yellow leaves are a pretty sure sign that the trees lack nitrogen and that the condition can be largely remedied by adding nitrate of some kind to the soil. An abundance of nitrate food material makes the beautiful, vigorously growing, green foliage, the kind that is a delight to every lover of plants. However, if nitrates alone are given, the foliage is very tender; the twigs are soft and watery and often times. especially in annual plants, the stem does not have enough strength to support itself.

Under such conditions, phosphorus in the form of phosphate has to be given in order to balance the

abundant supply of nitrogen. Phosphates give the leaves and twigs the required material to make themselves sturdy and strong so that they can support themselves and mature properly. When there is enough food to allow for the rapid and vigorous growth there is an additional load placed upon the transportation system of the trees.

In some unknown way potassium aids materially in the transportation problem. In a way we might compare potassium to the traffic officer of the trees. In some unknown way, it keeps the transportation lines open and functioning at the highest possible efficiency so that plants securing an abundant supply of potassium in the form of potash can always do their work more quickly and can consequently mature more The three most commonly used materials supplying nitrates are, dried blood, a byproduct from the meat packing industry, nitrate of soda and sulphate of ammonia. Of these dried blood, coming from animals already has been changed from the purely mineral and there is little or no danger of doing any damage with it. It is rather expensive, costing from sixty to seventy dollars per ton and does not supply as much nitrogen as does either of the other two materials. Nitrate of soda and sulphate of ammonia are purely inorganic chemical materials and when they are applied, care must be taken that the plants receiving the treatment are not killed because of an over-dose. The costs of the two materials are about the same, ranging in the neighborhood of seventy-five dollars per ton. Of the two, sul-

phate of ammonia carries a little more nitrogen than does the nitrate of soda and is a little better to handle. Besides this each substance in the sulphate of ammonia, is valuable to the trees, while the soda part of the nitrate of soda is of no use to the plant.

### Applying Nitrogen

In applying these materials as much dried blood as one cares to give can be applied without fear of danger. Ordinarily the amount will vary from two to three pounds for small trees up to as much as one hundred pounds for the largest trees. Nitrate of soda and sulphate of ammonia should be applied in amounts varying from three or four ounces in the case of the smallest trees up to as much as fifteen to twenty-five pounds in the case of the very largest trees. A tree hav-

BEFORE Showing thin foliage, dead branches and unmistakable signs of dying. Photo on opposite page shows same tree one year after treatment

rapidly and more completely than those which are starying because of a meager supply of this most favorable food. It is because of this fact that potash fertilizers are always so effective in growing and maturing grapes because tremendous quantities of sugar have to be transported from the leaves where it is made, to the fruit where it is stored.

### Fertilizer Values

There are various materials which supply each of the above mentioned three most necessary food materials.

ing a diameter of three or four feet and whose roots occupy as much as one-fifth to one-fourth of an acre, can receive the maximum amount of these highly concentrated foods without much fear of damage.

### Bone Meal Supplies Phosphate

Two materials are ordinarily used to supply phosphate to trees. One of these is bone in its various forms and the other is acid phosphate. Bone like blood is a byproduct from the packing industry and since it, like blood, has already been transformed from the mineral





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to the organic, it can be applied in any desired quantities without fear of damage. On the other hand acid phosphate is purely mineral and care must be used to prevent burning. Bone is by far the most expensive, costing from thirty to forty dollars up to as much as one hundred dollars per ton, while acid phosphate can be bought from twenty to thirty dollars per ton. However, the excellent results obtained from the use of bone and the lessened danger of damage often compensate for the additional money invested. In amounts the same rules apply as in the case of nitrates. Any quantity of bone can be applied, but usually from five to ten up to two hundred pounds is sufficient. With acid phosphate, a few ounces up to as much as one hundred pounds for the largest trees can be safely given.

### No Organic Fertilizer Supplies Much Potash

Unfortunately there is no purely organic substance which supplies an abundance of potassium as plant food. The two most commonly used materials are muriate of potash and sulphate of potash. These are purchased and applied in quantities comparable to that of nitrate of soda and sulphate of ammonia. One of the common materials supplying large amounts of potassium, is wood ashes and it is because of this plant food that wood ashes sometimes produce such astounding results when applied to the soil around growing plants. Of course wood ashes are very difficult to obtain and consequently they are used in small amounts as a fertilizer.



Tree shown in opposite photo, one year after proper pruning and fertilization

In the fertilization of trees, exactly the same

principles and practices apply as in the fertilization of other plants. First, it is always advisable to work and cultivate all the soil occupied by the roots of the trees. The only sure way to determine the extent of the roots is to dig into the soil and find them. In general the area occupied corresponds pretty closely to that covered by the branches.

### Remove Sod and Cultivate Root-Bound Trees

If the owner has the courage to destroy the lawn which is too often under the trees, it is well to turn under the sod to a depth of as much as a foot, depending of course on the depth at which the roots of the tree are found. During the turning under process, manure or compost can be worked into the soil. About a ton of the material can be effectively used where the roots of the tree occupy a circle with a diameter of fifty feet and of course proportionate amounts can be used where the trees are smaller or larger. At the same time the concentrated food materials such as bone and blood, acid phosphate and the others mentioned before, can be worked into the soil in the proper amounts. When the operation is completed, the newly cultivated ground can be raked and smoothed and grass seed sowed to form a new sod. Sometimes when the sod is especially good it is possible to remove it and then when the various

> materials have been added, to relay the sod and seeding is unnecessary.

Occasionally an owner does not desire to either destroy or remove the sod for the purpose of digging in the various food materials so necessary for the growth of the trees. Under such conditions it is possible to give the trees food by making holes into the ground with some sharp instrument, such as a spade or crowbar and putting into these holes small amounts of the concentrated foods. With this operation it is wholly impossible to improve the physical condition of the soil and as good and lasting results cannot be expected.

In the spring trees are making a rapid, vigorous growth. Large quantities of food materials are used and when the average tree owner recognizes the fact

that the trees are growing under unnatural conditions and in thousands of cases are starving to death, more attention will be given to feeding trees with the result that the well nourished ones will respond and pay the owner big dividends in added beauty and usefulness.

This is the fifth article in this series covering the planting and preservation of trees. Order your back copies now while they last, as supply is limited. The National Greenkeeper, 407 Caxton Building, Cleveland.

# Firming The Fairways

By W. D. CHINERY

Greenkeeper, York Downs Golf Club, Eglinton, Ontario, Canada

IN the March number of THE NATIONAL GREEN KEEPER an article appeared under the heading, "Are Your Rollers Ready?" This article appealed to me as very appropriate, as we had just finished overhauling our rollers to start the spring work.

I have often heard it remarked that we do not roll often enough. This is a general feeling among the players, who also feel that by constant rolling, holes will disappear and bumps will be pressed down. This is far from being the case.

That rolling is of vast importance if done judiciously is well known, but there are some conditions where more harm than good will be done with a roller. Soils that are well or imperfectly drained, heavy and adhesive clay soil, light soils, and the fact that some grasses on a golf course will stand more rolling than others,—all these and other conditions determine when and how much rolling should be done.

One thing we should bear in mind is that with the advent of the tractor on golf courses, we began to get a certain amount of packing that was not previously the case, and this continual packing affects heavy clay soils in particular.

### Triple Gang Fairway Rollers Efficient

While we devote ourselves to the fairways first, we contrive on re-crossing to roll a fair amount of the rough, which tends to improve the adjoining rough area from every point of view.

Which is the best type of roller is perhaps a moot point. We use for tractor work a three-section or Triplex type, which few question as being the most satisfactory type. We operate two of these gang rollers, one heavy and one light. Each of the drums on our heavy roller weighs about 1000 pounds, and they are four feet three inches long, two feet nine inches in diameter. The larger drums are to be preferred to the smaller solid type, or so I believe. The light roller we use was constructed from an ordinary three-drum farm roller, and for clay soil this we prefer.

### Converting Farm Rollers for Fairways

I may say that this light farm roller though new we had not used for two years, as it was a waste of time to pretend to roll with it. Some ten feet in width, it was supposed to "get" over the ground, and it did. But has it ever occurred to the young or inexperienced greenkeeper how much turf is actually pressed by a roller of this type on the undulating grounds of the average golf course? Doubtless there are still many of them used, but unless one has a perfectly flat surface, they are a thing of the past if best results are to be desired. For the benefit of anyone who may be inclined to convert such a roller, the cost would be somewhere around \$60, and can easily be done.

Like nearly every other course, we have both the small iron and wooden rollers of four sections for use on the greens. The wooden rollers are very useful if kept in shape, and in great favor, as the "give" of each section enables one to follow the roll and run of the green. To keep these wooden rollers in good shape, we make it a practice each season to go over any cracks



Three-gang fairway roller similar to that described in this article. This type manufactured by Worthington Mower Co., Stroudsburg, Pa.

with a little paint, then fill with putty, and paint over the whole. This treatment will keep them in good condition for an indefinite period, and they clean easily and do not pick or gather material on the rollers like those in a neglected condition.

With the small iron roller, it is well to keep an eye to the cotter pins that hold the frame to the axle, as often these get worn and drop out, resulting in the loss of the bearings. I have both heard and seen such rollers in operation, and pitied the worker. "Music hath charms", but not that which emanates from a dry roller. Grease and oil are both cheaper than machinery. A coat of paint may seem to some like fine feathers, but I can assure the doubtful ones that the use of paint is often the means of finding a loose rivet or bolt, and either can spell disaster.

A discarded bed knife, or better still a piece of hoop iron, will greatly facilitate the cleaning off of any roller.

