

Greenkeepers At State College



PROF. J. W. WHITE

who presented a series of charts at the Greenkeepers' School, State College, Pa., on soil acidity and the action of bacteria.

MORE than eighty enthusiasts interested in fine turf maintenance attended the 5th Annual Conference on Turf Management, held at State College, Pennsylvania, February 22 to 24, inclusive. Besides the usual Pennsylvania contingent, there were interested greenkeepers from New York and New Jersey. All regretted the inability of Mr. Joe Valentine of Merion Golf Club to be present. He was one of the original sponsors and a regular attendant to all previous conferences. Professor A. L. Patrick of the Department of Agronomy acted as general chairman.

A most instructive program was prepared by a joint committee of greenkeepers and representatives of the School of Agriculture of Pennsylvania State college.

Wednesday's session opened with a talk on propagation of flowers and shrubs by Professor E. I. Wilde. This was followed by a most interesting discussion of "Turf Treatments and Insect Control," by Professor L. B. Smith. The afternoon closed with a round table discussion of turf diseases led by Dr. Thurston.

The Thursday and Friday sessions were devoted to soils as a general topic. Physical soil properties furnished the main theme, with especial emphasis placed upon its physical make-up, the functions and uses of organic matter and the distribution and use of water. The college was indeed fortunate in securing Dr. Dachnowski-Stokes of the U. S. Department of Agriculture, who is America's foremost authority on peats and their uses.

Professor Smith discussed sod webworms and their control at considerable length. He pointed out that there are three control treatments, coated lead arsenate, kerosene emulsion, and pyrethrum extract. The use of kerosene emulsion is discouraged as being unsafe because of possibility of injuring the grass, and the advisability of using lead arsenate was questioned because of the possibility of building too high concentrations in the soil.

The Federal formula for preparing pyrethrum calls for 12½ ounces of pyrethrum extract dissolved in 50 gallons of water, and 111 gallons of the solution used per 1000 square feet of turf. Professor Smith furnished a substitute formula consisting of 16 ounces pyrethrum extract dissolved in 50 gallons of water. This solution to be applied at the rate of 50 gallons per 1000 square feet of turf.

Treatment with this solution proved effective, and has the advantage of being less expensive per unit area of turf treated. It was stated that the second brood of sod webworms is responsible for most of the damage, hence one annual treatment between August 1 and 15 was recommended. Pyrethrum, besides

destroying webworms, is effective for chinch bugs, cut worms, any earth worms near the surface and will also destroy some ants, but is without effect upon the nests.

ANT POISONS KILL TOO QUICKLY

IN DISCUSSING ants, Professor Smith stated that most of the poisons kill too quickly. He referred to the practice of locating the nests and fumigating with carbon di-sulphide or cyanogas. A new poison was suggested, namely Thallium sulphate, which holds much promise as an ant exterminator. This is a slow poison requiring two to four or five days to produce death. The following formula was suggested:

Sugar, 1 pound; Honey, 3 ounces; water, 1 pint; Thallium sulphate, 27 grains.

The suggested procedure calls for using this material in the small circular ice cream pasteboard cartons, procurable at any ice cream dispensary. To permit entrance of the ants, small windows or vents are cut in the sides, one inch above the bottom. A small amount of excelsior is first placed in the container, and then a sponge saturated with the solution. The cover should then be replaced on the carton. Professor Smith recommended placing the cartons out at night and taking them away early the following morning.

The old, standard formula for ant treatment was also given. It consists of the following ingredients.

Water, 11 pints; Tartaric Acid, 7 grams; Benzoate of Soda, 9 grams; Sugar, 12 pounds; Honey, 2 pounds; Sodium Arsenite, 21 grams.

In making the solution dissolve all the ingredients except the sodium arsenite in 10 pints of water and boil for 30 minutes. Heat the extra one pint of water to boiling and then dissolve the sodium arsenite in it. After the two solutions are cold, they should be mixed. Attention was called to the fact that high-grade chemically pure sodium arsenite must be used and not sodium arsenate. When properly prepared the solution will keep indefinitely.

JAPANESE BEETLE MAY BECOME A PEST

IN DISCUSSING the Japanese beetle, attention was called to the fact that this pest made a big jump during the past year, and that it will likely become a serious pest in Pittsburgh and Erie within the next three to five years. Consequently the clubs in these districts should prepare now to grub-proof greens by arsenate treatment. So far as fairways are concerned, the thought was expressed that their treatment could wait, but with the appearance of the Japanese beetle this will become necessary.

On Thursday morning Professor Patrick introduced the subject of soils by explaining the physical make-up of soils. The meaning and significance of soil separates, texture, soil classes, etc., were discussed, as well as methods for modifying soil texture and controlling structure.

PROF. WHITE DISCUSSES SOIL CONDITIONS

THIS was followed by a very interesting discussion of soil organic matter by Professor J. W. White. A series of charts was used to illustrate the various points brought out. It was

shown that increasing soil acidity results in retarding rate of decay. Tables further showed that bacteria were most numerous in soil having a Ph of 6 and maximum numbers of fungi were present at Ph 3.8 to 4.5.

Additions of nitrogen tend to accelerate loss of organic matter, probably due to increased numbers and activity of soil organisms. It was said that there has been no decided increase in the organic matter content of plats on the Experiment station farm in spite of manure applications during the past 47 years at rate equivalent to five tons of manure per acre annually. Decay is so rapid that accumulation does not occur. That different materials vary in the rate at which decay takes place was pointed out.

The organic matter content of typical materials was given in another table. These were all reported on a moisture-free basis. The average amount of organic matter found in nine samples of mushroom soil was shown to be 17.93 per cent. The individual samples varied from 14 to 24 per cent. Cultivated peat was found to contain 83.94 per cent organic matter, and raw peats varied from 85.22 to 93.07 per cent, all on moisture free basis.

In the table on rate of decay, fresh dried manure, Imhoff sludge and tannery sludge decayed most rapidly, whereas cultivated peat and mushroom soil showed a low rate of decay.

The rate of decay resulting from two different top dressings used on two small plots of grass was measured at the end of 23 months. Where Imhoff sludge was used as the source of organic matter 42.7 per cent of the applied organic matter disappeared as the result of decay and where cultivated peat was used the loss was only 17.1 per cent.

DR. STOKES TALKS ABOUT PEAT

PROBABLY the most outstanding talk on the program was that of Dr. Dachnowski-Stokes of the U. S. Department of Agriculture. He knows his peat, and the enthusiasm displayed would indicate that he is one of the fortunate few whose hobby is also his avocation. A fine selection of lantern slides was used to illustrate the points discussed.

The various factors involved in the origin of peat deposits, a description of various kinds of peat together with their properties, and a resume of some results obtained with peat materials on the experimental turf garden at Washington were included in such easily understandable language that all felt fully repaid for the afternoon session.

Based on origin there are three main zones of peat formation which usually show in cross section. The sedimentary peats are formed from soft aquatic plants in shallow water. A jelly-like material is produced, usually acid in character, which dries into hard lumps. Once dried these peats do not readily take up water again. They are recognized by the presence of hard lumps. These peats are unsuited for use as soil conditioners.

After the lake fills, the true marshes develop with the formation of so-called sedge or rush peats, depending upon the type of vegetative covering. The peats consist largely of the rootlets. Reed peats predominate, and usually develop in ground waters containing considerable salts and the water is usually of an alkaline character. Reed peats occasionally contain injurious materials, salts originally contained in the ground water.

Woody peats are formed when forests are superimposed upon the marsh. These peats can be recognized by their woody appearance. They are not always suitable for the preparation of commercial peat products.

The so-called moss peats constitute a fourth main class. They are found in northern latitudes, and the deposits resemble large mounds. Moss peats, as the name implies, are formed by the various sphagnum mosses. In the United States they occur in two principle centers, Maine and Northern Wisconsin and vicinity. The Maine deposit is very similar to the deposits of Europe, which are worked commercially. The Maine moss peat has a water-holding capacity of about 4000 per cent.

MOSS PEATS ARE LIGHTEST

OF ALL the peats the moss peats are lightest, weighing 7 to 9 pounds per cu. ft. Sedge peat weighs 20 to 30 pounds and reed peat 20 to 35 pounds per cu. ft.

The moss peats provide four to five times more coverage than sedge or reed peat. The suggestion was made that where water-holding capacity is desired, moss peats should be used, but where water movement is wanted, the sedge and reed peats are preferable.

In evaluating the different peats, three factors should be considered, their ability to improve physical soil condition, their soluble effect on soil mineral plant food elements, and their effect on the crop to be grown.

The ability of peats to overcome the injurious effects of applied soluble fertilizers was one of the most interesting results obtained in the experimental plots in Washington.

The Friday morning session was devoted to an interesting discussion of water and its uses by Professor Blasingame, and methods for sampling and testing soils for lime and nutrient deficiencies by Professor Merkle.

Turf Culture News

NEW YORK CITY

An old homestead in Milan Township, between Rhinebeck and Pine Plains in the foothills of Dutchess County, has been purchased by Nellie M. Seeds, of 228 West Thirteenth Street, Manhattan, from Sackett Case. E. I. Hatfield acted as broker in the deal.

The twelve-room dwelling on the place will be remodeled by the new owner and converted into a private school. The estate consists of 200 acres, largely farm and timber lands, and an orchard.

* * *

WASHINGTON, D. C.

The purchase of 4,468 acres of land from the Pennsylvania Railroad for use as a park has been approved by the Secretary of War. The contract price is listed as \$1,675,500.

The land is triangular and is situated near the Shaw Lily Ponds, on the west bank of the Anacostia River, about a mile below Magruder Bridge, in Kenilworth.

* * *

BLOOMINGTON, IND.

When the municipal golf course opens in the near future under the management of the city park board, it will be one more city amusement to be controlled by that efficient body.

During the past winter improvements have been completed on the city baseball diamonds. The work was under the direction of Williard Farr. Ditches around the park property, including the golf courses have been sodded and a number of trees have been removed which will add to the beauty of the park as well as to the pleasure of golfers.

Work on trees, greens and fairways was started March 1, under Johnny Stelzel, golf professional.

Turf Culture News

MEYERSDALE, PA.

Elaborate plans for the improvement of the Meyersdale City Park have been proposed by H. T. Staub, president of the Chamber of Commerce, and taken up by heads of other organizations and a number of public-spirited citizens.

A California privet hedge is to be placed around the entire park area. Trees of fair size are to be dug from their natural locations in the mountains and transplanted into the proposed park.

* * *

PRINCETON, ILL.

If present plans are fulfilled, 100 acres of land owned by Louis E. Conigam of Walnut, may be taken over by the federal government for the construction of a modern airport. The land is located north of Walnut in Lee county. Preliminary surveys have been started by government surveyors with the intention of selecting this location. Whether or not the new proposed airport might develop later into an aviation training school and storage quarters, along with a refueling station for government planes and places of shelter in case of storms has not been definitely learned.

* * *

BROKEN ARROW, OKLA.

Harvey G. Hayes, architect, reports that the drawings and plans of the new city part are near completion and that they will be submitted to the committee in charge for their approval. If approved the plans will then be put into effect. Mr. Hayes has been working for some time on these plans and has a drawing that would make a beautiful park for the city.

The material for the building of the park is to be donated by the citizens of Broken Arrow, and Mr. Nash will have charge of the work, which is to be under the R. F. C. made work program.

* * *

LEBANON, IND.

Officers of the Ulen Country Club whose terms expired this week, have been retained for another year. They are: President, Fred B. Hooton; vice-president, Thomas Shepperd; secretary, Isadore Eichman; treasurer, Lester F. Jones.

The showing made by the club under the direction of these officials and the board of directors, has been outstanding when compared to similar organizations over the state. The reports of the secretary and treasurer submitted at the stockholders' meeting showed that the Ulen Country club is in much better financial condition than any club concerning which information has been received.

* * *

CINCINNATI, O.

Swaim Fields, the new golf course which has been under construction near Blue Ash since last August, will have nine holes open for play by May, according to Delbert Todd, owner. The course is on Cooper and Zig Zag roads, between Blue Ash and Montgomery.

Todd hopes to have the full 18 holes, a planned 6500 yard, par 71 layout, ready for play before golfing season is over this year. The new course, with the club proposed at Remington, will bring the roster of golf courses in this district to 27.

Swaim Fields will be a public links with greens fees payable by the round or season. The clubhouse has been finished, but no professional has been named as yet. Nicholas Todd, Kenyon College man, is greens superintendent. William Diddle designed the course last year.

* * *

CINCINNATI, O.

Extensive improvements in Avon Field, Cincinnati's municipal golf course, recently promised by the Recreation Commission, have been started.

While it is intended to add more than 800 yards to the Muny layout in the planned two-year improvement, the course will be about 150 yards longer when it is opened for play March 25 or thereafter.

* * *

PUEBLO, COL.

Eight new members were taken into the Pueblo (Col.) Golf and Country club Monday night, when the directors of the organization met in regular monthly session and approved applica-

tions and transacted other routine business.

It is reported that the course is rapidly being prepared for the coming season, with a view of an early opening. Generally, the regular greens are not opened until late in April, but there is a possibility that the custom may be diverted from this season.

* * *

TRENTON, N. J.

In its second annual report to the legislative commission in charge of developing the proposed Thomas A. Edison State Park at Menlo Park estimated the total cost would be between \$2,000,000 and \$2,500,000.

The commission recommended passage of a bill to be introduced by Senator Quinn of Middlesex, permitting it to acquire, either by purchase, gift or condemnation, land in Woodbridge Township as part of a 300-acre site. The commission also urged that the \$10,000 provided in the 1931 law creating the body be advanced for additional surveys.

Henry Ford had advised the commission, the report said, that he would convey title to certain land in Menlo Park.

* * *

SPOKANE, WASH.

Indian Canyon golf course operations are not costing the taxpayers of Spokane a penny, L. R. Hamblen, park board president, says. At nearly every meeting addressed by candidates for city commissioner in the present campaign, one or more candidates makes the charge that the city is spending \$92,000 on a new golf course that should not be built under present conditions.

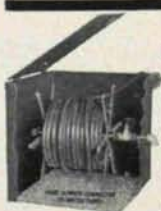
It is also asserted that the city should not borrow from the Reconstruction Finance corporation to complete the work, but should devote its money and efforts to making work for the unemployed.

* * *

CINCINNATI, O.

Although 25 per cent of the 1100 member clubs of the United States Golf

(Concluded on page 26)



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 Improve the appearance and safety of your course by keeping your Putting Green hose neatly rolled on this revolving metal reel in a durable steel compartment below the ground at each Green, protected from sun, weather, theft, and mowers. Hose always connected to water outlet. Big hose capacity. Easily installed. Pleases players. Many economy features. Write for literature.
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Market Place and Buyers' Guide

Where reputable manufacturers and dealers list and describe their products. Greenkeepers are requested to write the Market Place for any special information they desire about supplies or equipment.

Airport Drainage

Armco Culvert Mfrs. Association
Wendell P. Miller and Associates

Ant Control

Royal Products Company

Ball Washers

J. Oliver Johnson, Inc.
Worthington Mower Company
Ideal Power Lawn Mower Co.
G. B. Lewis Company

Ball Locators

Worthington Mower Company

Bent-Coos County State Sealed and Certified

J. M. McCullough's Sons Company
Seaside Bent Company

Bent Seed—Cocoas Creeping

Stumpp & Walter Company

Bent Seed—Prince Edward Island

J. M. McCullough's Sons Co.

Bent Stolons

Hubbard Nurseries
O. M. Scott & Sons Co.
Stumpp & Walter Co.
Ohio Humus Products Co.
Illinois Grass Co.
Hiram F. Godwin
Lyman Carrier

Bluegrass—Seed

J. G. Peppard Seed Company

Brown Patch Control

Stumpp & Walter Co.
J. Oliver Johnson, Inc.
Arthur D. Peterson
American Cyanamid Sales Co.
C. B. Dolge Company
McClain Bros. Co.
Arthur Boggs & Co.

Charcoal

Cleveland Charcoal Supply Company
Wood Charcoal Research Bureau

Cocoas

Lyman Carrier
Stumpp & Walter Company

Compost Distributor

Toro Mfg. Company
The Root Mfg. Co.

Compost Mixer

Toro Mfg. Company
Royer Foundry & Machine Co.
Beardsley & Piper Company
Silver Mfg. Company
Kemp Mfg. Company

Compost Screen

Silver Mfg. Company

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Fairway Mower Blades

The Budd Mfg. Company

Fairway Mowers

Pennsylvania Lawn Mower Works
Toro Mfg. Company
E. G. Staude Mak-A-Tractor Co.
Ideal Power Lawn Mower Company
Worthington Mower Company
The F. & N. Lawn Mower Co.
National Mower Company

Fairway Tractors

International Harvester Co. of America

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Wayside Gardens Company
Armour Fertilizer Works
Cobwell Reduction Co.
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Fertilizer Distributors

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Sherwin-Williams Company

Fairway Rollers

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Philadelphia Toro Company
Worthington Mower Company

Golf Architecture

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Golf Course Construction

Ohio Humus Products Co.

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Stumpp & Walter Co.
Peter Henderson & Co.
Arthur D. Peterson
Ideal Power Lawn Mower Company
Lawn Equipment Corp.
T. W. Wood and Sons
Worthington Mower Company

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John H. Graham & Co., Inc.

Cultivators (Spike)

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J. Oliver Johnson, Inc.
Worthington Mower Company
Peter Henderson & Co.
Ideal Power Lawn Mower Co.

Fairway Fertilizers

Synthetic Nitrogen Products Corp.
Armour Fertilizer Works

Fairway Irrigation

Buckner Mfg. Co.
Campbell Irrigation Company
Economy Irrigation Company
L. R. Nelson Mfg. Company
Double Rotary Sprinkler Co.

Golf Flags

Ideal Power Lawn Mower Company
Stumpp & Walter Company
Peter Henderson & Co.
Arthur D. Peterson
Philadelphia Toro Company

Grass Seeder

The Root Mfg. Co.

Greens Fertilizers

Armour Fertilizer Works
Synthetic Nitrogen Products Corp.

Greens Sprinklers

L. R. Nelson Mfg. Co.
Buckner Mfg. Co.
Double Rotary Sprinkler Co.
Dan F. Ryan

Hand Mower Blades

Budd Mfg. Company

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Arthur D. Peterson

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Mower Blades

The Budd Mfg. Co.

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Roseman Tractor Mower Co.
The F. & N. Lawn Mower Co.
Jacobsen Mfg. Company
National Mower Company
Philadelphia Toro Company

Motor Trucks

International Harvester Co. of America

Mower Sharpeners

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Toro Manufacturing Company
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Synthetic Nitrogen Products Corp.

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Putting Green Mowers

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Stolons

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Lyman Carrier

Sulphate of Ammonia

Synthetic Nitrogen Products Corp.

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Worthington Mower Co.

Tillage Implements

International Harvester Co. of America

Market Place and Buyers' Guide---

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Hyper-Humus Company
The Ohio Humus Company
Atkins and Durbrow, Inc.

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Underground Hose Locker
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Urea
Synthetic Nitrogen Products Corp.

Water Pipe
McWane Cast Iron Pipe Co.

Wood Charcoal
Wood Charcoal Research Bureau

Worm Eradicators
Peter Henderson & Co.
C. B. Dolge Company
Reade Mfg. Company

greenkeepers. It is what we call welfare labor. The city issues grocery orders to many unfortunates and they have to work them out on the golf course. They stay three or four days and then new ones are sent out. A crew may consist of bank clerks to bricklayers. Many of them are too weak to work. Many can never learn to do manual work. Others will not work. You have to be with them all the time, because they have a habit of picking up golf balls. You can not let them go. It is trying to do things well under these conditions, but we appreciate that the other fellow may have it just as hard or harder on his course.

The municipal course has to be self-maintaining. Golf receipts have dropped off. Competition has increased. It will be necessary to maintain good courses on less money. All we can do is work hard and intelligently, hoping that Mother Nature will stick with us.

Rehabilitating Old Courses

(Concluded from page 7)

If your club board of directors has in mind any extensive alteration of your golf course, study the problem yourself, then go to your chairman of greens, or whoever you deal with, and make yourself heard. If he has in mind hiring some alleged authority on golf construction who you know to be what in legal parlance is called a "shyster" (a fellow who doesn't know his stuff), tell him the danger of such a procedure.

Go over the course with your chairman, and show him how much money it will cost to do the job well—to have interesting greens and hazards, and to carpet the fairways with real turf. Try to find out how much the club intends spending, and figure out for yourself whether it will do the job. If you are convinced the money allotted will not cover materials and labor, speak your mind. Better to have an old-fashioned course, well kept up, than a fancy new one with only a few blades of grass here and there.

ALVES DOES NOT ADVISE RECONSTRUCTION

I DO not advise any reconstruction. Far from it. I hope that there will be much rehabilitation in the next few years; it

will make more work for the bona fide architects, seed salesmen, and the equipment manufacturers, and the wideawake and progressive greenkeeper. But, being an architect and greenkeeper myself, I would be a poor business man, if, even in these times, I attempted to encourage haphazard jobs and slipshod work that, in the end, would help none of us. If the club has the money and if conditions are correct—go ahead; if not—forget it.

Municipal Maintenance

(Concluded from page 17)

Complete fertilizer is mixed in the top-dressing with the mixer because a uniform mix is obtained. This plant puts our top dressing program on a business-like basis.

Progress can be made by the greenkeeper when he is responsible to one man. He happens to be the County Engineer on my course. That is not the case on the average municipal course. There is a manager of the clubhouse who likes to tell the greenkeeper what to do. Then there is the Park Foreman, Recreation Supervisor, General Superintendent and Park Commissioner. The greenkeeper is responsible to all of them. He can not buy his own material. He can not hire his own men. No one takes a personal interest in him, no one encourages him. He works hard and tries to make his course the best he can.

WELFARE LABOR IS A PROBLEM

A NEW problem reaches the municipal greenkeeper that does not affect other

Turf Culture News

(Concluded from page 23)

Association have disbanded or gone bankrupt in the last three years, golf continues to boom in Cincinnati, for it was learned Tuesday that plans are under way for the building of another golf and country club in this district.

The proposed new club may be built on a site overlooking the Little Miami River above Remington. Besides an 18-hole golf course facilities will be provided for tennis, aquatic and equestrian sports.

Charles E. Dornette, attorney, is one of a group organizing the club.

Stewart & Stewart, architects, are designing and receiving bids on the clubhouse, which will cost \$60,000.

* * *

PAMPA, TEX.

All that is needed to place the Country club golf course in the best condition of the year is a nice heavy rain. The rough is clear of weeds and the fairways have been rolled until the ball has a long, straight roll after flight.

Greens and tee boxes have been worked over and the putting surfaces are deep and even. The new drags give any kind of surface desired.

Caretaker Autry is waiting for the rain to make the grass green before he rolls the course again.



will keep new-cut Greens free of ant hills and worms and not injure turf. Trial order to make fifty gallons.

\$7.00 delivered or buy it of your dealer

Satisfaction or Money Refunded

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Pure organic material, ideal for soil improvement purposes. Complies with U. S. Gov't Specifications—available in finely fibrous or coarse form—Tell us your requirements. Shipment by bag, truck or carlot units.

Hyper-Humus Co. of Newton, N. J.
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Hyper-VELVET^{ben}
94% Pure - Germ. 88%
SEED

"ten million to the pound"

HYPER-HUMUS CO. of NEWTON, N. J.

Write us for Name of Nearest Dealer
MAIN OFFICE, MORRIS BLDG., PHILA., PA.

Mephacide

*A new
Scientific
Preparation
for the
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BROWN PATCH

and other fungi that attack grass
and plants

Ask your supply dealer about the
low price of Mephacide—it will
save your greens and money.

Arthur Boggs & Company
Willoughby, Ohio

FREE: A copy of "The Putting
Green." Has 40 pages
about construction and care of greens.
Send today.

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Spud is sharp until
completely worn
away. Will not harm
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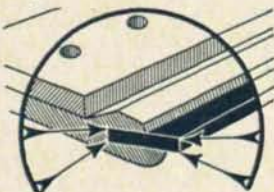
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4700 Grand Ave., Duluth, Minn.

Simple Enough, Isn't It?

When the four cutting edges of the
blade (see arrows) are worn, replace
with a new one as you would in your
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never needs replacement.

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Most economical because each 100 pounds
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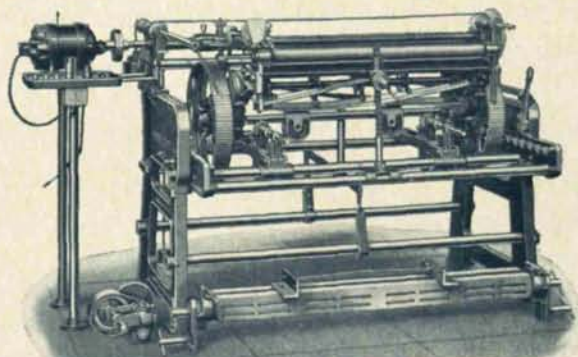
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tractor units with blades up to 36 inches wide, as well as
putting green and hand lawnmowers, without removing wheels
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New automatic weight feed—very fast and accurate. Equip-
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