

Around the Office Desk

NO greenkeeper has time to be a bookworm. But every greenkeeper has some hours during the year in which he may improve his knowledge through reading scientific and practical works on the culture of golf turf.

John Morley, in a talk given before a large group of Middle West greenkeepers last year made the statement, "If I receive direct benefit from ten per cent of what I read about soil and turf, I feel that my time has been well spent."

Unless we have technical knowledge of the subject, few of us get even ten per cent of the value out of scientifically written articles, whereas all of us understand how an expert greenkeeper gets results because he tells the story of his methods in simple and practical language. Herein lies the value of the contributions which are being sent in to *THE NATIONAL GREENKEEPER* by the members of the National Association.

NUMEROUS letters from young greenkeepers prove this point beyond question. Chester Mendenhall, greenkeeper at the Sim Park Golf Club, Wichita, Kansas, writes, "I am of the younger set of greenkeepers, and I get a great deal of valuable information out of our magazine. I will be with you at the annual meeting and will do my bit to make it a success."

Alex Miller, recently appointed as greenkeeper on a new eighteen-hole course built by Adolph Zukor at New City, New York, says, "I am going into a part of the country which is new to me, and I would not be without *THE NATIONAL GREENKEEPER* for ten times the amount of my annual dues in the National Association. I don't see how we have ever got along without it up to now."

A YOUNG greenkeeper with four years' experience, John L. Counsell, of the Reservation Golf Club, Fairhaven, Massachusetts, compliments Mr. Morley on

an article recently written, stating, "I have just been reading your interesting article, and it is evident to me you are not very 'green' when it comes to greenkeeping. I am now entering on my fourth year for this club and I find the work very interesting, but I would like to study the subject deeper. I have written to the U. S. Department of Agriculture for information in regard to golf course construction and maintenance, but they do not deal with it. Can you get me in touch with some good golf book? I would appreciate your assistance."



Bird bath of simple and beautiful lines, which any greenkeeper can easily build from concrete. Drawings from which to build forms may be secured by writing The National Greenkeeper. Most song birds are friends of the greenkeeper and should be given every encouragement to linger around the golf course

A GENERAL educational program for a greenkeeper is a large order to fill. This is clearly indicated in Mr. Michael's story of this month, "All Is Not Bent That Creeps." As time goes on, every angle of the greenkeeping profession will be covered in our

magazine. We do not intend to leave "chinks" in the wall of our foundation by printing in the pages of *THE NATIONAL GREENKEEPER* anything which will tend to lead the young greenkeeper astray.

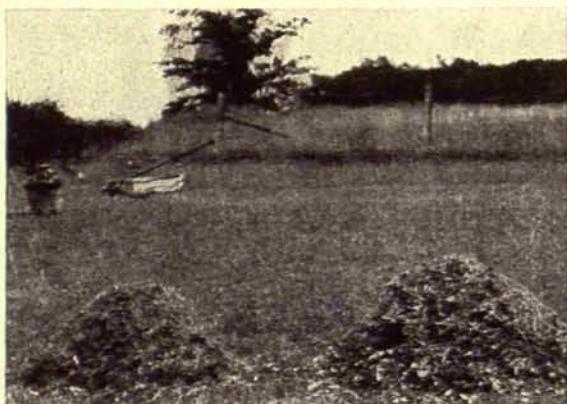
There may be "bunk" in some bunkers, but we want none in this magazine. Instead our program will be to take the "green" out of young greenkeepers by furnishing them with the right kind of information written by greenkeepers who are anything but "green."

There is no better guide for the young greenkeeper to follow than the advice found in articles written for our magazine by such greenkeepers as John Morley, Herbert E. Shave, W. J. Rockefeller, William Stewart, John McNamara, Mack Burke, Joseph Valentine, Samuel E. Lyle, Valentine Flood, and others who are contributing their experiences for the benefit of the younger generation.

With *THE NATIONAL GREENKEEPER* in one hand and the U. S. G. A. Bulletins in the other, we venture to say that within two years he will be in possession of the most authentic information it is possible for him to secure. Let energy and commonsense then hold sway, and



IMPROVES ESTABLISHED FAIRWAY TURF



Two piles of grass from equal areas of established fairway. Pile on left cut from unfertilized area. Pile on right from area fertilized with Milorganite at rate of 1,000 pounds per acre.

FAIRWAYS NEED NITROGEN

Progressive greenkeepers maintain excellent turf on fairways by feeding nitrogen. Soluble nitrogen fertilizers are especially subject to loss by leaching and are not effective over long periods. A fertilizer which gradually releases available nitrogen throughout the growing season is preferred. The use of phosphate and potash is avoided, except under unusual conditions, because both encourage clover.

MILORGANITE EFFECTIVE THROUGHOUT GROWING SEASON

Milorganite fulfills all these conditions. It sustains exceptional growth all season and does not encourage clover. The fact that it does not burn or injure the turf pleases the greenkeeper. Milorganite possesses excellent mechanical condition and flows freely through any good distributor.

MILORGANITE REASONABLY PRICED

Milorganite is sold direct to golf courses. At the price offered it is an effective, economical source of nitrogen for use on fairways.

FERTILIZE FAIRWAYS NOW AND USE MILORGANITE.

For further information use this coupon.

Milwaukee Sewerage Commission
508 Market Street, Milwaukee, Wisconsin

Please send additional information about Milorganite to

Name.....Club.....

Address.....City.....State.....

I am interested in fertilizer for Greens ☐ for Fairways ☐

Our Soil Conditions are.....

the National Association of Greenkeepers of America will evidence what it stands for—better greenkeeping and more of it.

EDUCATION in greenkeeping covers a great many things. Much will be said as time goes on through the exchange of information from members in the pages of our magazine.

Insofar as golf course equipment and supplies are concerned, the greenkeeper is the one who makes actual use of these products, and therefore the more he knows about what is on the market, the better position he will be in to make his selection and explain to his officials what has led up to his decision.

DAILY we receive letters from our advertisers to the effect that inquiries are coming in from our members, and this indicates that manufacturers appreciate the attention they are receiving. Indeed, many have told us that they have always had difficulty in getting in touch with the greenkeepers themselves prior to the advent of this magazine.

Quantities of advertising literature mailed to golf clubs never have reached the hands of the greenkeeper, because it was handier to throw it in the waste basket.

WHEN a green committee chairman reads of or hears about a new device, or sees something being used on a golf course he is visiting, which is new to him, he goes to his greenkeeper and asks about it. If the latter can say, "Why, I have a new catalogue on that down at the shop. I'll get it out for you right away"—the Chairman says to himself "So and So's on the job." He's pleased and tells the directors about it when they are considering the salaries of their employees.

Every advertiser in *THE NATIONAL GREENKEEPER* is more than pleased to mail a complete set of literature to any greenkeeper who asks for it without cost or obligation of any sort. So mail some postcards now and start a file of information which may prove helpful and valuable to you. Be sure and give your home address, or one which will reach you without delay, and mention your official magazine, *THE NATIONAL GREENKEEPER*.

If You Are Not a Member
of
**THE NATIONAL ASSOCIATION OF
GREENKEEPERS OF AMERICA**
and wish to receive
THE NATIONAL GREENKEEPER
regularly

Please Sign the Subscription Blank Below and Return With Your Check

THE NATIONAL GREENKEEPER,
407 Caxton Building,
Cleveland, Ohio

Date.....1927

Please enter my name as a subscriber to **THE NATIONAL GREENKEEPER** for one year, for which my check for \$3 is enclosed.

Name.....

Mail To.....

Name of Club.....

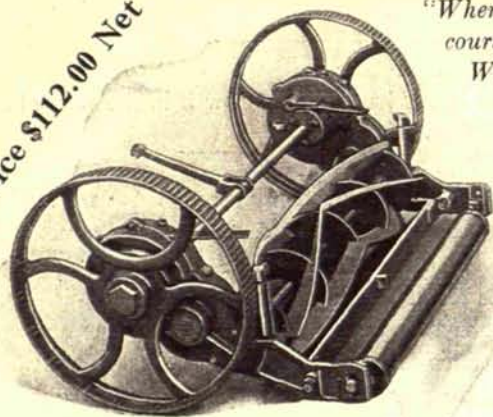
Club Address.....

Please check the following form
for our information

I am interested in golf course
maintenance from the point of
view of the

- ☐ Greenkeeper
☐ Chairman Green Committee
☐ Professional
☐ Club Manager
☐
☐

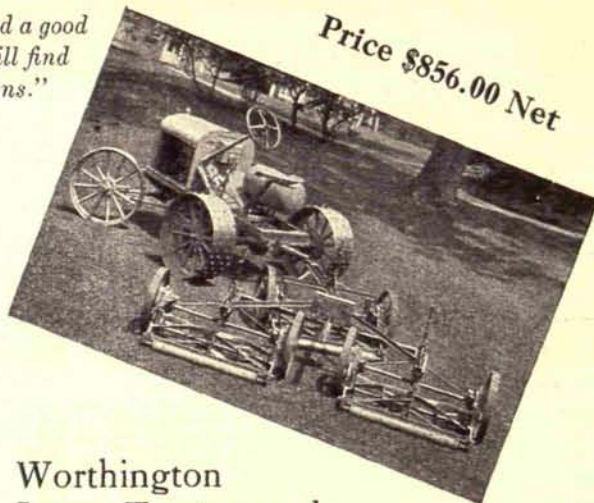
Price \$112.00 Net



"Where you find a good course you will find Worthingtons."

1927 Worthington Cutting Unit. Each blade of the new Herringbone V Reel is continuous, giving the added stiffness of a girder.

Price \$856.00 Net



Worthington Lawn Tractor and Triple Mower turns while mowing on a radius of 7½ ft. Lightest and most economical mowing machine in the world.

Worthington Mower Company

STROUDSBURG, PENNSYLVANIA

CHICAGO

MONTREAL

SAN FRANCISCO

ENGLAND

JOHNSON'S TEE STAND

GRASS SEED

FERTILIZER

CONSTRUCTION TOOLS

MAINTENANCE EQUIPMENT

PORCH FURNITURE



Be Sure

To see our 16-booth exhibit at the Golf Show, Hotel Sherman, Chicago, March 21-26.

J. OLIVER JOHNSON, INC.

The World's Largest Golf Equipment House

Morgan - Huron - Superior Streets, Chicago, Ill.



Sprinkling Cart for applying "ELECTRIC" WORM ERADICATOR

WHY TOLERATE WORM CASTS?

GET RID OF THE WORMS, AND YOU GET RID OF THE CASTS

Hundreds of greenkeepers throughout the country have solved the worm problem by using "ELECTRIC" Worm Eradicator. They have found that it is the most effective material for the purpose, and at the same time very beneficial to the greens.

"ELECTRIC" Worm Eradicator also acts as preventive against Brown Patch and other diseases of the turf.

We will be pleased to give you full information regarding "ELECTRIC" Worm Eradicator. We gladly ship on approval.

READE MFG. CO.

"HERBICIDE"
THE WEED EXTERMINATOR



JERSEY CITY, N. J.

Following Through With a Grass Seed

(Continued from page 9)

trating the soil. This helps to create a poisonous substance which later evaporates and closes the pores of the blade, which causes it to wither, because the upper part of the blade fails to obtain oxygen and the lower part carbon.

Forced Turf Cannot Resist Disease

Another method which may have a tendency to create a fungus or Brown Patch disease is too much forcing, which may keep the young grass too tender to throw off any disease that may clog its pores.

Under such conditions many fungi are able to gain entrance and become the cause of epidemics, whereas under normal conditions they may remain as harmless inhabitants of dead material.

I have been able during the past two seasons to keep this disease in check, by watching the weather conditions and by paying more attention to preventives than cures.

A grass seed planted on a putting green starts life under the handicap of conditions which are unnatural to the healthy growth of any grass plant. Maintaining a perfect, or nearly perfect, velvety surface under the vicissitudes that lie before such a seeding, is the mark of skill. It is not only that, it is the evidence of vigilance in guardianship. Sometimes I wonder how many of us realize the full meaning of the word "greenkeeper." We are soldiers standing guard, armed with what experience we have gained, what knowledge we can muster, that nothing may pass unobserved and molest that which has been given into our keeping.

Are you applying lime
to your golf turf
without knowing it?

Watch the May number
for this information.



"Rush!"
says the Customer

"Kindly ship us by first freight
in a terrible hurry:

1000 ft. $\frac{3}{4}$ " Tonka Cpld. 50 ft.
500 ft. $\frac{5}{8}$ " Tonka Cpld. 50 ft.
500 ft. $\frac{1}{2}$ " Tonka Cpld. 50 ft.

This is in addition to any other hose we have
ordered. Your hose is honest good hose."

THE REPUBLIC RUBBER CO.
Youngstown, Ohio

The Power Unit for Every Golf Course



Centaur Tractor

FOR every course, nine or eighteen holes, the Centaur Tractor is the ideal, economical power unit. Light weight, compact and powerful, it takes care of all the work on any nine-hole course—mowing fairways, cutting the rough, hauling, plowing, seeding, leveling and many other jobs.

On any eighteen-hole course, two Centaurs equipped with three-mower gangs can be operated for the same cost as one large tractor with a five-mower gang, and you have the benefit of two power units for handling different work at the same time.

Uses Your Present Mowing Units

Centaur's Universal Sulky enables you to use your present mower gangs, Roseman, Pennsylvania, Worthington, Townsend, Ideal, F. & N., National and all other makes, any of these attached in a few moments.

Ample Power for the Steep Grades

Centaur's powerful twin-cylinder, four-cycle LeRoi Motor takes you over the hills with ease. And Centaur's flexibility enables you to work closely around bunkers, hazards, etc., reducing cost and time for hand trimming.

Golf Executives

Centaur's operating cost is but fifteen cents an hour—the most economical unit you can buy for fairway mowing! Write us today for full information and illustrated literature.

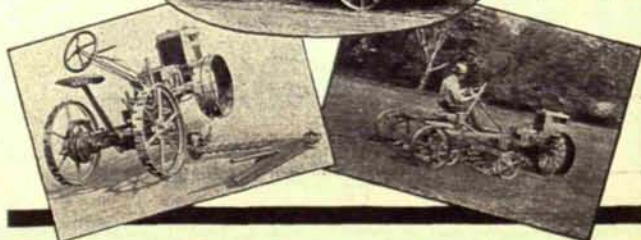
THE CENTRAL TRACTOR COMPANY
202 Central Avenue Greenwich, Ohio

Below:
Centaur with
field mower
for cutting the
rough.

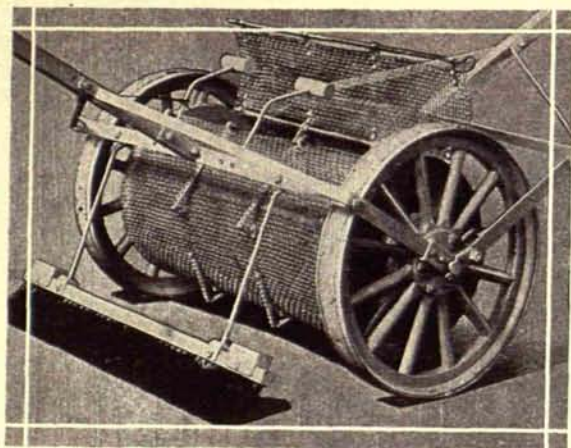


At Left:
Centaur with
dump cart for
hauling jobs.

Below:
At work on
the fairway.



THE MACGREGOR COMPOST DISTRIBUTOR



This is a machine which no greenkeeper should be without. One greenkeeper says, "I cut my labor cost on top-dressing more than half." Another says, "I wouldn't be without one; the workmen like it." Still another says, "Ship me another for spring delivery." There are many more, but space does not permit us to print them. This top dresser gives you an even and economical distribution of compost, insuring a true putting green.

A MacGregor Compost Distributor enables you to make your greens as uniform as it is possible to get them, and cuts in half the time spent in top-dressing 18 putting greens.

"Order now as top-dressing is in order"

Literature upon request

MACGREGOR COMPOST DISTRIBUTOR CO.

P. O. Box 717

WHEATON

Illinois



Tee Stand



Tee Ball



Turf Cutter

Greenkeepers

Time soon for golf--and course supplies. Are you prepared? Spalding's offer everything necessary to the greenkeeper. If you can't call, write for our catalog.

Tee Stands	Tee Plates	Tee Balls
Turf Cutters	Hole Rims	Setters
Flags	Bamboo Poles	Marking Discs

A. G. Spalding & Bros

New York Philadelphia Chicago San Francisco
—and all principal cities

A B C of Turf Culture

(Continued from page 14)

humus) often wilt even though peat still contains about 50 per cent of water. Yet it is a well known fact that soils well supplied with humus resist drought better than soils low in humus. The difference is probably not so much in the greater amount of water held as in that the humus soil absorbs a large amount of water temporarily during a heavy rain and then lets it work more slowly down into the soil. Thus the water is kept within reach of the plant roots for a longer time.

Humus is also able to absorb plant food materials such as ammonia, phosphoric acid and potash. Thus it tends to reduce the danger of loss from leaching.

Humus Modifies Soil Texture

The texture of sand and clay soils is materially modified by humus. It acts as a weak cement and holds the particles of soil together, thus it serves both to bind the coarse grained sandy soils and by forming aggregates of the finest particles to make the clay soils more open.

Methods of Increasing Humus in Soil

While turf soils need humus, its use is sometimes overdone. The amounts of humus formed from turf roots is considerable. Throughout the growing season as new roots develop, the older ones die and add organic matter to the soil. If established turf is encouraged to make a consistent growth the organic matter will take care of itself on most soils. It is only on the heavy clay and light sandy soils that organic matter presents a real problem, and this is best solved in connection with soil preparation prior to seeding.

Established greens receive frequent top-dressings of material containing considerable organic matter. This practice provides ample organic matter. In fact many greens probably contain more humus than is necessary, and this humus, together with the excellent moisture conditions, makes worms troublesome. The excellent results produced by top-dressings high in organic matter may be partially due to the large nitrogen requirements on greens. Nitrogen is constantly removed in clippings and suffers further loss by leaching. These losses must be replenished. Only enough organic matter should be used in top-dressing mixtures to produce the desired texture and additional plant food supplied by the use of fertilizers.

New greens should receive only enough manure or other humus material to give the desired texture and resilience. Yet the same result can often be obtained by varying the proportion of sand or clay. Here again needed plant food can be added in more concentrated form. Imbedding layers of manure below the surface serves no useful purpose. It harbors worms and places the plant food beyond reach of the short grass roots. Such practice does not encourage deeper root development.

(Continued on page 38)

Say you saw the ad in *The National Greenkeeper*

The F. & N. "Quintet"

F. & N. TITAN FAIRWAY Mowers are the only ones obtainable with patented self-adjusting bearings in the revolving reel. This device automatically keeps the bearings in perfect adjustment throughout the life of the mower. (Patented April the 10th, 1923).

Leading greenskeepers who *know* fairway mowers, invariably buy the F. & N. "Quintet." They *know* that F. & N. TITAN Fairway Mowers are designed and made especially for this heavy, rugged, tractor service—by the world's largest lawn mower makers. They *know* that genuine Timken Roller Bearings, cut steel gears, oil tight gear cases and the many other TITAN features assure smooth, quiet operation for a longer time than usual—and with the least attention. Even the reel bearings never need attention—they are SELF-ADJUSTING. Play safe. Don't guess. Buy F. & N.

The F. & N. Lawn Mower Company
The World's Largest Lawn Mower Makers
Richmond, Ind., U. S. A.

Supplied in gangs of three or five for Fordson, Staude, International and other tractors complete with attachments and heavy flexible all steel frame.



THE "LARK" SPRINKLER

It Sprinkles up to 150 feet

No Gears

Perfect Distribution

No Repairing

Fool-Proof



For Golf Greens and Fairways—Parks and Large Estates

Like a Lark it soars far out in a beautiful spray, alighting gently on the green in a wide, far reaching circle, perfectly distributing the water from the sprinkler to the outer edge.

It has no Gears but revolves as slowly and steadily as a geared sprinkler.

Neither wind, nor sloping hillside will stop its steady revolution.

The Lark is a labor saver for its wide covering capacity saves frequent setting. It is light in weight and easy to carry.

The Roller base prevents any damage to greens.

Price \$15.00 each. It is warranted to give long service and satisfaction.

L. R. NELSON MFG. CO.

PEORIA, ILLINOIS

ROYER COMPOST MACHINE

Cuts the time and expense of preparing top-soil, compost, etc., 75% to 85%



A Royer blending and shredding sand, soil and manure in one operation as fast as two men can shovel the material into the hopper

Do you read the newspaper, or drive an automobile, or ride in a modern steel train, or talk over the telephone?

Would you care to go back to the days when the news was broadcast by the town crier, and when traveling was done by means of the stage-coach, and when messages had to be delivered cross country on horseback?

If not, why not modernize your golf equipment. The old method of screening top dressing and compost is just as obsolete and out-of-date as the town crier or the stage coach. Investigate the Royer compost machine, and cut costs to one-half or one-sixth of your present expense. Send for latest bulletins.

L. F. MITTEN

P. O. Box 119

Wilkes-Barre, Penna.



"Beautiful Turf from Tee to Green"

Grass Seed of Known Quality

TESTED for PURITY and GERMINATION

South German Bent Rhode Island Bent
Colonial Bent Cocoos Bent Fancy Red Top
Kentucky Blue Chewing's N. Z. Fescue, etc.
Creeping Bent Stolons

Prices on Application

Remember:—All our seeds are of the highest quality, obtained direct from the most reliable sources of supply and are botanically true to name. All seeds are new and are cleaned and re-cleaned until they are brought up to the highest possible state of purity and germination, special care being given to the elimination of weed seeds.

Without obligation we shall be pleased to send a representative who, from long experience, is qualified to advise regarding grasses and furnish such other information as is necessary for the best results.

Stumpp & Walter Co

Specialists in Golf Grass Seeds and Equipment

30-32 Barclay St., New York

A B C of Turf Culture

(Concluded from page 36)

On most fairways the best way to insure sufficient organic matter is to encourage growth of a dense heavy turf. This is accomplished by providing adequate drainage, sufficient plant food and in some instances water should be provided during periods of dry weather.

Light sandy soils present a real problem and may require top-dressing with a heavier soil containing an abundance of humus. This not only adds humus but the finer soil particles as well.

New fairways often require organic matter, especially if the soil is a heavy clay or sand. Manure is often used to good advantage when it can be obtained at a reasonable price. Green manure crops plowed under some time before seeding add considerable organic matter. One of the legumes—clover, corn, peas, soy-beans, etc.—should be used. They not only supply organic matter but nitrogen as well, which is gathered from the air. The seed should be inoculated before seeding to insure the presence of the bacteria which gather the nitrogen. Good cultures are easily obtained. Since legumes usually respond to phosphate fertilizers it is generally well to apply 250 to 300 pounds of acid phosphate. If a combination seeder and fertilizer drill is used it can be applied simultaneous with the seeding. The phosphate serves later to stimulate root development of the young grass seedling.

Building Beauty Into the Bunkers

(Continued from page 28)

Improve Yourself as a Greenkeeper

Getting back to what I previously stated, the greenkeeper ought to have a fair knowledge of botany; this is essential if he takes an interest in his work for plant life with its scope for study will prove beneficial and interesting. The different kinds of grasses should be studied and carefully noted, on what ground they thrive best and under what conditions. The more knowledge we greenkeepers gain the more we want to know, and to my mind a golf course is unlimited in its possibilities of study.



THE WEAR-WELL TRACTOR WHEEL SPUD

Heat Treated, Oil Tempered Steel

**Double the Life of
Other Spuds**

Square Shoulder, Easy to
Install or Remove

Send 10c postage for sample.
(Adolse make of your tractor)

R. S. HORNER, M'F'R,
GENEVA, OHIO

AMMO-PHOS

Produces Perfect Putting Turf

Three qualities are essential to satisfactory putting greens—

- 1—Good texture
- 2—Resistance to wear
- 3—Freedom from weeds

Ammo-Phos provides an abundance of plant-food nitrogen which gives luxuriant turf of splendid texture, and plenty of plant-food phosphorous which results in wear-resisting turf. It fosters the growth of grasses at the expense of undesirable weeds.

The Green Section of the U. S. G. A. enthusiastically endorses Ammo-Phos.

Ammo-Phos '20-20' grade contains 20% ammonia and 20% available phosphoric acid, practically all water soluble. It is an ideal material in every respect—dry and granular, uniform throughout, containing no free acid, and may be stored indefinitely without deterioration.

Mail the coupon for descriptive literature

AMERICAN CYANAMID COMPANY
535 Fifth Avenue New York, N.Y.



American Cyanamid Co.,
535 Fifth Avenue,
New York, N. Y.

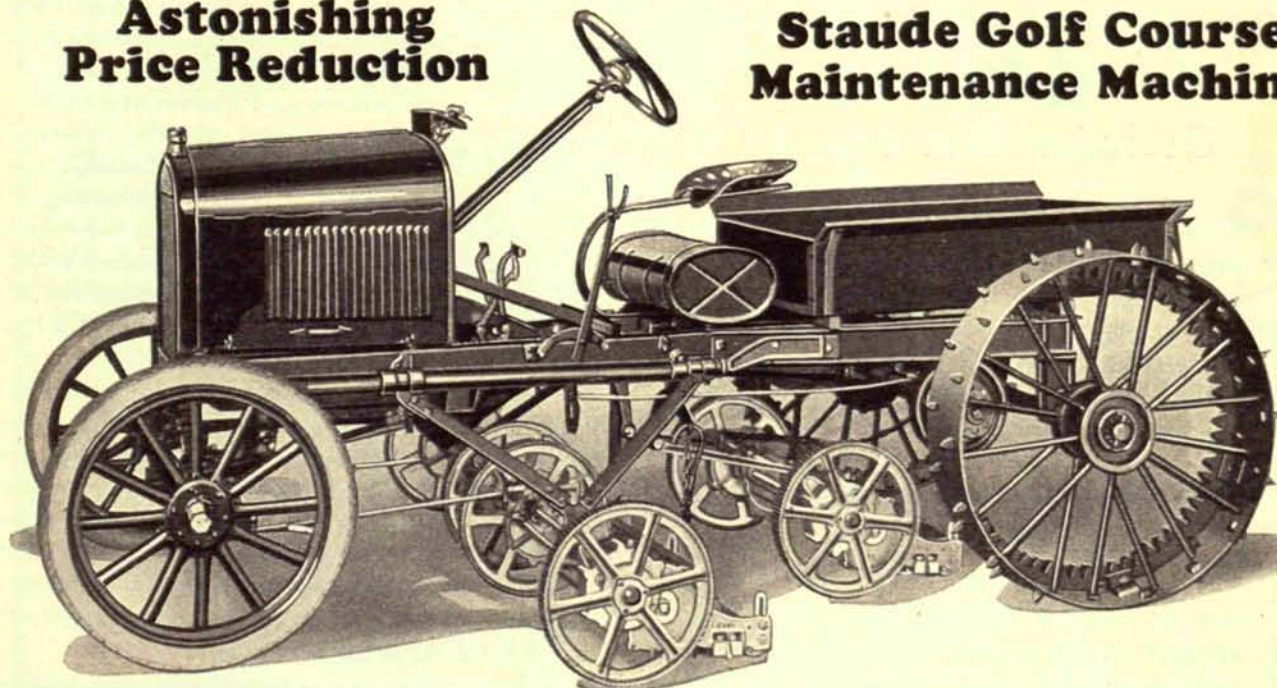
Please send me prices and full information
about Ammo-Phos 20-20.

Name.....

Address.....

Astonishing Price Reduction

Staude Golf Course Maintenance Machine



Price complete as shown, including Tractor, box, mower hitch and three 30" cutting units only \$695.00 f.o.b. St. Paul. Staude General Utility Golf Course Tractor alone \$420.00 f.o.b. St. Paul.

In universal use on golf courses.

Easy monthly payments if desired. Machine fully guaranteed. Write at once for full information.

2630 University Ave. **E. G. STAUDE MAK-A-TRACTOR COMPANY** St. Paul, Minnesota



Westchester-Biltmore C. C., Rye, N. Y.
"One of our users." (Photo Levick)

The Peerless Lawnmower Sharpener

THE PEERLESS Lawnmower Sharpener not only saves time and money in every Golf Club, but it does the work so much better there is really no comparison. Cutting blades are automatically ground alike with proper clearance or bevel. No more hard-running mowers—no more tearing of turf; grass is *sheared* off—not pulled out by the roots.

Not a Complicated or Expensive Machine

The Peerless is simple to operate and costs little to buy. Will save its cost the first season. Operated by $\frac{1}{2}$ H. P. Motor—attach it to your lamp socket.

Special Grinding Wheel Attachment for sharpening grass shears, sickles, scythes, axes, etc. Skate Sharpener Attachment sharpens all makes of skates—including hockey. Earns money all the year round. Hundreds of Clubs—both large and small, use the Peerless Sharpener. Write for Catalog and list of users.

The Fate-Root-Heath Co.

825 Bell St.

Plymouth, Ohio

WEEDS— Golf's Worst Enemy

Three-fourths of the golf course seed sowed could have been made purer by another cleaning. By that simple process the expense of seeding would be increased no more than 5% and you could charge off twice that amount from your weed-pulling bill.

Scott's Seed has had the extra cleaning. It has given complete satisfaction on over 700 golf courses in 43 states. If not in use on your course, why not suggest to the greens chairman that he send the next seed order to—

O. M. Scott & Sons Co.

Marysville, Ohio

Month by Month With the Trees

(Continued from page 21)

rather flippant reply: "Prune when your knife is sharp." In other words, pruning can be done successfully at any time of the year. The results to be obtained usually determine the time of year to do pruning. The most rapid healing results from pruning done in the early part of the summer. The greatest growth is stimulated by pruning done at the same time. Trees are checked most in their growth by pruning done in the late summer and fall, and so on for the many various purposes which one may desire to obtain through pruning, so that one must necessarily determine the results desired and then prune accordingly.

After the pruning operation is completed, the care of the resulting wounds is exceedingly important. When twigs are removed, ordinarily no care is given to the wound. It is more or less comparable to a small clean cut in one's skin, which in ninety-nine cases out of a hundred will heal up quickly, with no resultant damage. Wounds resulting from the removal of branches from one-half to two and one-half inches in diameter should be thoroughly dressed with some antiseptic wound dressing, because if they are not so treated, decay will surely start before the wound can be healed.

Use a Good Wound Dressing

Ordinary lead paint is not a good wound dressing. In fact, it has been pretty definitely proved that paint is worse than no dressing at all. The Sherwin-Williams Company manufactures and markets a product known as the Sherwin-Williams Pruning Compound which can be purchased at most any Sherwin-Williams store, that is very good. Some writers have recommended coal tar and creosote for treating pruning wounds. These are not satisfactory because the creosote is exceedingly toxic to living wood and instead of helping the healing, distinctly retards it and sometimes kills back the bark as much as two or three inches beyond the original outlines of the wound. Even the best wound dressings are only good for two or three years at the most and have to be replaced.

Because the human mind has a tendency to forget, it is always best to treat pruning wounds which are three or more inches in diameter in some permanent way so that forgetfulness will not prove disastrous. On these larger wounds, it is a good practice to excavate an inch or two of the sound wood and fill the resultant cavity with cement, which will form a permanent protection to the exposed wood and form a solid, indestructible base over which the callus can readily grow.

There are so many limiting factors in pruning, so many details which mark the line between success and failure, that the pruning operation deserves far more careful attention than is the common practice at the present time. Pruning is an important operation and should be given the utmost care and thought, if the desired and not disastrous results are to be obtained.

Say you saw the ad in *The National Greenkeeper*