

# Tested Seeds

**N**O matter how well the soil has been prepared, or how fully the thousand and one little details have been taken care of—if the seeds you plant are not right, it is largely wasted effort. This is why we emphasize, at all times, what we term "The Henderson Standard of Quality," rather than our prices.

We have always believed that there is a demand for the highest grade of Grass Seed—Grass Seed that could be depended upon, and the results have fully justified this belief.

Let us quote you on your requirements, and you will be surprised to find that the prices for Seeds of the Henderson Quality are about the same as you have been paying, but with a vast difference as to results.

We can help you with your course problems. Our staff of trained men is competent to assist you, whether it be a complete new course, the renovation of your present one, or the usual problems that come from day to day.

An inquiry does not obligate you in any way.

**PETER HENDERSON & CO.**

SEEDSMEN

*Everything for the Golf Course*

35-37 Cortlandt St.

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New York City



kaline, they are slightly acid from using chemical fertilizers containing acidity. There is an honest difference of opinion among greenkeepers and others, whether we are just in using an acid fertilizer. While I did not discover sulphate of ammonia as a fertilizer, it having been previously used in England and America, and practically discarded, Prof. R. A. Oakley can inform you that in the early history of the Green Section I advocated acid soils for bent and fescue grasses.

I have probably used it more than any greenkeeper in this country, and I have never found any reason to discontinue the use of it. In having nine putting greens from various parts of the course of the Youngstown Country Club analyzed by a competent chemist, his report was that four were sub-acid, three were minimum acid and two were neutral. This demonstrates that you cannot by the continual use of sulphate of ammonia get too much acidity by its use in the soil. This also shows that when the soils obtain a certain degree of acidity, an acid reaction takes place in the soil, and gradually brings the soils back to neutral, its former condition. There are some who believe that this fertilizer is the cause of the brown patch and other diseases which affect our turf. Before we were using sulphate of ammonia we had the brown patch disease. For instance, I may refer to Columbia Country Club, Washington, D. C., where they had brown patch during the National open several years ago. They were not using this fertilizer at that time.

One of the greatest troubles we may have by its use is, that at times we use too much of it, and create too much forcing of the grass plant, besides making the grass too tender. During brown patch weather we should only create enough nitrogen to keep the grass healthy and alive.

#### Greenkeeper Must Have Technical Information

**Y**ESTERDAY chemicals on a golf course were limited; today with all the big array of chemicals being advertised for, fertilizers, fungicides, insecticides, or what not, the greenkeepers of today must have some technical in-

formation himself, or to have some source to which he can turn for that information, unless he is to become a victim of the salesman with the best "line" of talk.

This is exactly the same situation which is found in modern farming as compared with farming of some years ago. The more progressive farmer years ago learned that they could not become expert in raising all crops, expert chemists, expert disease men, expert mechanics all in a lifetime. They, therefore, have demanded help from the Federal Government and the state governments in providing the highly specialized advice, which they themselves have not time to get. There are various farmers' organizations which have served to tie technical and practical parts together, as well as to help each other out.

Greenkeeping as I see it, is now reaching a point that farmers were forced to reach several years ago. In other words, I think you will readily agree with me that the demands of the golfers have become more exacting and the problems of the greenkeeper have increased tremendously during the past few years. This calls for better trained greenkeepers and for men who are willing to keep abreast with developments. The day for the greenkeeper with an unwillingness to learn from others, as well as to help others, is fast coming to a close.

#### Greenkeeper is Backbone of Golf

**T**HE greenkeeper of today has begun to realize that he is not only the backbone of successful golf, but also a leading auxiliary of big business. We have been too modest all along and for that reason golfers have blamed the greenkeeper for everything from an incurable slice to a lost ball. The greenkeeper at least realizes that he holds a key position in world affairs. The big business of the country look to golf for their recreation. If the greens are in good order, the business man is happy, and his state of mind is reflected in his work. If the greens are not kept up, the business man loses his temper, goes home cross and his business suffers. By perfecting our profession, we expect to tone up business.

(Concluded on page 42)



# .1929. WORTHINGTON MOWING EQUIPMENT



The Standard Mowing Equipment of the World

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### Booth III

At The Golf Show

**I**  
*is significant  
that*

**WORTHINGTON  
GANG MOWERS**

*are used on more  
golf courses in the world  
than all other makes combined.*

### STANDARD 30" UNIT — SEVEN BLADE REEL

20% Increase in wearing quality.  
Prevents all ridges sometimes noticeable on fairways.  
Smoother running—less draft—no shocks.

### THE IMPROVED LAWN TRACTOR

Substantial improvements.  
Featuring extra attachments for night mowing.

### THE "OVERGREEN"

Stronger and lighter design.  
Improved mechanism.  
Simpler in operation.

### THE "OVERLAWN"

New Gang Principle.  
Combination Triple cutting 36 inches or  
48 inches.

### "SHAWNEE CHIEFTAIN"

18" Hand Green Mower. Very light  
and simple in its operation.

The Public is advised that the combination of gang lawn mowers with motor tractor, either of the draft or push type, is fully covered by U. S. Patents, issued and pending, owned or controlled by this company. That the sale of any tractor used in combination with a gang mower, may render the vendor or user liable to infringements. This Company will protect its rights.

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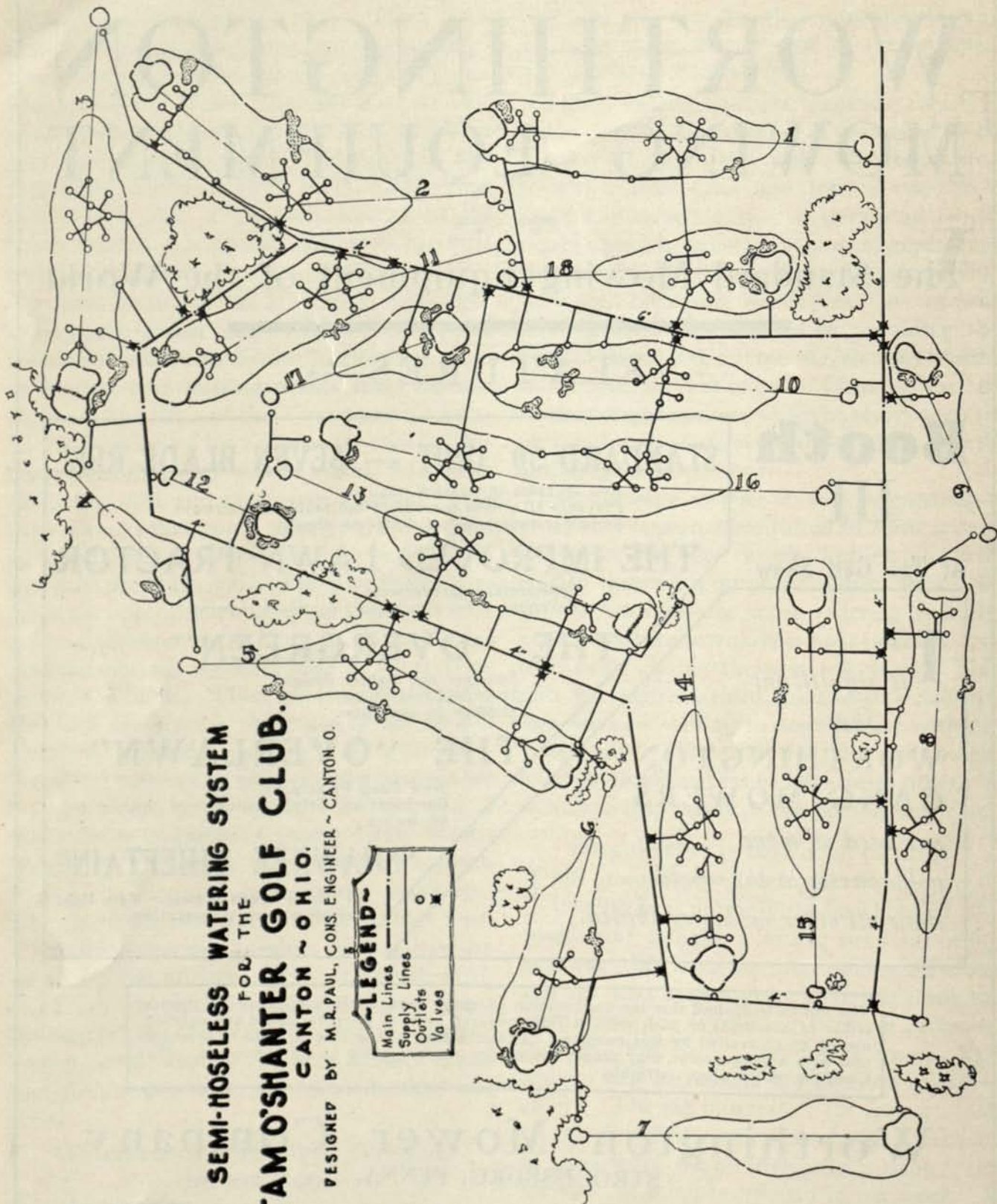
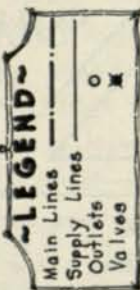
CLEVELAND  
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(Agencies in All Principal Cities)



**SEMI-HOSELESS WATERING SYSTEM**  
**FOR THE**  
**TAM O'SHANTER GOLF CLUB.**  
**CANTON ~ OHIO.**

DESIGNED BY M.R. PAUL, CONS. ENGINEER ~ CANTON O.





# Fairway Watering

By M. R. PAUL, *Construction Engineer*  
Tam O'Shanter Golf Course, Canton, Ohio

**F**AIRWAY watering, while a comparatively new development, is gaining adherents rapidly among all classes of golfers, and golf course maintenance standards will soon demand recognition of its advantages.

Fairway watering, first developed as a necessity in arid or semi-arid regions in California, has spread eastward so rapidly that the majority of the newer courses are making provisions for it in original construction and many old courses are adding equipment to care for their fairways.

There have been two major systems of piping developed to care for fairway watering, the first, the hoseless, very nearly automatic system, and second, the manual or hose system. There have been variations of these two worked out but the basic principle of each is unchanged. The recent development of the snap valve has made the hoseless system preferable, due to less labor cost and higher efficiency.

Tam O'Shanter Golf Course at Canton installed the manual system for watering its fairways; first, as a matter of experiment and second, because of the many gravel hills over the property. The pumping unit was designed to supply 300 gallons per minute under a minimum pressure of 40 pounds at any fairway outlet. Outlets were spaced every 100-125 feet along the edge of the fairway and sprinklers were to be served by 1 inch or 1½ inch hose.

The Main was laid paralleling the holes and short leads were taken from it. Pipe sizes were computed to allow the minimum pressure where there was any question of pressure sufficiency. Main sizes were calculated on the same basis and the hydraulic gradient determined. Pipes were laid in a 24-inch ditch and sumps connected to the drainage system.

## System Cost Only \$2000

It is estimated that this extension, the fairway outlets, increased pump capacity and pres-

sure tank cost only \$2000 in addition to the usual pumping system. This is exceptionally low and is caused by the layout, a long narrow piece with parallel holes, making it only necessary to add outlets from the main line to water fairways. This system has been in operation for one year and the results have been so gratifying that the owners have decided to install a fairway watering system on the second 18 holes, which will be completed in 1929.

The accompanying drawing shows the plan for the watering system on the No. 2 Course. This is a combination of the two systems, the hose and the hoseless systems. Notice particularly that the hoseless system will be installed at points receiving the heaviest play, that is, landing areas and approaches. The balance of the fairway area will receive the same system as was installed on the No. 1 course.

It is of prime importance that these landing areas and approaches be kept in the finest possible condition and they are the first areas to receive attention in any watering system. It is, therefore, entirely logical that these areas should have the most efficient plan and the one with the lowest labor cost, for the balance of the fairway area may be neglected until times of extreme drought.

Minimum pressures of 60 pounds will be maintained at all outlets, due to the lesser length and roll of the ground. In the main, pressures will vary from 115 to 80 pounds and the system will provide for 300 g. p. m.

A word in regard to the pump used might not be out of place. As there was no water supply available other than a drilled well, a 10-inch well was sunk to a depth of 90 feet. In the casing were installed runners for a centrifugal pump and a vertical lift centrifugal pump with an initial lift of 60 feet was installed. The 10-inch well has been tested to

(Concluded on page 42)



# Eliminate that Expensive COMPOST PILE



## use **LECCO** the COMPLETE GRASS FOOD

### LECCO RAISES GRASS—THE COMPOST PILE RAISES NOTHING BUT CAIN

The compost pile is a focus of infection, a fly-breeding, vile odored, money-eating relic of the dark ages of turf culture.

Modern methods say: GET RID OF IT.

Of course, there will always be people who will dispute scientific facts. In all communities you can find some old stiff-neck who thinks that a bag of asafetida tied around the neck is a better treatment for flu than the prescription of a wise physician.

There are people who carry horse chestnuts in their pockets to ward off rheumatism.

In York, Pa., men recently were tried for practicing witchcraft. And—here and there you will find a compost pile.

But greenkeepers who are progressive and open minded have learned that Lecco, the complete

grass food, offers the modern method for turf culture.

Lecco is the result of twenty years of research and study on the part of Lyman Carrier to evolve a complete and balanced ration for grass—and grass alone.

That it produces more abundant, healthier, and disease resistant growth is a fact, attested to by thousands of greenkeepers. Their letters are on file and are interesting reading. And—it banished the compost pile for good and ever.

Lecco is the cheaper, the more efficient, the safe means of raising good grass and turf.

If you are skeptical, write in for our booklet with testimonials or go to any greenkeeper who has used Lecco. You will be amazed at its marvelous record. You will be delighted to get rid of that compost pile.

#### COCOOS CREEPING BENT SEED

Used everywhere. Difficult to obtain the genuine, yes! But there's a reason for this. It's practically immune to brown patch when once established. Cocoos stands erect and does not grain. It's the last word in fine turf. A guaranteed purity of 90% or better. High germination percentage.

#### WASHINGTON CREEPING BENT STOLONS

From the original strain. Healthy children of a great family. Thrive and prosper anywhere. Highest in quality and priced reasonably. Carrier's stolons are the preferred, naturally, for Carrier created the strain. They are ready for spring planting. Let us know your needs.

## LYMAN CARRIER

Granger, Ind.

Cleveland Office  
Willoughby, Ohio





## Easier, Cheaper to Operate

**T**HE operator has been kept constantly in mind in connection with every detail of construction of the PENNSYLVANIA "New" Fairway Quint or Trio.

As illustrated, a **UNIQUE LIFTING DEVICE** enables the operator to raise or lower the two outboard units of the "New" Fairway Quint to permit it to pass through narrow spaces. The "New" Fairway has fewer parts than any other Fairway mower; its **PULL-FRAME** insures better control and vision; the **CLOSELY-COUPLED FRAME AND UNITS** permit quick handling and short turning; the **HINGED FRAME** insures full flexibility, and the **WHEEL-TYPE UNIT**, being simpler, is easier to adjust and makes shorter turns without digging the turf.

Write for our new **SPECIAL CATALOG**, which pictures and fully describes the "New" Fairway, the Super Roller and New Aristocrat greens mowers and the other PENNSYLVANIA Quality Mowers for Golf Courses.

### PENNSYLVANIA LAWN MOWER WORKS

1645 North 23rd Street

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Philadelphia, Pa.

"Giving Perfect Satisfaction,"  
Says Noted Golf Architect

In a recent letter, Captain D. L. Rees, grounds superintendent of the famous Progress Country Club, at Purchase, N. Y., and a noted Golf Architect, has the following to say about the Pennsylvania "New" Fairway:—

"I would like to go on record that the Pennsylvania "New" Fairway Quint is giving perfect satisfaction and is, in my opinion, equal to—or better than—the best machines on the market today."

**PENNSYLVANIA**  
*Quality*  
**LAWN MOWERS**





Take  
My  
Tip!  
Try  
This:

## Spring Treatment of Putting Greens and Fairways

Begin to feed the weakened roots and stolons as soon as snow and freezing temperatures are gone. Feed NitroPhoska—a water soluble, quick acting grass food that develops a strong, solid-growing, wide-spreading, deep-feeding root system. It is concentrated, balanced, 10% available at once, 90% slowly available, clinging to soil particles and nourishing the roots until finally absorbed.

# NITROPHOSKA

is not easily washed out of soil. Its popularity with greenkeepers is growing steadily. 4 to 6 pounds mixed with compost, humus or granulated peat moss sprinkled over an area of 1,000 square feet will develop a strong root system and a vigorous, healthy top growth.

An early start means a finer turf in late Spring; a strong sod in Summer, and a drought and pest resisting turf in Autumn. Follow with—

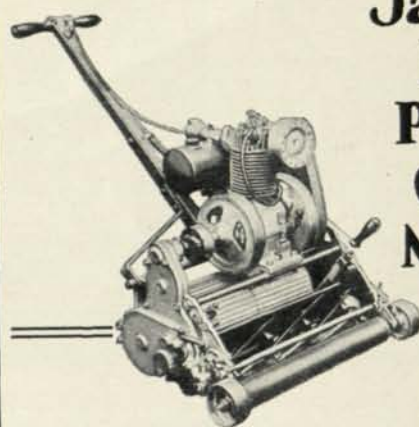
UREA (*Floranid*) the world famous organic nitrogen grass food. Apply 1 lb. to 1,000 square feet. It is entirely soluble in soil water. Twenty-two pounds equal a ton of best manure in fertilizing value. It will give your putting greens a billiard table surface and a velvety, deep greenness that will be a joy to players, club officers and especially to the greenkeeper.

Both are odorless, easy to apply, economical, leave no injurious, insoluble oxides or residues in the soil. Sold in convenient packages by your golf supply dealer. If he hasn't them, write us his name and we will see that you are supplied.

Send for instructive literature. It's Free.

**Synthetic Nitrogen Products Corporation**  
Garden Department  
285-S Madison Avenue New York

**\$1,000,000  
SAVED with**



**Jacobsen  
Power  
Putting  
Green  
Mowers**

THE success of the Jacobsen Power Putting Green Mower has been spectacular. Year after year this mower has added to its conquests and it is recognized as standard equipment on thousands of greens. Golf Clubs of America have saved over a million dollars with Jacobsen Power Putting Green Mowers, with the added satisfaction of more perfect greens, and greens ready for the players earlier in the day.

Jacobsen Putting Green Mowers are gear driven and have separate clutch control of traction and cutting unit. They travel on their own power with or without revolving the reel. All major castings are made of aero-plane aluminum and the light weight is perfectly balanced over the large aluminum traction roller. The mower exerts no more pressure on the green than a man's foot. The traction roller is divided at the center and equipped with an auto-type differential which permits easy turning without scuffing the green.

The Jacobsen Power Putting Green Mower produces a finer cut than any push-type mower. It is speedy, efficient and will not scalp the undulating green.

A Power Cart for transporting the mower, and a Green Brush attachment are Jacobsen accessories greatly appreciated by greenkeepers.

## A Valuable Free Guide to Green Maintenance

This new book describes Jacobsen Power Putting Green Mowers and equipment. Gives actual records and data from various Clubs, offers a solution of the Brown Patch Problem. A postal card brings you a copy.

**JACOBSEN  
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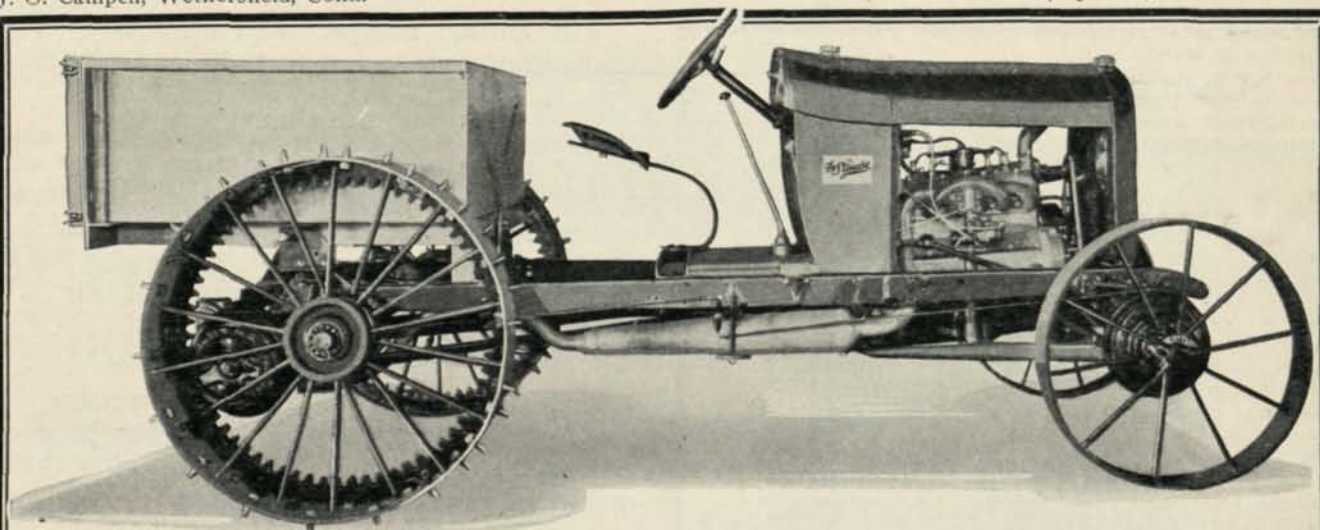
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(Concluded on page 21)



## MODEL A STAUDE GENERAL UTILITY GOLF COURSE TRACTOR

PRICE ONLY **\$695.00** F. O. B. ST. PAUL

(Complete as shown in cut including New Model "A" Ford Chassis with cubic yard all-steel dump body)

Has No Equal in Speed, Power, Economy and Service. Anybody can operate it. Any Ford Dealer can Service it. Tractor sold under Money Back Guarantee. Write Today for full particulars.

**E. G. STAUDE MAK-A-TRACTOR CO.**

2630 University Ave.

St. Paul, Minn.





## JOHN QUAIL SAYS:

It won't be long now boys, get out that old suit case and dust it off. All roads lead to Buffalo.

The "one and only Scotty McLaren" will be on hand to renew acquaintances. There is many a good time where Scotty is.

The entertainment committee is working hard. They have some big surprises in store for us. The trip to Niagara Falls when it is frozen over is worth a trip to Buffalo alone.

If your wife is coming with you she will be well taken care of. The Wives of Greenkeepers Association is planning a lively time. Bring her along, she will enjoy the trip. Make it a second honeymoon.

### Convention Headquarters



## HOTEL STATLER BUFFALO

Delaware Ave. at Niagara Square

1100 Rooms      1100 Baths

Radio in Every Room

## To Golf Club Officials

It is often folly when a golf architect turns over a new course to a club to employ an inexperienced greenkeeper.

Why not employ one with all the necessary qualifications? He will know how to bring the course up-to-date and with less cost than an inexperienced man.

We have a number of greenkeepers seeking new courses. If you desire these kind of practical men address:

### EMPLOYMENT COMMITTEE

The National Association of  
Greenkeepers of America

405 Caxton Bldg.

Cleveland, O.

The annual banquet will be a gala affair. Everything from soup to nuts, and plenty of everything.

The stag and smoker promises to be a surprise. Nobody knows what it will be but the entertainment committee and they have all lost their voices when you ask them about it. The only way to find out anything about it is to be there and see for yourself.

How about bringing along that prospective member and your chairman. Your prospect will want to become a member and your chairman will be glad you are a member.

The membership of the association is growing slowly but surely. About forty members have joined since June. There are a few who have just sent in their applications and will be members by the time we meet in Buffalo.

We are sorry to announce the sickness of Vice President John McNamara. John was taken sick while in New York attending the U. S. G. A. Green Section meeting. He had to remain in New York for several days before he was strong enough to make the journey