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**AMERICAN SEED COMPANY**  
DETROIT, MICH.

*"Quality Grass Seed for a Quarter Century"*

a happy frame of mind. The early spring brought courses into play in March, an unusual condition in Canada, while torrential rains and midsummer temperatures which followed carried out all frost, although it is true that the storms which swept the lower part of the Province did some damage to the courses. Howard Lloyd, greenkeeper at the Rosedale club, is confronted with the job of rebuilding portions of one fairway. Piling which protected several fairways was swept away by the swollen stream. The damage to other courses was comparatively slight and would only become serious in the event of snow and frost, not an uncommon occurrence in April.

Records at the Toronto Golf club show that the putting greens were clipped some years ago on April 9. This year the prevailing conditions have been responsible for a remarkable growth and greens are being trimmed. Mild weather which followed the storms dissipated fears that a return to winter would seriously delay growth and do any considerable damage to fairways and putting surfaces.

"Unless we have some severely cold weather within the next three weeks," said Hawkins, "we are off to an exceptional start. The storms naturally favored the sand courses, yet the rainfall may prove of great benefit to the numerous clay courses. We are weeks ahead of the game and quite contented with the prospects for the season."

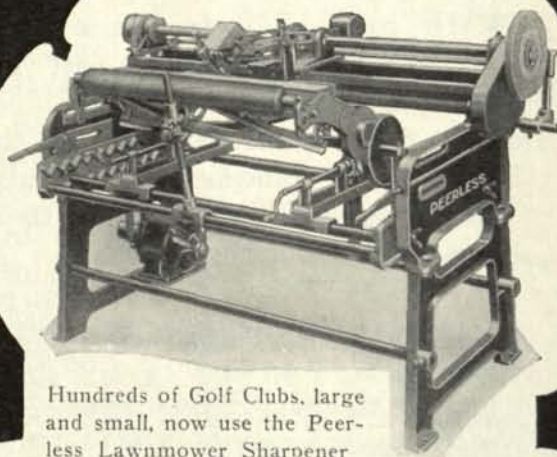
**HUBBARD NURSERIES**  
**CREeping BENT STOLONS**

*Washington and Metropolitan Strains*

Pure, free of weeds, and of one season's growth

**DR. AMOS F. HUBBARD, N. Kingsville, Ohio**

# The Peerless Mower Sharpener



Hundreds of Golf Clubs, large and small, now use the Peerless Lawnmower Sharpener

## It Perfects The Cutting Edges of any make of Mower

### And That Means Perfect Turf

The Peerless Mower Sharpener is the only machine that sharpens all makes of Power, Horse and Hand Mowers *scientifically — quickly — perfectly* — does the work as nothing else can. Operated by 1/3 H. P. Motor—attach it to your lamp socket. Special Grinding Wheel for sickles, scythes, etc. Skate sharpening attachment included. Will save its cost the first season. Write for catalog and list of users.

**THE FATE-ROOT-HEATH CO.**  
925 Bell St., Plymouth, Ohio

*We will exhibit at the International Golf Show*

# The Peerless Mower Sharpener



# HOW MUCH IT COSTS

*A statistical resume of income and expert*

BY E. W. DOTY, *Treasurer, The*

THE cost per hole for course maintenance is higher for the past year than it has been for some years. No doubt this was in part due to the brown patch epidemic of last July. The figures for the past year and those given a year ago are as follows:

	Cost of Course Maintenance	Cost Per Hole 1928	Cost Per Hole 1927
Sleepy Hollow .....	\$11,584.35	\$ 643	\$ 772.00
Lorain (9 holes) ....	7,922.32	880	* *
Lakewood .....	21,417.69	1189	* *
Westbrook .....	21,689.38	1204	* *
Youngstown .....	21,703.27	1205	* *
Willowick .....	22,454.97	1246	1376.00
Kirtland .....	23,509.40	1306	* *
Chagrin Valley .....	23,954.29	1330	1095.00
Westwood .....	25,338.67	1407	1347.00
Shaker Heights ....	25,534.57	1418	* *
Oakwood .....	25,903.74	1438	1072.00
Mayfield .....	28,810.64	1600	1294.00

\* \* NOTE—These clubs did not report in 1927.

The figures of Mayfield include the cost of green service and if only \$3600 was expended by Mayfield for green service—and it was probably more—the cost per hole for Mayfield would be \$1400 instead of \$1600.

Two major tables have been prepared and are presented herewith. The

first is one showing the income from the principal sources common to all clubs. The absence of figures under the heading of associate or family fees for several of the clubs would indicate that such fees are included with those for ordinary dues; it is therefore impossible to present a complete comparison for such receipts.

It would be very interesting if all the clubs would report the receipts from ordinary dues separately from those fees levied for associate or family privileges.

The Kirtland receipts for dues are much higher than those of any other club because Kirtland includes many activities that other clubs do not; and such activities necessarily increase the dues.

	INCOME	
	Dues	Green fees
Kirtland.....	\$90,014.58	\$4,731.00
Shaker Heights.....	70,680.00	9,402.00
Mayfield.....	62,063.54	7,441.26
Oakwood.....	60,027.09	2,946.00
Westwood.....	53,947.50	8,813.00
Youngstown.....	52,438.52	5,440.00
Lakewood.....	51,841.05	6,320.00
Willowick.....	41,613.00	8,287.00
Chagrin Valley.....	40,354.17	7,062.00
Westbrook.....	38,157.00	2,474.00
Sleepy Hollow.....	31,164.36	7,745.25
Lorain (nine holes)....	13,579.96	1,397.00

	EXPENSES			
	Course Maintenance	Green Service	Club House Expense	Adminis- tration
Kirtland.....	\$23,509.40	\$6,506.77	\$36,730.62	\$7,670.51
Shaker Heights.....	25,534.57	8,513.74	44,668.43	3,206.47
Mayfield.....	28,810.64	.....	31,689.88	3,829.43
Oakwood.....	25,903.74	5,378.10	27,423.95	7,260.90
Westwood.....	25,338.67	5,031.51	19,946.16	3,702.21
Youngstown.....	21,703.27	.....	26,348.47	6,070.01
Lakewood.....	21,417.69	.....	14,304.59	13,771.87
Willowick.....	22,454.97	2,441.57	20,099.92	1,866.34
Chagrin Valley.....	23,954.29	4,787.72	8,053.30	6,538.66
Westbrook.....	21,689.38	.....	5,628.04	1,492.25
Sleepy Hollow.....	11,584.35	5,580.72	8,300.38	5,148.83
Lorain (nine holes)....	7,922.32	.....	2,933.45	1,760.02



# AND WHERE IT GOES

*of various clubs in the Cleveland District*

*Cleveland District Golf Association*

The second table shows the items of expenditure for the necessities common to all clubs. The table is practically self explanatory.

Showing separately the cost of green service as distinct from the cost of course maintenance, is still absent from some of the statements. Mayfield, Youngstown, Lakewood, Westbrook and Lorain continue to add to maintenance costs, other costs that do not arise from the care of the course.

The cost of administration at the Lakewood club no doubt includes items that should be included with other costs if they could be picked out from the club's

statement. Westbrook combines cost of taxes, insurance and interest; this is not the practice of other clubs and the cost of these necessities have only one thing in common—they are fixed charges. Otherwise they have nothing to do with one another.

Only five clubs, Shaker Heights, Westwood, Youngstown, Willowick, and Chagrin Valley, make any provision for the item of depreciation. Westwood and Chagrin Valley are the only two that include a depreciation charge for golf course construction, and there is nothing so useless about a country club as the golf course after the country club has moved away and the land is turned back into ordinary uses.

It is interesting to note that the 12 clubs included in this report paid taxes last year amounting to \$74,858.63.

Last year I promised never again to inflict my so-called statistics on the local golf world. The foregoing shows that my promise isn't worth a tinker's dam.

## OME

Associate or family fees	Locker rentals	Entrance fees
\$5,435.00	\$2,335.00	\$ 9,000.00
.....	2,095.00	19,150.00
.....	3,553.22	23,750.00
.....	3,615.00	1,075.00
5,235.00	1,875.00	22,850.00
.....	1,889.75	.....
.....	1,718.00	10,800.00
.....	1,950.00	.....
1,780.00	2,070.00	6,225.00
.....	2,442.00	2,835.00
.....	1,252.50	8,722.73
.....	224.05	.....

## ENSE

Taxes	Insurance	Interest	Entertainment	Department losses	Depreciation
\$7,798.28	.....	.....	.....	.....	.....
10,677.41	\$2,626.19	\$1,765.89	\$2,694.28	\$4,356.03	\$5,115.51
12,836.37	3,312.57	.....	.....	2,681.13	.....
10,625.71	3,102.14	.....	2,297.38	3,759.63	.....
9,082.20	2,507.44	10,767.74	605.56	4,055.56	9,225.28
4,392.08	3,754.08	.....	1,482.11	548.70*	2,004.26
2,674.17	1,862.94	275.31	2,291.92	551.54*	.....
4,200.00	2,354.13	5,540.00	1,167.55	6,684.65	7,020.00
3,132.08	2,318.51	11,333.52	.....	3,638.91	9,167.66
8,436.58 (including insurance and interest)	.....	.....	1,499.35	.....	.....
201.70	1,648.87	2,908.96	282.20	1,402.06	.....
803.05	366.71	1,470.00	.....	624.06	.....
				*Gains.	





# JOHN QUAILL SAYS:

Reports are coming in from all over the country telling of the early spring and good weather. The majority of courses are all playing the regular greens and they look like the middle of May. Let's hope the good weather continues and will give the greenkeepers a chance to get an early start and try out the ideas they have collected through the winter.

\* \* \*

The 1929 dues are now due. The amount is Ten (\$10.00) Dollars. The place to send them is John Quail, Secretary, 426 Highland Ave., West View, Pittsburgh, Pa.

\* \* \*

Statements are now being mailed. Pay up and receive the magazine for the full year beginning April issue.

\* \* \*

It is with sorrow we write about the death of one of our Brothers, Louis Ferrari, a Charter Member, of Sandwich, Ontario, who passed to the Great Beyond on March 15th. The Association expresses its sympathy to the family and friends of the deceased.

\* \* \*

Did you send in the names of the greenkeepers you know who are not members of the Association? If you have not done so, do it now while you are thinking about it.

\* \* \*

Louisville promises us a big time next year at our convention. The committee has started to make plans and arrangements already so you can expect a hearty welcome.

\* \* \*

How about that article and those snap shots you were going to send into the magazine. Let the fellows from California, Minnesota or any place see what your pet green looks like or tell them about that new idea you have.

\* \* \*

A good motto for 1929. Get a new member, pay up your dues and boost the association.

## BETTER GOLF EQUIPMENT

250 YDS  
REPLACE TURF

One of many styles  
Cast Aluminum  
Signs



Parking  
Regulation  
Sign

The high quality of design and manufacture of "Standard" golf course equipment makes these accessories suitable for the finest of golf courses.

The use of "Standard" equipment eliminates complaint, saves trouble and expense, speeds up the play and adds much to the enjoyment of the game.

The substantial and permanent construction of "Standard" accessories make them economical on courses of even the smallest membership.

### THE "STANDARD" LINE

Indestructible Steel Flag Poles, Cast One Piece Hole Rims, Handy Bag Racks, Everbright Tee Markers, Permanent Aluminum Signs for all purposes. Write for Special Circular.

**STANDARD MANUFACTURING CO.**  
P. O. Box 68 Cedar Falls, Ia.



Cast Aluminum  
One Piece Hole  
Rim

## A Message to Dixie

I am not going to take up your time telling you how to grow grass; I will do that in future issues.

In my travels through the wonderful Southland whenever I have met a greenkeeper and mentioned the National Association to them their story has always been that the South was not recognized. Well boys to overcome that I went to Buffalo, N. Y. (and yelled my head off and have been taking everything I could find for my throat ever since) to bring the convention to the South. I even had to tie a bunch of the Northerners before I could make them see the light. Now boys of the South I want you one and all to pull together and make it a one hundred per cent membership.

The reason I am sending this letter to Dixie is because I gave my word at Buffalo that I would get every greenkeeper in the South to join if they would come to Louisville, Kentucky with me for the convention and when I gave that word I gave it as a Southern Gentleman and you all know because of its history what a Southern Gentleman's word means; it's even better than his signature because I have some of their signatures on tickets in my club.

Well boys the convention has been over now two months so I feel it's time we all went to work and get ready for Louisville in February, 1930, and I expect every greenkeeper south of the Ohio river to be on hand, so please come clean and help to make the first convention in the South a big success.

George Davies

General Manager Big Springs Golf Club

Louisville, Ky.

Address all communications relating to  
Association membership, dues, etc., to--

**JOHN QUAILL, Secretary**  
426 Highland Avenue  
West View, Pittsburgh, Penna.

Address all communications relating to the  
Golf Show at Louisville, February 5-8, 1930 to--

**FRED A. BURKHARDT**  
Chairman, Show Committee  
405 Caxton Bldg., Cleveland, Ohio



# Helpful Hints

Some practical advice from experienced greenkeepers on golf course maintenance. No guesswork here

## Lime and Common Sense

Years ago, we greenkeepers never were afraid to use a little lime in our soil, and those days we never had brown patch, and I'll venture to say not as much clover as you can find in some greens of today.

All we have heard these last few years has been use sulphate of ammonia and get your soil acid, than you won't have clover or weeds, but they forgot to say look out and don't overdo it.

I am using Gypsum this year—fifty pounds to a green. I find it has a sweetening effect on the soil and will not encourage clover, and can be mixed with manure as it does not react unfavorably on manure.

So here's to a little lime with common sense—better turf and less brown patch.

HERBERT E. SHAVE.

Oakland Hills Country Club,  
Birmingham, Mich.

## Spring Topdressing

In topdressing my greens for the first time in the spring, I find it is a good idea to add two ounces of mercury, or about one pound of Semesan and fifteen pounds of arsenate of lead to a yard and one-half of compost to a seven thousand foot green. It acts as a preventive for brown patch and is very effective in eliminating grubs and worms.

Before planting new greens I put on fertilizers, like Milorganite or tankage, and about four pounds of arsenate of lead to one thousand square feet of green raking them in to a depth of one-half inch. This method puts the fertilizer close to the stolons, and also grub

proofs the greens. The advantages of using commercial fertilizers are—much easier to handle and the weed growth is not so great as when manure is used.

J. O. CAMPBELL.

Wethersfield Country Club,  
Wethersfield, Conn.

## Handy Oil Filter

A handy oil filter can be made by using an oil drum and a small metal tub. The tub is punched full of small holes and then a thick layer of felt is placed in the tub and the tub on top of the drum. The oil is poured into the tub and it slowly filters through the felt into the drum where you collect a good grade of oil that will be found very useful.

If the oil is not burned or full of gasoline it can be used for oiling the small mowers and other machinery. It is excellent for the rough mower or wheelbarrows or numerous other places where the best oil is not necessary. It is also good to paint the equipment with in the fall before putting into storage for the winter.

Some practical advice from experienced greenkeepers on golf course maintenance. No guesswork here.

## Breaking Up Manure

Here is a little stunt I worked out last Fall and which gave surprising results.

We made a drag of a six foot piece of eight feet high Cyclone fencing by lacing it to a piece of 1-inch gas pipe for drawbar, and to it a crotch chain to draw it by, and upon it a flexible wood frame to carry some extra weight. The frame is fastened at six dif-

### IT SHARPENS THE GROUND BLADE

Also the Revolving Blades—of any Lawn Mower from the Smallest to the 30 inch model—  
also Herring Bone Blades

### THE HARDINGE LAWN MOWER SHARPENER

Write For Illustration—Particulars—Price

HENRY H. DOTY

Distributor

Highland Park, Illinois



# Make Water Your Servant and not a nuisance

The distribution of water on the golf course, while thoroughly important, should be a well-ordered part of the upkeep instead of a bothersome, time-eating and expensive routine. The correct equipment for the particular type of water system and equipment that is itself modern, sturdy and wear-proof is the answer.

Nearly half the golf courses in the U. S. are using one or more Economy Sprinklers. Sold for 15 years, this equipment has been constantly improved and adapted to the changing conditions. It makes all water systems adequate.

The Economy Traveller is a familiar sight on thousands of courses—the only sprinkler in the world that moves itself, making one revolution in  $\frac{1}{2}$  to 4 hours. There are two types—for day and for night watering. It covers an area up to 160 diam. feet—almost double that of any other sprinkler—and allows for slower application of water.

The President (illustrated below), the Super-Simplex, the Spectacular—each is fitted to its specific job and is of the same rugged construction that characterizes Economy Sprinklers. Write us for name of our agent near you. He can give you worth while watering information.

## Economy Irrigation Co. INCORPORATED

21 Spokane Street  
SEATTLE, WASHINGTON

Distributors in leading American and  
Canadian cities.

The Economy President. Patented  
Speed Control. Even coverage 100-  
120 diam. ft. Gearless. Slow Speed.  
Long life. With either roller or sled  
base.



# ECONOMY SPRINKLERS

ferent points of bearings to mat, bearings are of short pieces of board about 12 inches square, stapled to mat from underside at well distributed points.

This tool is used to break up and spread barnyard manure where it is desired to be put on very heavy. The inspiration came to me when we were raking this fertilizer around by hand to break it up, etc.

We use our Ford chassis runabout to draw it and I wish to tell you it surely does the work in a jiffy that requires many hours to do by hand.

A. E. ARNOLD.

Masonic Country Club,  
Comstock Park, Mich.

## Damage to Poa Annua

There are probably quite a few greenkeepers especially in Illinois who find themselves reviewing the ravishing results of a hard winter on "poa annua." They will find the damage not so great as they at first thought as the seed of this grass germinates rapidly in the Spring. If the greens are left alone and not torn up, a light top-dressing with a little fertilizer mixed with the compost will bring them back very quickly. If there are any spots which do not respond mix some Cocoos Bent seed with some compost and seed these places; the result in about a week will surprise you.

## Checking the Drainage System

Weak spots in the drainage system would certainly show up on the golf courses this spring, if they have not been remedied they should be marked for draining in the fall.

## Moving Evergreens

If you are contemplating moving or thinning out evergreen trees, pines, spruce, etc., the best time to do this is in the month of July. Never move an evergreen while it is making new growth; if you do, every shoot will curl up and die. Wait until the growth has become ripened, then the trees can be moved successfully.

JOHN MacGREGOR.

Chicago Golf Club, Wheaton, Ill.



### Weed Control in Fairways

I think it would be well if something was said about weed control in the fairway.

Like most courses, a year ago we had weeds in our fairways and a good number of them too. This spring there are only a few and the ones that are growing are very small.

I give all the credit to a complete fertilizer that contained 200 pounds of sulphate to the acre. Not only does the sulphate reduce and hold the weeds in check but also no weed seeds are put back with this fertilizer and the grass grows so thick that weeds do not have a chance to thrive.

FRED A. BURKHARDT.

Westwood Country Club, Cleveland, O.

### Loosening Up Sand

A potato hook makes an excellent tool to loosen up the sand in the traps. The long prongs reach to the bottom of the sand and stir it up in good shape.

### Putty Knives

When working in wet soil and clay that sticks to the shovels, the investment in a few cheap putty knives will save money. A putty knife will clean a shovel better and quicker than a stone or a wooden paddle.

### Using Acid Phosphate

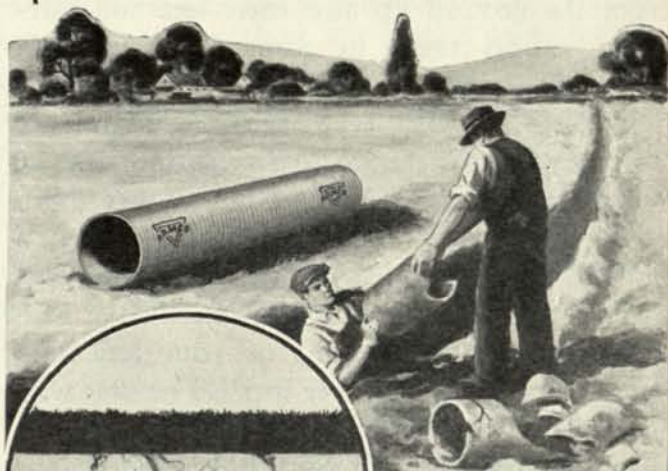
Should there be any question of acidity in the earth making up the green the use of 125 pounds of acid phosphate to the green is advisable. To eliminate the lime content, the bag containing the phosphate should be suspended in a barrel of water for 24 hours, after which time the water would contain the available phosphoric acid through "circulatory displacement." The lime, as a sulphate, contained in the bag, could then be thrown away and the liquid from the barrel applied to the greens.

The purpose of this phosphoric acid addition is to control any aluminum excess in the soil which would cause acidity. This should best be done at the time final contours are being made.

JOHN QUAILL.

Highland Country Club, Pittsburgh, Pa.

"We are digging up these drains for the last time . . . ."



**RIGID**  
*it cracks*

*flexible—*  
*it cannot break*

THERE is an answer to broken drains—a pipe that will not crack or break in spite of trucks, rollers, freezing water and heaving and swelling soils. Armco Perforated Iron Pipe cannot break *because it is flexible*. Put your drains down once and for all. Stop replacement annoyance and expense. Complete information on request. Write today.

Armco culverts and drains are manufactured from the Armco Ingot Iron of The American Rolling Mill Company and always bear its brand.



**Armco Culvert Mfrs. Association**  
Middletown, Ohio

**ARMCO**  
*perforated*  
**PIPE**

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## Bermuda Stolons

There are a great many golf clubs through the South that are poor more or less in a financial way. Some of them have to struggle to purchase a few golf seeds; for the benefit of these clubs I would suggest that they use stolons. In this way they can build their greens from the ground up also their tees and fairways. This takes in clubs from Virginia South, including Virginia.

The stolons that I am speaking about are Bermuda. You can go to any farmer and he will be only too glad to get rid of this grass, as it is a pest to the average farm. All you have to do is just plow up this grass and pick out all weeds and other grasses. Take said grass, put in your greens or your tees in a small trench, put soil over top. The best way to do this work is to take out a shovel full of soil about one inch deep, break the stolons apart thoroughly, place them in the place where you take your soil from and put your soil back on top. Do not go more than one inch deep. Then pat down the soil with back of shovel.



## Get the Worms—Protect the Greens

The superiority of Electric Worm Eradicator in bringing up the worms has been demonstrated on more than 500 golf courses. "ELECTRIC" is not only a safe eradicator, it has a positive action in protecting the greens from "brown patch" and in fertilizing the turf.

2 Offers for Immediate Acceptance

COMBINATION OFFER NO. 1  
(Enough for 9 Hole Course)

25 gallons "ELECTRIC"  
Worm Eradicator; 1 READE  
50-Gallon Sprinkling Cart; 3  
—1 gallon Jugs, 1 Pint Measure,  
1 Faucet. \$105.00.

COMBINATION OFFER NO. 2  
(Enough for 18 Hole Course)

50 gallons "ELECTRIC"  
Worm Eradicator; 1 READE  
50-Gallon Sprinkling Cart;  
4—1 gallon Jugs, 1 Pint  
Measure, 1 Faucet. \$175.00.

These Offers contain everything needed to do a quick, thorough job. One or two applications are all that are needed for a season. We will gladly ship on approval. New Folder gives full details.

READE MANUFACTURING CO.

195 Hoboken Ave. Est. 1883 Jersey City, N. J.

# ELECTRIC

## WORM ERADICATOR



You can patch your greens, fairways or your tees this way or you can build an entire golf course by using the same methods. This method is very quick. If you have water on your course, do not spare it in hot weather. This grass should not be allowed to get long. I would suggest that you cut often then your grass will not get coarse. Just keep your foliage on top, top-dressed very often, perhaps once a month, and thin. It is better to top-dress too thin than too heavy.

I have in the last year put in 18 greens, 45 tees and 18 fairways by using said stolons and the same methods that I have suggested here. After putting in 9 of these greens, tees and fairways, starting the first of February, 1928, we were playing on said course June 1, 1928. I have just completed same amount of greens, tees and fairways, tees to the number of 45; starting in February and we can play golf by the middle of May if we choose. I have used this method and these stolons which is Bermuda Grass not from a financial standpoint but because it is healthy, strong and a wonderful grass for the South; also quick. This suggestion is only for the South. For as you know, the North use Bent grasses.

H. C. MOORE.

Sea Island Golf Club, Brunswick, Ga.



# Education of Greenkeepers

By PROFESSOR L. S. DICKINSON

*Massachusetts Agricultural College, Amherst, Mass.*

Address delivered at the National Greenkeepers Convention at Buffalo, Feb. 15, 1929

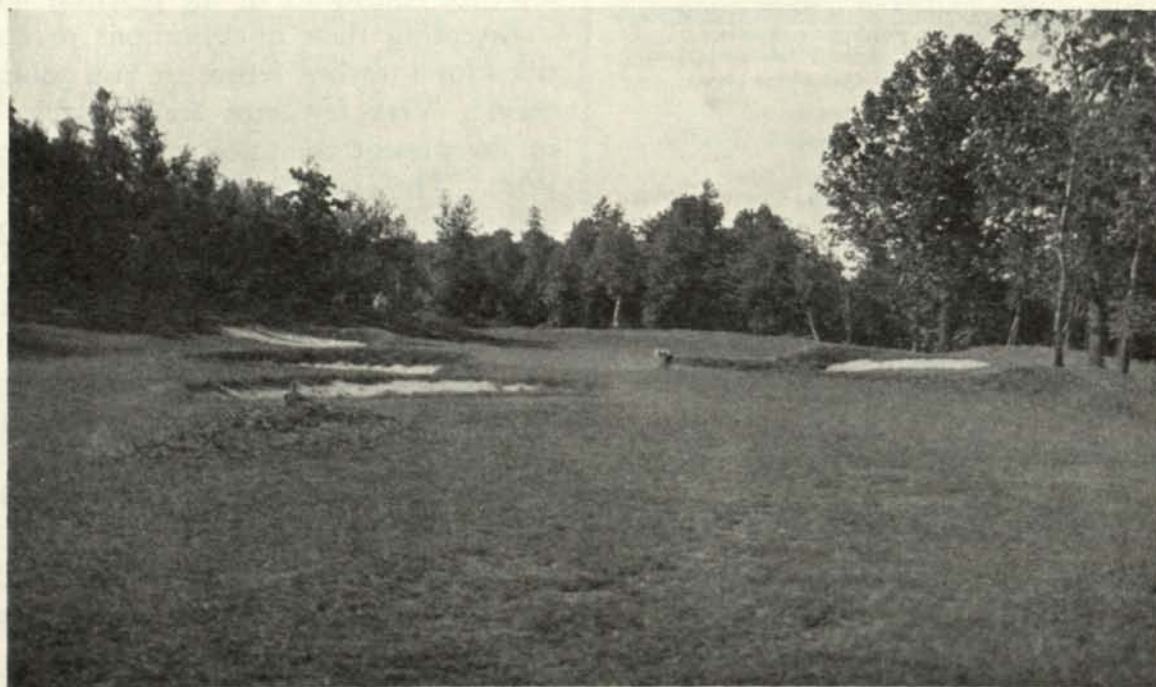
NO ONE appreciates more than I do, the delicacy of the subject I have been asked to speak upon, "The Education of the Greenkeeper." However, whatever general opinion is, I believe one should speak with the conviction of mind, and let others judge the merits. I will begin with a story.

Little Tommy was asked by his uncle, what he learned in school that day. "I learned lots of things," replied Tommy, "And one of them was that this world is round and turns on a swivel thing like the great globe in the school-room." "Did you?" asked his uncle; "What do you think of that?" "I think," said Tommy after pondering a while, "that teacher is asking me to believe a good lot for a small boy."

Tommy's answer showed that he had not been properly prepared for the phenomenon or he would have accepted and understood the fact without doubt. He believed it, because of faith in his teacher. A demonstration

would have given him more confidence. The teacher, however, had a complete understanding of the child's mind, his handicaps, and joys, and with such an understanding created the confidence. Later on in life "Tommy" learned the scientific principles involved.

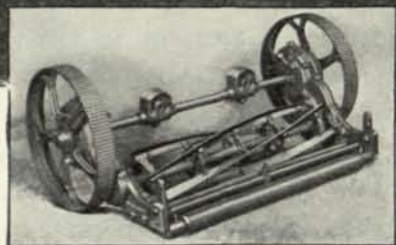
The turf expert's advice in many instances obviously seems a "whole lot for me to believe." The greenkeeper believes the advice either because he has faith in the expert, or because he can think of no counter argument, or because the chairman tells him to believe it. If the advice works, faith in the expert is increased and all is well. If for some reason such as, poor manipulation, carelessness, or because the expert failed to have a complete understanding of the whole situation, the advice failed, faith is weakened and confidence lost. Who is at fault? The expert as much as the greenkeeper, for a complete understanding by him would have instilled confidence into the greenkeeper and made him realize the



THE 11TH HOLE AT GLEN OAKS

*This beautiful course located at Great Neck, Long Island is in charge of Elmer F. Affeldt, N. A. G. A. member*





## This easy-running FAIRWAY QUINT has five easy-running units!

The five interchangeable mower units of the tractor-pulled PENNSYLVANIA "New" Fairway Quint insure maximum speed with minimum power because:—

The construction of the wheel-type unit is such that it can be made much lighter than the "forward cut" or roller type without sacrificing the strength which is indispensable at high speeds.

Every moving part is on roller or ball bearings except the ground rollers, which are on hardened steel bearings. Therefore, there is less strain on the tractor and more work done with a given amount of power.

All bearings and gears are in dirt-proof, oil-retaining housings.

The lubrication throughout is Alemite.

An attractive, new GOLF CATALOG, which is yours for the asking, pictures and describes the "New" Fairway Quint and Trio, the Super Roller and New Aristocrat greens mowers and all the other Pennsylvania Quality Mowers for Golf Courses.

**Pennsylvania Lawn Mower Works**  
1645 North 23rd Street Philadelphia, Pa.

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

necessity for proper technique and carefulness.

### Who Is Qualified?

WHO is qualified to be a teacher to educate the greenkeeper? That is the next logical question which should be decided upon before any educational work is undertaken. A most important qualification is that the teachers must be none but those who can actually "feel" the greenkeepers part. The sorrows, joys, disappointments, and praises. The teacher must have felt the workman's emotions. He should have had actual experience with pick, shovel and mower. Those are the first set of requirements for a teacher.

The second set requires that the teacher should have had practical experience in handling men, especially small groups of men, for I think it is more difficult in many ways to successfully boss a gang of twelve men than five hundred.

The teacher must also have technical training, all he can get, and in as many lines as possible. Don't belittle the value of technical training. But! the teacher must use the technical training only to the point of its practical application to the work at hand. That point of practical application varies on every golf course and with every greenkeeper. If the teacher goes too far beyond that point he loses the confidence of the practical mind.

Accepting these qualifications or specifications for a teacher, where are you going to get them? Very few men are available because of the present condition of the golfing universe. The greenkeeper who started 20 years ago is the logical man, and will well qualify. But! are you going to leave your position to become a teacher at a salary of three-fifths or two-thirds your present wage? Of course you are not; but you are automatically eliminated by the attractiveness of your present position. The college professor has to accept as a part of his salary the satisfaction of seeing his students succeed.

The college man who has been on the job, for three years, qualifies well in all ways but the first requirement, that of complete understanding. He also lacks experience.

The elimination of these two men, places the responsibility to furnish teachers upon the