

Officers were re-elected unanimously for one year. Charles Erickson, the grand old man as president; Leo Feser, the greenkeeper with an executive's brain, as vice-president; Victor Larson, another Alexander Hamilton, as treasurer, and H. Stodola, who talks better turf than he can raise, as secretary.

We will continue to hold our monthly meetings the second Monday of each month. A new set of by-laws are to be printed. The meeting was a huge success and everyone was very pleased.

We take this means of thanking the Toro Manufacturing Company, Mr. Goit, Mr. Clark and Mr. Feser for engineering a fine meeting. The next meeting will be held at Interlachen Club, two o'clock, Monday, May 9.

Oklahoma News

By MERLE ZWEIFEL

IF PLANS of the Oklahoma City Park board are carried out Oklahoma City will have two brand new golf courses, one in Northwest Park and the other in Southwest Park and will bring the total to five courses owned and operated by that city.

Surveying work for the new courses was started April 8th and actual construction will begin soon. Arthur Jackson, well-known golf professional and architect

SPRING SHOWERS . . .

Are forgotten when the hot, dry days of August parch unwatered fairways and greens. But you can have the same velvety April-green course the season through, regardless of drought conditions, when the

BUCKNER

One-Man Sprinkler System

does your irrigating. And, too, you'll have the satisfaction of knowing your course is being properly watered at a tremendous money saving compared with man-power costs where ordinary equipment is used.

There are more Buckner sprinklers and valves in use on American golf courses than any other make.

May we, without obligating you, send a copy of our latest catalog?

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GREENKEEPERS are obtaining a quick and lasting effect by feeding their greens with Urea—the quick-acting and long-lasting fertilizer.

Urea supplies nitrogen in the ideal form for grass—the same soluble organic form as the nitrogen in liquid manure. It gives the grass a healthy, dark green color, and leaves no undesirable residues in the soil. Moreover, Urea is economical, because its nitrogen is in concentrated form. It contains 46% nitrogen (55.9% ammonia). One pound is ample for an application to 1000 square feet. It may be applied in solution or mixed with compost.

Fertilize your greens with Urea—recommended by the U. S. Golf Association. A 100-lb. bag costs only \$9.00 f. o. b. New York. Larger quantities cost less. Order now from your supply dealer or direct. Synthetic Nitrogen Products Corporation, 285 Madison Avenue, New York.

**Soluble Organic Nitrogen
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Why Spend Needless time and Money...

{Killing} Worms?

Order your **DIWORMA** Now. You'll see how you save later. Dolco **DIWORMA** is guaranteed uniform strength. Brings worms up inside of two minutes. Requires no washing in or rinsing off. Cannot harm the grass. Just sprinkle it on.

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100 gallons, \$300.00; 50 gallons, \$150.00; 30 gallons, \$90.00; 15 gallons, \$45.75; 5 gallons, \$15.75.



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Saves Water - Time - Work Saves Greens and Fairways

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Distributes water with penetrating force to reach roots—will not injure tenderest turf. Will not puddle, wash or pack soil. No baked turf.

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Ask your local dealer. If he cannot supply you, order direct. Try 10 days. If not satisfactory, return sprinkler and money will be refunded. New catalog free on request.



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Ideal all-purpose home sprinkler. All the proved features of above Heavy Duty Model. Sold on same basis.

DOUBLE ROTARY SPRINKLER COMPANY
309 COCA COLA BLDG. KANSAS CITY, MO.

DOUBLE ROTARY SPRINKLER

Next Best to Rain



will supervise construction of the courses and he expects to have them in playing condition by early fall.

* * *

The Tulsa District Golf Association met at the Tulsa Country club, Tulsa, Oklahoma, March 17, 1932, and the following officers were elected:

President—Allen Whiteside, Indian Hills C. C.

Vice President—W. D. Hume, Oakhurst Golf and C. C.

Secretary-Treasurer—E. C. Stewart, Oakhurst Golf and C. C.

The members of that association pledged themselves to cooperate with the greenkeepers of the Tulsa district in every way and at future meetings articles on the production and maintenance of fine turf grasses will be read and discussed for the benefit of the greenkeepers present at the meetings.

* * *

The Oklahoma State Amateur Golf championship of 1932 will be played over the Indian Hills Country club of Tulsa, Oklahoma, May 23 to 27, 1932, inclusive. That announcement was made recently by the Oklahoma State Golf association at the conclusion of a meeting of directors held at the Oklahoma City Golf and Country Club early in April. It is believed that G. A. Shaner, chairman of the Green committee at Indian Hills will have the course in championship shape by that time. Mr. Shaner devotes a large portion of his time to the development of the greens and fairways and his progress has been most remarkable. Grover C. Zweifel is the greenkeeper.

* * *

The directors of the State Golf association voted to hold an annual handicap tournament at a number of its member clubs over the state, the proceeds to be used to finance the experimental grass greens station at the Tulsa Country Club, Tulsa.

Previously the U. S. G. A. (Green Section) has borne the expense of maintaining this station together with the Tulsa Country Club, however, it will be necessary to give the station more care than was given it last year.

Oscar Brown, greenkeeper at the Tulsa Country Club, has devoted a considerable portion of his time to building the turf garden and it has been a source of interest for greenkeepers over the entire state. A large number of well-known grasses used in the development of grass greens are represented here.

* * *

The Oklahoma City Golf and Country Club will be the scene of the 1932 Trans-Mississippi tournament and Greenkeeper Hankins of that club just about has his hands full. The Oklahoma City Club has only experienced about two seasons' actual play and like all new courses it is in need of changes. The greens and fairways are in good condition but there is some necessary construction work and Hankins is working feverishly to get the course in shape for the big show which will be staged the latter part of next June.

Canadian News

By J. H. EVANS, *Golf Editor*

Toronto Globe

PARADOXICAL as it may seem in the light of prevailing conditions, the greenkeeper and course superintendent of eastern Canada expects, according to President W. J. Sansom, of the Ontario Greenkeepers' association, to have an exceptionally busy season. The forecast of the 1932 season provided by club executives and officials is that the play on the 150 courses of Ontario, Quebec and the Maritime Provinces will be heavier than for many years. Furthermore, the forecast is intimation that thousands of golfers expect perfect tests for the sport and pastime this year.

The explanation of the paradox is that many golfers whose interest in the sport was confined to the spring and early summer and then again to the early and late fall must through necessity place a limit on their pleasure and will, as a consequence, spend their spare moments in their clubs, Mr. Sansom said. And then on account of necessity again, their attendance at their clubs will be for golf and not for the social purposes so frequently associated with the sport, particularly when United States and Canada were on the crest.

* * *

At the same time, clubs must enforce economies in 1932. The programs of more than a score of prominent organizations which paid little concern during the past decade to the question of expenditures are being closely scrutinized. The economies put into effect will place a limit on the amount to be spent on maintenance of courses and a decided limit on capital investments. The economies also include a reduction in the wages of the laborer.

Whether the policy is wise remains to be determined when the season comes to an end. There is a disposition, Mr. Sansom stated, on the part of the laborer who has found employment annually for years about courses of Ontario and Quebec to do his utmost for the clubs which have provided them with employment.

* * *

"Reports which I have received from course superintendents tell the same story, the necessity for economy this year," said Mr. Sansom, briefly reviewing the prospects for 1932. "There have been wage reductions, but this was to be expected. There must be other economies in maintenance and there must be a limit on capital expenditure. However, there is no desire on the part of working forces about courses to dispute existing conditions, but rather a willingness to cooperate with clubs during the coming year.

CANADIAN COURSES IN SPLENDID SHAPE

"We are told that play should be heavy," he continued. "If the prediction is correct, clubs should con-

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GOLF COURSE
SEEDS

MARYSVILLE
OHIO

clude the season in excellent condition, at least from a financial point of view. Fortunately every course has wintered well. There is little evidence of any damage. Late in March clubs more fortunately situated than others were able to offer permanent courses to their members. The snowfall of early April which was general over the eastern part of America did no damage whatsoever in Ontario; in fact, it rather assisted us.

"There have been no changes in the personnel of staffs maintaining courses. The economies have not included the discharge of workers. This was wise. Laborers who have been on one course or another throughout the Province are, while generally regarded as unskilled, invaluable on account of their knowledge of the conditions which have prevailed. A disruption of working forces might prove disastrous. With the start we have received we can meet each situation as it arises if we are permitted to enjoy normal conditions."

Mr. Sansom said that some anxiety was felt by Course Superintendent Kirby, of the Lambton Golf and Country Club during the winter. Kirby was instructed to prepare his course for the Canadian amateur golf championship and following the instructions of the club and the golf association committee built two new greens and made some other minor improvements late in the fall.

The greens came along better than he had anticipated. Their present condition has removed a burden from

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Cleve-Brand Soil Improvement Charcoal
for Putting Greens in depression condition

Write for a copy of our Wet-Dry Low Tax
Economy Platform and Free Inspection
Sample.

Cleveland Charcoal Supply Co.

3905 Jennings Road - Cleveland, Ohio

Kirby's shoulders. A stream of minor proportions runs through the course, but it went out this year without creating any damage to the fairway and green on the flats. Quite frequently the stream has broken up with considerable damage to the property of the Lambton club.

* * *

Superintendent Fred Haines, of the Summit Golf and Country Club, finds it necessary to do considerable fertilizing about the course. The course is built on extremely sandy soil. His task is a bit more troublesome this year on account of the demand for economy and necessity of the purchase of material in larger quantities.

* * *

Greenkeeper Hunter, of the Brantford Golf and Country Club, has commenced the beautifying of the course by planting a large number of trees. This is the limit to which Hunter is permitted to go on the matter of capital expenditure or in extra maintenance.

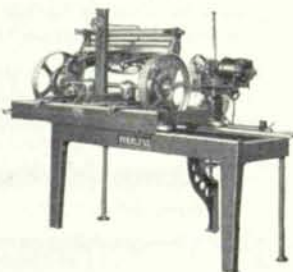
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In connection with the beautifying of courses an interesting situation developed some weeks ago. The Federal and Provincial governments provided the trees and shrubs necessary without charge or at a nominal figure. Private interests which had paid no concern to governmental policy in the past entered a protest with the gov-

The PEERLESS Mower Sharpener NEW MODEL D

Grinds all type of power-driven, fairway, putting green and hand mowers without removing mower wheels or reel knives. Carriage has travel of 42 inches. Very fast and extremely accurate. 6-inch grinding wheel driven by 1/2-h. p. motor and V belt. Very quiet running.

A Reconditioner Attachment can be furnished at an additional price for "lapping-in" putting green mowers with emery paste. This Attachment can be quickly clamped to the Sharpener by two clamps. Write for Catalog.



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ernments, claiming there was an interference with business. The result was that governments were compelled to place some restriction on the size of its gifts.

* * *

The Federal government will continue to conduct its experimental plots which were laid out last year in Toronto, Montreal and Winnipeg. It was thought that the demand made on the Federal Government for a balanced budget might compel the Federal Department of Agriculture to withdraw its support, although the expenditure was small, on the ground that the plots were luxuries. Fortunately the Government has not done so. Greenkeepers are following the work undertaken with considerable interest and would be disappointed if economies forced on the Department compelled its officials to ignore the work commenced last year.

Michigan News

By HERBERT E. SHAVE

THE Michigan and Border Cities Greenkeepers' Association held their Seventh Annual Banquet and election of officers at the Birmingham Golf Club, March 28, 1932. Forty-five greenkeepers and their guests sat down to a very fine dinner.

* * *

We were honored by the presence of S. L. Beymer, president of the club; G. E. Baldwin, vice president and chairman of the House committee. Also H. E. McCurry, chairman of Membership committee. Representatives of the Lawn Equipment Corp., Ideal Power Mower Co., Birmingham Lawn Supply Co., E. Chamberlain Co., and Toro Mfg. Co. were invited and turned out in good number.

After dinner our guests were taken to the recreation room to enjoy billiards, pool and ping pong while the greenkeepers were having their election of officers.

* * *

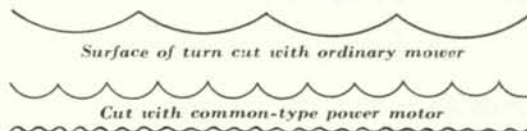
The following officers were elected: President, Wm. Smith, Red Run Golf Club, Royal Oak, Mich.; vice president, Benj. Bertram, Burroughs Recreation Farm and Golf Club, Brighton, Michigan; secretary-treasurer, Ruben Scott, Detroit Municipal Golf Course.

Board of Directors: John Gray, Essex County C. C., Windsor, Canada; Wm. Beaupre, Lockmoor C. C., Grosse Pointe, Mich.; Leo Wedyke, Glen Oaks C. C., Farmington, Mich.; E. Stoddard, Monroe C. C., Monroe, Mich.

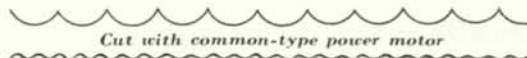
* * *

Herb Shave, the retiring president, was tendered with a vote of thanks for the able manner he had carried on with the Association. Herb was also appointed Publicity man for 1932.

Avoid that "WASHBOARD" SURFACE



Surface of turn cut with ordinary mower



Cut with common-type power motor

Cut with Jacobsen Power Putting Green Mower

Frequency of Cut of the Jacobsen Power Putting Green Mower

—makes the Perfect Green. Notice the sketch above. The top line shows the inch-long corrugations in the turf left by a hand mower, the next the lesser ridges left by ordinary power mowers, and the third the extremely fine, three-eighths-inch frequency of the Jacobsen, which is due to the superior, seven-blade high-speed cutting reel—a smooth, PERFECT putting surface.

This mower is a green conditioner. It cuts fine and its large rear rollers smooth uneven surfaces without a scar and without packing. Its unusual speed puts the greens in order for the early morning players. A greens brush attachment—found only on a Jacobsen—is of inestimable value in lifting matted grass of a bent green and making a perfect cut possible. Power transport optional equipment.

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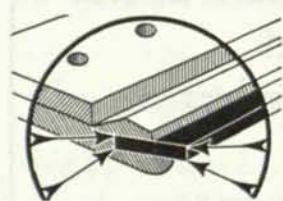
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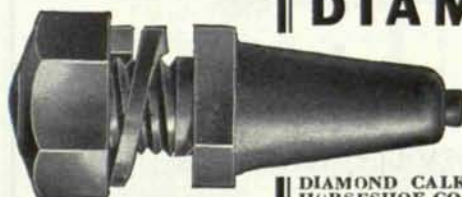


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*Fred
Burkhardt
Says:*

THERE has been some response to last month's plea that membership dues be paid promptly and that new members be received both in the Association and in the Death Benefit Fund. To receive a prompt response, at this time of the year when the greenkeeper is entirely engrossed in his work, is certainly encouraging.

* * *

Now, we have some advance enthusiasm to tell you about. A number of our greenkeepers have noted on their membership bill which they returned with their check, "WILL SEE YOU IN CHICAGO IN 1933." Each time we receive a check enclosed with such a message, we are spurred on to new efforts in this work of the Association. Perhaps there would have been a great many more notations of this kind if all our members had been aware of the time and location of next year's Convention and Show.

* * *

At the New York meeting in January of this year, the members of the Executive Board agreed upon Chicago as the city for the Greenkeepers' Annual Convention and Show in 1933. In accordance with this decision, on March 5, President John Morley and the writer met in Chicago with Vice President John MacGregor, Edward B. Dearie, Jr., and Alex Binnie, to begin preparations for next year. The result of this meeting was that next year's Convention Headquarters will be at Hotel Sherman. We found this hotel most suitable for our needs, both because of the comfort and convenience offered the greenkeeper and also because this hotel offers adequate space for the show. January 31, February 1, 2, and 3 were the days set for this Annual Convention.

* * *

With the above information fresh in mind, we hope that when you return your bill for dues together with your check, you will also write, "Will see you in Chicago in 1933." If you do this, then in November when the NAGA Executive Board meets here in Cleveland, we will be able to offer the encouraging news that YOU too will be in Chicago January 31 to February 3, 1933.

At the November meeting, the Executive Board will complete arrangements for the annual meeting as well as review the work accomplished in the past months.

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Golf Tournaments

- May 23-28**—British Amateur Championship at Murifield Golf Club, (Edinburgh, Scotland).
- May 30-June 2**—British Women's Championship at the Staunton Golf Club (Staunton, England).
- June 6**—Sectional Qualifying rounds for U. S. Open (courses to be announced).
- June 6-10**—British Open Championship at the Princes' Course, Sandwich (England).
- June 8-11**—Metropolitan Golf Association Amateur Championship at the Plainfield (N. J.) Country Club.
- June 23-25**—United States Golf Association Open Championship at the Fresh Meadow Country Club (Flushing, L. I.).
- June 27-July 2**—Intercollegiate Championship at the Cascade Golf Club (Hot Springs, Va.).
- July 4-9**—West Virginia State Golf Association Amateur Championship at the Greenbrier Golf Club.
- July 7-9**—Royal Canadian Golf Association Open Championship at the Ottawa Hunt and Country Club.
- July 11-16**—Ohio State Golf Association Amateur Championship at the Portage Country Club (Akron).
- July 14-16**—Metropolitan Golf Association Open Championship at the Lido Golf Club.
- July 19-24**—United States Golf Association Public Links Championship at the Cherokee Park course (Louisville, Ky.).
- August 4-7**—New York State Golf Association Amateur Championship at the Niagara Falls Country Club.
- August 8-13**—Royal Canadian Golf Association Amateur Championship at the Lambton Golf and Country Club (Toronto).
- August 16**—Preliminary Sectional Elimination Rounds for the U. S. Amateur Championship (Courses to be announced).
- September 12-17**—United States Golf Association Amateur Championship at the Baltimore Country Club (Entries close July 26).
- September 25-October 1**—United States Golf Association Women's Championship at the Salem Country Club (Salem, Mass.).

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ADVERTISERS' INDEX

| | |
|---|-------|
| American Cyanamid Company..... | Cover |
| Atkins & Durbrow..... | 19 |
| Bayer-Semesan Company..... | 9 |
| Blue Ridge Evergreen Supply Company..... | 25 |
| Buckner Mfg. Company..... | 21 |
| Budd Mfg. Company..... | 26 |
| Cleveland Charcoal Supply Company..... | 24 |
| Cobwell Reduction Company..... | 27 |
| Diamond Calk Horseshoe Company..... | 26 |
| Dolge, C. B. Company..... | 22 |
| Double Rotary Sprinkler Company..... | 22 |
| Fate-Root-Heath Company..... | 24 |
| Graham, John H. & Company..... | 27 |
| Horner, R. S..... | 29 |
| Hubbard Nurseries..... | 26 |
| Hyper-Humus Company..... | 26 |
| Ideal Power Lawn Mower Company..... | 4 |
| Illinois Grass Company..... | 27 |
| Jacobsen Mfg. Company..... | 25 |
| Johnson, J. Oliver, Inc..... | 23 |
| Kemp Mfg. Company..... | 23 |
| Lewis, G. B., Company..... | 24 |
| McClain Brothers Company..... | 27 |
| Milwaukee Sewerage Commission..... | 15 |
| Nelson, L. R. Mfg. Company..... | 20 |
| Nitrate Agencies Company..... | 26 |
| Pennsylvania Lawn Mower Works..... | Cover |
| Peterson, Arthur D..... | 28 |
| Root Mfg. Company..... | 13 |
| Royal Products Company..... | 30 |
| Ryan, Dan F..... | 18 |
| Scott, O. M. & Sons..... | 24 |
| Standard Mfg. Company..... | 17 |
| Staude, E. G., Mak-A-Tractor Company..... | 20 |
| Stumpp & Walter Company..... | 26 |
| Synthetic Nitrogen Products Company..... | 21 |
| Toro Manufacturing Company..... | Cover |
| Worthington Mower Company..... | Cover |

Cultivators (Spike)
John H. Graham & Co., Inc.

Drainage Engineers
Wendell P. Miller and Associates

Dump Carts
Toro Mfg. Company
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.

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

Fertilizers
Milwaukee Sewerage Commission
J. Oliver Johnson, Inc.
Peter Henderson & Co.
Nitrate Agencies Co.
Atkins & Durbrow, Inc.
Arthur D. Peterson
American Cyanamid Sales Co.
Lyman Carrier Company
Bayer-Semesan Company
Synthetic Nitrogen Products
Wayside Gardens Company
Armour Fertilizer Works
Cobwell Reduction Co.

Fertilizer Distributors
International Harvester Co. of America
Synthetic Nitrogen Products Corp.
The Root Mfg. Co.

Flag Poles
Ideal Power Lawn Mower Company
Standard Mfg. Company

Flexible Steel Mats
J. Oliver Johnson, Inc.

Fungicides
Bayer-Semesan Company, Inc.
Sherwin-Williams Company

Fairway Rollers
Toro Mfg. Company
Philadelphia Toro Company
Worthington Mower Company

Golf Architecture
Charles Evans, Jr. and Associates

Golf Course Construction
Ohio Humus Products Co.

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

Golf Flags
Ideal Power Lawn Mower Co.
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

Hole Cups
Standard Mfg. Company

Hole Cutters
Ideal Power Lawn Mower Co.
Lawn Equipment Corp.
Standard Mfg. Company

Market Place and Buyers' Guide---

Hole Liners

Chilton Crocker Company

Hole Rims

Ideal Power Lawn Mower Co.
Arthur D. Peterson

Horse Drawn Mowers

Pennsylvania Lawn Mower Works
Worthington Mower Company
International Harvester Co. of America
Ideal Power Lawn Mower Co.
Roseman Tractor Mower Co.

Hose

Peter Henderson & Co.
Arthur D. Peterson

Humus

Hyper-Humus Company
Ohio Humus Products Co.
Peter Henderson & Co.
Atkins & Durbrow, Inc.

Insecticides and Fungicides

American Cyanamid Sales Co.
Sherwin-Williams Company
Bayer-Semesan Company

Iron Pipe

McWane Cast Iron Pipe Co.

Lawn Mowers

Pennsylvania Lawn Mower Works
Toro Manufacturing Company
Worthington Mower Company
Ideal Power Lawn Mower Co.
The F. & N. Lawn Mower Co.
Jacobsen Manufacturing Company

Lime Spreaders

International Harvester Co. of America

Mowing Equipment

E. G. Staude Mak-a-Tractor Co.
Toro Mfg. Company
Pennsylvania Lawn Mower Works
Ideal Power Lawn Mower Co.
Worthington Mower Company
Arthur D. Peterson
International Harvester Co. of America
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

Fate-Root-Heath Company
Toro Manufacturing Company
Henry H. Doty
Palmer-Bee Company

Nitrophoska

Synthetic Nitrogen Products Corp.

Peat Moss

Atkins & Durbrow, Inc.
Richard Gertstell

Perforator

Philadelphia Toro Company
J. F. Buel

Poa Annua

J. M. McCullough's Sons Co.

Power Mowers

Cooper Mfg. Company
Toro Manufacturing Company
Worthington Mower Company
International Harvester Co. of America.
Jacobsen Mfg. Company
Ideal Power Lawn Mower Company

Putting Cup Illuminators

Chilton Crocker Company

Putting Green Mowers

Toro Mfg. Company
Pennsylvania Lawn Mower Works
Worthington Mower Company
Cooper Mfg. Company
Ideal Power Lawn Mower Co.
Roseman Tractor Mower Co.
The F. & N. Lawn Mower Co.
Jacobsen Mfg. Company

Power Mower Blades

The Budd Mfg. Company

Power Putting Green Mowers

Jacobsen Mfg. Company
Worthington Mower Company
Ideal Power Lawn Mower Company

Rakes

Pennsylvania Lawn Mower Works

Rhode Island Bent Seed

A. N. Peckham

Rollers (Hand)

John H. Graham & Co., Inc.
Stumpp & Walter Company

Rollers (Fairway)

John H. Graham & Co., Inc.
Toro Mfg. Company
Worthington Mower Company

Rollers

Stumpp & Walter Company
Toro Mfg. Company
Worthington Mower Company

Rough Mowers

Toro Manufacturing Company
Pennsylvania Lawn Mower Works
Worthington Mower Company
Ideal Power Lawn Mower Co.
Roseman Tractor Mower Co.
Jacobsen Mfg. Company
Philadelphia Toro Company
International Harvester Company
Gravely Mower & Cultivator Co.

Seaside Bent

Seaside Bent Company

Seed

Henry A. Dreer
O. M. Scott & Sons Co.
J. Oliver Johnson, Inc.
Stumpp & Walter Co.
A. N. Peckham
Peter Henderson & Co.
J. M. McCullough's Sons Co.
Illinois Grass Co.
Arthur D. Peterson
J. G. Peppard Seed Company
Lawn Equipment Corp.
Philadelphia Seed Co.
Henry A. Dreer
T. W. Wood & Sons
Seaside Bent Company
Lyman Carrier

Signs

Standard Mfg. Company

Sod Cutters

J. Oliver Johnson, Inc.
Pacific Greenkeepers' Appliance Co.

Sprayers

Hardie Mfg. Company
Friend Mfg. Company

Sprinklers

L. R. Nelson Mfg. Company
Buckner Mfg. Company
Economy Irrigation Company
Pelican Works
Campbell Irrigation Company
Double Rotary Sprinkler Co.
Dan F. Ryan

Spuds

Diamond-Calk Horseshoe Company

Stolons

O. M. Scott & Sons Co.
Hubbard Nurseries
Hiram F. Godwin
Lyman Carrier

Sulphate of Ammonia

Synthetic Nitrogen Products Corp.
Koppers Products Company

Tee Markers

Standard Mfg. Company

Tee Mowers

Toro Manufacturing Company
Pennsylvania Lawn Mower Works
Worthington Mower Co.
Ideal Power Lawn Mower Co.
Jacobsen Mfg. Company

Tee Stands

Worthington Mower Co.

Tillage Implements

International Harvester Co. of America

Top Dressing

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

Top Soil Dresser

Beardsley & Piper Company

Tractors

E. G. Staude Mak-A-Tractor Co.
Toro Manufacturing Company
Worthington Mower Co.
International Harvester Co. of America
Ideal Power Lawn Mower Co.
Roseman Tractor Mower Co.
R. S. Horner
Gravely Mower & Cultivator Co.

Tractor Wheels and Spuds

R. S. Horner

Trees

Blue Ridge Evergreen Supply Co.

Turf Fertilizers

Armour Fertilizer Works

Urea

Synthetic Nitrogen Products Corp.

Water Pipe

McWane Cast Iron Pipe Co.

Worm Eradicators

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

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If your Ford or equipment dealer cannot supply, write direct to



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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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214-216 S. Charles Street
BALTIMORE - MARYLAND, U. S. A.

Something New

Greenkeepers of golf courses and growers of fine turf generally will hail the advent of a new inexpensive, All-Purpose Spreader, just put on the market by the Root Manufacturing Company, 1051 Power Avenue, Cleveland, Ohio.

The Root spreader is operated by hand, with finger touch control, so that it is able to handle not only all kinds of fertilizers and topdressings, but grass seed as well. The makers claim that it can handle the finest bent seeds as light as three pounds per thousand square feet.

This new spreader is built for heavy duty work and has the feature of triple roll agitation, which prevents packing of the material, even though moist. The operator, walking behind the spreader can control the distribution with the result that there is no waste, which makes for economy.

This company has also put on the market a Weed Killer, which uses dry ammonium sulphate and is very efficient. This eliminates the use of liquid poisons and is a stimulant to the grass.

The spreader sells for \$50.00 and the Weed Killer for \$1.00, f. o. b. Cleveland. Complete particulars will be furnished upon request.

New Rotary Booklet



Double Rotary Sprinkler Company, Coco-Cola Building, Kansas City, Missouri, has just issued a new booklet on the Double Rotary Sprinkler, which shows by text and photographs the many advantages of this product.

The makers claim that the famous Double Rotary principle prevents any wasting of water; in fact it actually saves water as it covers a larger area most evenly and thoroughly.

By its rotating principle, the Double Rotary sprinkles a circular area up to eighty feet in diameter—more than five thousand square feet—depending upon city water pressure. Also easily adjusted to sprinkle smaller areas down to fifteen feet in diameter.

The Double Rotary Junior sprinkler, which sells for \$7.50, is especially designed to meet every need of the home owner. It is ample to take care of lawns and flower gardens and may be adjusted to meet all requirements.

Every sprinkler sold by this company is personally guaranteed by Lou E. Holland, president of the Double Rotary Sprinkler Company.

Soil Conditions and Root Development

(Continued from page 13)

In closing, it may be said that the studies here reported do not pretend to completely solve the important problem of root behavior. However, they do serve to emphasize the importance of roots in growing turf, and show certain of the relations existing between root occupation and soil conditions. It is hoped that further investigation will indicate treatments that may be adopted to improve root development, both for soils before grass is planted, and on turf that is established. An additional extremely important point to consider is the range of soil conditions that will facilitate the development of root hairs on roots that are present, and the absorption of water and nutrients.

Jacobsen Gives Figures

Jacobsen Manufacturing Company, 735 Washington Avenue, Racine, Wisconsin, is quite pleased with a letter from the Kilbourn Country Club, Franksville, Wisconsin, with regard to the experience they had with the Jacobsen power mowers. This is a course of twenty-seven holes with Washington Bent greens and has been in play for three years.

We quote the following from a letter written by the Green committee chairman:

"An accurate cost record was kept for all operations on the course during the season and you will note that the cost of greens mowing for twenty-seven greens amounted to only about \$15.56 per green for the entire season or approximately 13c per cutting.

"With power mowers it is not necessary to mow the greens more than five times a week, whereas if hand mowers were used, it would be necessary to mow them every day, the growth of the greens being so heavy that it would be hard to

mow a two days' growth with a hand mower. The turf actually becomes stronger by letting it grow one or two days each week without cutting. This does not interfere with the playing qualities of the course as days are selected when the play is not so heavy.

"We attribute the immunity of our greens to Brown Patch to the frequent brushing and top dressing of the greens, especially during the hot, dry weather. Brushing of the greens whenever the growth appeared stunted or during the early season when the growth was at its height, kept the greens from matting and improved the grain of the Bent. This is easily done with the brush attachment as furnished with the 24" Power Putting Green Mowers and also makes it possible to brush in thoroughly, light applications of good top dressing material. Frequent applications of top dressing is in our opinion, much superior to the use of chemicals and provides excellent cushion to hold a pitched ball.

Statement of the Ownership, Management, Circulation, etc., required by the Act of Congress of August 24, 1912, of THE NATIONAL GREENKEEPER, published monthly at Cleveland, Ohio, for April 1, 1932.

State of Ohio, County of Cuyahoga, ss.

Before me, a Notary Public, in and for the State and county aforesaid, personally appeared Robt. E. Power, who, having been duly sworn according to law, deposes and says that he is the Editor of the National Greenkeeper and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, (and if a daily paper the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor and business managers, are:

Publisher, The National Greenkeeper, Inc., 405 Caxton Bldg., Cleveland, Ohio; Editor, Managing Editor and Business Manager, Robt. E. Power, 11609 Lake Ave., Cleveland, Ohio.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

The National Greenkeeper, Inc., 405 Caxton Bldg., Cleveland, Ohio; Robt. E. Power, 11609 Lake Ave., Cleveland, Ohio; Frank H. Clark, 2848 Drummond Rd., Shaker Hts., Ohio; H. L. Richey, 3263 E. Fairfax Rd., Cleveland, Ohio; Frank H. Pelton, 19110 S. Woodland Rd., Shaker Hts., Ohio; F. E. Percy, 3159 South Moreland Blvd., Shaker Hts., Ohio; C. F. Lowe, Aurora, Ohio; Frank M. Power, 11609 Lake Ave., Cleveland, Ohio; M. J. Fox, 15002 Superior Rd., Cleveland Heights, Ohio.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

ROBERT E. POWER, Editor.

Sworn to and subscribed before me this 11th day of April, 1932.

H. W. Slack.

My commission expires Jan. 8, 1935.