

## EXHIBITORS

- P. C. ALLEN**  
Virginia-Carolina Chemical Co.  
Richmond, Va.
- R. O. ALLEN**  
F. & N. Lawn Mower Co.  
Richmond, Ind.
- F. F. ANDERSON**  
Fate-Root-Heath Co.  
Plymouth, Ohio
- M. J. ANDREWS**  
Frazier Publishing Co.  
Montreal, Canada
- W. L. AUSTIN**  
Ideal Power Lawn Mower Co.  
Lansing, Mich.
- H. S. BAILEY**  
J. Oliver Johnson, Inc.  
Chicago, Ill.
- AL BARR**  
American Radiator Co.  
Louisville, Ky.
- HAL BILLIG**  
Hal Billig, Inc.  
Chicago, Ill.
- A. R. BIRKEL**  
International Harvester Co.  
Chicago, Ill
- C. O. BORGMEIER**  
Geo. A. Davis & Co.  
Chicago, Ill.
- C. W. BOYLE**  
American Radiator Co.  
Cleveland, Ohio
- R. E. BRADLEY**  
Ideal Power Lawn Mower Co.  
Lansing, Mich.
- W. F. H. BRAUN**  
Pennsylvania Lawn Mower Works  
Philadelphia, Pa.
- C. L. BRAUND**  
H. B. Sherman Mfg. Co.  
Battle Creek, Mich.
- W. G. BRIETENBUCHER**  
Atkins & Durbrow, Inc.  
29 Burling Slip, New York City
- W. A. BUCKNER**  
Buckner Mfg. Co.  
Fresno, Cal.
- W. C. BUNNELL**  
International Harvester Co.  
Louisville, Ky.
- LYMAN CARRIER**  
Lyman Carrier, Inc.  
Coquille, Oregon
- R. S. CARSON**  
Logan Co.  
Louisville, Ky.
- ERNEST CHAMBERLAIN**  
American Seed Co.  
Chicago, Ill.
- G. R. CHAMPLAIN**  
Pennsylvania Lawn Mower Works  
Philadelphia, Pa.
- FRANK A. COGSDILL**  
Cogsdill Mfg. Dist. Co.  
Detroit, Mich.
- H. M. COOPER**  
Cooper Mfg. Co.  
Marshalltown, Iowa
- E. H. COREY**  
Moto Mower Co.  
Detroit, Mich.



### To meet the demand for Golf Course Work today—

Water Hose must be of the best materials and workmanship that can be obtained. This, we have accomplished in

## Super Par Golf Hose

It is constructed with two braids, special three ply cord yarn, extra thick black smooth rubber cover that will withstand the roughest use.

### The Philpott Rubber Company

1381 West Third St. - Cleveland, O.

## Flooded Fairways

Nothing so much provokes the golfer, already chafing under a long winter's restraint, as to have his spring entry upon the course delayed by flooded, sodden fairways. You can't stop spring rainfall so there is only one thing to do—get rid of the water, quick!

### The Key to the Situation

Leave it to Nature, if you want to; but better, beat her at her own game! Progressive clubs everywhere are doing it—compelling that surplus water to run off at record-breaking rates by employing

### Engineered Drainage

which is a practical application of scientific principles whereby surface and soil water is removed extra expeditiously, leaving the turf with that springiness that delights the golfer's heart.

### Play Weeks Earlier

Don't waste a single day of golfing weather. Don't let another spring catch you napping. Engineered drainage will help you get on your course weeks earlier—it's being done on other courses, everywhere. Our booklet tells you how to do it—write for it NOW!

**Wendell P. Miller and Associates**  
105 W. Monroe St., Chicago      85 E. Gay St., Columbus, O.

*Consulting Engineers*  
Drainage - Irrigation - Turf Development

## Budd Mower Blades

Increased production of the improved Budd Blade permits lower prices on some models. The new blade changes easier—lasts longer. Fits any mower like its present blade—no attachments or accessory needed. Just attach—adjust—ready to go. Later changes a matter of moments. If your supply man cannot furnish—just write us.

**The Budd Manufacturing Co.**  
Ravenna, Ohio P. O. Box F

### ROBERT CREATH

Ohio Humus Products Co.  
London, Ohio

### DOUG. CUNNINGHAM

Ideal Power Lawn Mower Co.  
Chicago, Ill.

### CHAS. P. DABBS

Ideal Power Lawn Mower Co.  
Chicago, Ill.

### H. J. DIEM

Hyper-Humus Co.  
Newton, N. J.

### O. H. DIETRICH

Atkins & Durbrow  
New York, N. Y.

### F. V. DONALD

Cooper Mfg. Co.  
Marshalltown, Iowa

### HENRY H. DOTY

Henry H. Doty  
Highland Park, Ill.

### J. A. DOUGHERTY

Ric-Wil Co.  
Cleveland, Ohio

### S. L. DRYFOOS

Universal Sand Equipment Co.  
Cleveland, Ohio

### F. T. EVANS

Grasselli Chemical Co.  
Cleveland, Ohio

### F. J. FELLMAN

Lawn Equipment Co.  
Detroit, Mich.

### L. A. FERGUSON

Ideal Power Lawn Mower Co.  
Chicago, Ill.

### R. D. FERGUSON

Staude Mak-a-Tractor Co.  
St. Paul, Minn.

### J. A. FORREST

Virginia-Carolina Chemical Co.  
Ft. Wayne, Ind.

### M. J. FOX

The National Greenkeeper, Inc.  
Cleveland, Ohio

### A. E. GILES

L. R. Nelson Mfg. Co.  
Peoria, Ill.

### HERB GRAFFIS

Golfdom  
Chicago, Ill.

### JOE GRAFFIS

Golfdom  
Chicago, Ill.

### A. E. GRANTHAM

Virginia-Carolina Chemical Corp.  
Richmond, Va.

### WM. HAYES

Pennsylvania Lawn Mower Works  
Philadelphia, Pa.

### JOHN HEASLIP

Thompson Manufacturing Co.  
Los Angeles, Cal.

### M. A. HOAG

L. R. Nelson Mfg. Co.  
Peoria, Ill.

### R. L. HOWDEN

The Ric-Wil Co.  
Dayton, Ohio

### H. E. HUMISTON

Virginia-Carolina Chemical Corp.  
Chicago, Ill.

### O. T. JACOBSEN

Jacobsen Mfg. Co.  
Racine, Wis.

### MIKE DE JOY

Lyman Carrier, Inc.  
Willoughby, Ohio

### E. W. JOHNS

Ideal Power Lawn Mower Co.  
Ft. Wayne, Ind.

### ARTHUR JOHNSON

H. H. Doty  
Highland Park, Ill.

### J. OLIVER JOHNSON

J. Oliver Johnson, Inc.  
Chicago, Ill.

### V. H. KADISH

Milwaukee Sewerage Commission  
Milwaukee, Wis.

### H. V. LEATHERMAN

Logan Co.  
Louisville, Ky.

### L. H. LIPMAN

Atkins & Dubrow  
New York, N. Y.

### WRIGHT McCALLIP

Ohio Humus Products Co.  
London, Ohio

### C. McGINNIS

Hal Billig, Inc.  
30 No. Michigan, Chicago, Ill.

### E. O. MADDIN

Ideal Power Lawn Mower Co.  
Chicago, Ill.

### WARREN MARKLEY

Ohio Humus Products Co.  
London, Ohio

### JOHN H. MELADY

Stumpp & Walter Co.  
New York, N. Y.

### C. M. MELVILLE

Geo. A. Davis, Inc.  
Chicago, Ill.

**REFINED  
GRASS SEED  
AND  
COMPLETE EQUIPMENT  
FOR  
GOLF COURSES**

Send for Catalog and Grass Seed Price List

Distributors  
**Worthington Mowing Equipment**  
Nu-Green Semesan

**AMERICAN SEED COMPANY**  
DETROIT, MICH.

"Quality Grass Seed for a Quarter Century"

**WENDELL P. MILLER**  
Wendell P. Miller and Associates  
Chicago, Ill.

**THEO. D. MUNDING**  
Ideal Power Lawn Mower Co.  
Toledo, Ohio

**LEO F. MURRAY**  
J. Oliver Johnson  
Chicago, Ill.

**LOU NOBBE**  
Worthington Mower Co.  
Chicago, Ill.

**O. J. NOER**  
Milwaukee Sewerage Commission  
Milwaukee, Wis.

**A. E. NOLL**  
Grasselli Chemical Co.  
Cincinnati, Ohio

**E. J. O'CONNELL**  
American Radiator Co.  
Chicago, Ill.

**S. S. PARMENTER**  
Lawn Equipment Corp.  
Grand Rapids, Mich.

**W. PARRISH**  
International Harvester Co.  
Chicago, Ill.

**N. D. PERINE**  
Pennsylvania Lawn Mower Works  
Philadelphia, Pa.

**F. J. PETLEY**  
Ideal Power Lawn Mower Co.  
Detroit, Mich.

**W. C. PIVER**  
Virginia-Carolina Chemical Corp.  
Richmond, Va.

**J. V. POL**  
Jacobsen Mfg. Co.  
Racine, Wis.

**GEORGE W. PRUSIA**  
Geo. A. Davis  
Chicago, Ill.

**FRED S. RADWAY**  
I. L. Radwaner Seed Co.  
New York

**M. S. RAMSEY**  
Moto Mower Co.  
Detroit, Mich.

**R. N. ROCKWELL**  
Ideal Power Lawn Mower Co.  
Detroit, Mich.

**P. H. ROOT**  
Fate-Root-Heath Co.  
Plymouth, Ohio

**HARRY E. ROWE**  
F. & N. Lawn Mower Co.  
Richmond, Ind.

**F. SCHMIDT**  
Price Chemical Co.  
Louisville, Ky.

**F. M. SEELEY**  
Ideal Power Lawn Mower Co.  
Lansing, Mich.

**CHARLES E. SHANK**  
Lawn Equipment Corp.  
Detroit, Mich.

**O. W. SHEETS**  
Hal Billig, Inc.  
Chicago, Ill.

**F. B. SMALLEY**  
Motor Mower Co.  
Detroit, Mich.

**JAMES A. SMITH**  
Ohio Humus Products Co.  
London, Ohio

**E. D. SPERRY**  
H. B. Sherman Mfg. Co.  
Battle Creek, Mich.

## Do you buy Grass Seeds by Quality or Price?

Let us quote you on your Spring Seed-  
ing, with Samples. Our Special  
Grass Seed Circular is free.

### Henry A. Dreer Seeds, Plants, Bulbs

1306 Spring Garden St. Philadelphia, Pa.

ESTABLISHED 1838

**FRED W. STAPLES**  
Worthington Mower Co.  
Stroudsburg, Pa.

**ROBERT THOMAS**  
Lyman Carrier, Inc.  
Granger, Ind.

**WILLIAM THOMPSON**  
Pennsylvania Lawn Mower Works  
Philadelphia, Pa.

**W. P. TROXELL**  
Hyper-Humus Co.  
Newton, N. J.

**W. C. TYSON**  
Friend Mfg. Co.  
Gasport, N. Y.

**R. VANDER BEKEN**  
Worthington Mower Co.  
Stroudsburg, Pa.

**W. K. VOORHEES**  
Standard Mfg. Co.  
Cedar Falls, Iowa

**A. E. WALLACE**  
Roseman Tractor Mower Co.  
New York City

**R. B. WEINMAN**  
Koppers Products Co.  
Koppers Bldg., Pittsburgh, Pa.

**D. D. WILLIAMS**  
International Harvester Co.  
Louisville, Ky.

**P. C. WILLIAMS**  
O. M. Scott & Sons Co.  
Marysville, Ohio

**STEVE ZICH**  
Roseman Tractor Mower Co.  
Evanston, Ill.



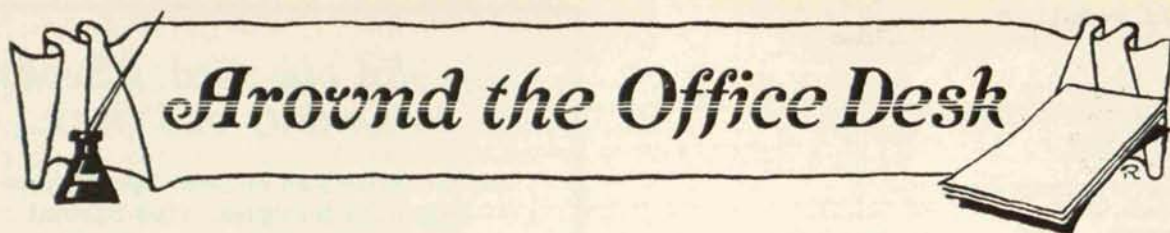
### SCOTT'S Seed Travels 3000 Miles

From Seattle, Washington, Dr. Chas. B. Ford of Inglewood Golf Club, writes: "The turf produced from the seed I purchased from you is as good as any I have ever seen. The seed was satisfactory in every way."

One thousand and thirty-two other greens chairmen had the same or similar reasons for sowing the same seed. There's a cause for this recognition—Scott's Seed IS freer from weeds. Ask for quotations now.



More than 1,000 golf clubs sow Scott's Seed



# Aroond the Office Desk

## TOURNAMENT SCHEDULE

### MARCH

- 1 Open Amateur Championship, Algiers Course, North Africa.
- 3-7 Women's Pebble Beach Championship, Pebble Beach.
- 3-7 Palm Beach Championship, Palm Beach G. C.
- 3-8 Volusia Championship, Ormond Beach G. C.
- 4-8 Women's Fla. East Coast, St. Augustine Links.
- 5-7 S. C. and Mid-South Tournament, Ocean-Forest G. C.
- 6-8 S. E. Open Amateur, Timuquana C. C., Jacksonville.
- 9-12 International Four-Ball Team Matches, Miami C. C.
- 10-15 Women's Amateur, Coronado C. C., Cal.
- 11-15 Bermuda Amateur, Riddell's Bay G. and C. C.
- 18-22 Winter Amateur Championship, St. Augustine Links.
- 18-22 Ladies' Open Spring Tournament, Belmont Manor.
- 19-21 Women's Tournament, Ocean-Forest G. C.
- 20-22 La Gorce Open, La Gorce C. C., Miami Beach.
- 27-28 North and South Open, Pinehurst C. C.
- 27-29 Men's Tournament, Ocean-Forest G. C.
- 31-1 Southeastern Open, Augusta C. C., Augusta, Ga.
- 31-4 Women's North and South Amateur, Pinehurst C. C.

### APRIL

- 5 Annual Team Match, Pinehurst vs. All South, Pinehurst C. C.
- 7-10 Women's Four-Day Tournament, Ocean-Forest G. C.
- 7-12 North and South Amateur, Pinehurst C. C.
- 14 Mason and Dixon Tournament, White Sulphur Spgs.
- 18-22 Mid-April Tournament, Pinehurst C. C.

### MAY

- 15-16 Walker Cup Matches, St. George's Course, Sandwich.
- 26 British Amateur, St. Andrews, Scotland.

### JUNE

- 16 British Open, Holyoke, England.
- 18-21 St. Albans' Amateur Championship, St. Albans' Golf Club, St. Albans, L. I.
- 23-25 Ardsley Junior Championship, Ardsley-on-Hudson Club, New York.
- 23-28 Ohio State Amateur Championship, Toledo Country Club, Toledo, O.
- 24-25 Invitation Open Tournament for Shawnee Shield, Shawnee C. C., Shawnee-on-Delaware.

### JULY

- 8-11 California Junior Championship, Del Monte, Calif.
- 10-11 Northern California Women's Golf Association Invitational Tournament, Del Monte, Calif.
- 10-12 National Open, Interlachen C. C., Minneapolis, Minn.
- 17-19 Fairview Open Championship, Fairview Country Club, Elmsford, N. Y.
- 31 Invitation Tournament for Buckwood Trophy, Shawnee C. C., Shawnee-on-Delaware, Pa.

### AUGUST

- 1-3 Midsummer Tournament, Del Monte, Calif.
- 5-11 National Public Links Championship, Municipal Golf Course, Jacksonville, Fla.

### SEPTEMBER

- 22-27 National Amateur Championship, Merion Cricket Club, Haverford, Philadelphia, Pa.
- 30-October 1 Arcola Senior Championship, Arcola Country Club, Arcola, N. J.

### OCTOBER

- 13-18 Women's National Championship, Los Angeles Country Club, Los Angeles, Calif.

Colonel John Morley  
Youngstown, Ohio

Dear Colonel:

I am writing on behalf of the Greenkeepers Association of Michigan and border cities, to congratulate you on the honor bestowed on you by the Governor of Kentucky.

Also to congratulate you on the success of the Fourth Annual Convention. We from Michigan considered it a great success in attendance of greenkeepers and of the manufacturers.

We owe the growth of the National to your great leadership and we are very proud to have you at the head to guide it through its stormy seas and bring it safe in the harbor.

We wish you success through this year and dear Colonel we are yours to command.

Yours sincerely,

(Signed) Herbert E. Shave, president,

Michigan and Border Cities Greenkeepers Ass'n.  
Birmingham, Michigan

February 12, 1930

Mr. Fred Burkhardt  
405 Caxton Building  
Cleveland, Ohio

Dear Mr. Burkhardt:

The Show is over, we are back home, at least partly rested, and the charged water is all paid for.

Ordinarily, the week after a convention is like the day after Labor Day at a summer resort, which means that everything is closed up and forgotten for another year.

It would be ingratitude, however, not to express our whole-hearted appreciation of the trouble and time you went to to put this Show over, and we believe everybody will agree that it was wonderfully well handled and a success in every way.

Very truly yours,

(Signed) K. E. Goit, Sales Manager,

Toro Manufacturing Company  
Minneapolis, Minn.

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 Columbus, Ohio in 1931 to--

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

## Sargent Discusses Greens

The Central Ohio District Green Section held its first meeting of 1930 at the Elks Club, Columbus. About 40 came and they were well repaid for their efforts in making the trip from their clubs by the instructive talks given by men who know, and the questions which were discussed pro and con in open forum.

G. M. Trautman, secretary of the district, opened the meeting with effective remarks, followed by President Young who expressed his pleasure with the attendance and the interest shown at these meetings which has been very gratifying.

Professor George M. McClure of Ohio State University gave a short talk and outlined the policies of the meetings and the benefits to be derived from the discussions of the various topics, criticisms, etc.

George Sargent of Scioto Country Club then took the floor and entertained with a most practical and instructive outline of what a putting green should be. His talk was a wonderful explanation from the golfer's standpoint, but acknowledged the fact that what the greenkeeper considers a perfect green does not really satisfy the golfer—it is either too slow or full of grain for true putting unless it is cut close to the ground and almost shows the soil beneath, which is almost too much for the grass to stand. This is continually a detriment to the general health and growth of grass itself. As a result the greenkeeper is between the devil and the deep sea all the time to know what the golfer expects of a true putting surface, especially since the coming of the bents which to many are proving very troublesome owing to the various strains used and their uncertainty on different soils and locations.

Mr. Sargent, like many others, was frank in the statement that ere long we would be pleased to welcome a change back to seeded greens, but with bent as a base, which he believes would partly solve our troubles in greenkeeping and give the golfer a truer putting surface.

The advent of putting greens came at the time lawn mowers were introduced to replace the scythe which up to that time was the only means of cutting grass short enough to encourage a place called a putting green. With the lawn mower came the troubles for the greenkeepers; it brought in problems on more scientific lines with cutting grass so short.

The Scioto Mentor emphasized the necessity of having more past history on what has been done in all branches of golf course construction which has proved

successful from the old methods and not rely on new fangled ideas and guess work. He was very sincere in giving Walter Frairs of Garden City, L. I., much credit as a pioneer in broadening the viewpoint and causing wide-spread efforts among the golf clubs of America to determine what a putting green should be. This brought about to a large extent its present condition.

## Now Is the Time

Your fairways and greens take up their entire supply of organic matter for the coming season while the soil is opened up by the freezing and thawing of late winter.

Now is the time to apply well rotted manure to your fairways and whatever material is to be used for increasing the soil humus content of your green.

## Mrs. Varn Hagen Reelected

THE annual meeting of the Wives of National Greenkeepers was held during the week of Convention at Louisville, February 4-7.

During the week social things in the way of entertainment were planned for the ladies and a bus trip around the city of Louisville visiting all places of interest, which included a luncheon planned by Mrs. George Davies, Louisville, took up one entire day. About forty ladies were guests of the National association on this trip. They returned only in time to make themselves ready for the Annual Banquet, which was held at the Kentucky Hotel on Thursday evening.

Many new members were taken into the association and the meeting was well attended by active members, being so since the organization started some two years ago in Detroit.

Mrs. Jos. Varn Hagen Sr., was reelected president and Mrs. Elmer Affeldt of Glen Oaks, New York, is the new secretary, while Mrs. Herbert E. Shave remains treasurer.

A very active year is being planned by the ladies and next year when they meet in Columbus they expect to have doubled their membership.

## A New Association

AT the close of the short course for greenkeepers held at the University of Wisconsin the middle of February, greenkeepers held a meeting and organized the Wisconsin Greenkeepers Association.

Paul Brockhausen, Blue Mound Country Club, Milwaukee was elected president, John Bone, of the Black Hawk Country Club, Madison, Wis., vice-president, and C. L. Bingham, Municipal Course, Beloit, Wis., secretary and treasurer. The next meeting will be held at the Blue Mound Country Club, March 10.

### 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



**HARDIE** makes sprayers  
and spraying equipment  
for every golf and country  
club need. Write for catalog.

The Hardie Manufacturing Company  
Hudson, Michigan  
Portland, Oregon Petrolia, Ontario

**HARDIE**  
DEPENDABLE SPRAYERS



# Market Place and Buyers' Guide

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

**Airport Drainage**  
Armco Culvert Mfrs. Association  
Wendell P. Miller and Associates

**Airport Seeds**  
Seaboard Seed Co.

**Arsenate of Lead**  
Sherwin-Williams Company

**Ball Washers**  
J. Oliver Johnson, Inc.  
Worthington Mower Company

**Ball Locators**  
Worthington Mower Company

**Bent-Coos County State Sealed and Certified**  
American Seed Company  
Stumpp & Walter Co.  
J. Oliver Johnson, Inc.  
Peter Henderson & Co.  
O. M. Scott & Sons Co.  
Philadelphia Seed Co.  
Golf Course Supply Co.

**Bent Seed—Cocoas Creeping**  
American Seed Company  
Stumpp & Walter Co.  
J. Oliver Johnson, Inc.  
Peter Henderson & Co.  
O. M. Scott & Sons Co.  
Philadelphia Seed Co.  
Golf Course Supply Co.

**Bent Seed—Prince Edward Island**  
American Seed Company  
Stumpp & Walter Co.  
J. Oliver Johnson, Inc.  
Peter Henderson & Co.  
O. M. Scott & Sons Co.  
Philadelphia Seed Co.  
Golf Course Supply Co.

**Bent Stolons**  
Hubbard Nurseries  
O. M. Scott & Sons Co.  
Stumpp & Walter Co.  
Ohio Humus Products Co.

**Bridg Floors**  
Armco Culvert Mfrs. Association

**Brown Patch Control**  
Stumpp & Walter Co.  
J. Oliver Johnson, Inc.  
American Seed Co.  
Reade Mfg. Co.  
Golf Course Supply Co.

**Catchbasins, Corrugated Iron**  
Armco Culvert Mfrs. Association

**Cast Iron Pipe**  
McWane Cast Iron Pipe Co.

**Cocoas Creeping Bent Seed**  
Stumpp & Walter Company  
Seaboard Seed Co.

**Compost Distributor**  
Toro Mfg. Company

**Compost Mixer**  
Toro Mfg. Company  
Kemp Mfg. Company

**Compost Screen**  
Ideal Power Lawn Mower Company

**Drainage Engineers**  
Wendell P. Miller and Associates

**Drainage Gates**  
Armco Culvert Mfrs. Association

**Dump Carts**  
Toro Mfg. Company  
J. Oliver Johnson, Inc.  
Worthington Mower Company  
Peter Henderson & Co.

**Fairway Irrigation**  
Buckner Mfg. Co.  
Thompson Mfg. 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  
F. and N. Lawn Mower Co.  
Worthington Mower Company

ADVERTISER'S INDEX	
American Seed Company	42
Armco Culvert Mfrs. Association	23
Buckner Mfg. Company	38
Budd Mfg. Company	42
Cooper Mfg. Company	21
Doty, Henry H.	46
Dreer, Henry H.	43
Fate-Root-Heath Company	35
F. & N. Lawn Mower Company	18
Friend Mfg. Company	40
Golf Course Supply Company	36
Hardie Mfg. Company	45
Henderson, Peter & Co.	17
Hubbard Nurseries	45
Hyper-Humus Company	23 and 39
Ideal Power Lawn Mower Co.	26 and 27
Jacobsen Mfg. Company	31
Johnson, J. Oliver, Inc.	38
Kemp Mfg. Company	39
Koppers Products Company	37
McWane Cast Iron Pipe Company	25
Miller, Wendell P.	41
Milwaukee Sewerage Commission	22
Nelson, L. R. Mfg. Company	36
Nitrate Agencies Company	13
Ohio Humus Products Company	33
Peckham, A. N.	48
Pennsylvania Lawn Mower Works	Cover
Philadelphia Seed Company	24
Philpott Rubber Company	41
Reade Mfg. Company	49
Roseman Tractor Mower Co.	34
Scott, O. M. & Sons Company	43
Seaboard Seed Company	40
Sherwin-Williams Company	Cover
Standard Mfg. Company	47
Staude, E. G. Mak-A-Tractor Co.	29
Stumpp & Walter Company	18
Thompson Mfg. Company	20
Toro Mfg. Company	Cover
Virginia-Carolina Chemical Corporation	9
Wood, T. W. & Sons	30
Worthington Mower Company	15

**Fairway Rollers**  
Toro Mfg. Company

**Fertilizers**  
Milwaukee Sewerage Commission  
J. Oliver Johnson, Inc.  
Peter Henderson & Co.  
Golf Course Supply Co.  
T. W. Wood and Sons.  
Virginia-Carolina Chemical Corp.  
Nitrate Agencies Co.  
Koppers Products Co.

**Flag Poles**  
Ideal Power Lawn Mower Company  
Standard Mfg. Company

**Flexible Steel Mats**  
J. Oliver Johnson, Inc.  
Golf Course Supply Co.

**Golf Course Construction**  
Ohio Humus Products Co.

**Golf Equipment**  
Stumpp & Walter Co.  
Peter Henderson & Co.

**Golf Flags**  
Ideal Power Lawn Mower Co.  
Stumpp & Walter Company  
Peter Henderson & Co.

**Golf Cart**  
Ideal Power Lawn Mower Co.

**Greens Mower Blades**  
The Budd Mfg. Company

**Greens Mowers**  
Ideal Power Lawn Mower Co.  
F. & N. Lawn Mower Co.

**Greens Sprinklers**  
L. R. Nelson Mfg. Co.  
Buckner Mfg. Co.  
Thompson Mfg. Co.

**Hand Mowers**  
Ideal Power Lawn Mower Co.

**Hole Cups**  
Standard Mfg. Co.

**Hole Cutters**  
Ideal Power Lawn Mower Co.

**Horse Drawn Mowers**  
Pennsylvania Lawn Mower Works  
Worthington Mower Company  
Roseman Tractor Mower Co.

**Hose**  
Peter Henderson & Co.  
Philpott Rubber Co.

**Hole Rims**  
Ideal Power Lawn Mower Co.

**Humus**  
Hyper-Humus Company  
Ohio Humus Products Co.  
Peter Henderson & Co.

**Insecticides**  
Peter Henderson & Co.  
Sherwin-Williams Company

**Iron Pipe**  
McWane Cast Iron Pipe Co.

**Lawn Mowers**  
Pennsylvania Lawn Mower Works  
Toro Manufacturing Company  
F. & N. Lawn Mower Company  
Worthington Mower Company

**Mowing Equipment**  
E. G. Staude Mak-a-Tractor Co.  
Toro Mfg. Company  
Pennsylvania Lawn Mower Works  
American Seed Company  
Jacobsen Mfg. Company  
Ideal Power Lawn Mower Co.  
F. & N. Lawn Mower Co.  
Worthington Mower Company  
Roseman Tractor Mower Co.  
Cooper Mfg. Company

**Mower Sharpeners**  
Fate-Root-Heath Company  
Toro Manufacturing Company  
Henry H. Doty

**Hardinge Mower Sharpener**  
Best by Test



Sharpens bed knives and reels of all mowers

Write for illustration—particulars—price  
**HENRY H. DOTY, Distributor**  
Highland Park, Illinois

**Power Mowers**

Cooper Mfg. Company  
Toro Mfg. Company  
Jacobsen Mfg. Company  
Worthington Mower Company  
Roseman Tractor Mower Co.

**Power Mowers—Roller Type**

Ideal Power Lawn Mower Co.

**Power Mowers—Wheel Type**

Ideal Power Lawn Mower Co.

**Putting Green Mowers**

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

**Power Mower Blades**

The Budd Mfg. Company

**Rakes**

Golf Course Supply Co.  
Pennsylvania Lawn Mower Works

**Rhode Island Bent Seed**

A. N. Peckham

**Rollers**

Stump & Walter Company  
Toro Mfg. Company  
Worthington Mower Company

**Rough Mowers**

Toro Manufacturing Company  
Pennsylvania Lawn Mower Works  
Jacobsen Mfg. Company  
Worthington Mower Company  
Roseman Tractor Mower Co.

**Seed**

O. M. Scott & Sons Co.  
J. Oliver Johnson, Inc.  
Stump & Walter Co.  
Golf Course Supply Co.  
Henry A. Dreer  
Seaboard Seed Co.  
A. N. Peckham  
T. W. Wood and Sons.  
Peter Henderson & Co.  
Philadelphia Seed Co.

**Signs**

Standard Mfg. Company

**Siphons, Corrugated Iron**

Armco Culvert Mfrs. Association

**Sod Cutters**

J. Oliver Johnson, Inc.

**Sprayers**

Friend Mfg. Company  
Hardie Mfg. Company

**Sprinklers**

L. R. Nelson Mfg. Company  
Buckner Mfg. Company  
Thompson Mfg. Co.

**Sprinkling Carts**

Reade Mfg. Company  
Worthington Mower Company

**Stolons**

O. M. Scott & Sons Co.  
Hubbard Nurseries

**Storm Sewers, Corrugated Iron**

Armco Culvert Mfrs. Association

**Street Culverts, Part Circle**

Armco Culvert Mfrs. Association

**Sulphate of Ammonia**

Koppers Products Co.

**Tee Mowers**

Toro Mfg. Company  
Pennsylvania Lawn Mower Works  
Jacobsen Mfg. Company

**Tee Stands**

Ideal Power Lawn Mower Co.

**Top Dressing**

Hyper-Humus Company  
The Ohio Humus Company

**Tractors**

E. G. Staude Mak-A-Tractor Co.  
Toro Mfg. Company  
Roseman Tractor Mower Co.

**Water Pipe**

McWane Cast Iron Pipe Co.

**Well Casings, Corrugated Iron**

Armco Culvert Mfrs. Association

**Worm Eradicators**

Reade Mfg. Company  
Peter Henderson & Co.

**Classified Advertisement**

PRO-GREENKEEPER WITH TEN YEARS experience desires position. Successful experience in greenkeeping, construction and maintenance. Best of references.—Address—J. O.—The National Greenkeeper, Cleveland.

**NEW CATALOGS**

**NACO Fertilizer**

Of special interest to greenkeepers is the announcement of a large and nationally known fertilizer company, the Nitrate Agencies Co., 104 Pearl Street, New York City—that N A C O "a golf course fertilizer" is now available for all golf courses throughout the United States.

Donald J. Ross, famous architect and builder of golf courses, has been working with the Nitrate Agencies company for a number of years in the development of the N A C O formulas, and the consistently fine results secured by Mr. Ross at Pinehurst and other places where it has been used, led to his definite recommendation of NACO for best results in turf culture.

N A C O is an all-organic fertilizer manufactured by the Nitrate Agencies company exactly according to the formulas developed and recommended by Donald J. Ross,

and sold to the trade through golf supply houses or direct from the manufacturers.

In an attractive booklet now ready for mailing to all interested parties, the story of N A C O is told in an interesting series of five letters reproduced in facsimile—two of the letters are written by Mr. Donald J. Ross while one of these letters is reproduced in the full page advertisement of the Nitrate Agencies company appearing in this issue of the NATIONAL GREENKEEPER.

**Standard Equipment**

A new folder in colors describing Standard golf course equipment has been issued by the Standard Mfg. Co., Cedar Falls, Iowa. This describes and illustrates their cast aluminum hole rim, which has some new features of interest to every

**Aluminum Golf Signs**

WEATHER and wear proof. Can be furnished with lettering on both sides. Yardage markers, regulation, parking, direction, and entrance signs. Also special signs to order.



**WRITE FOR CIRCULAR**



describing signs, tee-markers, hole rims, indestructible flag-poles and other Standard Golf Course Equipment.

Ask for details of ten day trial offer

Standard Manufacturing Co.  
Cedar Falls, Iowa



greenkeeper. This company also manufactures steel flag poles, aluminum tee markers and bag racks and a complete set of permanent aluminum golf course signs, which include entrance signs, arrow signs for tees giving the hole number, yardage, par, etc., fairway yardage markers, out of bounds, no parking, and numerous others used on the golf courses and which usually have to be made to order.

A copy of this little circular should be in the hands of every greenkeeper and Green committee chairman and will be sent free of charge.

**Thompson Sprinklers**

Over thirty different models of hose sprinklers are made this year by the Thompson Mfg. Co., Los Angeles, California. It is the claim of this company that no one sprinkler will answer all purposes because each meets a different working condition. It is for this reason they manufacture so many models and no matter what the sprinkling problem may be they can satisfy it.

For golf courses and large lawn areas this company recommends the Master sprinkler which is the last word in simplicity, but yet is so rugged in construction that the company unqualifiedly guarantees it for three years. This sprinkler will cover an area of 108 feet or better on 45 pounds pressure and will also

operate nicely on 20 pounds. It has no exposed machinery or gears and there is nothing to get out of order. The head can be slipped into a hip pocket.

For fairways, approaches and tees the company recommends the use of the Quick-Coupling Valve, which is set flush with the surface of the ground and is permanently attached to underground piping. This valve is housed in the Thompson Valve Sleeve—out of the way of mower and play. The Quick Coupler is attached to the Master Sprinkler which in turn is quickly connected to the valve when sprinkling is desired. A turn of the hand and the water is on. There is no need to go to the main controls and there is nothing to get out of order. This is said to be the most efficient and economical sprinkling system yet devised.

### Cooper Power Mower

A brand new power putting green mower is the Cooper, manufactured by the Cooper Mfg. Company, Marshalltown, Iowa. This machine was first exhibited at the Greenkeepers' Show in Louisville and attracted wide attention.

Two or three features are noteworthy. First, it is equipped with a Briggs & Stratton four-cycle gasoline engine and everybody knows the reputation and quality of the Briggs & Stratton machine. Second, it is constructed of press steel and aluminum alloy which gives great strength with extreme lightness as compared with cast iron frames and bodies.

The Cooper mower is short coupled with finger tip control and reel drive assembly with independent clutch. It has an unusually large grass catcher and a brush attachment which aerates the soil, brushes off worm casts and keeps stolon greens from forming runners.

A new circular completely describing and illustrating the Cooper mower will be mailed to greenkeepers who send a post card to the company at the above address.

### Koppers Sulphate

The use of Koppers sulphate of ammonia which is sold under the trade name of Koppers Velvet Lawn to the retail trade, is well described in an illustrated circular recently issued by this company. It tells the householder to broadcast two kitchen cupfuls for each two hundred and fifty square feet only when the grass is dry and then to water it down thoroughly.

The first application should be in the early spring as soon as the grass begins to start its growth, with another application about three weeks later, or two cupfuls of Koppers Velvet Lawn can be mixed in ten gallons of water and put on two hundred and fifty square feet with a hand sprinkling can. All this information is worth while for those who have no knowledge of the use of sulphate of ammonia. It can be had from your local dealer in 5, 10, 25 and 100 pound bags, these five pound bags being sufficient to cover twelve hundred square feet of lawn.

Complete information can be secured from the Koppers Products Co., Koppers Building, Pittsburgh, Pa.

### How to Use Milorganite

The Milwaukee Sewerage Commission, Milwaukee, Wisconsin, has issued a pocket circular describing in complete detail the use of Milorganite on established fairways and putting greens and also in new course construction. It is also used extensively as a carrier for supplementary fertilizers or lead arsenate where it has been very successful.

Milorganite is too well known to require detailed description—as a fertilizer it contains all the rare chemical elements which recent investigations indicate play a part in plant growth. It appeals to the greenkeeper especially because it imparts a deep green color to the turf, promotes long growth and is least apt to burn or injure the turf. Its mechanical condition also makes it easy to handle without waste which is a big factor on windy courses.

This circular which is new will be sent to greenkeepers upon request.

### Turf Builder Mowers

Everybody knows at once that the above title refers to the well-known Roseman fairway mowers, which apply to the fairway the same principle as universally used on putting greens. In other words Roseman mowers cut and lightly roll the turf at the same time which presses the grass roots gently but yet firmly into the soil and eliminates cuppy lies and soft spots. The Roseman is the only tractor mower having these qualifications.

It is also to be noted that the Roseman Quint or Five Gang set has three mowers in the front and two in the rear which is the reverse of the usual arrangement. In short the Roseman is original in every particular and the makers are not afraid at any time to demonstrate that their theories are correct. In fact experience of many years is incorporated in this company's product.

The company furnishes a dual purpose lifting hitch which sets up the mowers for mowing rough or transporting over areas where cutting is not desired. It is very simple and effective. For sandy soils particularly the Roseman is said to have no equal.

### Price Versus Quality

The Stump & Walter Company, 30-32 Barclay St., New York City, who for almost a generation have been specialists in golf grasses and equipment, distributed at Louisville an extremely interesting circular on grass seed under the above title. This company has gone into an editorial description of turf grasses and includes illustrations showing how to identify the various grasses by their leaf and root formations.

They also give a tabulation of all the grass seeds, where to use them, on what soils they are suit-

## BENT GRASS SEED

Nine-tenths of the seed offered by seed dealers invariably is of foreign origin and often is not acclimated to the severe variable climatic conditions of our northern states. SHOULD AMERICANS PLAY THEIR GAMES ON "GERMAN, NEW ZEALAND OR CANADIAN" GRASS WHEN THEY CAN PURCHASE SEED, THAT PRODUCES THE SAME KIND OF TURF, FROM AMERICAN FARMERS WHO GROW IT?

KINGSTON

A. N. PECKHAM

RHODE ISLAND

10 YEARS  
of Furnishing  
SEED  
Direct from the  
FARMS  
Where it grows  
to you

"Every penny of waste between farmer and consumer that we can eliminate will be a gain both to the farmer and consumer."—President Hoover



able, and the quantities necessary to produce the best results. Also planting times and other splendid information.

The data here is authentic and is not only extremely interesting but useful to greenkeepers and chairmen. A copy will be sent upon request.

## Ideal Golf Supplies

Few people connect the Ideal Power Lawn Mower Company, Lansing, Michigan with a complete line of golf supplies and equipment of every description which are carried in stock not only in their home warehouse at Lansing, Michigan, but in their factory branches in New York, Chicago, Detroit and Boston.

In order that the greenkeepers may acquaint themselves with the Ideal line of equipment the company has issued a catalog called Number 30, which will be sent upon request and which illustrates, describes and gives prices of practically everything used about a golf course. This catalog is a splendid book of reference telling the latest and most improved implements on the market collected by Ideal from a large range of reputable manufacturers.

This company specializes as everyone knows in mowing equipment, including hand mowers of all kinds, power mowers of various sizes, and gang mowers for use on fairways and large lawns.

One interesting item is the Bull Dog Golf course tractor combining the new Ford Model "A" Motor and Ford Type Worm Drive making it so the makers claim the simplest and most powerful—and sturdiest golf course tractor offered on the market. It weighs 1850 pounds, costs \$668.00, and will pull a five gang mowing unit eight miles an hour.

Of special interest to schools and colleges, parks and cemeteries is the Ideal Triplex mower, a close-coupled self-contained unit which will cover twenty-five acres in a day and handle easily and quickly around trees, walks, flower beds, shrubs, etc. It has three Ideal mowing units and the total width of cut is eighty-four inches. The cost of tractor, mowers, etc., complete ready to run is \$1200.00, which is very cheap considering the high quality of the outfit.

## ELECTRIC WORM ERADICATOR

**Eliminates Worm Casts  
Prevents Brown Patch  
Stimulates the Greens**

Every gallon of "ELECTRIC" makes 250 gallons of solution, enough to cover 3,000 sq. ft. Price, \$3 per gallon. Shipped in 5, 10, 15 and 50 gallon containers. Measure and glass jugs for handling, supplied free.

Write for free folder—today

**READE MFG. COMPANY**  
195 Hoboken Ave. Jersey City, N. J.

## The Lark Sprinkler

The old reliable Lark sprinkler continues to grow in popularity and more of them will be found on the golf courses this year than ever before. L. R. Nelson Mfg. Co., Peoria, Ill., are justly proud of their product and are ready to fill orders promptly for spring delivery.

The Lark sprinkler as is well known is very light and easy to handle and is mounted on a roller base to prevent damage to the green. It works on the principle of a double spray with the main stream throwing far out covering a broad outer circle, while inside is the whirling rotor which creates an even distribution to the center. This adjustable rotor which is a patented feature makes possible the perfect control of the main stream at full speed and scattered rainlike distribution. It sprinkles evenly up to 150 feet.

The L. R. Nelson Co. will mail an illustrated circular upon request without charge.

## Improve Your Soil

The Hyper-Humus Company, Newton, N. J., distributed a very interesting circular at Louisville, telling where and how to use Hyper-Humus which is a pure organic material prepared for the purpose of building up the soil.

Hyper-Humus is used for composting with sand and top soil and gives remarkable results. It is also used largely for mixing with inorganic fertilizer and this is carefully charted in the circular which will be sent free upon request.

## Buckner Irrigation

It is marvelous the perfection which the Buckner Mfg. Company has attained in modern golf course irrigation. The combination of Buckner sprinklers and self-closing valves appears to be the simplest and

most effective means of watering greens, tees and fairways, that has ever been devised.

Space will not permit a complete description but it is certainly worth a postage stamp to get the Buckner catalog illustrating and describing the Buckner simplified method and the equipment which is used. Address Buckner Mfg. Co., Fresno, California.

## Convention Report

O. M. Scott & Sons Company, Marysville, Ohio, have prepared a report of the 4th Annual Convention of the National Association of Greenkeepers of America, held at Louisville, February 4-7.

The company states that they will be very glad to send a copy of this report to anyone who requests it.

## Night Mowing

The Worthington Mower Company, Stroudsburg, Pa., has issued a circular on "Night Mowing" giving illustrations of an outfit used at the Chicago Golf Club during the Walker Cup Matches last year. It is accomplished by the use of both front and rear searchlights and has been very successful.

This system of night mowing with Worthington's mowing equipment was first used by George Sargent at the Scioto Country Club during the U. S. Open Championship in 1926.

## Triumph and Victory

The Jacobsen Manufacturing Co., Golf Dept. 11, Racine, Wisconsin, manufacturers of the famous Jacobsen power putting green mowers is justly proud of the record it has made in the golf field. People said "it can't be done" and every discouragement was thrown in their way but they persevered until their claim as leaders in the field is well substantiated.

Mr. O. T. Jacobsen, head of the company is a good mechanic and his father was before him and nothing less than bullheaded belief that he was right coupled with conscientious, painstaking care in design and manufacture has brought Jacobsen out on top.

It will interest greenkeepers to see a new circular recently published by this company, which will be sent for the asking. It describes and illustrates their splendid products in many phases of work.

### Toro's Complete Line

As usual the handsome illustrated catalog of the Toro Mfg. Co., 3042-3160 Snelling Ave., Minneapolis, Minn., carries within its covers photographs and descriptions of its complete list of golf course equipment. The policy of this company is to keep abreast of the times and every year sees something new added to its already extensive line, based upon the experience of the previous season.

The Toro catalog this year displays the new power putting green mower with its light weight, 4-cycle motor and eight-blade cutting reel. It is built in one size only—19¼-inch cut—with full length rollers front and rear to prevent scalping on undulating ground. The material and workmanship is fully up to the Toro standard.

Another new item is the Toro Junior tractor with dump box body, which is equipped with a Ford 1930 Model "A" Heavy Duty engine and gives speeds ranging from four to twenty miles an hour. The wheel base is 98 inches and the total width is 78 inches.

The Toro Junior tractor is an excellent supplementary machine for eighteen hole courses and as an all-around general utility machine for nine hole courses, because it has such a wide range of usefulness. Field

tests have proved that the new Toro tractor will climb a 30 per cent grade with a full body load.

The Toro catalog is really worth while and should be in the files of every greenkeeper and Green committee chairman. It will be sent free upon request.

### Seeds of Success

Every year brings a new catalog from J. Oliver Johnson, Inc., Morgan-Huron-Superior Streets, Chicago, Ill., under the title, "Seeds of Success". This catalog not only deals with grass seed, but covers a complete line of golf course equipment of every description, as well as fertilizers, top dressings and disease killers.

### Functions of the three plant food Elements

(Continued from page 16)

permanency of the turf. Further, a histological study of the cell structure of grass should be made under various fertilizer treatments. Do repeated applications of nitrogen weaken or strengthen the cell wall? This information is of value in determining the relation of fertilizer treatment to resistance to disease and attacks of brown patch. I thank you.

### A Live Wire

By Robert E. Power



THIS is the first picture we have ever seen of "Lew" M. Evans sitting down. Just how the photographer kept him quiet long enough to get this photo is indeed a mystery. For "Lew", let it be known, is a live wire and about the busiest boy in the "Big League" of greenkeepers.

Some months back wise old John Morley made him National Organizer of the National Association of Greenkeepers of America. He had John Quail buy him some postage stamps and a couple of new pairs of shoes. Since that time Lew has been burning up the trails leading to the lairs of languid greenkeepers. And how he has preached the N. A. G. A. gospel to them is nobody's business.

So here's fair warning, one and all. If Lew Evans gets on your trail you better join up because you will never get a minute's rest until you do. And you will be glad of it some day and will thank Lew for making you do it. Your club will thank you too because golf officials generally are fast becoming convinced that the National Association of Greenkeepers of America is doing more good for golf in a constructive way than any other agency in the world.

### High Spots of the Convention—(From page 9)

the Annual Convention in token of the remarkable services they have rendered for them. Both Mr. Morley and Mr. Burkhardt were among the original organizers of the Greenkeepers Association at the first meeting held at the Sylvania Country Club, Toledo in September, 1926.

**John Morley, president of the Association** pronounced the Annual Banquet at Louisville the best ever held by the Association. George Davies, chairman of the Entertainment committee and his associates were highly praised for the efficient work they did not only at the Banquet, but throughout the entire week.

**Harry Burkhardt, chairman of the Registration committee** reported a considerable increase in attendance over last year's Convention in Buffalo. He sprung an innovation this year by issuing three sets of badges—one for members of the Associa-

tion, one for Exhibitors and one for Guests.

**"Bill" Farnham, sports writer of the Herald Post, Louisville** afternoon newspaper who handled the newspaper publicity for the Greenkeepers' Golf Show and Convention has been appointed Publicity representative of the National Association of Greenkeepers of America. The appointment was made by President Morley.

**George Davies, the Louisville live wire**, sprung a unique surprise on the greenkeepers with his reproduction of a one-shot hole in one of the booths of the Golf Show. It was completely turfed from tee to green with grass which he grew in a greenhouse, had a creek with water in it running across the fairways between the tee and the green, and was dotted with trees and miniature figures to give it a realistic appearance. This unique achievement was one of the high spots of the week.