



## *The Art of Doing Things Well*

*T*HE art of doing things well, while not exclusive, yet is confined to those individuals and institutions that are properly fitted by training, equipment and courage.

From a small start and without the use of high pressure tactics, the Toro organization has grown until the products of this company are used in all sections of the civilized world.

First in building a thoroughly satisfactory golf course tractor. First in building an oil-tight, machine-cut steel gear fairway mower. First in building a roller type putting green mower that would handle creeping bent. First in building a flexible fairway roller. First in building an all steel dump wagon—

And first to provide countrywide service on golf course machinery.

The art of doing things well has given this company the measure of success which it now enjoys. The intelligent buyer of grass-cutting machinery will recognize that in this fact rests his greatest safeguard as to satisfactory performance and worth-while value.

PRESIDENT

TORO MANUFACTURING COMPANY  
MINNEAPOLIS, MINNESOTA  
U. S. A.



# The NATIONAL GREENKEEPER

(Registered U. S. Patent Office)

Official Organ of the National Association of Greenkeepers of America

Published monthly at 405 Caxton Building, Cleveland, Ohio.

Contents copyright, 1930, by The National Greenkeeper, Inc., Publishers.

Robert E. Power, President and Editor; Frank H. Pelton, Sec'y.; C. F. Lowe, Treas.; M. J. Fox, Asst.-Sec'y.

Entered as second-class matter, Aug. 25, 1928, at the post office, Cleveland, Ohio, under act of March 3, 1879

All Rights Reserved—None of the contents of this Magazine, either wholly or in part, may be reprinted without permission

## Contents

MAKING COMPOST <i>By Chester Mendenhall</i> .....	7	AMHERST'S FIFTH ANNUAL SHOW <i>By Llewellyn L. Derby</i> .....	32
PRACTICAL GREENKEEPING <i>By Joseph Williamson</i> .....	10	SAND GREENS IN OKLAHOMA <i>By Don Sparks</i> .....	34
IRRIGATION <i>By John MacGregor</i> .....	20	GREENKEEPING TODAY AND TOMORROW <i>By Prof. Lawrence S. Dickinson</i> .....	36
CAROLINA GREENKEEPERS ORGANIZE.....	24	CANADIAN NEWS <i>By J. H. Evans</i> .....	39
EFFECT OF MERCURY COMPOUNDS AND ARSENATE OF LEAD ON SOIL NITRIFICATION <i>By Prof. J. W. White</i> .....	26	PACIFIC COAST GOSSIP <i>By Arthur Langton</i> .....	41
JOHN QUAILL SAYS.....	31	PENN STATE GREENKEEPING COURSE.....	42
MID-WEST NOTES <i>By A. L. Brandon</i> .....	31	AROUND THE OFFICE DESK.....	43
		MARKET PLACE AND BUYERS' GUIDE.....	44

## Officers---National Ass'n of Greenkeepers of America

**John Morley, President**

Youngstown Country Club  
2248 Selma Avenue  
Youngstown, Ohio

**John Quail, Secretary**

Highland Country Club  
426 Highland Avenue  
West View, Pittsburgh, Penn.

**Fred A. Burkhardt, Treasurer**

Westwood Country Club  
Cleveland, Ohio

**John MacGregor, First Vice Pres.**

Chicago Golf Club  
Box 717, Wheaton, Illinois

**Wm. J. Sansom, Second Vice Pres.**

Toronto Golf Club  
Long Branch, Ontario, Can.

**Robert J. Hayes, Third Vice Pres.**

Pelham Country Club  
Pelham Manor, New York

**George Davies, Fourth Vice Pres.**

Big Springs Golf Club  
Louisville, Kentucky

**John Anderson, Fifth Vice Pres.**

Crestmont Country Club  
West Orange, New Jersey

### DISTRICT VICE PRESIDENTS

ELMER F. AFFELDT, 35-12 Brewster Avenue, Flushing, L. I., New York.  
A. E. ARNOLD, Masonic Country Club, Grand Rapids, Michigan.  
C. J. AUGUSTO, Del Monte Country Club, Del Monte, Calif.  
G. W. BARNES, Banff Springs Golf Course, Banff, Alberta, Canada.  
C. G. BARTON, Sylvania Golf Club, Toledo, Ohio.  
ALEX BINNIE, Shoreacres Golf Club, Lake Bluff, Ill.  
JAMES BOLTON, Berkshire Country Club, Reading, Pennsylvania.  
MICHAEL BISSEL, Montclair Golf Club, Montclair, New Jersey.  
ALEX BOYD, Rainier Country Club, Seattle, Washington.  
A. L. BRANDON, Saint Charles Country Club, Saint Charles, Illinois.  
CARL A. BRETZLAFF, Meridian Hills Country Club, Indianapolis, Indiana.  
PAUL BROCKHAUSEN, New Blue Mound Country Club, Wauwatosa, Wisconsin.  
THOMAS BRYDON, Kahkwa Country Club, Erie, Pennsylvania.  
J. O. CAMPBELL, Wethersfield Country Club, Hartford, Connecticut.  
JAMES CONNAUGHTON, Monroe Golf Club, Pittsford, New York.  
CARL DAVIS, Moonbrook Country Club, Jamestown, New York.  
E. E. DAVIS, Meadville Country Club, Meadville, Pennsylvania.  
M. L. DePARIEN, Gulf Stream Golf Club, Delray Beach, Florida.  
THOS. E. DOUGHERTY, Springhaven Country Club, Chester, Pennsylvania.  
GORDON M. EARL, Ogdensburg Country Club, Ogdensburg, New York.  
CHARLES ERICKSON, Minikahda Club, Minneapolis, Minnesota.  
FRANK W. ERMER, Ridgewood-Willick Golf Clubs, Cleveland, Ohio.  
LEWIS M. EVANS, Tam O'Shanter Golf Club, Canton, Ohio.  
O. E. EVANS, Country Club, Yorktown, Virginia.

R. E. FARMER, Brynwood Country Club, Milwaukee, Wisconsin.  
D. ALLEN FRASER, Berkshire Hunt and Country Club, Lenox, Mass.  
THOS. C. GOODMAN, Normanside Country Club, Albany, New York.  
FORD GOODRICH, Flint Country Club, Flint, Michigan.  
JOHN GRAY, Essex Golf and Country Club, Sandwich, Ontario, Canada.  
J. E. HAMMER, JR., Memphis Country Club, Memphis, Tennessee.  
HARRY HANSON, Maple Bluff Country Club, Madison, Wisconsin.  
H. HAWKINS, Lakeview Golf Club, Port Credit, Ontario.  
ROBERT HENDERSON, Country Club of Buffalo, Williamsville, N. Y.  
G. HOLMQUIST, Fort Wayne Country Club, Fort Wayne, Indiana.  
FRANK J. HOSNER, Glendale Golf and Country Club, Saginaw, Michigan.  
ARTHUR J. JENSEN, Fargo Country Club, Fargo, N. D.  
CHAS. S. KESSELRING, Moundsville Country Club, Moundsville, West Virginia.  
FRED LARRENCE, Deal Golf Club, Oakhurst, New Jersey.  
M. W. LAWRENCE, West End Country Club, New Orleans, Louisiana.  
GEORGE LIVINGSTONE, Bell Meade Country Club, Nashville, Tennessee.  
HUGH LUKE, Garden City Country Club, Garden City, New York.  
JEROME MACDONALD, Palmetto Golf Club, Aiken, South Carolina.  
TOM K. McCLENAHAN, Mayfair Golf and Country Club, Edmonton, Alberta, Canada.  
JOE P. MAYO, Pebble Beach Country Club, Pebble Beach, California.  
CHESTER MENDENHALL, Wichita Country Club, Wichita, Kansas.  
T. H. RIGGS MILLER, Richmond Country Club, Staten Island, New York.

HUGH C. MOORE, St. Simon's Island Golf Club, St. Simon's Island, Ga.  
JAMES MURDEN, Ridgewood Golf Club, Cincinnati, Ohio.  
L. T. PARKER, Pasadena Golf Club, Pasadena, California.  
WILLIAM E. PERKINS, Yale Athletic Ass'n., New Haven, Connecticut.  
JOHN PIRIE, Whippoorwill Country Club, Chappaqua, N. Y.  
CLARENCE PLOSS, Salem, Mass.  
EDWIN O. PRATT, Mission Hills Country Club, Kansas City, Kansas.  
WALTER C. REED, Westwood Country Club, St. Louis, Mo.  
ROBERT SCOTT, Baltimore Country Club, Baltimore, Maryland.  
H. E. SHAVE, Oakland Hills Country Club, Birmingham, Michigan.  
CLARENCE W. STROUSE, Highland Country Club, Grand Rapids, Mich.  
DAVID TAIT, Northwood Country Club, Meridian, Mississippi.  
RALPH THOMAS, Sandy Burr Country Club, Waltham, Massachusetts.  
D. R. VALENTINE, Beaumont Country Club, Beaumont, Texas.  
JOSEPH VALENTINE, Merion Cricket Club, Philadelphia, Pennsylvania.  
TOM VARDON, Yacht Club, White Bear, Minnesota.  
RICHARD WATSON, Chevy Chase Golf Club, Washington, D. C.  
BONNIE WEAVER, Burlington Golf Club, Burlington, Iowa.  
GEORGE WELLIN, Tumblebrook Country Club, New Britain, Conn.  
JACK WELSH, Wakonda Country Club, Des Moines, Iowa.  
SAM WHITING, Olympic Club, San Francisco, California.  
JOSEPH WILLIAMSON, Scioto Country Club, Columbus, Ohio.  
WALTER WOODWARD, Senneville Country Club, Montreal, Quebec, Canada.



# TESTED SEEDS

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

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

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

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

An inquiry does not obligate you in any way.

**PETER HENDERSON & CO.**

SEEDSMEN

*Everything for the Golf Course*

35 Cortlandt St.

New York City



# The FAIRWAY Will Reduce Your Course Maintenance Costs



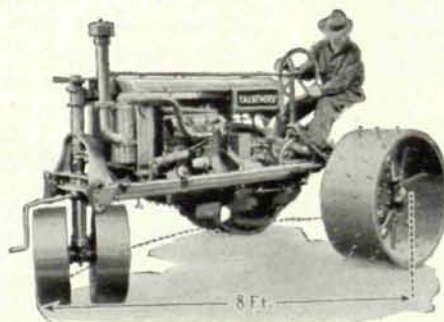
The McCormick-Deering FAIRWAY Tractor is the key to successful golf course maintenance. It is an economical mobile power plant that has proved it can efficiently mow the fairways, cut the rough, do construction work, and operate equipment, at a cost much lower than manual labor.

When you consider that from 60 to 75 per cent of your annual maintenance expense is labor cost, it is readily apparent that a great saving can be made by using the FAIRWAY. It pays for itself the first season and it has a long life ahead of it.

One man operating the FAIRWAY and a gang of mowers can cut from 75 to 100 acres a day. The

7-foot built-in power mower simplifies cutting of the rough. In an emergency, the FAIRWAY can be operated 24 hours a day. It is a flexible unit and its owners say it is the most useful equipment they have.

If you want to reduce your maintenance costs this year, now is the time to get a McCormick-Deering FAIRWAY Tractor. The nearest of 115 Company-owned branches in the United States and Canada, or a McCormick-Deering distributor or dealer will be glad to demonstrate it for you. Remember, too, that they are ready to give you prompt, efficient service when it is needed.



The FAIRWAY makes a square turn in a radius of 8 feet

Write us for information.

INTERNATIONAL HARVESTER COMPANY

606 So. Michigan Ave.

OF AMERICA  
(Incorporated)

Chicago, Illinois

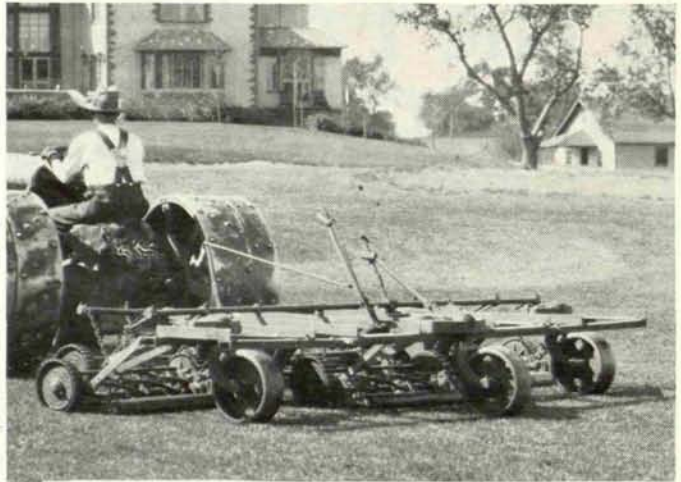
**The Golf  
Tractor**

**MCCORMICK-DEERING  
FAIRWAY**



# THE REASON WHY— Low wheels on the BULLDOG Mean Smoother Fairways

Low wheels mean a short side frame that allows the cutting knives to go right to the bottom of every hollow on the fairway. The short frame holds the cutting knives in such a position that they cannot scalp the tops off ridges. In addition, the low-wheeled Ideal cutting units are pushed forward on hinged arms that allow them to



7 blade cutting units for 1931

The Bulldog

follow every undulation of the ground. They cannot leave uncut patches on the fairway, because they cannot bounce and sway from side to side as less efficiently designed gang mowers will do. And, those same low wheels mean a stocky, rigid side frame without any complicated chain-of-gears, and without any high repair costs. Nothing can equal the Bulldog.



Rough Mower

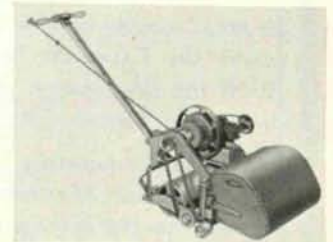
## NEW IDEAL ROUGH MOWER LOWERS ROUGH CUTTING COSTS

Here is a new, and proved, way to obtain better rough, and to lower rough cutting costs. The new Ideal Rough Mower is built on the same design as the famous Bulldog—with adjustment to allow any required height of rough. It cuts more rough per day, enabling rough to be kept more even all season long. Actual cost records on clubs in various parts of the country show a saving in rough cutting costs as high as 50%—and an equally high increase in player-satisfaction.

## NEW POWER PUTTING GREEN MOWER

Power flows smoothly to operate the seven-blade cutting reel at a higher speed—giving more even cutting. The new Ideal Power Putting Green Mower is easier to operate than any other. Time tests prove it takes less time per green. It is so simply constructed that virtually nothing can go

wrong. Lubrication system cannot fail. Cooling system keeps it running sweet on even the hottest days. It is so light in weight that it can be turned on even the most delicate turf without injury. Ball bearings and aluminum construction make it the lightest running power greenmower on the market. Ask for 1931 catalog.



Power Greensmower

IDEAL POWER LAWN MOWER COMPANY, 444 Kalamazoo Street, Lansing, Mich.

Factory Branches:

413 W. Chicago Ave.,  
Chicago, Ill.

237 Lafayette St.,  
New York City

161 Vester St., Ferndale  
(Detroit) Mich.

273 Boylston St.,  
Brookline, Mass.

Dealers in all principal cities

CANADIAN DISTRIBUTOR: Aikenhead Hdw., Ltd., 17 Temperance St., Toronto, Ont.

# IDEAL GOLF COURSE EQUIPMENT



April  
1931  
Volume V  
Number IV

# The NATIONAL GREENKEEPER

Official Organ of The  
National Association  
of Greenkeepers of  
America

## Making Compost

By CHESTER MENDENHALL, *Greenkeeper*  
Wichita Country Club, Wichita, Kansas

I WILL try and tell you how we put up our compost. The subject of compost is a very much discussed one. Some of our friends who are selling different kind of fertilizers would have us believe that compost is no longer necessary; that all we need to build up our grass is to use their particular kind of fertilizer.

I heard a man not so long ago make the statement, "whoever saw a compost pile in Nature?" I would like to ask whoever in Nature saw grass cut a quarter inch high and then expected it to stand the trampling of three or four hundred men every day. So I would say that if we are going to treat grass so unnaturally in cutting and wearing, we will surely have to use some unnatural process of feeding.

There are many ways of putting up compost. Some very expensive ways and others not so expensive. The expense of putting up compost depends on how you are prepared to handle your compost.

The old system with which most greenkeepers are familiar was the pile system. By this



CHESTER MENDENHALL

*Mr. Mendenhall is one of the most experienced and efficient greenkeepers in the Middle West. What he says about compost is worth the consideration of everyone engaged in turf culture.*

process a layer of manure was put down and then a layer of soil, then another of manure. This process was continued until the desired amount was in the pile. This was allowed to lay for a season. Then it had to be turned, and let go for another season, after which it was screened and ready for use.

You can readily see that there was a great deal of hand work to this process. We all realize that hand work is expensive. A great deal of the manure used in these piles was burned up instead of being decomposed so it could readily become mixed with the soil as supposed that it would.

Scientists tell us that the air must circulate freely in the soil for the proper growth of the bacteria in the soil that are so necessary for the feeding of the grass. It is readily seen that the

air circulation in a pile of this kind is very limited. Then the sunlight and the rain both enter in the same way as the air, and of course with the same handicap as the air.

Then comes the yard system of making compost. By this system a



COMPOST MACHINE IN OPERATION



fertile piece of ground is selected somewhere on the course, where it is as much out of the way as possible. For an 18-hole course this piece should consist of about two acres of ground. If this is sod land it should be plowed shallow and then thoroughly disced to chop up the sod, covering it with twenty tons of manure per acre. After that it should be plowed to a depth of six or seven inches. If this is done in the spring I would disc it thoroughly and sow to soy beans.

About August 15th you should have a fine green manure crop to turn under. The reason for turning these beans under at this early stage is that they will break down very rapidly at this time. The ground should be disced every two weeks the rest of the fall and a few times during the winter when the ground thaws out and is dry enough to work; then you are ready to screen your compost.

As you can readily see this system leaves your entire area open to the full benefit of the air, sunshine and rain, which are the three things essential to the life and development of the plant food bacteria. The cultivating also gives you a chance to rid your soil of weed seed which would give you trouble on your greens.

#### AIR ONLY PENETRATES THREE INCHES

SOME of our very helpful agricultural professors who go considerably deeper into these subjects than we greenkeepers, tell us that the air only penetrates sufficiently for the highest development of plant food bacteria, to a depth of about three inches; so I make it a point to not go any deeper than this while taking off my soil for my compost. After my compost is all in the shed for the season, I again plow this area, but not so deep as the year before. It is again sowed to soy beans and the same process followed as the year before. I do not think that you should use the same area more than two seasons as by that time you have the cream well skimmed off.

We try to put up our compost during the month of February providing we have a dry spell of weather at that time, which we usually do. We use an old wheat threshing machine for a compost machine. It is striped of everything except the cylinder and a screen is placed inside where the shakers came out. This machine grinds and screens the compost all in one operation. A man with a team and slip are used to bring in the top two inches of soil from the field.

We have the sand hauled to the machine as it is used. Our compost is mixed about one-half sand, because, having a gumbo soil, it requires a good bit of sand and humus to give it the best water-holding and releasing qualities.

#### COMPOST IS HOUSED IN SHED

OUR compost is all housed in a portable shed to keep it dry until it is used. The sides of this shed are made in panels four feet wide and fourteen feet long. The roof is made in sections six feet wide and fourteen feet long. This shed is set up as the compost is piled.

First, we set up posts along for each wall. The posts are set six feet apart and tied across the top with a heavy wire to prevent the walls from spreading. The wall panels are placed along inside the rows of posts and the compost is then ricked between the two walls as it is screened. After the pile has been well-rounded up, the sections of roof are set over the pile and tied down to the sides. As the compost is used the sections of shed are taken down and stored for use again next season.

We now have two hundred yards of compost in our shed for the 1931 season at a labor cost of \$123.00. This compost is all ready to put on the greens, all dry and screened through a quarter-inch mesh screen. When it comes time to top-dress we do not have to wait for the compost pile to dry out and this type of covering for the compost pile is very inexpensive both in cost of the shed and getting the compost in the shed.

I know that all the greenkeepers will not agree with what I have written, so let us have their ideas on preparing compost. This is a free argument for more and better ideas along the lines of green-keeping.

## Farber Compliments Magazine

Editor, The National Greenkeeper.

It shall be my intention at all times to see what can be done to have our members subscribe to your magazine, as I am a firm believer that it will help accomplish what we are trying to do. Your March number is most instructive, especially the article of Doctor Howard B. Sprague on "Some Water Relations of Turf Plants."

Also, Mr. Doty has a good article on "The Book-keeper and the Greenkeeper." I have made a study of this problem the past four years, having established a yearly budget, with monthly reports of expenditures, which is working satisfactory.

WILLIAM C. FARBER, President,  
Carolina Greens Association, Columbia, S. C.







# Practical Greenkeeping

By JOSEPH WILLIAMSON, *Greenkeeper*  
Scioto Country Club, Columbus, Ohio

Read at the 5th Annual Educational Conference of the National Association of Greenkeepers of America, held at Columbus, O., February 3-6.

**G**REENKEEPING has so far advanced from what it was a few years back that the greenkeeper of today is in a new field so to speak, because of the exactness and proficiency of the average golfer and the vast increase and popularity of golf in general throughout the country which has caused and demanded far more thought and study in the art of greenkeeping than the old timers ever dreamed of. This has placed the greenkeeper as a marked man in the eyes of the golfer and the club by which he is employed for many reasons, a few of which I shall mention.

First—the advent of creeping bent for putting greens and the many and varied strains, none of which as yet have seemed to satisfy in any part of the country and up to the present time has kept the greenkeeper in hot water and nervous doubt where he has solid bent greens.

Second—the dub golfer with his ever-present alibi—the greens were terrible or he would have sunk his putts; the sand traps were full of footprints and washouts making him take a seven where he should have been down in par 3; the fairways were not mowed and he could not get anywhere but in the rough, and that was knee high, causing him to lose six balls and the match. In fact the course was in terrible shape, all of which was heaped upon the head of that darned greenkeeper.

These are a few of the many reflections we have to bear, irrespective of the club's finances which has the controlling interest as to the number of men employed to care for a course expected to be in first-class playing shape at all times, whether it rains for a week in the spring which stops the progress of the work, or during a drought like we have



JOSEPH WILLIAMSON

*As greenkeeper at the Scioto Country Club, Columbus (O.), where the Ryder Cup Matches will be played this summer, Mr. Williamson is in the spotlight. He has proved his worth and when the time comes his course will show it.*

just passed through in 1930 when everything was parched hard and dry—fairways literally burned out and water at a premium everywhere in the middle west. These are a few of the problems the greenkeeper of today runs into so far as the working conditions are concerned.

GREENKEEPER MUST BE MIRACLE  
MAN

**A** GREENKEEPER today must be a part at least of the following trades and professions if he would succeed: First, he must be a general to lead his men and a master of arts to show them how, a mechanic of first-class machinery of all kinds, a civil engineer to survey and construct, a landscape architect to

create and beautify, a doctor to diagnose, and a chemist to mix the dope which is now so generally used. In fact in a word, the greenkeeper of today must be a genius, and whether he is or not that is what he is expected to be anyway—"a miracle man."

So let us now get down to business and look his place over. First comes the question of equipment—tractors, machinery, tools, etc., to conduct the work efficiently at low cost.

Does he have up-to-date and labor-saving appliances? For if he has not, and his equipment is in poor shape and dilapidated condition, he cannot expect or be expected to do good clean work which is looked for today. A few dollars saved in cheap tools or in trying to get by for a while longer will eventually cost much more later on, besides the slovenly manner in which the course was kept and the disrepute piled upon him often at the cost of his job, whether it be his inability to maintain his