A GOOD Mower Improved for 1928 Season!

There is no more exacting mowing operation than the maintenance of true, uniform surfaces on putting greens, and no more arduous task with a cumbersome mower.

That is why the 1928 Model of the PENNSYLVANIA Super Roller Greens Mower has been mathematically adjusted to leave a close-cut, flawless wake, and why it was scientifically designed for light weight and for simple, positive adjustment.

Our SPECIAL CATALOG illustrates and describes the Super Roller, as well as the other PENNSYLVANIA Greens and Fairway Mowers—all built throughout to the PENNSYLVANIA Quality specifications, which insure uninterrupted service and long life.

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Evanston, Ill.
Good Machines Save Man-Power

By FRED SHERWOOD
Greenkeeper, Northmoor Country Club, Chicago

A SHORT time ago, I was quoted as having said, "The maintenance expense of a golf course could be considerably reduced, likewise the club's annual budget by cutting down the labor costs, if modern machinery is used on a more extensive and comprehensive basis." Perhaps the following will explain to some extent what I mean:

Machinery is on the market for almost every conceivable job on a modern golf course. While it is true that some of this machinery is worthless as far as performing the work claimed for it, other machines are real labor-saving devices, and they are here to stay as a boon to the greenkeeper.

It is not my intention to attempt to enumerate any one firm's machine for any special service. I am fully convinced, after practical tests and demonstrations, that some of the firms turn out very fine labor-saving machinery-devices ranging from tractors, gang mowers, to putting green and bunker mowers.

Visiting some golf clubs, I have been amazed at the piles of miscellaneous junked machinery lying around the barns and out-sheds, most of them bought as labor-saving devices on the strength of a smart salesman's word. Whether it was the fault of employee or the superintendent, or possibly the makers, the machine has been discarded and junked as no good. Instead of saving labor, it has only helped to swell the budget.

In the past, as well as the present, golf clubs can trace many of their big budget expenses largely to discarded and junked machinery. My experience has been that the chairman of the green-committee does not, as a rule, frequent the barns or sheds. A peek now and then into the sheds, and a few questions asked regarding the used and unused machinery, etc., might en-first-class playing condition at all times. It does not matter if, perchance, the budget increases $2,000 or $3,000. It is the small club with limited resources that generally
lighten the green-committee and broaden their knowledge on various matters.

An 18-hole golf course, properly supervised by an up-to-date and intelligent greenkeeper who has had more of the practical and less of the theoretical side of it, could, and should, normally run an 18-hole golf course and keep it in perfect condition at all times for play and still have lots of change out of $20,000.

Golf courses vary in upkeep. Those that have sprinkling systems installed are likely to run higher in labor upkeep than those clubs who have not the system.

Machinery, properly used and properly handled, with up-to-date devices, will save golf clubs much man-power. A summary of some of the items generally considered as the most expensive will, perhaps, be of interest. Fairway mowing twice a week with a tractor and five mower units will entail an expenditure of 960 hours for one man alone, or $550 for the season. These items will vary according to what a club must pay its labor.

<table>
<thead>
<tr>
<th>Total Hours</th>
<th>Wages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rough, once a week...</td>
<td>480</td>
</tr>
<tr>
<td>Fairways</td>
<td>960</td>
</tr>
<tr>
<td>Scythe man</td>
<td>1,200</td>
</tr>
<tr>
<td>Four-acre machine for cutting traps and around green</td>
<td>1,200</td>
</tr>
<tr>
<td>Five men cutting greens daily</td>
<td>3,600</td>
</tr>
<tr>
<td></td>
<td>7,440</td>
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</table>

These items are based on the maximum expenditure rather than the minimum. I have refrained from mentioning the expenses for top dressing, fertilizing, worming, brown patch, weeding, raking traps, etc. Most greenkeepers seem to have a way of their own for doing these pursuits. But here again, quite a deal of man-power can be saved if the greenkeeper will familiarize himself with modern appliances, put on the market to minimize the cost of the various items I have just mentioned.

First-class golf clubs with large incomes are not perturbed one way or the other, providing their golf courses are kept in

MR. PRO: What you want is—the Most Profit and the Best Golf Tee. Send for samples of the new NINE-HOLE Golf Tee.

SIMPLEX MFG. CO.
Box No. 1854, Sta. E., Cleveland, Ohio

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"On the way I stopped off at the St. Louis Country Club and played with Art Longworth against Jimmy Manion and 'Cotton' Whitbread.

"The next time I used these stock clubs was in the P. G. A. where I used them throughout the Championship. I've never played with a set of clubs that gave me as much confidence as these did.

"I hope to get a chance at the Golf Show to show you the 'whys' and 'wherefores' of our precision built clubs."
The Anonymous Golf Ball

THE unmarked golf ball is a most prolific cause of mistakes and delays from which the man who plays it is by no means the only sufferer.

When lost, it becomes "caddie currency". This puts a dangerous premium upon easily acquired new balls "found" on the course or elsewhere and may account for many mysterious losses.

Thoughtless players, and others not so thoughtless, buy "found" balls to the moral detriment of the caddie. The purchaser has no assurance that the ball was actually found.

All this can be put under control by Fulname Marking backed by a sound policy. No habit among players deserves encouragement by the management more than that of marking plainly every ball they play. The players who use Fulname find it a profitable investment, not an expense.

Experience with some 2000 Professionals shows that the best business men among them are the most consistent buyers of Fulname equipment.

These men know that service rendered in the player's interest always pays.

Millions of golf balls have been Fulname marked without a report of damage to a single ball otherwise good.

The method is correct. Opposition to Fulname Marking justifies a search for the real reason.

The Fulname Company will be glad to give full details to Club Officials, Professionals or interested players. Be sure to give name of club. Address the company at 707 Southern Ry. Bldg., Cincinnati, Ohio.

Play All Winter Without Green Injury

WESTMORELAND, in the Chicago district, probably has more winter golfing "nuts" than any other club in the section. Play continues all through the winter on the permanent greens and to the uniformed observer it is an amazing fact that Westmoreland is one of the earliest courses in shape for spring play, and continues in excellent condition all through the normal season.

It is the belief of the people responsible for Westmoreland's all-year play and maintenance policy that since nature takes pretty good care of pasture grass during the winter it should do as well for golf turf. They admit that walking on the greens during the winter makes them rough in the spring, but they correct this condition by rolling in the spring when the frost leaves and before the ground gets too dry.

A tractor-drawn roller 6 feet wide and weighing not less than 2,200 pounds is used for this green rolling the same as for the fairways. Experienced men operate the tractor, so there is no damaging slippage of wheels. The man uses his head. He doesn't run up hill on a green at a brisk speed. He gets results by careful operation and in addition to smoothing out the rough spots left by winter play, the rolling keeps the moisture in the ground so the greens get a good early start.

SHAFTS SHAFTS SHAFTS

DIRECT FROM FACTORY TO PRO;
TWO SHAFTS FOR PRICE OF ONE

During this sale am offering best No. 2 Pro-finished air-seasoned Hickory shafts for 15c each, irons and drivers, postage prepaid. CASH with order or C.O.D.

JOHN W. WEIS, 650 New York St., Memphis, Tenn.

Please mention GOLFDOM when writing advertisers
Valuable Papers Read at Green Section Meeting

BY O. J. NOER

THE annual meeting of the United States Golf Association Green Section was held at the Hotel Astor in New York City on January 6 and 7, 1928, with Mr. Findlay S. Douglas, vice-president of the association, presiding. Two sessions were held on Friday and one on Saturday morning. Approximately 250 green-chairmen and greenkeepers were in attendance, and displayed keen interest in the papers presented. Besides reporting on the work and accomplishments of the green section, discussions included such pertinent topics as soils, fertilizers, turf diseases and grub, weed and worm control. The complete program was as follows:

January 6, 10 A. M.
Opening Remarks—Chairman Findley S. Douglas.
The Service Rendered by the U. S. G. A. Green Section to the Golfers of America—Wm. G. McKnight, president, Baltusrol Golf club, Short Hills, N. J.
How the Green Section Can Be Helped by Clubs, Green Committee Chairmen and Greenkeepers—Sherrill Sherman, Yahnundas Golf club, Utica, N. Y.
Treating Compost to Destroy Weed Seeds—D. M. Boude, manager, Miami Valley Golf club, Dayton, O.

January 6, 2 P. M.
Feeding versus Seeding Turf—Norman L. Mattice, manager, Pine Valley Golf club, Clementon, N. J.
First Aid to the Beginner—A. G. Chapman, chairman, Green Committee, Audubon Country club, Louisville, Ky.

January 7, 10 A. M.
Recent Turf Disease Studies—Dr. John Montelth, Jr., U. S. Department of Agriculture.
Conditions Which Influence the Growth of Turf—C. A. Tregillus, Simece, Ontario.
Further Experiments in Grub, Worm and Weed Control With Some Comments

Sell Easily Sell Fast

THE profit on an item is important, of course, but that profit made frequently is much more important. Reddy Tees give you a good margin, and they give it often. They sell fast—faster than any other tee in the world. Fair margin multiplied by frequent sale equals husky profit for you.

Golfers prefer Reddy Tees to any other because they last longer, are brightly colored and easy to find, balance the ball without friction, are easy to insert and adjust to proper height, can’t damage the club face, and—because they are the best made and best designed tees on the market.

Every man who plays your course is a prospect for Reddy Tees. Display them prominently. A reminder makes a sale. Sales soon mount up to a good-sized profit.

And remember that Reddy Tees help sell other merchandise for you. Golfers come in frequently for tees. That gives you a good chance to sell them balls, clubs and other equipment.

THE NIEBLO MFG. CO., INC.
38 East 23rd St., New York

The Tee of Champions

Reg. U. S. Patent Office

P. S. For those who fancy a carrot tee, the Nieblo Mfg. Company makes Scot Tee. These are not as well made as the Reddy—no other tees are—and consequently cost you less.
Self-Adjusting

Smooth mowing is permanently assured with F. & N. TITAN Fairway Mowers by the patented F. & N. Self-Adjusting Device in the reel housing. No attention or difficult adjustments by hand are ever necessary.

The F. & N. "Quintet"
Fairway Equipment

Tractor mowing requires rugged mowers especially built for this hard service, if best results and minimum upkeep are desired. That means F. & N. TITAN Fairway Mowers for several reasons: They are designed and built exclusively for tractor work, by the world's largest lawn mower makers. The drive wheels are 17 inches high. Interlocking frame and cutter bar hold the mower rigid and in alignment—the mower can't work loose at the joints. Gears cut from drop-forged, carbonized steel, and run in oil-tight gear case, assuring minimum wear. Genuine heavy duty Timken Roller Bearings mean easy running. F. & N. TITAN Fairway Mowers are the choice of experienced golf clubs and greenskeepers everywhere. Guaranteed, of course.

Supplied in gangs of three or five for Fordson, Studebaker, International and any other tractor, complete with attachments for flexible all-steel frame. Write us today for catalog and prices.

on the Trend in Greenkeeping—B. R. Leach, U. S. Department of Agriculture.

Fertilizer Experiments on Turf Grasses—Dr. Howard B. Sprague, N. J. Agric. Exp. Station, New Brunswick, N. J.

In the opening remarks, Mr. Douglas stressed the important functions of the Green Section, and paid tribute to the pioneer work of Dr. Piper and Dr. Oakley, as well as the present staff. Due to their efforts frauds have been exposed and sound principles of turf management enunciated for the guidance of green-committees and greenkeepers.

Busy Year for Green Section

Mr. Westover presented a detailed report covering the activities of the Green Section staff during the past year. Very many clubs requested specific information which was given by correspondence. The staff were unable to visit as many clubs and districts as seemed desirable due to limited travel money. The experimental work included testing varieties of bent and fertilizer, and continuing work in the control of turf diseases and insect pests. In addition to the turf nursery at Arlington, experiments were continued in Florida, Kansas, New Jersey and Minnesota under a cooperative arrangement. During the coming year, it is hoped to establish co-operative turf gardens in California and the Chicago district.

The fertilizer applications on the regular plots have been continued and the results confirm those obtained in previous years. Acid producing nitrogenous fertilizers continue to reduce clovers and weeds. Mention was made on the effect of corrosive sublimate for controlling so-called "snow mold," and the various mercury compounds for combating large and small brown patch. Several promising varieties of velvet bent, which propagate quite rapidly vegetatively, are under observation, and give promise of developing excellent turf for greens.

Dr. Oakley was reported to be improving in health and is expected to resume active work during the ensuing year. The resignation of Mr. G. T. Cunningham, executive secretary, and editor of the Bulletin, was announced, effective December 15, 1927. Mr. O. B. Fitts also leaves on February 1, 1928. Arrangements have been made whereby Dr. John Monteith, Jr., will devote his entire time to the Green Section work after April 1st. He will edit the Bulletin and direct all the experimental work. The Green Section is for-
tunate and to be congratulated in securing
his full time services.

Mr. Wm. McKnight, president of the
Baltusrol Golf club, spoke briefly on the
service rendered clubs by the Green
Section. He called attention to the wide-
spread interest in scientific research in
industry. The large progressive corpora-
tions maintain scientific staffs and are
guided by the results of their research.
The workers of the Green Section have in
no small measure contributed to the bet-
terment of golf course maintenance. The
effect of the use of sulphate of ammonia
in controlling weeds at Baltusrol was
cited, and mention was made of the ex-
cellent greens composed entirely of velvet
bent.

Support of Green Section Urged

Mr. Sherrill Sherman of Yahundasis, in
his introductory remarks, told of the ex-
cellent results obtained at his club by fol-
lowing the guidance of the Green Section
and urged more general and hearty sup-
port. He suggested that individual club
members be encouraged to subscribe for
the Bulletin. Mr. Sherman pointed out
how individual clubs can conduct experi-
ments and thus supply valuable informa-
tion relating to turf maintenance prob-
lems.

Mr. D. M. Boude, manager of the Miami
Valley Golf club, explained how his club
treats compost with steam to destroy weed-
seeds. The soil is put in a specially con-
structed box and steam is run in. The
process is similar to that used in steam-
ing tobacco beds. This paper provoked
considerable discussion.

Mr. Leach explained how carbon disul-
phide could be used to kill weeds, but ex-
pressed the opinion that all these methods
would be discarded in favor of more simple
methods, notably lead arsenate. This chim-
ical, when mixed with topdressing, kills
troublesome weeds such as chickweed, crab
grass, etc. This discovery was incidental
to the use of lead arsenate for the control
of grubs.

Turf Tests at Pine Valley

Mr. O. J. Noor spoke on the physical
soil factors as they affect turf growth.
He stressed the importance of the size of
the individual soil particles and their ar-
angement. These determine the water-
holding capacity, air-space, and the rate
at which plant food becomes available.

The importance of the fertilization in
improving their turf was brought out by
Norman L. Mattice, manager of Pine Val-

A Piece of Cocos Bent Turf

Today's low prices on Bent Grass Seeds
should encourage the more liberal sowing
of these grasses, which in the past, on ac-
count of their high cost, were restricted
largely to Putting Greens.

For Spring Sowing, We Offer

Grass Seed
of Known Quality

Tested for PURITY and GERMINATION

South German Bent  Colonial Bent
Rhode Island Bent (White Bent)
Cocos Bent  Bent Stolons
Special Putting Green Bent Formula
Superfine Fairway Formula
Chewing's N. Z. Fescue
Fancy Red Top Kentucky Blue
Special prices on the above, and many other
Grasses or Mixtures, on application

COCOOS BENT

We are now convinced, after several
years of trials in the different sections of
the United States other than the Pacific
Coast, where it is already recognized as
the outstanding Putting Green Grass, of
the fine turf producing qualities of this
Creeping Bent. True Cocos Bent turf is
superior to turf produced from stolons and
yet of the same creeping habit and uni-
form color.

Use Cocos Bent for your new greens
or work it into existing greens, or where-
ever a fine and enduring turf is desired.
Per lb. $2.50, 10 lbs. $22.50, 100 lbs. $200

Remember:—All our seeds are of the high-
est quality, obtained direct from the most
reliable sources of supply and are botan-
cally true to name. All seeds are new and
are cleaned and re-cleaned until they are
brought up to the highest possible state
of purity and germination, special care
being given to elimination of weed seeds.
We are always glad to suggest varieties suited
to your soil and climate, to assemble a combina-
tion of seeds to your specifications, or to supply our
own mixtures.

Golf Course Equipment

We carry a complete line of equipment and sup-
plies. Call at our new Golf Equipment Display
Floor at 40 Vensy St., N. Y., or write to us.

Without obligation we shall be pleased to send a re-
presentative who, from long experience, is qualified to
advise regarding grasses and furnish much other
information as is necessary for the best result.

Shumpp & Walter

Specialists in Golf Grass Seeds and Equipment

30-32 Barclay St., New York
"As OHIO Goes, So Goes the NATION"

The old familiar election prophecy, "As Maine goes, so goes the Nation" has shifted its locale to Ohio and now concerns itself with a less romantic institution than politics.

"As Ohio goes, so goes the Nation" now finds its inspiration in Golf Seed Statistics which show rather convincing evidence that the golfing citizenry of the country have gone Scott by a large majority, with Ohio as the torch bearer—seven out of ten clubs in the Buckeye State Sow Scott's Seed and one out of five in the entire country.

We gratefully accept this verdict of the polls. We feel that it is the result of intelligent weighing of facts. Before you vote in 1928—for the good of your course—get the facts on Scott's Seeds.

O. M. SCOTT & SONS CO.
Marysville, Ohio
Golf Course and Lawn Seed

ley Golf club. The sandy nature of the soil at Pine Valley is generally known. During the past year, the fairways have been topdressed with a mixture consisting of clay soil, leaf-mold from the woods, and mushroom soil. This mixture was further reinforced with fertilizer. This treatment, without the additional use of seed, has caused the existing turf to spread and produce a denser turf. All fairways received lead arsenate for grub control. It was soon evident that the lead arsenate also eliminated such troublesome weeds as chickweed and crab grass.

The difficulties of a new green-chairman was discussed by Mr. A. G. Chapman of Louisville, Ky. Mr. Chapman pointed out the great differences of opinion pertaining to golf course maintenance. He exhibited a loose-leaf system in which information gathered from various sources was grouped under appropriate subheads. A simple cost system was also shown and explained. This system is of inestimable value in building the next year's budget and is effectively used in justifying requests for increased or special expenditures.

Mr. H. Kendall Read announced plans for the proposed greenkeepers' convention. It is proposed to meet at the Country Club of Atlantic City some time during June, the exact date and program to be announced later. Besides visiting the clubs around Atlantic City, a day will be spent at the Pine Valley Golf club, Clementon, N. J.

The Saturday morning session was given over largely to scientific papers. Mr. C. A. Tregillus discussed the various factors which affect turf growth, including environment and soil factors. Turf is not permitted to grow according to its natural habits. In turf maintenance conditions as favorable as possible must be maintained.

New Turf Disease Found

Dr. Sprague of the New Jersey Agricultural Experiment station made a progress report in fertilizer experiments being conducted at New Brunswick, N. J. Treatments include manure, various forms of nitrogen, and lime with and without supplementary fertilizers. The percentages of bent grasses, clover and weeds resulting from these treatments were shown on charts, as well as the effect of the fertilizer on the reaction of the soil. Some progress was reported in the use of sulphur to make the soil more acid.

Dr. John Montelith gave a very inter-
estig talk on turf diseases, illustrated
with slides. He showed a new disease
called pythium. This is essentially a
warm-weather disease and attacks all va-
rieties of grasses. So far, effective means
of combating this disease have not been
worked out. It is undoubtedly of im-
portance in the belt south of Philadelphia
and St. Louis, where average summer
temperatures are high.

Several pictures showing the effective-
ness of late fall applications of corrosive
sublimate in controlling the so-called
"snow-mold" were shown. This disease is
confined to northern areas and appears
as the snow melts. The slimy mold-
growth often totally destroys large areas
of turf, but can be effectively checked with
bichloride of mercury if applied in the
preceding fall.

Value of Mercury Compounds
During the past season, a large num-
ber of mercury compounds were tested as con-
trol for large and small brown patch.
When applied to supply equal amounts of
mercury all were effective except mercury
sulphide. In response to a specific ques-
tion, Dr. Monteith expressed the opinion
that the more insoluble mate-
rials, such as
calomel, usually pre-
vent brown patch over
longer periods than corrosive sublimate,
yet are not so effective against the large
brown patch. Attention was called to the
fact that there is more danger of injuring
the turf with corrosive sublimate than
with calomel.

Mr. Leach presented new and inter-
esting material on grub control with lead
arsenate. He recommends the use of 5 lbs.
of lead arsenate per 1,000 square feet for
initial applications, to be followed by
smaller amounts when used as a regular
constituent of topdressing mixtures. Not
only the green but circular areas 25 to 50
feet around the green should be treated.

GIVE new life to
fairways this year.
The grass will spread and thicken if
properly fed.

V-C Fairway Fertilizer supplies just
the kind and proportion of plant food
needed. A ton of V-C Fairway Fer-
tilizer contains fifteen times as much
plant food as a ton of manure—requires
less handling.

Does not interfere with playing. Does
not bring in worms, grubs or weed
seeds. Approved by leading golf spe-
cialists.

May we send you our booklet
"Better Fairways"?

VIRGINIA-CAROLINA CHEMICAL CORP.
RICHMOND, VIRGINIA

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GOLFDOM'S 1928 EQUIPMENT REVIEW
What the Makers Say of Their 1928 Features

STUMPP AND WALTER'S NEW ONES

STUMPP AND WALTER CO., New York, introduces this year the Sauco Lawn Comb, an attachment for the lawn mower which scarifies the turf, breaks the soil crust and lets air into it. Other claims are that it eradicates crabgrass, clover, Bermuda runners and coarse grasses generally; it prepares turf for topdressing and fertilizing; and it opens up thin turf and prepares it for seed. It is more effective and easier than raking.

Stumpp and Walter are also introducing the Sauco Lawn Mower Lifter, a device which can be attached quickly to any side-wheel mower. This simple device permits the lawn mower to cut long grass easily. It is for use on golf courses, parks and lawns; anywhere, in fact, where grass may have been allowed to grow too long to cut readily.

NEW LITTLEFORD COMPOST MIXING SCREEN

LITTLEFORD BROS., Cincinnati, Ohio, are offering to golf courses for the 1928 season a compost mixing screen with a rated capacity of 15 cubic yards per day. It is free from complicated parts. Screening cylinder is 26 inches in diameter by 60 inches long and is arranged so that wire screen can easily be replaced when worn out. A heavy cast iron fly-wheel insures constant motion.

While the standard screen is hand operated, pulleys are furnished when it is desirable to use mechanical power.

F. & N. MOWERS IMPROVED

F. & N LAWN MOWER CO., makers of F. & N fairway equipment, Richmond, Ind., announce among features of their triples

HAVE YOU INVESTIGATED THIS?
The New Mueller Watering System for Golf Greens Entirely Eliminates Labor and Equipment.

No expensive hose and equipment to buy and to replace—once installed the system lasts eternally.

Greens attain a uniform, even perfection that is not possible by hand watering methods. There are never burnt-out, unsightly greens on the course.

On new courses the installation of this system will get the greens ready for playing months ahead of the hand watering method.

All 18 greens watered thoroughly, evenly and simultaneously in fifteen minutes from one central point. All that is required is someone to open and close a valve or switch.

Let us tell you about this unique system and how it will save you money. There's no obligation, of course.

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