

## Have You Seen the New Toro Catalog?

The new Toro catalog is now being mailed and should reach you not later than the 25th of this month. If it does not reach you promptly, write us immediately.

There are a number of new additions, among them being an all-steel dump wagon of entirely new design, rugged in construction, yet extremely easy to handle and free from complicated mechanisms.

A new grinder, which does the same quality of work as the large factory grinder, not only is capable of truing up a reel cylindrically but also puts the correct bevel on the cutting edge.

A new greens brush, hand operated revolving type for removing grain from Bent greens.

A new Zenith cultivator for disking greens — also extremely useful for tearing out the runners in Bermuda grass.

There are also a number of other refinements and improvements too numerous to mention here, which will be found in the new catalog. Write for a copy, or better yet, attend the Convention and Show at the Hotel Statler, Buffalo, February 13th to 16th, 1929.

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# The NATIONAL GREENKEEPER

Official Organ of The National Association of Greenkeepers of America

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VOLUME III.

No. 1

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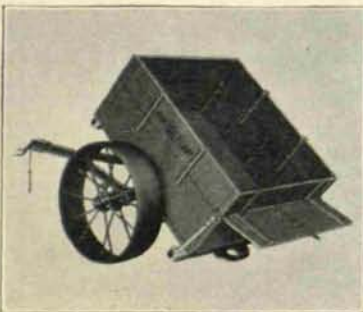
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## The close-coupled Bulldog cuts clean in every hollow and on the ridges



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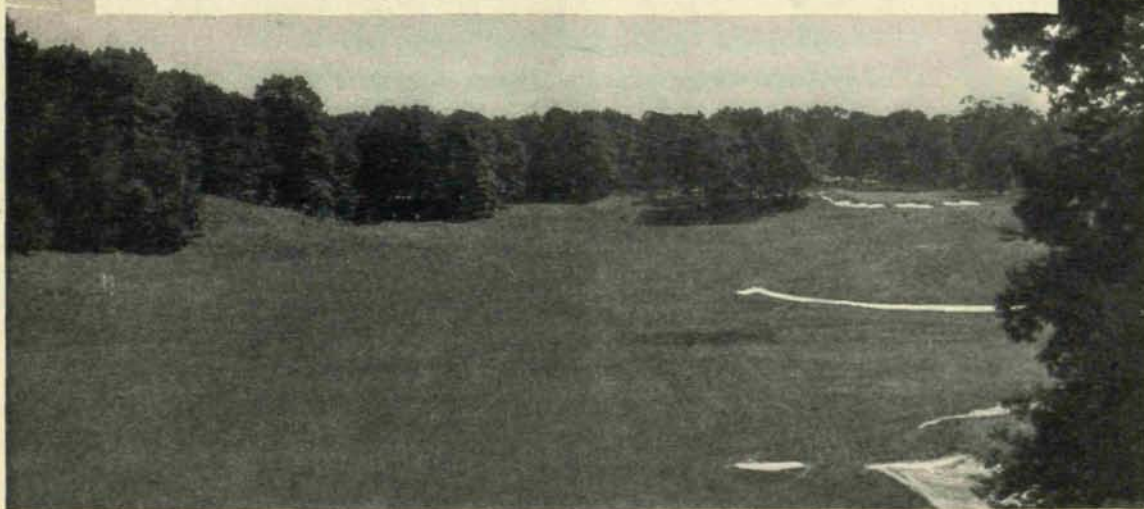
# The NATIONAL GREENKEEPER

*The Leading Journal of the World on Turf Culture and Golf Course Maintenance*

Official Organ of The  
National Association  
of Greenkeepers of  
America

## Bunkers Challenge the Golfer

By EDWARD B. DEARIE, JR., *Secretary,*  
*Mid-West Greenkeepers Association, Chicago*



VIEW FROM THE 1ST TEE, APAWAMIS C. C., RYE, N. Y.

The fairway bunkering is skilfully placed to catch a slice while the green is completely shut out with bunkers

**B**UNKERS, hazards and natural wastes are the foundation of the practical golf course. The attitude of the player toward these and his attempt to master them characterize the calibre of the golfer. The conquest of each trap inspires the player to fresher conquests—and better golf.

The golf course, which is comparatively free from bunkers, traps and hazards, soon ceases to challenge players to exert their best efforts. If the course is too easy, they soon lose the incentive to put forth their best efforts. Mediocre courses invariably develop mediocre golfers. Difficult courses are the only ones which develop champion golfers.

Build a few bunkers on the sides of the fairways to prevent players from wandering from one fairway to another and place a few traps in the middle of each fairway which demand

long shots, carefully directed, and the course architect has issued a challenge which the players will readily accept. Immediately they will try to master the drives which demand heroic "carries" and constant skill.

The majority of golfers appreciate the challenge of hazards and appreciate the privilege of playing on a course plentifully supplied with bunkers. The harder the course the more satisfaction is derived from the attainment of par.

Although bunkers, hazards and traps have been built as tests of skill for decades—in fact, since the adaptation of the first golf course—their construction, like all other features of golf course architecture, is highly individualized. Only general principles can be observed for their design. No set rules can ever be laid down for the construction of any golf course features. If such were the case, courses would



soon incline toward one pattern and the result may easily be imagined.

In the past, the tendency has been to construct hazards after the completion of the fairways. In many cases, these were not added until the links had been in play for a year or two under the theory that delay might prevent misplacement. While to a certain extent this may be true, this delay seems undesirable for many reasons.

Economy is one of the principal reasons why bunkers and hazards should be built at the same time the whole course is constructed. It is not only foolish but expensive to get a course ready for play and then tear up portions of it almost immediately for the purpose of remodeling. Naturally some remodeling should be done at the close of each season but such work should be confined to changes which will prevent the play from becoming monotonous to the same group of players. Such remodeling should not include the addition of features which should have been included in the course

when it was first opened for the members.

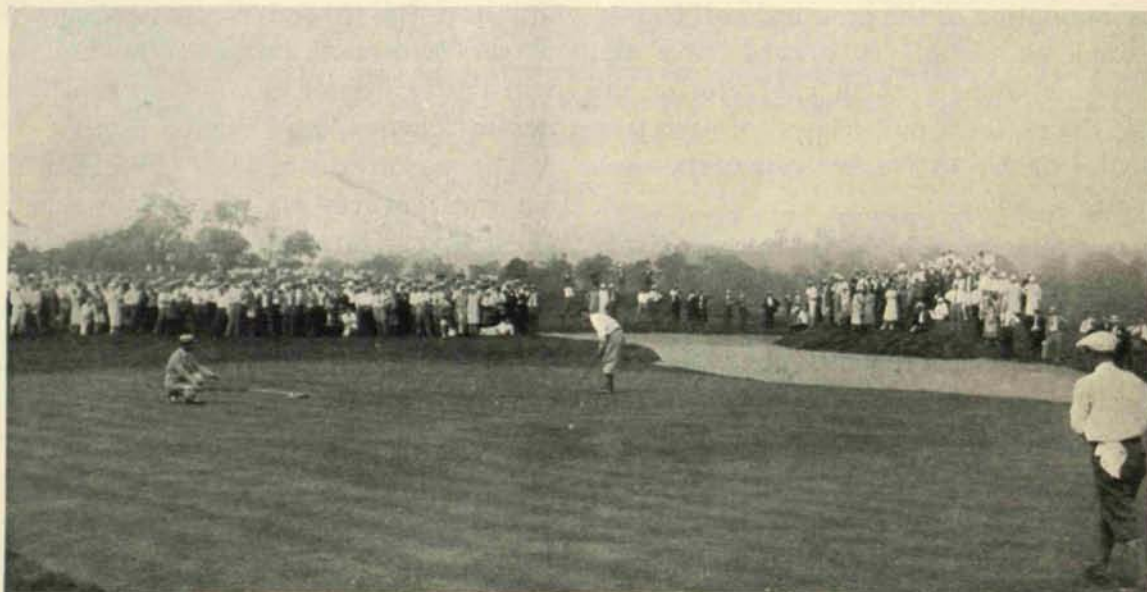
Undoubtedly it is always cheaper to model golf course architecture in the most efficient manner. Grading, excavating and contour development can best be done with power equipment or slip teams wherever available. Such equipment is not always accessible after the completion of the course. The result is the utilization of the best equipment available, otherwise a longer time is required and the expense is correspondingly greater.

Although it is always desirable to plan all remodeling so as to not interfere the least with play, this is not always possible. Weather conditions and availability of labor and equipment sometimes make it necessary that this work be done when play has ceased. Such work should be reduced to a minimum. The construction of all features of the course at the same time makes interference with play more improbable.

Turf is expensive to cultivate and sometimes its proper culture and development requires real skill. Such turf should not be torn up except un-



**YAWNING BUNKERS STERNLY GUARD LIDO'S 12th GREEN**  
The putting surface is in a punch bowl 100 ft. beyond the pits



**OAKMONT'S BIG BUNKERS CLOSELY HUG THE PUTTING GREENS**

Photo shows Roland MacKenzie putting on the 14th green in the National Amateur Championship in 1925 at Pittsburg



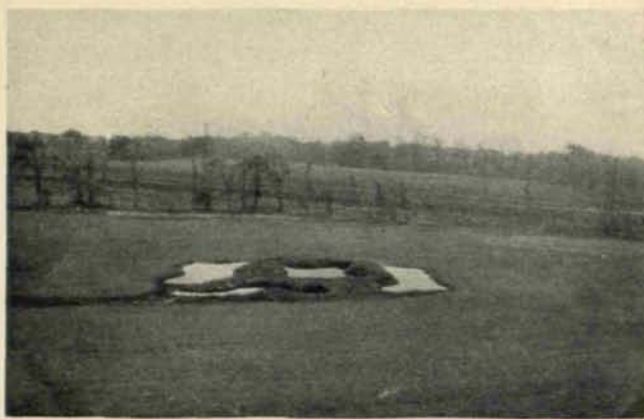


THE LONG ONE-SHOT 9th HOLE AT THE OAKLAND HILLS C. C., NEAR DETROIT, MICH.  
The bunkering on this hole is severe enough to test the skill of any golfer



MINIKAHDA'S GENEROUS BUNKERS ARE OF THE OLDER TYPE AND NOT TOO SEVERE  
Photo shows Bobby Jones and Chick Evans at the 2nd hole in their final match for the Amateur  
Championship in 1927 at Minneapolis





A UNIQUE FAIRWAY BUNKER AT WANAKAH C. C., BUFFALO  
This double hazard is very good between two parallel fairways

avoidably to comply with unforeseen necessities. Horses and grading equipment meandering around a course never improve the turf. The best that can be hoped is that the damage is repairable.

#### COST IS ENGINEERING PROBLEM

THE cost of construction of bunkers is a problem of engineering. The expense of excavating and filling may easily be predetermined from topographical survey maps. Some architects make their estimate from a master lay-out plan supplemented with additional information furnished from the preliminary survey on your topographical plan. Other architects make a cross section survey of all cuts and fill areas on the ground surface. Thus may easily be calculated the approximate cost of the construction of either new or old bunkers. This cost is determined by the size and shape of the mounds, or traps required, which in turn will be

influenced by the problem of drainage. The cost of equipment used and its efficiency is another factor of importance in estimating this work for contract purposes.

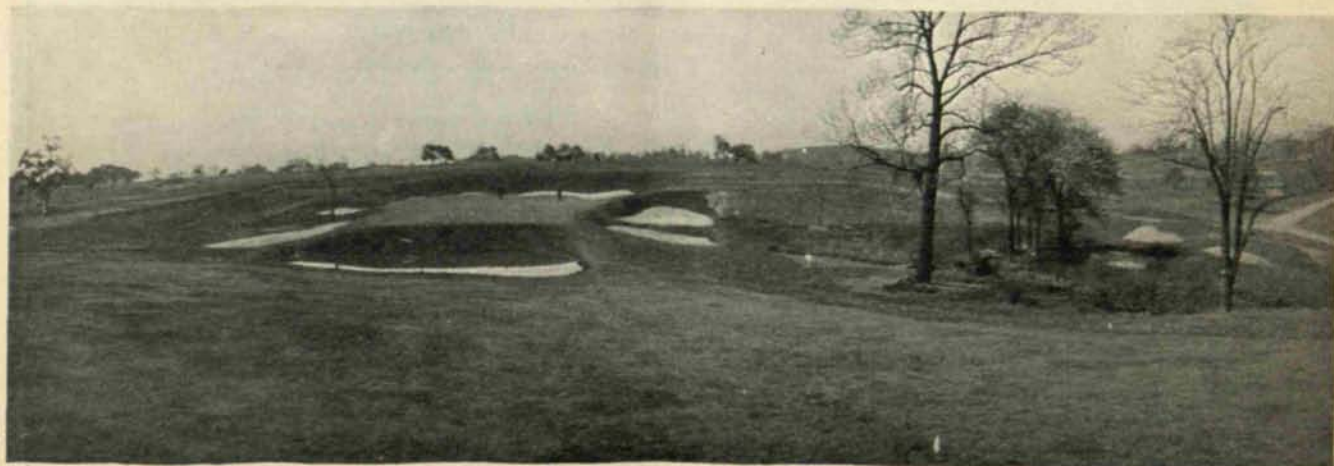
The expense of maintaining mounds and traps is a cost problem to be worked out by the course superintendent. One of the best means of doing this is to divide the whole area into small standardized units. When the cost of cutting or trimming one unit has been ascertained by observation and actual tests the cost of maintaining all the units may be determined.

Generally, if not invariably, it is necessary to adopt different units for cutting and for raking and weeding traps. In the former case, there is a difference between units which may be cut by hand and units which may be cut by power, also. This unit system seems to be the only practical method of estimating such costs because such work is not comparable on different golf courses.

The cost of trap maintenance in the Middle West for raking and cutting has been found to be about \$14.40 per trap per season. The expense of keeping the pit areas in condition has been found to be about 12 per cent of the total cost of maintaining the course for the season.

#### U. S. G. A. INVITES MORLEY

John Morley, as president of the National Association of Greenkeepers of America, has been invited by the United States Golf Association to speak on greenkeeping at the Green Section meeting in New York, January 4-5, 1929.



A 16th HOLE AT THE PITTSBURGH FIELD CLUB  
This is one of the new holes in the reconstruction program recently completed by John McNamara, greenkeeper



# A New Year's Editorial

By ROBERT E. POWER, *Editor*

*The National Greenkeeper*

We are going to write a little New Year's editorial.

And nobody knows anything about it but ourselves.

Not even Al. Lundstrom, John Morley or anybody else.

Because we pay for the paper and ink and postage and printing we have decided to sort of say something all our own and if it's wrong we are to blame—nobody else.

Frankly, we're tired of these golf experts.

We mean the guys with a lot of P. H. D's and X. Y. Z's either in front or behind their names.

They wear frat pins and folks call them Doctor this and Professor that.

They have apparently forgotten more about growing golf turf than all of the greenkeepers in the National Association combined ever knew.

Because we started two years ago to talk about education and study of soil conditions these birds bounced out with more theories than Lydia Pinkham has pills.

They talked everybody dizzy about P. H. and acidity and bugs and bacteria and what not.

Even our oldest and best greenkeepers hesitated and tried out many of their profound formulas. Green committee chairmen exulted because we had "experts."

This is a funny country—this United States of America. Its people try most anything once. But eventually and surely they go back to George Washington and Benjamin Franklin and kick all the upstarts bowlegged.

So we predict modestly but quite confidently that doctors, professors, chemists, agronomists, agrostologists, etc., etc., will find a lot of "Stop" signs at the entrances to golf courses in 1929.

We do not know much about greenkeeping but we know quite a bit about golf clubs and how they spend their money.

Unless we are much mistaken every Green committee chairman along about April first is going to say to his greenkeeper:

"You know, John, you have been here several years and we always had good greens and fairways and were getting along fine until last year when we experimented a lot with these high class experts.

"Now, John, from now on you are in charge of the golf course. You can experiment all you want to in your nursery and on your practice greens. If these experts from Washington or any other place crowd in on you either shoot them or give them mustard gas. You're boss now and no questions asked."

Maybe we're wrong but we still believe that the man who gets up at daylight and works until dark knows how to run his golf course.





B. R. LEACH



VICTOR GEORGE



JNO. MONTEITH, JR.

PAPERS TO BE READ AND DISCUSSED at the 3rd Annual National Greenkeepers' Conference, Hotel Statler, Buffalo, February 13, 14, 15, 1929.

RE-SODDING A PUTTING GREEN.....By Joe Valentine, Philadelphia

HUMUS AND ITS USES .....By James A. Smith, London, Ohio

GRUB CONTROL .....By B. R. Leach, Riverton, N. J.

GREENKEEPING YESTERDAY AND TODAY IN CANADA  
.....By W. J. Sansom, Long Branch, Ontario

SOILS I HAVE SEEN .....By O. J. Noer, Milwaukee, Wisc.

CAN GOLF MAINTENANCE BE STANDARDIZED?  
.....By R. H. Montgomery, Detroit

ANIMAL vs. CHEMICAL FERTILIZERS  
.....By Victor George, LaFayette, Ind.

PLANTING AROUND THE CLUBHOUSE  
.....By Prof. A. H. Tomlinson, Guelph, Canada

BROWN PATCH CAUSES AND CURES  
.....By Dr. John Monteith, Jr., Washington, D. C.

FUNGI DISEASE FROM A FLORIST'S STANDPOINT  
.....By J. E. Cannaday, Sedalia, Mo.



JOE VALENTINE



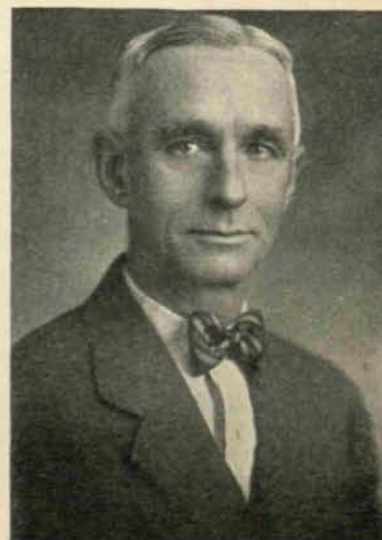
O. J. NOER



J. E. CANNADAY



R. H. MONTGOMERY



JAMES A. SMITH