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Bunkers Challenge the Golfer

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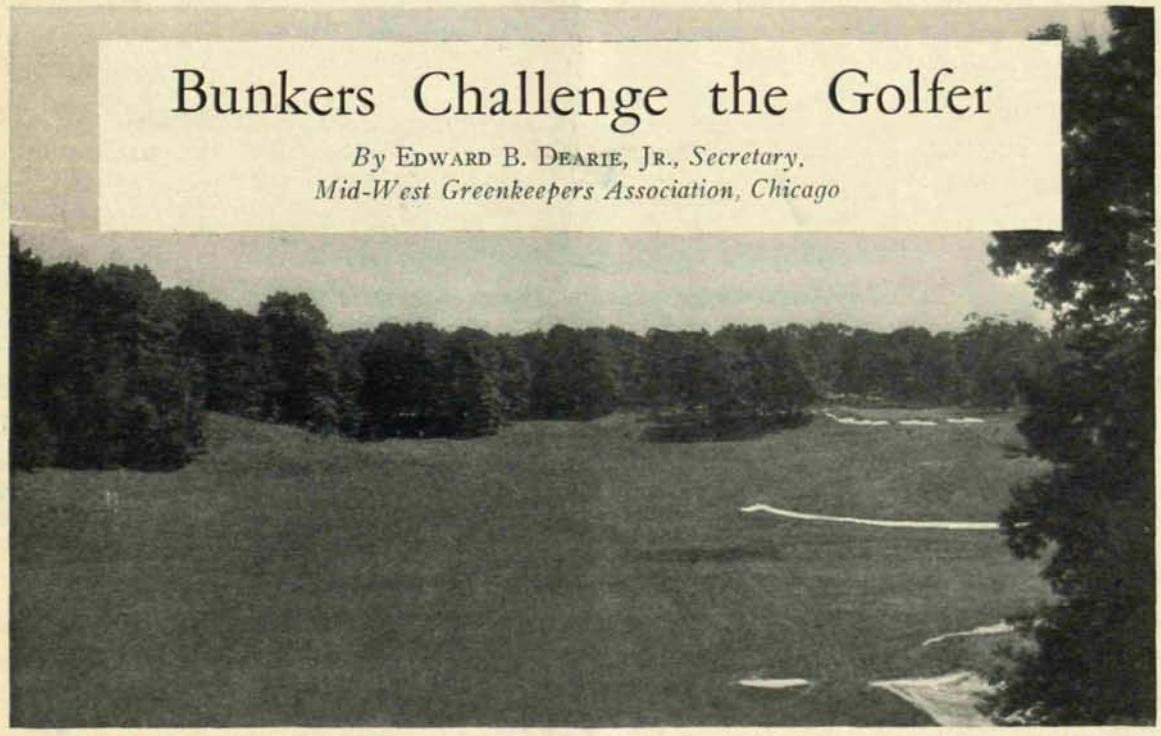


VIEW FROM THE 1ST TEE, APAWAMIS C. C., RYE, N. Y.
The fairway bunkering is skilfully placed to catch a slice while the green is completely shut out with bunkers

BUNKERS, 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.

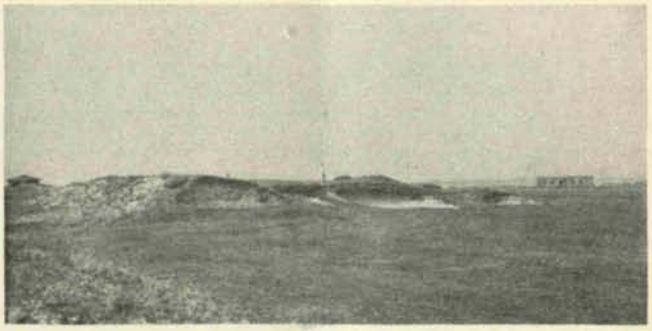
Build a few bunkers on the sides of the fairways to prevent players from wandering from one fairway to another and place a few traps in the middle of each fairway which demand long shots, carefully directed, and the course architect has issued a challenge which the players will readily accept. Immediately 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.



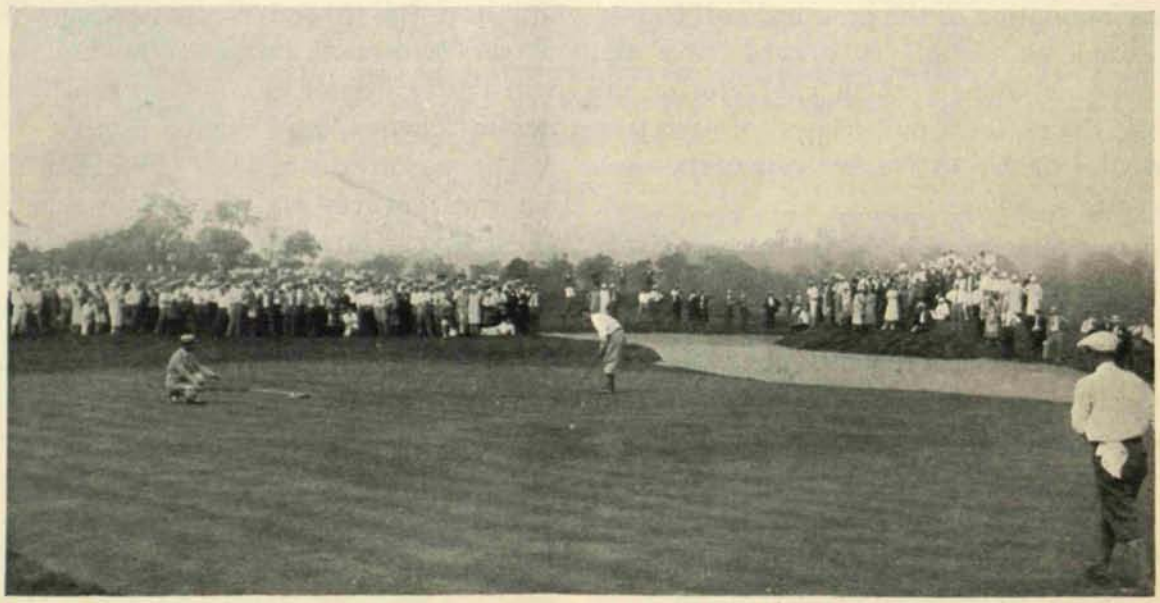
YAWNING BUNKERS STERNLY GUARD LIDO'S 12th GREEN
The putting surface is in a punch bowl 100 ft. beyond the pits

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.

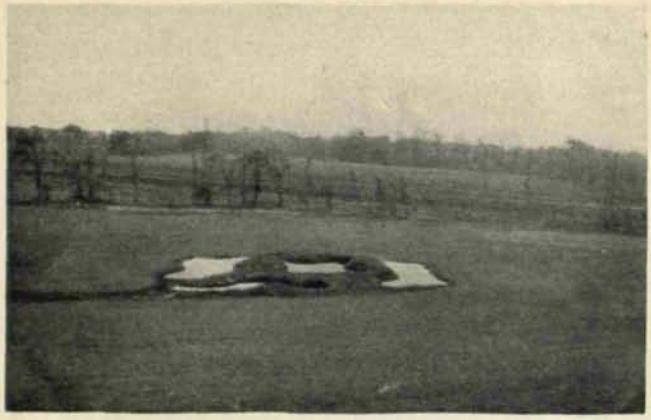
Turf is expensive to cultivate and sometimes its proper culture and development requires real skill. Such turf should not be torn up except un-



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