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But if some of your 8 or 10 handicap members insist on playing this new ball — and thousands of them seem to be doing so — let 'em try it. It won't let you down. It won't let them down.

And when it pushes a few of *these* boys down from the middle eighties to the high seventies — have *you* made some friends for life! Acushnet Process Sales Company, New Bedford, Mass.

★ ★ ★

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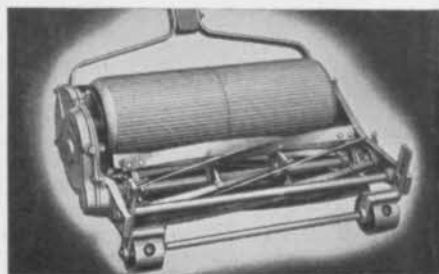




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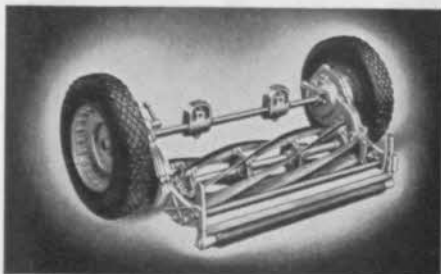
Available in both 30-inch and 36-inch sizes. Unbreakable malleable iron construction. 6 heavy crucible analysis steel blades provide a smooth cut. (5 blades if preferred.) Timken roller bearings on cylinder are adjustable, to take up wear. The raised edge lower blade is reversible. Train of machine-cut hardened gears on both sides, protected by dust-proof, grease-retaining cases. Steel roller with hardened steel bearings. Pneumatic tires optional. 30-Inch Model K Fairway is made of cast iron and offered at a lower price.

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Here's what one of Canada's most prominent turf men wrote us late in the summer of 1939:

"I have made tests with Super Mineralite on two greens, both of which are usually very susceptible up to the present time they have been singularly free of large or small brownpatch.

"All the other greens have been treated regularly with (well known fungicide) and have been affected at different times.

"Normally, when all other greens are attacked these two are badly scarred, but this year the position seems to be reversed."

And from another Canadian — In Sept., '39:

"Early in July I treated active large brownpatch on four greens with Super Mineralite as per your instructions. The check was complete. We have had no recurrence of brownpatch since."

(Names on request)

The above results were obtained on active diseased conditions on putting greens under actual play. The material was in the hands of the turf doctor himself. And the cost of application was approximately 9c PER 1,000 SQUARE FEET OF TURF.

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Should the Number of
**SAND TRAPS
BE REDUCED?**

ONE of the hottest topics now stirring arguments in greenkeeping circles concerns revision of trapping. Fortunately, the arguments have not rushed incompletely considered action. Apparently clubs are learning not to remodel the course in obedience to the urge of each new set of officials. They're going slow and getting expert advice on each case.

GOLFDOM queried golf architects on the trapping situation and presents herewith answers early received from well-known architects. The subject is wide open, so if you have anything to say on it, GOLFDOM will be glad to pass along your contribution to the discussion.

Says Theodore Moreau of Langford and Moreau:

"The number of bunkers and traps should be reduced in many cases but there are probably as many more golf courses that should have the number of bunkers increased or re-located. To establish a sound formula for reducing the number of traps on golf courses would require an understanding of the Einstein theory.

"If a golf course has been laid out and trapped to satisfy the demands of low handicap players and these players are still in the saddle, any attempt to reduce maintenance costs by eliminating bunkers would certainly meet with resistance. If the economic pressure of such clubs is forcing a reduction in maintenance through trap elimination, the course in question should have a careful study made of its local conditions before work is started.

Trapping Often Amateurish

"In some instances, traps on golf courses, particularly the older ones, are monuments to the administrations that have gone before. The lack of rhyme or reason can often be traced to this influence. In no other field of development has there been such a free expression of amateur effort as trapping on golf courses.

"After an enthusiastic golfer has mastered the teachings of a pro on how to play the game, or, at least thinks he has, he often turns his thoughts to bunkers. At this stage of his career, it might

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- aerate packed soil thus encouraging extensive, healthy root growth.
- spike-disc the subsoil below the normal root line, promoting deep root

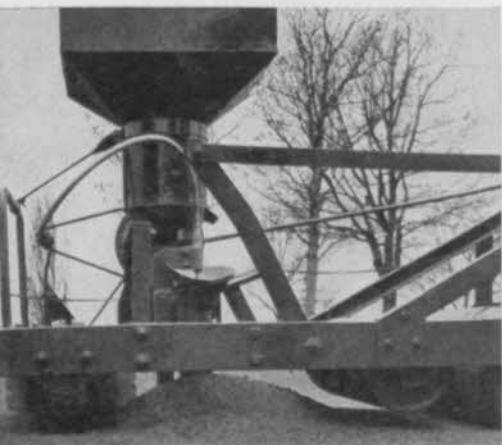
systems and improved moisture conditions.

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well be said that he has become allergic to traps. Place this man on a committee where he is given authority to express his individuality on a golf course and he will erect monuments to his administration.

"It must be remembered that the location of traps placed by such an enthusiast is bound to be influenced by his type of game and while, in some instances, this type of individual may acquire a working knowledge of trap location and construction, his perspective is narrowed by the limitations of his own game. One rarely finds a golf course trapped under this influence satisfactory to the large majority of players. Good design requires an understanding of the wide range of players' skill.

By-Laws Demand Expert's Advice

"In discussing this subject with a group of green-chairmen, I was informed by one connected with a prominent club that the by-laws of the club are so written that any changes made on the golf course must be done under the direction of the original designer or, if he is not available, after consulting a competent course architect.

"It is possible to lay out a golf course and to use bunkers in a way that will produce a wide range of interesting golf holes for the low handicap player without

imposing undue difficulties on the majority of players capable of breaking 100.

"This condition is possible without peppering a golf course with sand traps but it is important that, where a minimum number of traps are used, each one is correctly located and so constructed as to really function.

Sand Area Gets Larger

"The trapping on many of the older courses has often grown in number by adding small traps to small traps, resulting in a series of mounds and bunker faces that prove ineffective in stopping shots that were driven into them. Efforts to make them effective often resulted in increasing the width of the sand pit as well as sweeping sand up the bunker face. In many instances, this created such large sand areas that the original cost of the sand and annual replacement has been entirely out of proportion to the need.

The bunker face, originally constructed for sod, was often too steep to retain sand, necessitating undue labor cost in coating the washed slopes after each rain. The total perimeter of these small units was much greater than one well constructed single unit. This increases the cost in edge maintenance.

"The numerous mounds of small scale

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and steep slopes are not constructed for economical mowing. Clubs confronted with this problem could make a worth while investment to correct these conditions without destroying the interest in the course. Other conditions too numerous to mention might well be corrected but only through a study of each problem."

Beware of Under-trapping—Jones

Robert Trent Jones expresses his opinion:

"I am and have been for a number of years a convert to the principle that our golf courses of the 'twenties' were over-trapped. However, a course without any traps is certainly listless. I am sure that golf would not have developed to where it is today without having interesting and strategic hazards. The warning that I want to sound right here is beware of under-trapping, particularly when other characteristics of the green design have not been molded to offset the lack of traps.

"Some of the factors that have helped make it possible to reduce the number of traps on the golf course and yet maintain a high standard in golf course design, punishing the expert golfer when he should be punished and allowing a certain amount of latitude for the duffer's common faults, are (1) The modern technique of design; (2) The improvement of power machinery to mold golf features boldly and relatively inexpensively, and (3) The development of the flexible frame and other improved features for maintenance.

"In my opinion the prime factor responsible for over-trapping the courses of the 'twenties' was the tendency to mimic the more difficult holes of courses groomed for national championships; courses such as Oakmont. These imitative courses went beyond trapping primarily for the experts, and went under the theory that a shot should be punished that was missed no matter from whose club it came. From that period the island greens completely surrounded by sand and the bottle neck type of green design in which the entrance to the green was narrowed and traps flanked both sides of the green surface were inherited. Two features of these types of greens which were usually apparent were the sharp banks on the trapped faces of the greens which had to be cut by expensive hand work, and the general flat appearance of the greens themselves and their environs as a whole.

"The traps put in during the 'twenties' have been thrown out of scale by the length of the ball and the improved manufacture of clubs, causing the traps of that

TIMELY TURF TIPS

LOCALIZED DRY SPOTS ON FAIRWAYS

With the advent of diminishing rainfall and warmer weather, localized dry spots may appear on fairways. When these spots develop on unwatered courses, they appear at the first sign of drought, and are the last to revive after fall rains start.

Even on watered fairways, localized drying may occur. Uneven watering is an obvious cause, but dry spots may appear despite perfect distribution. This happens in patches of creeping bent, due to formation of a dense mat at the surface because of high cutting. Heavily matted grass prevents penetration and absorption of applied water. Closer cutting, particularly in early spring, to remove surplus grass is the obvious answer.

On watered courses acid soil is a more common cause for localized dry spots. Acid clay particles tend to exist as individual grains. This favors compaction and discourages water absorption. In lime saturated soil, the fine clay particles gather into groups. Formation of these larger clusters speeds water absorption and retards loss from surface evaporation.

Frequently soil in dry spots is a full pH lower than in immediately adjacent damp soil. When tests disclose this condition, lime is badly needed. Its use will reduce and eventually eliminate dry spots on watered courses and simplify watering. On unwatered fairways the lime will prolong spring growth and speed recovery in fall.

• • •

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period to punish primarily the present day average golfer and the women. As a result, these traps are being and should be removed, and replaced by fairway traps that are more in keeping with the modern game.

Must Penalize Bad Shots

"Changes around the green merely to eliminate the trapping as it exists in the older courses would actually detract from the character of the course, as it would leave just flat, characterless, green surfaces and unless the holes were filled in, ugly looking lines would be left from the old traps. Furthermore, one of the fallacies in the play of these older courses was that shot value was not punished in relation to the degree of error, because a shot only slightly missed would catch a trap, whereas often a shot quite badly missed would be left with a not too difficult niblick pitch for a complete recovery. Therefore, where traps are removed, dunes with well drawn-out lines should be placed.

"This must be done adroitly and with a view to the proper punishment in mind, the purpose being to bring back the pitch and run shot to golf, to punish the missed shot more fairly in relation to the degree in which it was missed, and to cut down on

the maintenance by making it possible to cut with modern mowing equipment to the very edge of the green mechanically. The modern theory is to develop green design in such a manner that the key or master trap to the hole makes it possible to tighten the hole by the position in which the pin is placed. This also makes it possible to eliminate profuse trapping and actually adds to the character of the hole, because this changes the complexion of the playing value of the hole depending upon from which side of the fairway the second shot has to be played.

Some Traps Replaced

"In some cases where clubs have just casually eliminated trapping since that seemed to be the popular theme of the day, they have had to call in experts to place new traps because the hole or holes had proved unpopular."

A. W. Tillinghast remarks:

"During the time when I was editor of *Golf Illustrated* and in numerous newspaper interviews, I advocated trap reduction. This was particularly true of the period when I was retained by the PGA, when for more than two years I visited more than 600 golf courses in all parts of America to advise concerning practical

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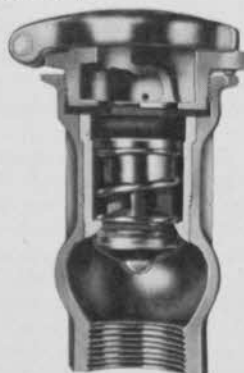


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and economical methods for the betterment of the courses, sensible upkeep and a truer appreciation of the game's pleasures for the players generally.

"I coined the term 'Duffers' Headaches' for thousands of unnecessary traps that added nothing to the testing qualities of the courses so far as the experts were concerned but did irritate and discourage the masses of ordinary players, the very element that should be encouraged if golf was to continue and increase its hold on its devotees.

"True, it took quite a bit of persuasive argument sometimes to convince a hell-bent-for-a-championship-course committee that the new idea would in no manner 'sissify' any course for champions (make it a sterner test, in fact, if properly applied) but results proved that I was gratifyingly successful in getting the theory across. Theory? It is no longer a theory, for cold facts show that no less than 7,000 utterly useless traps disappeared from American courses after my PGA tour. And more are going as the days pass.

Expense Must Be Considered

"Aside from easing duffers' pains (and it is entirely unnecessary to add to the

poignant, soul-stirring grief that follows an utterly miserable shot, by burying the unfortunate up to his neck in a sand trap) there is the matter of upkeep expense to be considered. The money wasted on those 7,000 silly traps will mean much to budgets properly applied. The greenkeepers appreciate this.

"The greenkeeper of today is an intelligent man, studious and resourceful, who is disinclined to waste any part of his maintenance budget.

GSA Suggests 72 Maximum

"I am informed that at the last meeting of the GSA it was said that a maximum limit of 72 sand traps be placed for any 18-hole course. This figures four to a hole. Certainly enough if they are properly placed and not scattered in eye-sore disarrangement all over the place. The last plans I made were for a 27-hole course in California. Each 9 holes presented approximately 25 traps, the 'master trap' (as I call it) and the green being arranged to take the place of 3 or 4 of the out-moded arrangements. The whole secret is that the contouring of the greens be receptive or unreceptive to accurately placed or misplaced previous shots.

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Unity Needed in Turf Research

By H. B. Musser

Professor of Agronomy, Pennsylvania State College

Turf research programs must be intensified greatly, immediately, to relieve tremendous burdens on now existent experiment stations

AS INTEREST in golf has increased in this country there has been a parallel development in the demand for more perfect conditions for playing the game. This, in turn, has shoved the course superintendent right into the middle of a whole series of specialized problems connected with turf production and maintenance. Because of the definitely technical nature of these problems he has recognized the necessity for critically controlled research to supply the answers. In other words, it is becoming increasingly important to extend the art into the science of green-keeping.

Evidence of the crystallization of our thinking in this direction is apparent in our golf journals and association publications. Almost any issue contains one or more articles on the more technical phases of turf production or management.

Short Course Interest Grows

The development of increased interest in the annual short courses at many state colleges also is a straw that indicates which way the wind is blowing. A short ten years ago only three or four states were conducting such courses. At the present time over a dozen states regu-

larly schedule meetings of this type, with representation of as high as 50% of all the golf courses in the state in attendance.

All of this betokens a very definite development of interest on the part of the men who are growing turf, in the creation of a sound body of scientific information that will help them solve their problems. This is good. The need for action must be recognized before it is possible to make very much progress. However, if we continue, generally, to look upon this increased interest as the end in itself, instead of a very valuable means to an end, we will indeed have "missed the bus."

Basic Facts Needed

One of the important jobs of the green-keeping profession today is to catch the rising tide of interest in the underlying science of turf culture at its flood and so harness it that out of its potential power may come a sound groundwork of basic facts. It is self evident that if we are content to go on talking in generalities with only indirect evidence, for the most part, on which to base our knowledge, an inevitable ebb of interest will come. When that happens it will be just so much

Golf flags are not part of the game, and therefore not subject to the 10% tax on games and sporting goods, under a decision handed down by the United States District Court for Illinois. The government had different ideas and made the Chicago Flag and Decoration Co. pay \$3,400. The company then sued to get its money back, and Judge Holley ruled for the company.

harder to do what eventually must be done.

And just what needs doing so badly as to warrant all the excitement? While it is not the purpose here to attempt a technical discussion of turf problems, it may be worth while to take a quick inventory of the status of our knowledge, or perhaps it would be nearer the truth to say lack of knowledge, of many of the basic principles on which a sound body of information depends.

For example, are we satisfied with the basic facts we have on fertilization of turf under the extremely specialized conditions to which it is subjected on greens and fairways? Apropos to this, what of the relative merits of organic and inorganic nitrogen; is one carrier of phosphorus to be preferred over another; and what do we actually know about the necessity of potash and the rarer elements in fine turf nutrition?

What About These?

What about the grasses that we are using on greens and fairways? Are we satisfied that the last word has been said on the best adapted types of bent, particularly on greens where disease is an important consideration? And have we a definite answer to this fairway problem, where good maintenance practice with the grasses available at present comes into direct conflict with playing demands?

Have we really developed a set of sound basic facts to back up such things as watering, physical conditioning of greens, the effects of constant applications of chemicals for disease, insect and weed control, and a dozen other things probably just as important? Are we definitely satisfied that we have all the answers on insect control? And what about the disease situation in widely separated areas during the last two years, where standard mercury treatments seemed to have little effect on what we were at least calling large brown-patch?

These and many more questions probably just as important constitute a backlog of needed critical investigation that deserve serious attention.

And right here it should be pointed out that the fact that there are still a lot of tough problems to be cleared up in no way detracts from what already has been done. The work of the Green Section of the USGA under the direction of Dr. Monteith has been a life-saver, particularly on control of some of our worst diseases. The soil fertility and acidity studies at New Jersey and Rhode Island have helped materially in nutrition problems. Also, turf breeding and soil fertility work in Pennsylvania is beginning to contribute some interesting facts to add to the sum total.

Not Enough Interested

The difficulty, certainly, is not with the quality of what already has been accomplished. The chief trouble is that so much remains to be done and there are so pitifully few who seem to be seriously interested in doing it.

So where do we go from here? If the facts really are needed, where and how can the machinery necessary to produce them be set up?

The state agricultural experiment station would seem to be the logical starting point. Certainly, it does not seem reasonable to expect an individual superintendent, whose job is practical course management, to find time for more than a very limited amount of critical experimental work. In contrast, the experiment station has the necessary laboratory equipment and a force of trained personnel with a background of many years of study of agricultural problems. Here is a potential cog in greenkeeping machinery that is already cut and fitted to meet the research needs. It should function for the greenkeeping profession just as the law library fits into the legal profession or the testing laboratory functions for the steel mill or automobile industry. It should and can be used to establish those technical facts on which such an important part of the job of golf course management must be based.

But the state experiment station is only a part of the picture. While there are many problems that are largely peculiar to individual states, there are many more that are generalized over wide areas. In order to get the answers to this latter group with the least lost motion and with the minimum of duplicated effort the work at individual stations should be correlated and dovetailed. This could become a very