Neglecting to Employ Qualified Architects Has Cost Thousands in Muni Course Building

The more I know of golf and golf courses the more convinced I am of its influence on the health, the happiness and, owing to its effect on mental as well as physical fitness, the prosperity of the community.

One of the many advantages of capitalism is that under this system the luxuries of the rich today become the necessities of the poor tomorrow. This has been proved in regard to most things which at one time were the monopoly of the rich such as tea, coffee, sugar, automobiles, electric light, telephones, radios and even silk stockings, but golf and golf courses have fallen far behind other luxuries in this respect.

In olden days golf was the sport of kings, the Royal and Ancient game, but in Scotland in my youth, owing to the lessering in cost of clubs and balls, it became so popular that it was well within the reach of the artisan.

At the Braid Hills municipal course in Edinborough and on many other municipal courses golf could be played for as little as three pence a round, and at St. Andrews the rate-payers and their families enjoy the game free of all cost.

In the United States often those in authority rarely appreciate the value of a golf course not only for its health-giving properties but also in providing wide open spaces free from buildings which are a permanent asset as the lungs of the city and in the second place they fail to realize that a golf course which is well designed and constructed, invariably pays, and is not such a burden to the community in the form of taxes.

The natural conditions of soil and climate in America are not so suitable for providing golf courses at a low cost as in the home of golf, Scotland.

The chief cause of the comparatively high cost of golf, however, in the United

Dr. Mackenzie insisted his architecture appear to have been created by nature. This 180-yard 11th hole of the Valley Club, Santa Barbara, Cal., illustrates the finality of his work.

One of the last articles written by the late Dr. Alister Mackenzie, internationally famed golf architect, is of timely interest because of extensive use of relief funds in municipal golf course construction.

Dr. Mackenzie points out the great opportunity before municipal golf courses that are expertly designed and constructed.

If his message were heeded by those responsible for the considerable amount of municipal course construction now being planned, use of public funds for such work would have highest, practical justification.
When not in use cutting down cutting costs, the sickle bar folds up. Or by loosening three cotter pin bolts it can be removed altogether. Tractor in either case is then free for all kinds of hauling jobs.

This New Sickle Bar Tractor Cuts Down Cutting Costs

At an average speed of 5 miles an hour it mows down a 5-foot swath of tall grass or weeds. That's 26,400 square feet each hour. Compare that with what a horse drawn mower does, and you at once see how this sickle bar tractor cuts down cutting costs. Furthermore, horses get tired. But this tractor goes merrily along hour after hour, cutting the last mile just as fast, just as perfectly, as the first one.

On rainy days the sickle bar can be easily slipped off, and a belt pulley put on the power take-off shaft. Then you have an ideal equipment for operating compost mixer, saw, and other stationary machinery. Gives you four speeds with the one pulley.

Send for new catalog. See for yourself just how this sickle bar tractor cuts down your cutting costs.

Main Office: Stroudsburg, Pennsylvania

Worthington Mower Company

Sales Agencies In Other Principal Cities of U. S. A.
1—Axle is larger—stronger. 2—Sturdy tie-rod giving a box-bracing. 3—Quick acting hand adjustment of cutting knife. No wrenches or screw-driver needed. 4—Quick acting hand shift for gears. 5—Driving gears— one on each side—giving balanced power, weight and even cut.

How This Improved Cutting Unit Cuts Down Cutting Costs

TAKE lubrication for instance. On other 5-gangs there are 40 lubrication points requiring daily attention, as compared with only 10 on a Worthington 5-gang, requiring attention only 2 or 3 times per season.

Also, Worthington cutting units have a separate train of machine cut gears for each ground wheel. This means a balanced unit—balanced in weight—so that there is no possibility of one side cutting closer than the other.

Send for new catalog. See for yourself how all Worthington equipment cuts down cutting time.

Main Office: Stroudsburg, Pennsylvania

Worthington Mower Company

Sales Agencies In Other Principal Cities of U. S. A.
One of the late Dr. Mackenzie's prides: the 160-yard fifteenth at the Leads (England) municipal course.

States is due to the fact that the municipalities that intend constructing a course rarely realize that the construction of a golf course is an extremely difficult art and if it is to attain its acme of popularity at a low cost of maintenance and construction it must be designed by an expert.

Build Right for Profit.

Records show that a first class golf architect designs a golf course at half the cost of construction charges and at a saving of at least 50 per cent in maintenance charges under figures of an inferior architect. Moreover the course is twice as popular if computed in terms of green fees. This estimate of course is based on similar conditions of accessibility, nature of terrain and so on.

With the exception of cities like San Francisco and Sacramento that are blessed with Park Commissions and city managers of exceptional ability cities are inclined to figure that if they get 9 or 18 holes of golf course they have handled the job properly. There never has and never will be an outstanding municipal golf course constructed on these lines. The false economy of saving one or two thousand dollars in expert advice frequently leads to the loss of hundreds of thousands of dollars in increased cost of construction and maintenance and in decreased popularity as estimated in terms of green fees.

This may appear to be an exaggerated statement but I do not think that it is. I have in mind two public golf courses in the same city. One of them is less accessible and more unsuitable ground for golf than the other, but designed by an expert whereas the other was designed by a man of extremely limited architectural experience. The one designed by a first class architect has not cost half as much to construct and maintain and yet it gets $50,000 a year more in green fees than the other. Multiply this by the life of a golf course which may be 20 to 100 years (the old St. Andrews course, which is a municipal course, is over 300 years old) and the loss for the lack of expert advice may conceivably run into a million dollars or more.

There are a few general principles which apply to public courses even more than to private ones. It is of even greater importance than usual that the soil, climatic conditions and the nature of the studied so as to select the most suitable seed and fertilizers to provide turf of hard wearing qualities.

A Civic Jewel.

Beauty is of paramount importance. A municipal course designed by an architect who is an artist in constructing hillocks, hollows, sand bunkers and the grouping of trees of a natural appearance is almost invariably the beauty spot of the city. The most important thing of all in the designing and maintenance of a municipal course is the realization by everyone concerned that golf is played for fun, and that unless
It takes a course in the pink—

to keep play up at its peak

Here is a list of the supplies and equipment you'll need to get and keep your course in the pink of condition... Check it!

Worthington Mowers

FAIRWAY GANG MOWERS
The new Convertible MULTIGANG cuts a 16-ft. swath. All Worthington units are interchangeable and frames convertible. The seven unit MULTIGANG may be converted into a five-unit Quintuplex or three-unit Triple.

THE SCOUT OVERGREEN
Cuts 1,000 square feet per minute with ribbon effect or in circles.

THE LAWN TRACTOR
Shortest, lightest and most flexible golf tractor made.

SUPPLIES and EQUIPMENT

GRASS SEED
Quality high—prices low
Kentucky Blue Grass
Recleaned Red Top
Chewings Fescue
Pea Trivialis
Seaside Bent

FERTILIZERS
Bag lots, ton lots, car lots
Nu-Vim
Swift's Special Golf
Ammonium Sulphate
Nitrate of Soda
Superphosphate

EQUIPMENT
Selected from experience for efficiency
Tractors
Mowers
Seeders
Discers
Soil Shredders

Cutters
Flags
Poles
Cups, etc.
Rollers

SHIPMENT MADE DAY ORDER IS RECEIVED

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Phone Monroe 6580

World's Largest Golf Course Equipment House
a golf course provides the maximum amount of pleasure for everyone, including the beginner who rarely gets a ball off the ground, it is not a complete success.

There should be no long grass or other hazard on a public course necessitating the annoyance and irritation of searching for lost balls, and there should be a minimum of sand bunkers.

On the other hand the course should be full of interesting features such as closely mown hillocks, hollows and swales creating fascinating strategic problems and making every hole of such a character that there is such infinite variety stimulating players to improve their games. Then the charm of the course grows and grows so that golf never becomes stale.

The Old Course at St. Andrews in Scotland is an ideal public course in this respect. There is a constant stream of men, women and children playing on it all the year round from sunrise to sunset and yet it is such an excellent test of golf for a good player that Bobby Jones says he gets more pleasure in playing it than in a hundred other courses.

The course I made for Bobby Jones, the Augusta National, is similar to St. Andrews. There are only 22 sand traps on it. It is easy for the man who is content with fives and sixes and an occasional par, but it is extremely difficult for the golfer who is striving for sub-par figures. It is a private club but it would have made an ideal public golf course.

There is an old adage, "Penny wise and pound foolish," which applies as much to the laying-out and designing of golf courses as to anything else, but it requires men of vision to realize this. Records show it however, and history has proved it. Beauty and finality must be provided for at the beginning, or the life of the course will be that of a cripple struggling on crutches.

WILLIAM MILLER, a director of Teacher's, the Scotch liquor people, recently visited Chicago and told the folks among other things:

"The American's drink is about 50 per cent larger than the 'spot' consumed by the Englishman.

"Scotch liquor should be consumed with the liquor and the soda about 50-50.

"Cost of retail liquor licenses in Scotland is 50 per cent of the assessed value of the property."
SUGGESTIONS TO GREEN-CHAIRMEN

At this time of year there is not much work needed on the golf course. Your greenkeeper can easily take a week attending one of the turf short courses announced below. He will be immeasurably benefited by the first-hand knowledge of latest maintenance practices and he will have the opportunity to work out practical problems in conference with other greensmen who will be attending the courses.

Your club can make no smarter move than to pay whatever it costs to send its greenkeeper to one of these conferences. The expense is not great; probably $25 will cover everything. The investment will be returned amply in better maintenance and greater course economy.

Incidentally, you Mr. Green-Chairman, yourself, can profitably attend a short course. You'll get a better picture of what greenkeeping is all about, and you'll be in better position to fill your chairmanship.

Penn State Turf Conference
Will Meet Feb. 20-24

EVERYONE in Pennsylvania and neighboring states interested in turf culture is invited by J. W. White of Penn State College School of Agriculture to attend the seventh annual conference of golf course superintendents, to be held Feb. 20-24. The conference was arranged by a joint committee of greenkeepers and representatives of the college, and will be held on the college grounds.

Some subjects to be discussed and the speakers are:

The annual turf conference dinner will be held at 6:30 p. m. on Feb. 21, with prominent speakers on the program.

No registration is necessary for attendance at the Penn State conference. All interested are invited to plan to be there.

U of Wisconsin Plans to Hold Two-Day Greens Course

WORD comes from James G. Moore, chairman of the department of horticulture, College of Agriculture, University of Wisconsin, that the institution will offer a two-day course in greenkeeping in conjunction with a meeting of the Wisconsin Greenkeepers association on March 7 and 8. Moore will be in charge of the course.

Two-Day Greenkeepers Short Course at Iowa State

FOURTH annual greenkeepers short course at Iowa State college will be offered this year on Monday and Tuesday, March 4 and 5. Nationally known authorities on turf culture including Kenneth Welton and O. J. Noer will be on the program. Other speakers will deal with various phases of practical green-
Ready February 1st

9th Edition

"GOLF TURF"
(First Publication Since 1931)

"Golf Turf" is a valuable reference book on the making and maintaining of turf of high quality. It will be sent free to chairman and greenkeepers and others interested in fine turf.

GRASS SEED
of Known Quality

Tested for Purity and Germination

We have some fine stocks at reasonable prices on such short items as Chew'ing's N. Z. Fescue, Seaside Bent (Coos Co. strain) Astoria and Triple A Bent.

Prices on these as well as other fine Turf Grasses are lower now than they will be later.

Also fertilizers, equipment and requisites of guaranteed quality.

Without obligation we will furnish a detailed report to cover any Turf Problems.

Stumpf & Walter Co.
132-138 CHURCH STREET
(Corner Warren Street)
NEW YORK

keep.ing. This year some laboratory work will be presented under the direction of college staff members.

Attendance and interest at past short courses have invariably been good, and ordinarily 80 or more greenkeepers have been present. Visitors have been attracted from all adjoining states. A cordial welcome is extended to golf professionals and greenkeepers both within and outside of Iowa, and to park and estate superintendents or any others interested in turf growing and maintenance.

Those desiring additional information and the program of the short course should send requests to Prof. B. S. Pickett, Head, Department of Horticulture, Agricultural hall, Iowa State college, Ames, Iowa.

New Jersey to Hold Turf Course at Rutgers This Month

SEVENTH annual short course in turf management will be held this month at the College of Agriculture, Rutgers University, New Brunswick, N. J., during the five days from Feb. 18 to 22. The usual lectures, discussions and laboratory demonstrations will constitute the course and such subjects as soils, fertilizers, drainage, turf pests, seeds and methods of management will be covered.

The course will be under the direction of Dr. Howard B. Sprague and he will be assisted by eleven other instructors of the college, including J. G. Lipman, E. E. Evaul, J. S. Joffe and E. R. Gross.

Greenkeepers, members of green-committees, landscape architects, estate managers and others interested in turf management may take the course upon payment of the registration fee of $10, plus $1.00 for outlines of lectures, payable upon registration. Application should be sent at once to F. C. Helyar, director of resident instruction, College of Agriculture, New Brunswick.

University of Minnesota Offers Five-Day Turf Course

UNIVERSITY of Minnesota will offer a five-day short course for greenkeepers starting March 4 and full information on it may be obtained by writing W. R. Smith, director of intramural athletics, Univ. of Minnesota, Minneapolis. Last year over 50 greenkeepers of the Northwest attended the course and a like number are expected for this season's.
It Pays to Know Your Golf Course Areas

You're going to topdress your fairways. Do you know how many acres of surface they represent?

Your greens need an arsenate of lead dose at the rate of 2 lbs. per 1,000 sq. ft. How many square feet of turf are there in your 18 greens and the practice green?

Your sandtraps need new sand. How many cubic yards of sand are you going to use if you put a two-inch layer of new sand in every trap?

Your tees have a good many weeds in them. If a man can get the worst of them out of a square yard in two minutes, how many hours of labor should you plan on for this work?

These questions are not meant to be a lesson in arithmetic; they are given as examples of the sort of problems every greenkeeper should be prepared to answer accurately at all times. Most greenkeepers have a fairly close idea of the areas covered by tees, fairways, greens and traps, but it would be a lot better if they knew exactly how big these areas are. And during the winter, while other course work is slack, is as good a time as any to do a little measuring and store away the figures for later reference.

Here are some hints on obtaining reasonable accuracy in measuring course areas. They are taken from a bulletin sent out last fall by the Detroit District Golf Assn. to its member clubs. The association wants the figures so it can make accurate comparisons between the labor costs of different clubs.

Tees, says the bulletin, are easily measured. They are generally square or oblong and it is only necessary to multiply the length of each tee by its width to get the square feet.

To estimate size of irregularly shaped greens or traps, visualize a quadrangle of approximately the same area.

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Tees, says the bulletin, are easily measured. They are generally square or oblong and it is only necessary to multiply the length of each tee by its width to get the square feet.

Traps and greens present a different problem because of their irregular outline;

More Available Plant Food... for fewer Dollars

The new process Fairway

This high quality impregnated tobacco stem fertilizer is now so close to ordinary materials in direct sale price that you cannot afford anything less... Ideal 6-6-4 formula of plant foods plus 1,200 lbs. humus forming organic material per ton.

Economical! you use only 2 lbs. per 100 square feet

Find out about it—Write:

General Chemical Company
40 Rector Street, New York City
STAUDE GENERAL UTILITY TRACTOR $495 to $795

Speedy, powerful, quiet, economical and adaptable for mowing, hauling and all other golf course work. Steel tractor wheels easily replaced with Ford pneumatic tired wheels for road work. Proven by 18 years of service (since 1916).

Attachments only for Ford Models T, A and V-8
$155 to $225

Fully enclosed internal cut gear drive for Model A and V-8 Models. See your local Ford dealer or write for full information. Sold on a money back guarantee.

E. G. STAUDE
MAK-A-TRACTOR CO.
2696 UNIVERSITY AVENUE
ST. PAUL, MINN.

a simple way to arrive at the square feet is to visualize an approximate square or oblong like the diagrams herewith. The lines represent the outline of a green or trap; the dotted lines represent a square or oblong roughly the same size and easy to measure.

To estimate the area of fairways, refer to the table below, where any combination represents approximately one acre. Determine the average width of the fairway and refer to that width in the table; see how many times the length given will go into the length of the fairway, as marked on the score card, after deducting the rough in front of the tee.

These dimensions equal one acre

<table>
<thead>
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<th>Width</th>
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<tr>
<td>70 yds by 70 yds.</td>
<td>50 yds. by 96 yds.</td>
<td>65 yds. by 75 yds.</td>
<td>45 yds. by 108 yds.</td>
</tr>
<tr>
<td>60 yds. by 80 yds.</td>
<td>40 yds. by 120 yds.</td>
<td>55 yds. by 88 yds.</td>
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Example: A fairway with an average width of 40 yds. and 250 yds. long will contain approximately two acres. There are 4,840 sq. yds. in an acre.

"Better Prices for Liquor" Manager Urges

A MANAGER IN THE Cleveland metropolitan district comments interestingly on liquor prices: "Through experience in this district, which, no doubt, is true elsewhere, I find that the one large fault of club managers, or, should I say 'committees,' is that the clubs are trying to sell liquors in accord with prices and conditions existing in public hotels and cafés and this is impossible. In Ohio sales at private clubs are restricted to members and their guests throughout a seven-month season of activity. Even on good days we have only a limited number of possible customers. Private clubs here in Ohio are selling only the best liquor obtainable and they should be entitled to a better price for their drinks than are publicly operated places where refills are common."

ROOT ALL PURPOSE SPREADER

CUT your LABOR COST with this machine.
For speed, economy and perfect application it is unexcelled.
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