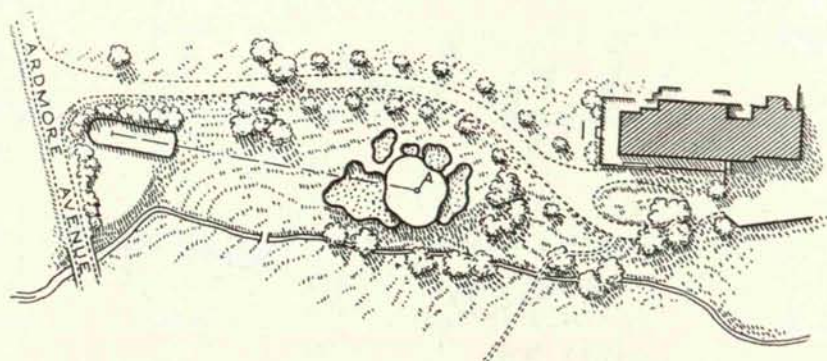


MERION CRICKET CLUB, PHILADELPHIA

HOLE 13. 125 Yards—Par 3. Mashie or Mashie Niblick

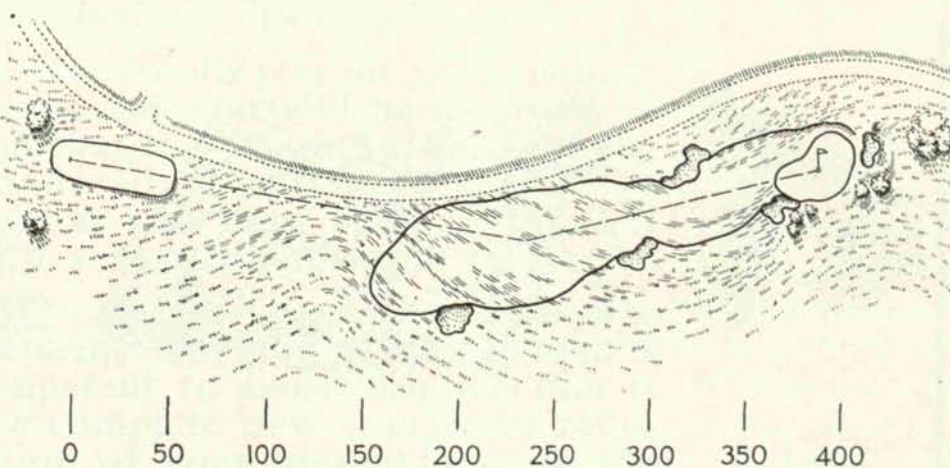


TEE is at a somewhat higher level than the flat island Green, which is surrounded by traps, some deep and some shallow. A Tee shot other than that of the sort particularly required will find sure trouble.

0 50 100 150 200

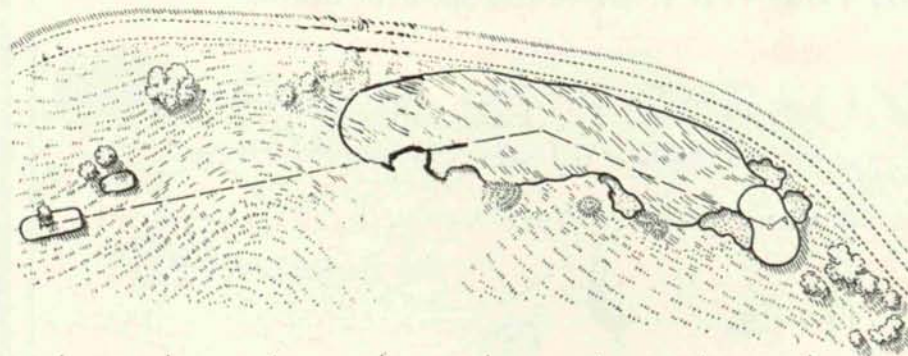
HOLE 14. 412 Yards—Par 4. Drive and Iron or Spoon

A FAIRWAY that bears somewhat to the left, with a continuous boundary on that side, and traps to the right to punish too great conservatism from the Tee. Trap to the left to catch a ragged second shot and others to the right of an ample undulating Green, with mounds and patches at its far edge to penalize an overplayed second. Up grade all the way. Premium on distance and accuracy from the Tee.



0 50 100 150 200 250 300 350 400

HOLE 15. 370 Yards—Par 4. Drive and Mashie or Mashie Iron



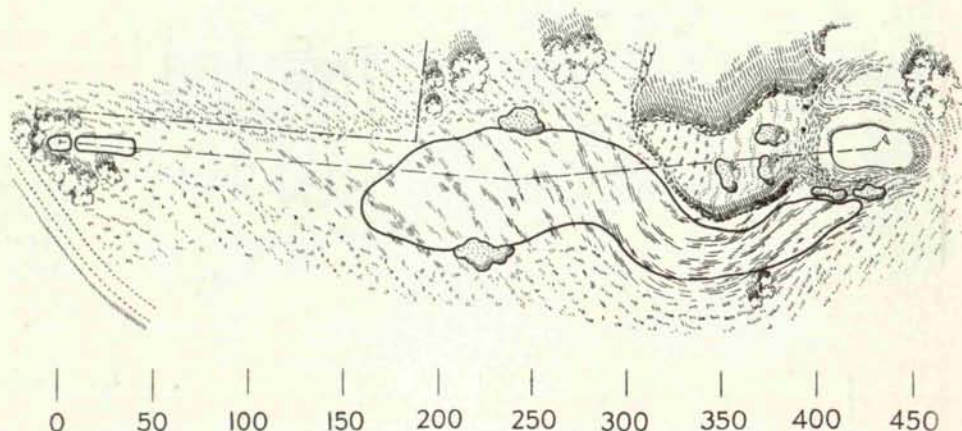
0 50 100 150 200 250 300 350

A FINE two-shotter, with Fairway bearing to the right, and successive traps in the elbow at the right to extend the long hitter who chooses to cut the corner. To the left, a boundary to punish too great caution from the Tee. A drive placed to the left side of the Fairway opens up the entrance to the somewhat raised Green, which slopes toward its entrance, with pits to the left and a severe trap to the right front.

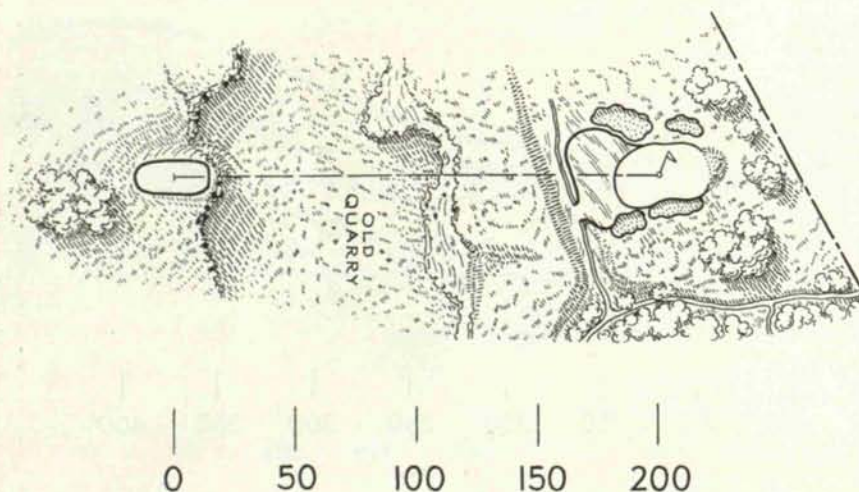
MERION CRICKET CLUB, PHILADELPHIA

HOLE 16. 435 Yards—Par 4. Drive and Iron or Spoon

THE first of the Quarry holes. A boundary to catch a pull from the Tee with traps to right and left farther along. Second shot an iron, or perhaps wood for all but the long hitters. This second shot must carry the upper level of the Quarry, which is a broad rock-walled depression floored with undulating reaches of sand-blown beach grass. Over this hazard the ball must at least find its way to the lower shelf of the Green to be safe; if hit well, it will carry to the upper level of the Green, surrounded by rough banks and patches. There is a "way around" for those who do not choose to brave the Quarry, but it is not spoken of in tournament play.



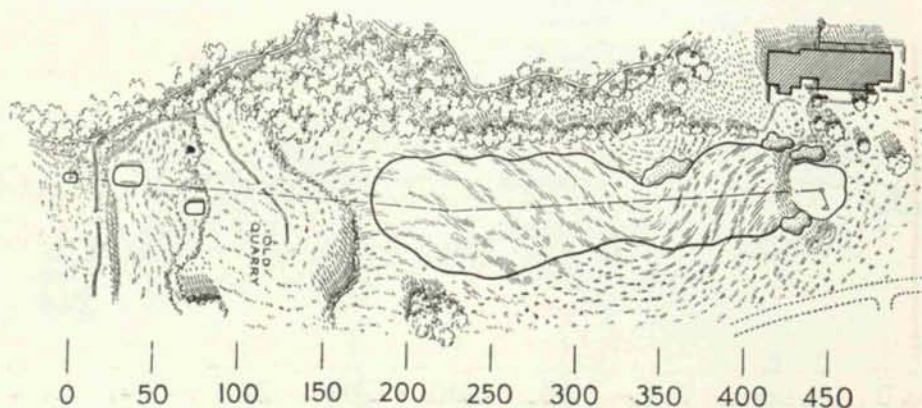
HOLE 17. 215 Yards—Par 3. Iron or Spoon



TEE shot over the lower level of the Quarry, and a rough slope between it and the two-level Green, which is flanked by generous traps on either side, with patch of sand in mound beyond. A challenging iron shot, calling for length and firmness.

HOLE 18. 455 Yards—Par 4. Drive and Spoon or Brassie

STRAIGHTAWAY home. The Tee shot again over the Quarry, with woods at left from Tee to pin. The long hitter, if straight, may go for it with an iron on his second shot, but usually the wood is required. The ample level Green is guarded by traps at fore-left, left and right, with patches of rough beyond. In actual play, the eighteenth is the toughest par on the course, with no chance for soft shots or nonse. A grand home hole.



TESTED SEEDS

NO matter how well the soil has been prepared, or how fully the thousand and one little details have been taken care of—if the seeds you plant are not right, it is largely wasted effort. This is why we emphasize, at all times, what we term "The Henderson Standard of Quality," rather than our prices.

We have always believed that there is a demand for the highest grade of Grass Seed—Grass Seed that could be depended upon, and the results have fully justified this belief.

Let us quote you on your requirements, and you will be surprised to find that the prices for Seeds of the Henderson Quality are about the same as you have been paying, but with a vast difference as to results.

We can help you with your course problems. Our staff of trained men is competent to assist you, whether it be a complete new course, the renovation of your present one, or the usual problems that come from day to day.

An inquiry does not obligate you in any way.

PETER HENDERSON & CO.

SEEDSMEN

Everything for the Golf Course

35 Cortlandt St.

New York City

Common Sense Greenkeeping

By CAPT. CHARLES CLARKE

Hawthorne Valley Golf Club, Cleveland and Fort Myers, Florida

BEFORE entering on the subject of Bermuda and its green and fairway uses for Southern courses; I want to have a few words on still another subject that seems to be growing ever stronger as time goes on; one might call it, "The Growth of Secretism and Mysticism in Greenkeeping."

I am not at all sure this growth is not fostered and aided by manufacturers of patent fertilizers, and such-like experts in the chemical world who cannot talk in everyday language but must inject as much Latin formulae as possible to make their products impressive. They are not entirely alone. I have heard greenkeepers are arguing about the characteristics of *Agrostis Stoloniferus* when they might just as well say creeping bent anyway.

Why all this secretism? It doesn't make grass grow any better. In fact the more theory the less common sense seems to be employed and in proof of that I have in my mind's view a certain course in

this district, outstanding as to its wonderful condition and the sole claim for the responsible individual is that up to a year or two ago he was a farmer. In comparison with this course how many do we know that, in spite of thousands of dollars expenditure every year on every new fangled so-called assistance, suffer a constant succession of minor ailments and for no other reason than if one constantly coddled a child and gave it every new patent medicine that came out you know what sort of youngster would result.

Because Bill Jones got fine results with such and such at so and so club is no certainty you will with entirely different conditions. The old maxim, "One man's meat is another man's poison," applies to golf courses as well as individuals. Experiment with all the aids you want, but use them with the help of common sense as well.

The above remarks are particularly applicable to Bermuda, that one and only standby of the South.

Everybody Praises the Staude Mak-a-Tractor

Our Model "T" Golf Course Staude Mak-a-Tractor has done everything we expected of it and a little more. We now mow places that we never could mow with horse drawn mower, such as side hills of 45% angle and a little steeper. Besides that we consider it labor saving as the extra time the horse drawn mower consumed can now be used for other work.

Hudson Country Club, G. E. Bonner, Sec.,

Hudson, Mich.

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F. O. B.
ST. PAUL

Reinforced Cubic Yard Steel Dump Body

Double Acting Tail Gate

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Drive Wheel Mounted On Heavy Duty Roller Bearings

10 Inch Face 39 Inch Diameter Drive Wheel

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6 Inch Face, 30 Inch Diam. Steel Front Wheel

Model T

\$475

F. O. B.
ST. PAUL

The tractor has been entirely satisfactory and is in daily use. We are well pleased with its performance.

Dr. John S. Stone,
Chairman Greens Committee,
Clarksburg Country Club,
CLARKSBURG, W. VA.

The sturdy, dependable Staude has made an outstanding record of satisfactory service wherever used. Over 1000 golf clubs sing its praises. Used successfully since 1916. Sold on money-back guarantee. Repairs cost practically nothing.

Our Model "A" Staude General Utility Golf Course Tractor has been giving us excellent service and we have absolutely no reason to complain about it.

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J. P. Kisecker, Asst. Secy.,
WAYNESBORO, PA.

E. G. STAUDE MAK-A-TRACTOR CO., 2630 University Ave., St. Paul, Minn.

Write for Full Description and Easy Payment Terms

After over a decade of experience in handling this grass, I am more than ever convinced we do more harm than good by trying to make it different to its natural self. Oftentimes this comes about by unnatural feeding and very commonly by trying to get results from an entirely different rootbed to the one nature always grows it in. How many times have I been called to look at Florida greens covered sometimes with a small shiny cloverlike growth and when I ask the question, "what top dressing?" always the same answer—rich black loam from hammock nearby where Bermude never grew and never will. Be fine for carpet certainly, not Bermuda.

Where do you see the finest Bermuda growing? By the roadsides and in the orange groves. Does it get any black loam or fertilizer in such places? Of course it doesn't. All it gets is heck from wheels on the roadside and a constant discing in the groves in a vain attempt to get rid of it.

RYE GRASS KILLS BERMUDA

IT IS surprising how few people handling golf courses in the South realize that year after year they continue to do one thing and so far as the writer knows the only thing that will kill out Bermuda in a very short time and that is the annual sowing of Rye grass. I am aware this is a pretty strong statement, but I want my Southern readers to look back and remember that every spring, lawns particularly that have been sown down in rye grass die out and the rye positively kills everything with it when it dies. This seems to be a feature of rye and curiously is not nearly so marked in the case of redtop. I believe the answer to this is that the Rye roots so much quicker and possibly deeper than the red top; anyway I never lost half as much Bermuda in the spring when seeded with the latter.

Now the question of seeding comes up. If you have a decent stand of Bermuda, I unhesitatingly urge that, instead of the usual method of one heavy topdressing of rich soil and one accompanying heavy seeding, you loosen your Bermuda with a good raking, then take your usual amount of topdressing such as you would apply to keep the green in play. Mix just one-fifth of the usual quota of winter seed and proceed to topdress in the ordinary way. In ten days do it all over again and so forth. This method has several advantages, first, the greens are not out of play; second, you can see from each successive seeding where extra seed is required.



"Where's The Economy, Tom?"

"In laying water pipe for our greens and fairways irrigation system that won't resist rust?

"While if we use McWANE Precast Joint Cast-Iron Pipe we not only get a low installation cost, but it *can't* rust—it's cast iron.

"And only McWane makes it small enough for a full layout of permanent pipe."

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Needless to say care must be taken in watering not to wash the combined seed and dressing.

Bermuda thrives only on sand for any length of time. Of course, you can get a wonderful first and second year growth on rich soil but it will not last without copious dressings of sand. Again use common sense and remember where it grows best naturally. Last year on arrival at my winter position I found that the greens had had an extremely heavy black muck dressing. I immediately countered this with nearly an inch of plain white sand to the horror of everyone, yet last year's greens were the best we had for some seasons and what is better I am having glowing reports that there never was as much Bermuda in them as now. The sand did it.

As a last idea eliminate heavy dressings and you stop that usual trouble of a high ball cutting a piece out every time one drops on the green.

I cannot close without expressing my thanks for one whole week practically given me by that authority on Bermuda, Dr. Hinman, Chairman, Green Committee, Druid Hills, Atlanta, and member of the Green Section of the U. S. G. A. The visit years ago he gave me in Florida taught and encouraged me more than anything.

How We Nursed Our Golf Courses

Letters from members of the National Association of G
preserving turf under extremely hot and arid

Winnipeg Has Watering System

THE construction boss and gang have just left our new 9-hole course. I was going to say finished it but as the fraternity know this is impossible. I can assure you there is plenty to do when the spring comes.

We have had wonderful results in the seeding of the fairways obtaining a good catch of grass throughout and very little seeding will be required in the spring. We put onto the acre one hundred and fifty pounds, twenty-five per cent, red top, twenty-five, fescue and fifty Kentucky blue grass.

With the greens too, we have good results. A uniform catch throughout of Detroit-Washington Bent which was imported by our club when I came here three seasons ago and which has given wonderful results on the old course. The seeding on our new course was watered by thirty Buckner Rotary sprinkler (five to a man), and forty-five hundred feet of one-inch hose.

On our old course no trouble has been experienced in keeping up our greens and fairways and tees, all having been in splendid shape also uniform in character. They are systematically watered every morning for one hour by hand with a one-inch hose. A sprinkler is placed on the tee while the green is being watered.

FAIRWAYS ARE WATERED

OUR fairways are systematically watered once a week (unless it rains), with the Serpentine sprinklers of which we have five. To these I have

attached a reducer from one and one-half to three-quarter inch. To this reducer is attached fifty feet of three-quarter-inch hose and a sprinkler; our fairways being wide this is moved from place to place on the edge of the fairway where it would otherwise be burnt out.

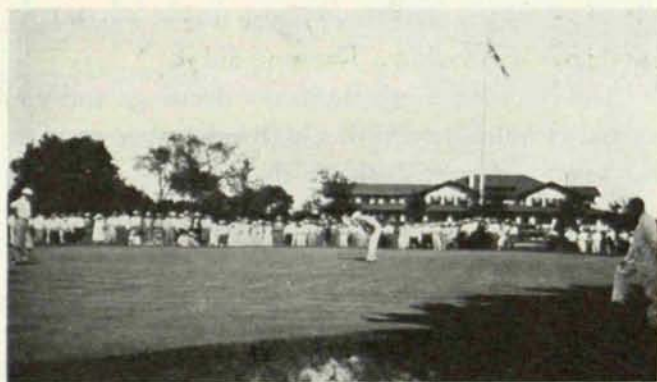
Regular feeding, watering, topdressing, fertilizing and fungus treatment I attribute to the betterment of our course which has been pronounced by visitors from all over the United States, England, etc., as being in excellent shape and a delight to play on. Compliments were received continuously during the Manitoba Amateur Championship which was played here this year.

For our water system we have pumps which gives us one thousand gallons per minute at one hundred pound pressure. The whole of the Assiniboine River to draw from one hundred and fifty yards wide which partially surrounds one course in the horseshoe shape.

I was pleased to read that Herb Shave at Oakland Hills, at last got a fairway watering system. He is the man who taught me how to grow grass and I can just fancy I see him at the fairway watering system.

We surely had a very dry season here as well as elsewhere and one has to be on the go all the time but never mind we will soon be having thirty to forty degrees below zero down here and then grass won't or should not worry us.

I believe it is just as important to do things regularly and work to a system in greenkeeping as it is



NUMBER NINE GREEN AT THE ST. CHARLES C. C.

This is one of Winnipeg's outstanding courses where many championships have been played



VIEW OF THE BENT NURSERY AT ST. CHARLES

This nursery consists of about two acres of Washington Bent and is the pride of the greenkeeper, A. W. Creed

Through The Past Summer's Drought

greenkeepers of America describing ways and means of
d conditions. Fairway watering is coming.

in business. Grass is like humanity—it demands service. But it doesn't always get it, and then it falls down on us and we fail too.

Greetings to the fraternity down east. Hope to see all of you at Columbus.

A. W. CREED, *Greenkeeper*,
St. Charles Country Club, Winnipeg, Manitoba,
Canada.

Oakwood Has Been Fortunate

OAKWOOD Club, Cleveland Heights, is situated in the humid-arid region. This year I fear we shall be classified as semi-arid so far as our rainfall measures to date. However, as most years average pretty much the same we may expect much liquid refreshment ere the year is out.

Our greens and tees we have kept in good condition through night watering. Having no equipment for fairway watering prayer was our only recourse and while not altogether successful in our appeal yet we have much to be thankful for.

Having a heavy clay soil which holds the film water to a greater degree than lighter soils, plus the fact that when thoroughly established in clay soil grass is deep-rooted and vigorous, we have practically no dead grass on our fairways.

Knowing that clay soil cracks with continuous dry weather causing a further loss of water by admittance of air, I was considerably surprised to find practically no cracking of the ground, which I credit to good drainage installed some five years ago. Prior to that date after a few weeks of drought cracks sufficiently large to insert one's fingers were common.

From this year's drought we learn a lesson as to the resisting power of the various grasses. Personally I find the velvet bent, of which we have many patches throughout the fairways, the first to show signs of distress. I also find it does not respond to slight showers as quickly as, say, fescue.

Another point we have to bear in mind is that while in past years the rainfall, while much heavier, has frequently not been evenly distributed—that is we have a surplus in the form of thunder showers, and while credited with a certain number of inches

of rainfall in a given time we have not benefited to the extent of less rainfall when more evenly and frequently distributed.

However, should our golf clubs desire to avoid a repetition of baked fairways, with the resultant sole blisters, we greenkeepers will be only too glad to install a sprinkling system when they so desire.

CHRISTOPHER BAIN, *Greenkeeper*,
Oakwood Country Club, Cleveland Heights, O.

Bunker Wants To Know

I HAVE a question I wish someone would answer. Do greens become immune to brown patch? I have nine greens six years old and a new nine two years old. I have had brown patch on the new nine just ten times and in the old nine twice and not bad then. Do greens become immune (they are all Washington) from the same sod.

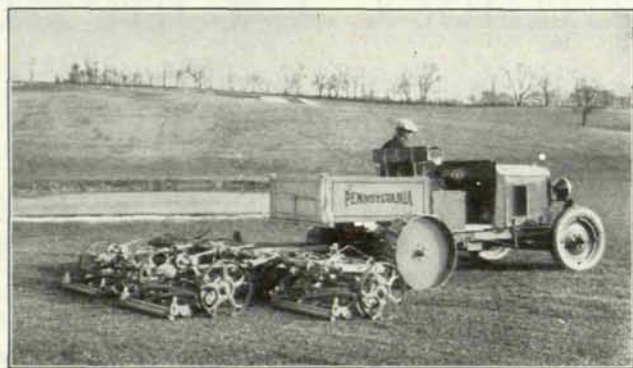
I cannot understand how our greens stood up

Fall Seeding Recommended

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Field Ripened
Sun Cured
GRASS SEED

TITE SOD SEED is specially selected for greens, fairways, tees and fine lawns. Of known Origin and tested for Purity and Germination, this fine seed is backed by our 50 years experience as seedsmen. Write for complete information and quotations.

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KANSAS CITY, MISSOURI



The "New" Fairway Quint being pulled by the 6-cylinder PENNSYLVANIA Tractor

What's your cost per mowing mile on greens and fairways?

If you are considering new mowing equipment for greens or fairways, it will pay you to remember the half-century-old reputation of PENNSYLVANIA Quality machines for maximum mowing mileage at a minimum cost per mile.

You'll be interested in our attractive GOLF CATALOG, illustrating and describing the PENNSYLVANIA "New Fairway Quint or Trio, the PENNSYLVANIA Tractor, the Super Roller and New Aristocrat greens mowers and all the other PENNSYLVANIA golf mowers.

PENNSYLVANIA LAWN MOWER WORKS
1645 North 23rd Street Philadelphia, Pa.

the way they did because we sold about thirty-five hundred tickets and have one hundred and fifty-seven who play every year and one-half of them can't play under a hundred.

Our greens were as good this summer as any private course which we have around here, if not better. As you don't know—ours is a city course built on one hundred and ten acres and new players start every day. I used to stop all new players and tell them how to treat the course and especially the greens, but they came too fast this year and I ran out of wind. So just watch and the old players teach the new ones or I do when they do wrong.

The city has quite a park here, six hundred and seventy-one acres. It is three miles long, one-quarter to one-half miles wide and I have charge of it all. I used to burn five gallons of gas a week, now I burn about thirty. That will show you how big it is. I had plenty to do. We built a bathing beach, one hundred and twenty-five feet wide, eleven hundred and fifty feet long of sand and the nearest sand to Galesburg is thirty-four miles. We used one hundred and nine loads of sand.

We built a sixty thousand dollar beach pavillion, cleaning up sixty acres around it for picnic grounds,

built nine and one-half miles of gravel roads and expect to clean up more next year. And, by the way, the four hundred acres the city got last fall is where I as a barefoot kid, used to walk out to swim, picnic, shoot squirrels, rabbits and birds (with a rubber gun), and gather hazelnuts, butternuts, hickory nuts and last but not least, walnuts. This is the timber I cleaned up and it was a pleasure you can be assured. We, as kids walked the three miles because there wasn't even a bicycle then.

Every golf course around here had to play winter rules but ours. We put on one thousand loads of horse manure in the past three winters, which is the reason.

The golf course shows a profit of \$3561 so far this season.

D. C. BUNKER, *Pro-Greenkeeper*,
Galesburg Golf Course, Galesburg, Illinois.

Talk About Work—Here's One

YOU wrote me to describe my experiences of how we maintained our golf course this summer. I am not much of a writer on anything like this but will do my best. I always like to read the other fellow's better, I suppose he is the same.

We have been a lot better off than most places for rains this year. There were only two weeks that we did not mow fairways. We have a nine-hole course. Our greens are bent and a practice green and have our own nursery of bent. I have only one man to help me which as you know is a great handicap.

Our greens are small too, most of them averaging about four thousand square feet. It takes the two of us all forenoon to water by hand as our pressure is only thirty pounds at the best so that only leaves one-half of the day to do the other work. I mow the greens myself; that takes four hours. The other man does the tractor work.

When we want to topdress we have to cut down on watering. We water every day that it don't rain, except Sunday, but they were few this summer. I have only topdressed twice this year. I used to topdress five times a season but get as good results with three times. I will topdress in October for winter.

Our greens are six years old and as good today as the first year. We went to a little more work when we built them which may be the answer for some of it. We removed eight or ten inches of soil put in three to six loads of well-rotted manure and put on six to ten inches of sandy loam out of a river bottom

and that is all. I used to topdress with it and even though it takes a little more water the bent does well or has so far.

I figure to sulphate my greens every four weeks putting it on dry in the morning or in the evening, broadcasting it on and watering in good so there is not much danger of burning. I never have cut down on the amount during the hot season; some do but I have never seen any harm as I have always used sulphate of ammonia with good results.

This has been my worst year for brown patch. We used NuGreen and Semesan with good results. I treat for it as soon as I notice it and always in the afternoon so it will lay on over night—then water in morning before I mow.

Our greens are mowed not less than three times a week and in good growing weather such as we have now, every day. I have topdressing all screened to put on the last time. Our tees are all grass; they are mowed and watered twice a week. Our water pressure is poor so that half of our labor cost is in watering.

Our fairways are mowed twice a week in growing season with a 5-unit mower and the rough is cut every three weeks. The course is pretty well covered with trees and that means more trouble to keep clean. That is about all two of us have to do. I will say I think our course is in A-number-one condition all the time and I believe anyone who plays it will say so.

LLOYD ADAMS, *Greenkeeper*,
Bucyrus Country Club, Bucyrus, O.

Kesselring Used Lecco

I HAVE neglected getting an account of my work written for the NATIONAL GREENKEEPER, but will try to encourage you with the assurance that we all had our share of the drought.

I have rolling, sandy ground and water was very scarce. We have a pond which is fed from springs that takes care of the greens, but that too was dry and I used city water for the greens, but could only use enough of that to keep my greens alive as we had a shortage of city water due to bad pumping system. But my greens were fine all through the drought.

My fairways and tees suffered as I couldn't get water for them, but we had many compliments about my nice greens. They were in splendid con-

A longer season Happier Members . . . through GOOD DRAINAGE



ORINDA — Oakland Calif., is a great course. It is ARMCO drained.

THE longer playing season on a properly drained and conditioned course means a better-satisfied membership and a more successful club.

Prominent courses, coast to coast, know the value of improved fairways and greens—always dry, firm, compact—made so by a drainage system of Armco Perforated Iron Pipe. This product of champion endurance in service—of an unequalled 24-year record to date—goes just under the surface and carries off rain water as it falls. Standing water and soft spots are eliminated. It promotes the healthy growth of the turf and, being flexible and unbreakable, it is never endangered by rollers or trucks.

Ask any greenkeeper, course architect or engineer. Ask any professional. Good drainage is indispensable to a successful club. Armco Perforated Iron Pipe, longer lasting, is popularly preferred because logically more economical. Data of importance will be sent on request. Write.

Armco culverts and drains are manufactured from the Armco Ingot Iron of The American Rolling Mill Company and always bear its brand.

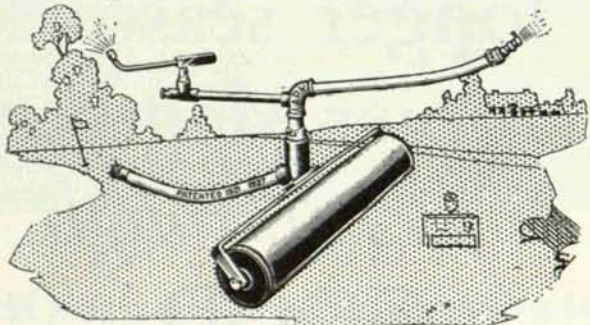
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MIDDLETOWN, OHIO



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7


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4



Here's a revolving sprinkler that does its work quickly, yet breaks up the water into such fine drops that it falls harmlessly—like a gentle, soaking rain. Covers an area up to 125 feet in diameter. Spreads the water **EVENLY** at any pressure. Made entirely of brass, except hose and roller. Finest workmanship. Adjustable nozzle on larger arm.

In the drought regions this summer the Lark has proved its worth. Used on the finest greens throughout the U. S., Canada, Australia and the British Isles. Greenkeepers everywhere say—"For perfect greens—the Lark!"

The Lark Sprinkler is sold on 10 days' trial. Further details and list of users sent on request. Price \$15.00 each in the U. S.



L.R. NELSON MFG. CO.
PEORIA, ILLINOIS



dition all through and my fairways have come out fine since we have had rain.

And to help matters I only had two men up until August 1 and have had only one part time. It surely kept me going. I am getting ready to make a new practice green and enlarge others.

As for brown patch I keep a close watch on it and haven't any to bother me. I have used Lecco five times and topdressed four times which is the only thing I have ever used on my greens.

CHAS. S. KESSELRING, *Greenkeeper,*

Moundville Country Club, Moundville, W. Va.

Rolling Green Lacked Labor

HERE at Rolling Green Country Club in the Chicago district we have been handicapped by lack of labor as it was necessary to cut expenses to the bone. We went through the summer since the first of June with five men on our 27-hole course.

Our course has been in very good condition considering the lack of help. The greens which are Washington Bent have been very good all summer except that they have been cut only three times a

week and were slow to putt on between cuttings.

We have had brown patch quite often but it has never been severe. We have used Calo-Clor the past two years for brown patch control and find it very efficient and economical.

During the first part of April we fertilized the greens with Milorganite and Armour's N. P. K. (9-18-18), at the rate of fifteen pounds of Milorganite and three pounds of N. P. K. to one thousand square feet. Again just after the 4th of July we used fifteen pounds of Milorganite, three pounds of sulphate of ammonia and two pounds of N. P. K. to every one thousand square feet.

The last fertilizing they received a short time ago which was fifteen pounds of Milorganite, two pounds sulphate of ammonia and one pound of N. P. K. to one thousand feet. Once in May and once in June a light application of sulphate of ammonia alone was put on.

Our greens here are very rolling. Some of the slopes are so steep that it is hard to get water down into their soil and it has been necessary to do a lot of hand watering on those places in addition to the regular sprinkling. We tried working humus and charcoal into the places that burned out the most and had very good results with it. We shall use more next year.

The roughs grew very long before the dry weather set in as we could not cut as often as we should have done. And the traps have been weedy and rough. But at the present time everything is in very good shape except that the fairways are hard and dry:

We gave eighteen of the fairways fifteen tons of Milorganite and two tons of N. P. K. in the spring and noticed quite a little improvement in them. Our fairways here are not very large.

I have been fortunate in that I have never had any trouble with grubs until this year. We have a few infested spots on the course now. We applied arsenate of lead with the sprinkling cart to two of the infested places at the rate of five pounds to one thousand square feet. The grubs seem to be as active as ever in those places. I would be very glad to hear from someone who has had experience with grubs and learn how they overcame them.

I neglected to mention that our greens are nearly all black loam and fertilizers leech out quite rapidly.

THOS. M. TODD, *Greenkeeper,*

Rolling Green Country Club,

Arlington Heights, Ill.