

for he gets a lot of enjoyment and valuable information out of it.

Being anxious to visit one more course before we left Philadelphia, Mr. Valentine drove us to the Cedarbrook Country Club, Mt. Airy, the home club of our treasurer, Lewis M. Evans. It is needless to state that he was glad to meet us as was Mrs. Evans for we had all previously met at the home of our vice-president, John McNamara, Pittsburgh. Here for the first time I was able to see the destructive work of the Japanese beetle that destroys the roots of the turf on the fairways. They were lying on their backs chewing away the roots and were there by the million.

After returning from the course we bid goodbye to our old friend, Joe Valentine, and accepted an invitation to have dinner with Mr. and Mrs. Evans. Immediately after dinner we were honored by a visit from Alex Duncan, pro-greenkeeper of the Philadelphia Cricket club, Mr. Duncan being an old friend of John MacGregor's.

Having practically crowded two weeks into one and completely worn out we decided to take one day's rest before returning home and through the kindness of Mr. Duncan he drove us to Philadelphia where we boarded a train for Atlantic City and Sunday morning found us on the famous board walk. The weather being warm and balmy excursion trains were coming in from every direction, and the board walk was soon a mass of humanity. Being very tired we spent most of the day watching the bathers on the beach until evening when we both took trains to our respective homes.

What We Learned About Brown Patch

THIS story of our trip to the East would not be complete without stating that it was our desire to make it educational as well as one of pleasure. One of our chief objects was to get data on the brown patch disease. Every greenkeeper that I met I asked him to be brief and let me know what in his opinion caused the brown patch disease, and the readers must understand that the greenkeepers that are quoted were above the average in experience with this disease.

It may seem strange to relate after consult-

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The Club's reputation and your reputation as a greenkeeper—not only depends upon ability and artistic taste, but, upon equipment.

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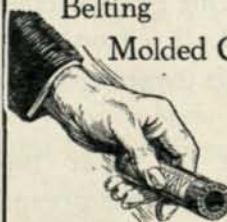
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ing with so many greenkeepers on the subject, the situation appeared to me more complex and confused than it was before I left home. One would state over-watering, another too much fertilizer, and yet another would quote atmospheric conditions, while others sulphate of ammonia. One greenkeeper claimed we did not have so much brown patch when we used lime and another could not understand why one course that had *Poa Annua* and bent putting greens that the *Poa Annua* got the brown patch and the bent did not, while on another course it hit the bents and left the *Poa Annua* alone. A few claimed the disease was caused from the lack of air. Another could not understand why with two putting greens only a short distance apart—both greens out in the open, both receiving the same treatment, one of these greens got the disease and the other was immune.

I have simply quoted the above to show how most of us are so far apart in our views. Yet in my interviews I failed to have any greenkeeper state that the disease may be caused by top dressing, either from dressing not properly treated and aged or that the disease may be caused by poisonous substances in the soil.

Let us stop and analyze a few of these opinions. Is this disease caused by the lack of air? I visited two courses that were situated close to the Atlantic Ocean. The winds seemed to be blowing over the putting greens most of the time yet the putting greens close to the ocean were hit harder than those quite a distance away.

Can it be too much water? One greenkeeper tells me that he never watered all season, taking only what Nature gave. His greens got the brown patch.

Another informed me that he never top dresses during the summer months. His greens were infected with brown patch.

Another stated that he had a special fertilizer—his putting green got the brown patch.

Another told me that sulphate of ammonia will cause the disease—yet eight years ago the Columbia Country Club at Washington, D. C., never used it and they, too, got brown patch.

Let us try and be honest with ourselves and

acknowledge that we do not know what causes this dreaded brown patch disease.

Joe Valentine told me of three specialists on fungus diseases, graduates of the University of Pennsylvania that specialize on fungus diseases. They claim that the same fungus disease that is in the soil is often found in the human body, and that it has been impossible for them to find a cure. All they can do for the patient afflicted with this disease is to aid them to prolong a few more years of life.

An Open Letter

My attention has been called to rumors, claiming that THE NATIONAL GREENKEEPER is not the official organ of the National Association of Greenkeepers of America, and also that it hasn't the association's support.

I feel, as chairman of the magazine committee of this association, that it is my duty to refute these false charges when and whenever possible, in order to promote the association's welfare.

It is difficult to understand the underlying motives of such falsehoods, if a motive they really have, for they certainly work against the welfare of every greenkeeper, regardless of whether he is a member of the association or not, for, THE NATIONAL GREENKEEPER is the first and only periodical exclusively devoted to the betterment of this profession, both socially and technically.

During the past two years THE NATIONAL GREENKEEPER readers have benefited materially by the articles printed, these being submitted gratis by the members and officers of the National association and not by paid editors, and all the writers' motives are only to promote the association and its members' welfare,—There's the answer.

A concise understanding was attained between the association and publishers during the Detroit convention and the details of same are on the association records of that gathering.

Again I desire to call your attention to the authors of these articles and ask—Who are they? Upon close study you will find that they are officers and members of the National Association working in harmony with the publishers and without pay and for one reason only that is to help our association and to place our profession where it justly belongs.

This magazine is open to everyone and will publish any article bearing upon the welfare of the association, and I, therefore, suggest that the originators of these rumors submit their knowledge by a signed article and mail same to the National association who in turn will see that same is printed in this magazine and should none be coming then we can draw our own theory.

(Signed) A. E. Lundstrom, Chairman

The National Greenkeeper Committee.



JOHN QUAIL SAYS:

The Executive Committee will hold the Fall meeting on Monday, October 29, 1928 at the Hotel Statler in Buffalo, N. Y.

The following will be some of the main business to be transacted by them:

Suspension of Delinquent Members

Anyone who has not paid his 1928 dues is liable to suspension according to the by-laws. If you have not paid, send your check in right away so we will receive it on or before the 31st of October.

Application for Membership

Applications will be voted upon and passed or rejected as the committee sees fit. If you have anyone in mind who wishes to become affiliated with us send in the application at once. Blanks may be secured from the officers or from the local secretaries where they are known. Let's boost the association and get some new members. We would like to make it a thousand by the time we meet in Buffalo in February.

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out of
Golf
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And this is why they sow it. In the words of a Pennsylvania Greens Chairman: "We seeded our 9 hole course with Scott's Seed and many golf enthusiasts pronounce it the best year-old turf they have ever seen. Our 9 greens were sowed with your German Bent and today there is surprisingly thick green turf. Now you know what I think of Scott's Seed." For the good of your course get more facts about Scott's Seed before you buy.

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CARRIER'S LECCO The complete grass food eliminates this expense. One ton will make forty applications.

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CARRIER'S COCOOS creeping bent seed. Thirty pounds will plant a green of average size (5000 square feet).

LYMAN
CARRIER'S WASHINGTON stolons. This strain makes putting greens that will stand heavy traffic and rough treatment.

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The Secretary would like to hear from the local Associations. If the various secretaries will get in touch with the National office we will be able to keep in closer touch with the members and will also get quite a few new members. We are at present mapping out an extensive program to interest the members and create a new feeling among us. We want to hear from the members oftener in the magazine. There are any number of men who have had experiences this past year that will be of benefit to all of us. Write up an article and send it in.

Space for the Golf Show is now being allotted to the exhibitors. Chairman Burkhardt is working hard to repeat the success of last year and it looks as if he is going to make this show a huge success and a Show to be proud of. Give him your support and help, and this can be made the largest and most complete Show that has ever been held.

Above all, BOOST, BOOM and ROOT for the association.

MILORGANITE THE IDEAL TURF FERTILIZER

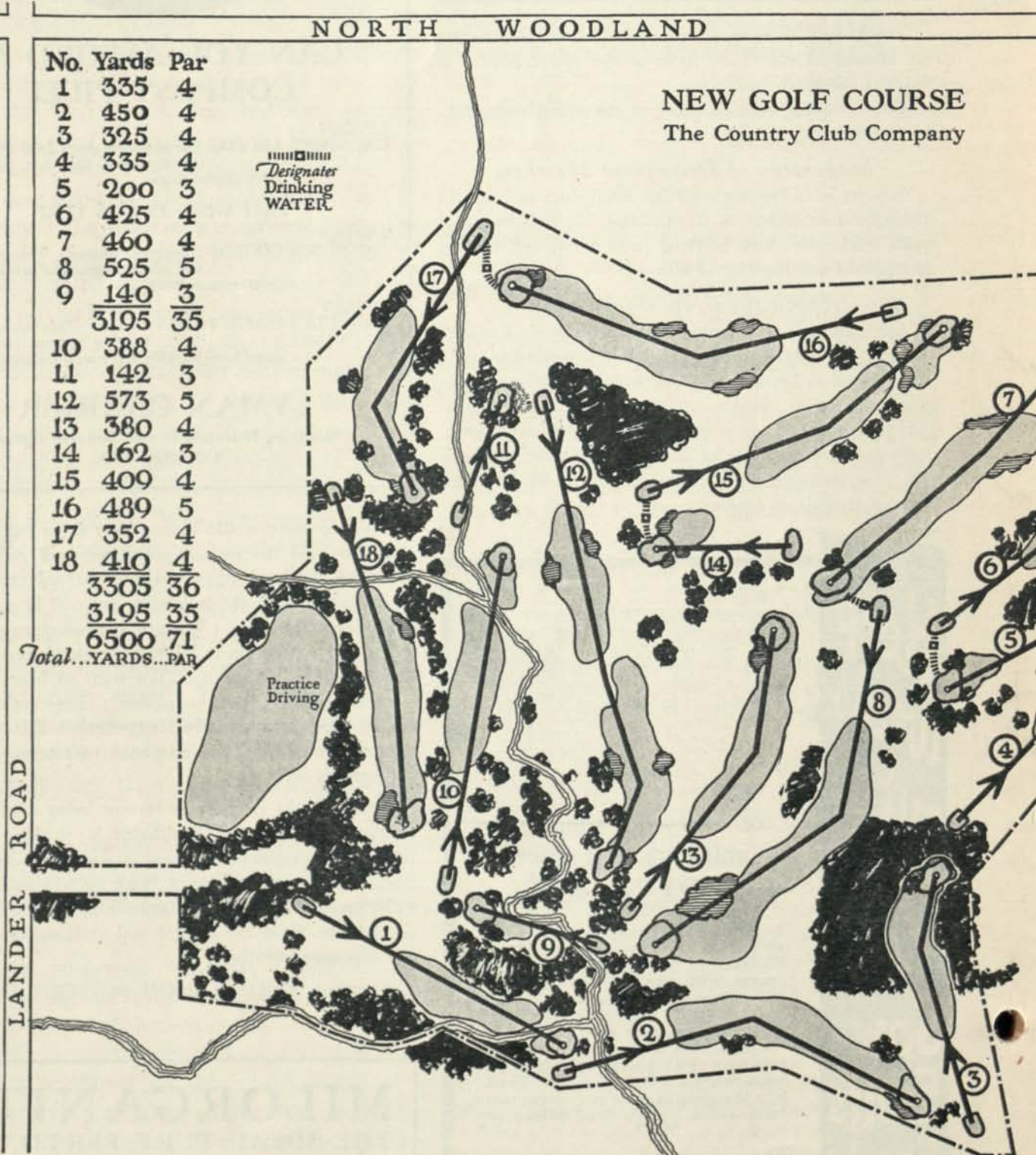
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Cleveland's Newest Course La



st Word in Golf Construction

THE new 18-hole course of the Country Club, Cleveland is in many respects the last word in golf construction. The architect, William S. Flynn, of Ardmore, Pa., has taken a wooded rolling terrain and worked out a layout which is not only pleasing to the eye, but puts a splendid premium on good golf.

For almost twenty-five years the Country Club has been located on the lake front at the foot of Eddy Road, which is practically now within the city limits of Cleveland and only five miles from the Public Square. Obviously the growth of business and residential sections has crowded in on them until it became necessary to seek a new location in the outskirts of the community. The spot chosen is about a two hundred acre tract owned by the Van Sweringens, at the corner of Lander and North Woodland Roads, and adjacent to the present Pepper Pike Club, which lies on the brow of the hill overlooking Chagrin Valley. As the adjoining diagram shows, a considerable amount of clearing had to be done and many of the holes are bordered by wooded areas.

Two small creeks traverse the course and are utilized by hazards on seven of the eighteen holes. These offer particular attractive situations on Numbers 1 and 9 where in each case a shot to the green with a slice is heavily penalized.

The new Country Club course was built this year by Toomey & Flynn of Philadelphia, working in conjunction with Wendell P. Miller, Drainage Engineer, and nothing has been left undone to provide proper conditions of play at all times. As is customary in Flynn courses there are several dog-leg holes. This puts a premium on the tee shot, both as to accuracy and distance so the reward for long straight hitting is very noticeable. Another feature is the fact that each hole is isolated and there are no paralleling fairways. The players traverse the hole they are playing without disturbing or being disturbed by others.

It will be noted that the new Country Club course is set well back from the highway and is entirely free from public intrusion. There can be no building of any sort adjacent to the golf course without permission of the club directors.

Burt Sheldin, veteran greenkeeper of the Country Club and N. A. G. A. member will have charge of the new layout and has been engaged in the construction of it throughout the past summer. The course will probably be ready for play in the fall of 1929.



Humus For The Soils

By JAMES A. SMITH, *Greenkeeper*
London Country Club, London, Ohio

SINCE the important feature gained by the complete incorporation of a good humus in the top six inches of the putting green is that of creating proper physical conditions rather than of fertilization, more care must be used in the selection of humus than has been considered necessary in the past.

From its use we should expect to gain:

POROSITY: The rapid passage of water into the soil at any ordinary sprinkling speed.

MOISTURE RETENTION: The holding back of moisture after porosity and good drainage has allowed easy passage of water and air through the soil at time of sprinkling.

AERATION: The easy passage of water to any depth will necessarily draw air after it, keeping active the bacteria which are producing feedings for the vegetation above.

ROOTAGE DEPTH: A good rootage depth insures deeper feeding areas, since practically all plant food must be taken up through the rootage in the effort to replace moisture lost by evaporation through the grass blades. Rootage depth may be expected with bent grasses at the lowest point at which, through mellowness, there has been allowed an easy movement of moisture and air. The reasonable cutting of healthy, vigorous turf, does not materially effect the rootage depth.

To do these things, a humus should have the following characteristics:

It should be the result of complete decay of hard woods, not weeds, and have the appearance and cellular structure of a fine charcoal.

One level pint of sun dried humus should weigh not more than 11 ounces, which shows freedom from silt which might have been washed in upon it.

One level pint of sun dried humus when thoroughly wet, the excess moisture having been removed in a fine cloth or bag, should weigh at least 23 ounces.

It should be of such fineness that approximately ninety per cent would, when dry, pass

through a screen ten meshes to the inch, without rubbing.

A quart of humus as received in shipment, should on drying measure approximately one pint.

It should have been removed from well cultivated and well drained land and be alkaline or at least neutral in reaction.

The litmus test for acidity is not always conclusive but it is a poor indication if on wetting it should turn blue litmus paper red.

Humus in the pile after becoming wetted by rain fall on the surface, should not show cracks on drying but should crumble to its original fineness. If cracks appear the actual humus content is too low.

Most of our garden seeds in good plain humus and properly cared for, should show a germination of approximately 100 per cent.

Never purchase humus for other than the physical improvement of soil. For years, as a protection to farmers in their purchase of fertilizers, it has been illegal in the State of Ohio to market humus with any claim for fertilizing value. It does have a feeding value in the soil but this is too slowly available to warrant any claim as a fertilizer.

The amount of humus needed should be anticipated and bought during a dry season. Twenty tons of a good humus shipped dry, would weigh fifty tons if shipped wet. Reliable dealers through storage made in the dry season of the year, are able to keep the moisture content comparatively low.

Good humus properly used will return a magnificent profit. Improperly used, it may become a liability.

FOR HEALTHY GREENS

Cleve-Brand Special Granulated

CHARCOAL

Retains Moisture-Makes Soil Porous

THE CLEVELAND CHARCOAL SUPPLY CO.

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Rush Work In The South

By HUGH C. MOORE

SOMETIME ago I promised you a story and as I like to keep my promises, here is one.

Some ten months ago I came to St. Simons Island off Brunswick, Ga., to put a golf course in shape but on my arrival I found that it was not built. In fact, the work was "botched" up very badly. I was asked by Mr. Howard E. Coffin, president of the Sea Island Company, how long it would take me to put said course in shape so that we would be able to play golf. I told him by June 1st, if given the proper equipment and left alone to do my work as I saw fit.

By May 1st we were playing golf on the course and the greens, fairways, tees, in fact the turf as a whole was in better shape than any course in the state of Georgia. In that time I built five greens, put stolons on same; also put stolons on six fairways, remodeled twenty-six traps; re-seeded three fairways; also re-seeded four greens and tees. All my men were green at this kind of work which made it much harder but I showed them my way and insisted on them following instructions which they did, and I had wonderful success with this work.

My greens are Bermuda; fairways are Bermuda and Carpet grass, that is the best grass for the South and for my winter greens I use red top which gives me a beautiful green. I used red top in four greens last winter just for the effect and they were very beautiful. I fertilized all grass in the early spring and since then all I have done is water, roll, top dress and cut grass.

Be sure to water and top dress quite frequently. I would recommend sulphate of ammonia to be used considerably as this is a wonderful fertilizer; also keep weeds down. I used it in liquid form, sometimes as much as five barrels to a green, ten pounds to a barrel and you see the results very quickly. In this way you hardly ever burn a green.

I HAVE had a considerable lot of trouble with crab grass. To overcome this I put

one man watching the greens, cutting this grass out just as it appeared, with a bucket of soil mixed with seed. As he would make a bad place, he dropped in a little soil, put his foot on it and the sore was soon healed.

The southern greenkeeper will find that this crab grass runs from June 1st through until about September 15th. Do not let this grass spread or accumulate in your greens. If you do, it just means that you will have to plow up and re-seed your greens and the expense is much greater. This same man can also fight ants, and Porto Rico cricket moles, which are one of the southern golf courses greatest pests. For these, use carbon bisulphide through a funnel. Do not let this liquid get on the grass. The best time to get these is early in the morning before they get out. You must keep after this pest or in a few years your course is com-

THE PERFECT GOLF COURSE SPRINKLER
COVERS GREATER AREA
THAN ANY OTHER TYPE

GOLF KING No. 6

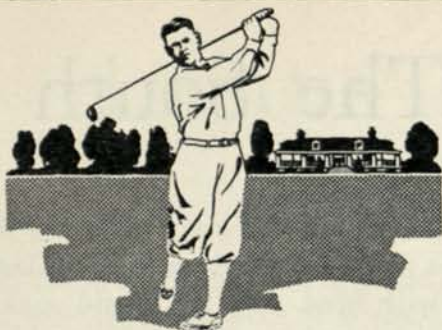
The sprinkler that Efficiency, Economy and sound business judgment demands.

It has the slowest motion and is positive in action on fluctuating pressure, in wind or on hillside and is without a single whirling or fluttering part to get broken off.

Price on roller stand $\frac{3}{4}$ " conn. \$10.00. 1" conn. \$15.00. Larger sizes $1\frac{1}{4}$ " or $1\frac{1}{2}$ " conn. \$20.00.

The only sprinkler that can be used on HOSELESS SYSTEM with SNAP VALVES without "drowning" the attendant. Write us for full literature on SNAP VALVES which eliminate all control valves, all hose, all service leads and more than 50% of irrigating cost.

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V-C Fairway Fertilizer

supplies just the kind and proportion of plant food needed. A ton of V-C Fairway Fertilizer contains fifteen times as much plant food as a ton of manure—requires less handling.

Does not interfere with playing. Does not bring in worms, grubs or weed seeds. Approved by leading golf specialists.

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pletely ruined. In fact, do not let these pests and your work get ahead of you.

The greenkeepers' work is getting much harder year by year and I believe part of the fault lies with the chairman of the Green committee as much as anything else. Most of the golf courses elect a chairman who knows absolutely nothing about soil, grasses, or the condition of a golf course, and yet this same man will in many cases try to instruct the greenkeeper how to maintain a perfect golf course. A good chairman, one that understands golf course work, and has the time to spend out on the course, who is broadminded; also one you can talk to, is a wonderful help to the greenkeeper.

I am a great believer in getting a good greenkeeper, putting his work before him, tell him the condition that you want the course kept in, and leave his work up to him, and in the end your course will be in much better shape. I have had bookkeepers, blacksmiths, and men of all professions, tell me how to grow grass and keep a good turf and maintain a golf course and then get angry with me because I do not do it their way.

Cheap Seed is Expensive

THE greenkeeper should be allowed to select or purchase all of his equipment; also select his seed. Clubs should not buy cheap material and cheap seed. Cheap seeds are the most expensive kind, as they usually carry abundance of weeds. Weeding greens is very expensive. If the clubs would purchase a better grade of selected seed that was tested properly, bought from reliable companies, they would not have so much weeding to do which would cut down the expense.

We are now building the second nine on our course and I hope to be playing on it by the first of next May. When this nine is completed, we will have one of the finest courses in the south bar none. This is a very beautiful island and in time will be a wonderful resort.

I am at present greenkeeper, professional, and club manager, and I am sure that I will never come in contact with any more work than I have had here, but all greenkeepers should remember that to please they should work, stay sober, and stick on the job.

Laying Up Your Machinery

By C. J. ZINK

Greenkeeper, Highland Park Golf Club, Cleveland, Ohio.

IN THE fall after the season is over and all equipment brought in and all dirt, dead grass, etc., thoroughly removed, it is a good plan to disassemble each and every unit that needs any repairing and paint all the parts separately, thereby making it easier to get at the inaccessible places. Replace all worn parts, being careful not to place a new part against a badly worn part, such as bearings.

Grind The Reel Lightly

On the cutting units, grind the reel, but grind lightly and don't make the mistake of cutting too much, being careful to have the reel set properly in the grinding machine. If any unit has seen a season's service it will invariably need a new bed knife steel. Assemble it in the bed knife and face it on the grinding machine which will bring the face perfectly straight. Now, granting that the reel has been ground properly and reel bearings adjusted, the units should cut with very little friction.

Overhaul- ing The Motors

Your power machines, such as fairway tractor, probably work nine hours a day, five days a week, which means that your motor has run the same as an automobile that has been driven ten thousand miles. Needless to say your motor will need the carbon cleaned and the valves ground. A good policy is to replace the spark plugs, have the bearings taken up and don't make the mistake of tightening the bearings too tight. The connecting rod bearing should be snug enough to hold the connecting rod out at a forty-five degree angle but touching it, it will fall by its own weight.

Checking Up The Crankshaft

After two seasons you should check up on your crankshaft for being out of round. If it is more than .005 I believe it is a good policy to replace with a new one. Having it reground gives a lot of grief for invariably you will have to replace all bearings, which is quite a task. You also lose the case hardening that it had when new. Care should be taken in setting the crank shaft bearings. If the wear is the same on all bearings they can be taken up without any trouble but if one bearing shows excessive wear, say .020 and the others, say .050 when you tighten the one with .020 wear, you will pull the crankshaft out of line making it warp with every revolution either wearing the other bearings and itself or crystalizing the shaft, causing it to break.

The remedy for that condition would be to remove the shaft, clean all oil from it, blue the shaft and put back in the block. The block being upside down, of course where the bearings show blue, scrape with a bearing scraper until all bearings show the same amount of blue. If you are available to a service station that has an aligning reamer that would be the best way out, but sometimes we don't have those facilities, so we have to rely on the old hand method of scraping.

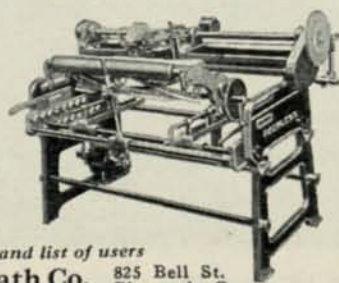
Replacing The Piston Rings

Piston rings should be checked. Should there be side play in the ring grove to the amount of .003 or over, the ring should be replaced. It is not good policy to replace rings over-size as your cylinder walls do not wear as much as the pistons, for the reason that the pistons in their travel are never free from friction while the cylinder walls are free half of the time. Also the pistons are the conductors of heat, while the walls are water jacketed making their working conditions under less degrees of heat.

The Peerless Mower Sharpener

Saves Time and Money for Any Club

The Peerless Mower Sharpener grinds all makes of power, horse and hand mowers in 20 to 30 minutes, with razor-like edge, giving any desired clearance or bevel. Mowers run easier, less power required, hence more speed. One owner reports they have dispensed with one man. Another writes: "The Peerless Sharpener saves us \$700 to \$800 annually."



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SEMESAN

Controls Brown Patch

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Golf At Put-In-Bay

By M. J. Fox

A GAIN we hear of historic Put-in-Bay, but in a new light this time—that of entering the sporting world. Construction on an 18-hole golf course was started in the early spring of this year. Nine holes will be ready for play at the beginning of the 1929 season. We understand from authorities who have viewed the layout that it has some very promising qualities.



BUILDING PUT-IN-BAY COURSE

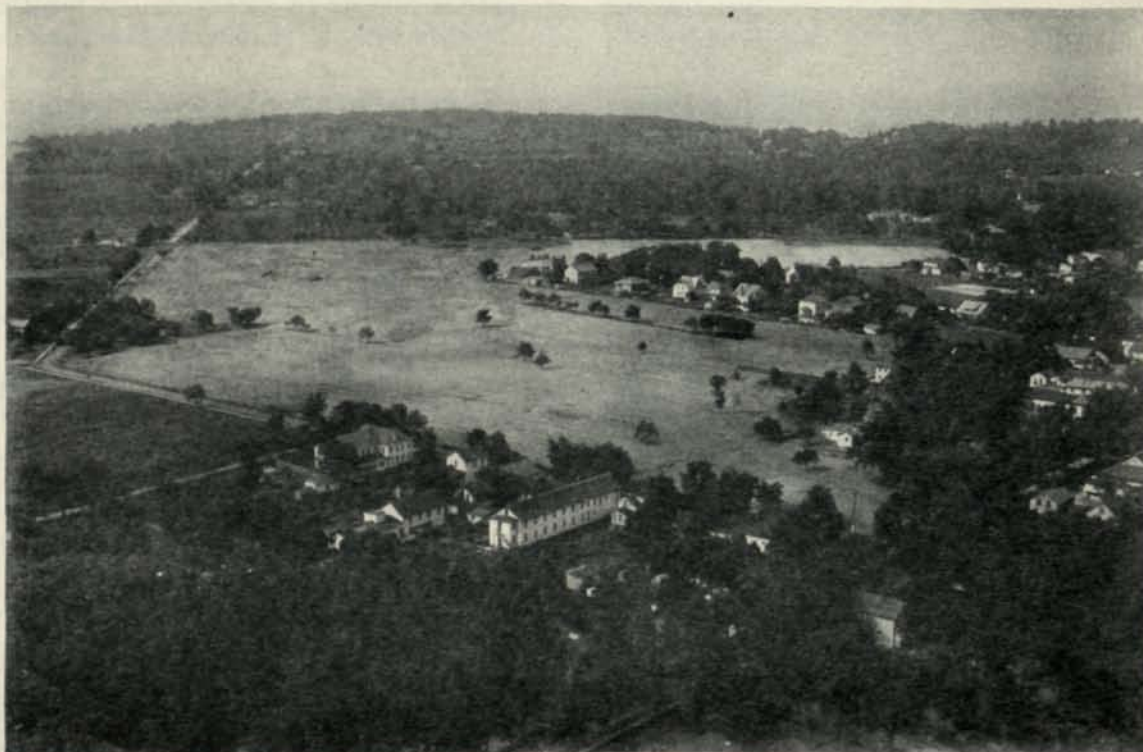
Sidney Stafford, LaVerne Gordon and Wm. Ross snapped during construction of this new golf course in the middle of Lake Erie

Put-in-Bay is ideally located in the middle of Lake Erie and is easily accessible during the navigation season from Cleveland, Toledo, Detroit and other points of the middle west. Already the committee members are visualizing a series of tournaments to be played over this sporty course in the not too distant future. Plans are underway at the same time for a modern 250-room hotel on the lake front which would furnish adequate accommodations for players.

If we were to brush up on our history we would find that long ago Commodore Perry used this little island and its natural harbor for his headquarters during the war of 1812. It is hoped that Put-in-Bay may again be brought into the public press in the history of the sporting world as well. The architect, Frederick Stafford of Cleveland, is to be commended for putting forth his best efforts in the building of this course.

Put-in-Bay Golf Club

Hole No. 1	290 yards	Par 4
Hole No. 2	310 yards	Par 4
Hole No. 3	329 yards	Par 4
Hole No. 4	110 yards	Par 3
Hole No. 5	355 yards	Par 4
Hole No. 6	400 yards	Par 4
Hole No. 7	435 yards	Par 4
Hole No. 8	160 yards	Par 3
Hole No. 9	285 yards	Par 4
<hr/>		
2674 yards		



BIRDSEYE VIEW OF THE PUT-IN-BAY GOLF CLUB

This photograph was taken from the parapet on top of the Perry Monument