Co-operation

Noted club manager sounds keynote of friendship between greenkeeper and club managers. How harmony brings success

By J. BARKER SMITH Manager, Cleveland Athletic Club

Read before the annual convention of the National Association of Greenkeepers of America at Detroit



J. Barker Smith

In ACCEPTING your invitation to speak at the banquet of the National Greenkeepers Association, to represent the Club Managers, I hardly know what to speak about that might interest a greenkeeper, unless it was in his relation to the club manager. And in that sense I have but one thought in view, co-operation. So I will ask you to allow me to sketch for you a mental picture of the co-operation between a club man-

ager and a greenkeeper. The club manager had just taken charge of a country club in addition to his duties at the City Club. So after organizing the employees in the house, he started looking about outside.

His first thought was to plant a vegetable garden along the roadway, so that it might advertise fresh vegetables for the dining room table. And in looking about for some one to take charge of this garden, he ran across a man who had been in charge of the Bass Lake Club at Chardon, Ohio. This man's place was renowned for its corn and onions. So figuring that this man knew his onions, the club manager induced him to take the job of handling the garden for the new Country Club at Youngstown, Ohio.

Onion Grower Becomes Grass Cutter

A SHORT time later, the foreman of the grass-cutters got drunk and stayed away for a week. So the club manager talked with the onion grower and told him that he should take over the foreman's job of handling the grass-cutters on the golf course. The answer was:

"Well, I know how to plant oats, dig weeds and make hay, raise corn and young onions, but if you think I can keep grass cut short enough on these little green patches, I will take the job."

He was hired, and set about immediately to re-organize the crew of outside workers. He then made a scientific study of golf courses and their requirements. As the years passed, this onion grower grew to be a big man in his new vocation, as "Foreman of the Grass-cutters" and he not only brought the Youngstown Country Club to be recognized as one of the best in the country, but his own information and judgment was widely sought.

Now that he is a big man, we can well afford to tell a

little joke about him, and I am sure that he will not get peeved, because big men are satisfied to have some of their friends become reminiscent, even if they are the butt of the joke.

A Joke on John Morley

AT ONE time, prior to the onion grower's advent into the grass-cutters union, he visited Youngstown at a picnic of Club Hotel men. It was held in an amusement park, where they have shooting galleries, popcorn stands and merry-go-rounds. Just before we all went to this park, which was quite a little distance out, our good friend Morley thought that he might go over to Sharon, Pa., to visit his mother, which was about 14 miles distant. But, in the meantime we all got into the Elks Club and got mixed up in some way and John forgot his trip.

Finally, we got out into the amusement park and John was rather tired, because it was a long way out. Someone suggested that he sit down in one of the carriages drawn by the wooden horses in the merry-go-round. John fell asleep. The attendant came and awakened him. So John thrust his hand in his pocket and took out a dollar bill and said to the attendant.

"Let me off at Sharon." (You see that visit to his mother was still on his mind).

It was about 12 o'clock when the attendant closed up the merry-go-round. He came back to John and said.

"I am going to close the place now. Here's ten cents change. We haven't reached Sharon yet; you'll have to walk."

Morley is Deaf-Sometimes

I RECALL one chairman of a green-committee, a Mr. Sharman, in conversation with Mr. Morley. Mr. Morley's deafness has stood him in good stead on more than one occasion when he desired to take advantage of it.

Mr. Sharman said, "John, why is number 15 so long this morning?"

And John replied, "No, I didn't see any worm-cast there yesterday."

Sharman looked at him for a moment or two, and said, "I meant the grass, John. It is too long."

And John replied, "Yes, but we will put lime on it next fall."

Sharman looked back at him and said, "Oh, hell, John, I guess it is all right."

This may seem foolish, but it was not. John knew exactly what Sharman was talking about, and had left the grass long purposely. He always keeps one poor green, so that the players would appreciate the good greens, by way of contrast. And he made believe to Sharman that he did not hear him. But I knew from the expression on Morley's face, that he was putting one over on the Chairman of the Green Committee.

Now for co-operation. The greenkeeper in this instance was Mr. John Morley, and the Club Manager, your speaker. And I am going to prove to you now how and why co-operation between these two men has proved a success. If you greenkeepers will only follow the example of this man, I am sure that you will be amply repaid, not only in the satisfaction of knowing that you are doing the right thing, but that success will come to you, perhaps in your pay envelope, who knows?

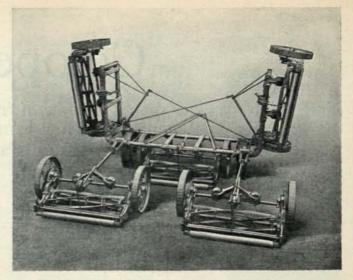
What Co-operation Actually Means

TO MORLEY, I was no doubt a kid when I hired him, but nevertheless John was in charge outside and I inside. So we immediately resolved that the success of he club as a whole could only be attained by co-operation. We had a meeting one blue Monday and agreed to keep each other posted on complaints. Anything that I heard on the inside, about the outside I was to tell John at the first opportunity, and what he could gather on the outside, that would benefit me on the inside, he was to post me forthwith. And besides, we agreed we would repeat to a dozen members, every compliment we heard from John's department or mine.

Today, I look back and I feel that John Morley must have repeated a lot of nice compliments about me, because complaints grew less and I have been reasonably successful in my chosen vocation.

Now, in closing, I wish you would take home with you this thought. Establish with your co-worker, the manager or steward of your club, a feeling of friendliness and confidence. Work together hand in hand, be loyal one to another and reap the personal benefits of co-operation.





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Topdressing and watering most essential

EDITOR'S NOTE:—The author of this splendid article is well-known in the golf field and has taken a very active part in the establishment of vegetatively planted creeping bent greens. He asks that his name not be used which modest request we are bound to respect.

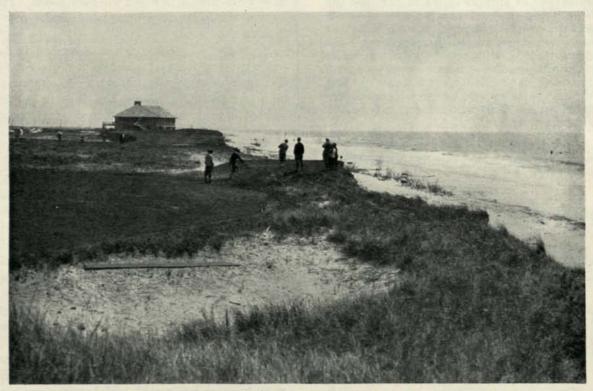
NEWLY planted bent greens must be watered lightly twice daily until the cool weather sets in, then once daily for balance of the season. Watering must be done by hand with hose equipped with a rose, or adjustable nozzle to get a fine spray to avoid washing the newly planted stolons out of the ground. Have an extra man to carry the hose on and off the green. If one man only he will drag the hose across the green and draw a lot of stolons out of place.

The most careful and trustworthy men must be in charge of the watering—for the final success of the whole procedure depends a great deal on the watering during the first two or three weeks after planting. The surface of the green should be kept moist all the time. You cannot make up by extra watering one day for neglect the day before. This does not mean that the soil should be soaked, but kept moist so that the stolons will not dry out before they take root.

When To Start Mowing

IN THREE or four weeks there is usually growth enough to make mowing necessary. The grass should be first cut before it is over two inches long. Use mowers without grass catchers and allow the clippings to fall on the green as clippings with buds or nodes will take root and help fill in. After cutting—the next thing to do is to roll lightly then a very light topdressing and watered. The first two or three cuttings allow the clippings to fall on the green, then give a light top-dressing. Young tips will take root and grow even though no joints are visible.

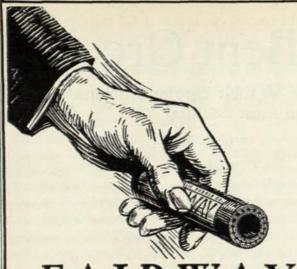
The only way to produce good creeping bent turf is to keep it cut down closely—nearly as close as greens in play. If you do not do this you will have a coarse mat of runners and roots on the surface and it will be difficult to get the turf in really good putting condition even though it is topdressed liberally. Don't be afraid to cut creeping bent closely; that is what it needs to convert it into a good turf.



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Photo by Edwin Levick



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TOP-DRESSING is something which is absolutely essential. Judgment and care must be used in its application. The importance of top-dressing to the maintenance of ideal putting greens is in many cases underestimated.

Haphazard top-dressing is a mistake and harmful. Heavy top-dressing that cover the leaves will cut off the sunlight and many times kill the growing plants. Light and frequent top-dressings are better than a very heavy application at one time. Dressing 1/16 to ½ inch during the fall on newly planted greens should meet the condition.

Top-dressing material should contain a mixture of medium loam soil with equal parts of well rotted manure, thoroughly mixed and screened. While screening mix in ½ part of sharp sand that has been screened to remove the small stones and pebbles to protect the putting green mowers. Green manure contains fertile seeds and if used in making top dressing will give trouble from weeds and wild grass.

We suggest mixing 10 pounds of ammonium sulfate or ammonium phosphate with each cubic yard of top-dressing before applying—then watered in. The last top-dressing before the ground is frozen should be about 1/4 inch to give grass roots additional protection.

Hard Rolling Hurts Grass

IT IS far more satisfactory and practical from a turfgrowing standpoint to fill the depressions by topdressing than to roll out the bumps and ridges. An uneven surface is the cause of many of the ills with which putting greens are afflicted. It is often impossible to mow them without scalping the high points. Pounding away at the bumps and ridges with a roller does not do the grass any good.

No matter how unevenly the spreading is done the top-dressing should be worked off the leaves and around the crown of the grass and into the low places to build up a nice putting surface. The dressing can be easily worked around the grass and in depressions by using the back of a light hand-rake so as not to disturb the tender roots putting out on runners.

Coarse brooms or heavy sweeping must not be resorted to on growing greens. The runners with tender roots just setting will be torn loose and the growth and "matting in" of the turf retarded, besides producing coarse runners on the surface of the ground. If the cutting is started early enough and the grass kept cut short there will be no necessity of sweeping up the ends so the mower will cut them, nor will there be any of the plants blown or show indications of seeding.

Stolons after planting must be cut before the grass attains a height of more than two inches, and kept cut every day thereafter if needed.

A month or six weeks of good growing weather in the spring is usually all that it takes to make the grass grow together into a turf. If there are any bare spots six inches or more in diameter they should have small plugs of bent set in them. These plugs can be taken from thrifty tufts on the green or from around the margin of the green. Bare spots no larger than four to five inches will be quickly covered when the grass gets to growing vigorously. The treatment should always be aimed toward producing good turf and a smooth putting surface.

Before the water is turned off at the end of the season it will be advisable to give the green a good thorough dose of watering so it will soak in and feed the grass roots.

Preparing for Winter

I RECOMMEND that all of the putting greens be covered with brush during the winter months—First—To prevent the strong winds from blowing the dirt from around the grass roots exposing them to the heavy freezing.

Second—To catch and hold the snow which will give the grass further protection during the extreme cold.

Third—To protect them from the animals before the snow falls and in early spring.

The amount of snow held on the greens will do no damage to the grass in the early spring during the melting process, providing the greens are properly constructed for surface drainage. The critical period will come in the early spring with reasonably warm days to start growth, then freezing during the night—therefore, water standing on the surface of the greens will be dangerous.

As soon as growth starts in the spring the same treatment as above outlined should be repeated—that is, top-dress and water to smooth up the surface and build up the turf.

Care During the Playing Season

DURING the playing season for best results—top-dressing should be applied at intervals of 25 to 30 days. A disadvantage resulting from long periods between top-dressing is that the surface of the green becomes packed making it difficult for the water to penetrate and too hard for a good putting surface. The frequency of these applications depends on the quality of the turf and that should be your guide.

There are FOUR things most important in keeping vegetative planted greens in perfect condition, viz:

- 1—Top-dressing
- 2-Ammonium sulfate or ammonium phosphate
- 3-Ample watering
- 4-Keeping the grass cut short

Ammonium sulfate or ammonium phosphate can be mixed in each top-dressing at the rate of 10 to 15 pounds to every cubic yard, or mixed with water and applied with the hydraulic sprayer at the rate of 10 to 15 pounds to 6,000 square foot surface after each application of top-dressing until the weather gets hot.

It will be necessary to remove the young weeds until the grass is well set and forms a good turf.

By carefully observing and following the above recommendations with average climatic conditions the most satisfactory putting green turf will be the result.



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- June 25-30-Trans-Mississippi Golf Association Amateur Championship at the Wakonda C. C., Des Moines.
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- July 2-3-Pennsylvania Golf Association Open Championship at the Oakmont Country Club, Emile Loeffler, Green-
- July 4-6-Annual Fourth of July tournament at Del Monte.
- July 6-7-New York State Golf Association Open Championship, Onondaga Golf and Country Club, Syracuse,
- July 10-11-Annual Invitation Open Tournament at the Shawnee Country Club, Shawnee-on-Delaware, Pa.
- July 18-20—Metropolitan Open Championship, Shackamaxon C. C., Westfield, N. J.

- July 26-28-Annual Buckwood Trophy Tournament at the Shawnee C. C., Shawnee-on-Delaware, Pa.
- July 31-Aug. 5-Public Links Championship, Cobbs Creek Course, Philadelphia.
- Aug. 15-18-Buffalo District Amateur Championship, Cherry Hills Country Club, Charles Behm, Greenkeeper.
- August 27-Sept. 1—Western Golf Association Amateur Championship, Bob O'Link Golf Club, Chicago, Ben Freberg,
- August 30-31-Walker Cup Matches. Chicago Golf Club, Wheaton, Ill., John MacGregor, Greenkeeper.
- September 10-15-National Amateur Championship, Brae Burn C. C., West Newton, Mass., John Shanahan. Greenkeeper.
- September 24-29-Women's National Championship, Virginia Hot Springs Golf and C. C., Virginia Hot Springs, Va.
- October 5-6-Lesley Cup Matches, Winged Foot Golf Club, Mamaroneck, N. Y., John Elliffee, Greenkeeper.

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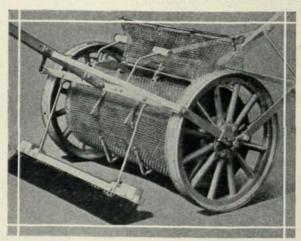
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Golf Course Drainage

A series of articles written exclusively for The National Greenkeeper by America's foremost golf course drainage engineer

By WENDELL P. MILLER

Part V-Rate of Run-Off and Sizes of Tile

THE following discussion of runoff and the methods of calculating sizes of tile is of particular value to the greenkeeper in explaining how his system should be designed and by furnishing him with a means of understanding the decision of the engineer upon questions which may arise regarding the sizes of tile to be used.

The portion of the rainfall or snowfall which passes over or through the ground to the natural or artificial drainage channels is termed runoff. It is that part which passes through the soil to the drains which is of particular interest in this discussion.

The rate of runoff is variously expressed as a percentage of the rainfall, as the depth in inches removed from the watershed per 24 hours, and as cubic feet per second, or per 24 hours, from each unit of watershed area.

It is probable that the method most common in present day drainage practice is to express the rate of runoff as the depth in inches removed from the watershed in 24 hours. This depth is often referred to as the runoff coefficient or the drainage coefficient, or in the abbreviated form of a "3% inch runoff." This method of expressing the rate of runoff will be used in this discussion.

The runoff coefficient adopted will control a large measure of the cost and the efficiency of the operation. It should provide a rate of runoff large enough to insure adequate drainage for heaviest storms to be expected year after year, though perhaps it is not always necessary to provide sufficient capacity for the extreme maximum during those extraordinary storms which occur, say, once in ten or fifteen years.

Runoff From Underdrains

THE rate of runoff from underdrains will vary directly, though not necessarily proportionally, with the amount and character of the rainfall. Localities subject to heavy rainfalls will have a rate of runoff larger than will other localities having less rainfall. The nature of the storms also, will have a marked effect upon the runoff from underdrains. For instance, a rain of one inch falling in a short time, as in summer thundershowers, will cause a much smaller total runoff from underdrains than one of an equal amount falling as a

gentle rain for twelve or twenty-four hours. In the case of the heavy shower the water reaches the earth much faster than it can be taken up by the soil, and, of necessity much of it must run away over the surface. However, the rainfall in the Central States is of sufficient uniformity that so far as this factor is concerned, the runoff coefficient will be the same for all portions of the state.

The rate of runoff is markedly affected by the size, shape and slope of the watershed or drainage area. Other things being equal, the rate of runoff from a large

area is somewhat smaller per acre than it is from a small one, and that from a long, narrow watershed is somewhat less per acre than from one nearly circular. However, the size and slope of the watershed affects the rate of surface runoff more than they do the runoff through underdrains. As a matter of fact, the rate at which the water moves through the drains is so much greater than that at which it moves through the soil to the drain, that the effect of these factors is comparatively small.

In deciding upon the runoff coefficient, the relation of the size, shape and slopes of the untiled contributary watershed must be considered in connection with the area actually to be underdrained. If the untiled adjacent area is comparatively large and has fairly steep slopes, the surface and underground runoffs on to the flatter tiled area below are equivalent to so much additional rainfall, and must be taken into account in designing the drainage system for the flatter area.



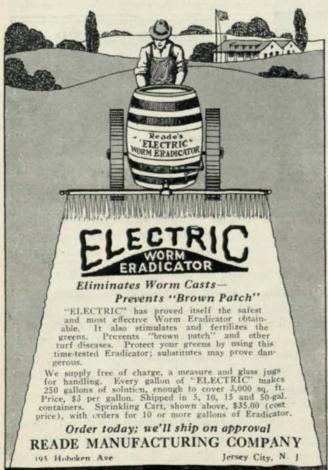
Editor's note: Mr. Miller was formerly Extension specialist in Agricultural Engineering at Ohio State University, and his background of training includes several years of study in soil physics and chemistry. Since 1920 his unusual abilities have been devoted to solving the drainage and soil improvement problems on golf courses

Character of Soil Affects Runoff

THE rate of runoff is considerably affected by the character of the soil. In close soils, such as clay, the water will not pass down to the drains as rapidly as it will in a more open soil such as loam. It is for this reason that tile in clay soils are laid with relatively close spacing, and generally should be kept at the top of any very impervious subsoil stratum.

The rate of runoff will vary with the seasons. A rain of a given character and amount in the early spring will cause a much larger rate of runoff than if it occurred in July or August. During the warm months, when the natural evaporation from the ground surface is





large, and when the crops are growing rapidly and drawing large amounts of water from the soil, the ground-water is maintained at a comparatively low level, thus creating a large storage reservoir in the soil. Under these conditions the soil absorbs and holds what water is necessary for plant life, and accordingly decreases the rate of runoff through the drains.

In golf course work throughout the Central States a common practice has been to use a runoff coefficient which will provide for the removal of a 1/4 to 1/2 inch depth of water from the drainage area in 24 hours, though of late, there is a tendency among drainage engineers to provide for larger capacities in some instances. No one coefficient is truly applicable to all drainage systems in the state. This low value may be correct under some conditions, but is probably smaller than should be used for a great many systems. So if an average value is to be stated, it seems probable that 3/8 inch will be more satisfactory than 1/4 inch. In realty the maximum rate of actual underdrainage runoff will vary, under different conditions, from 1/4 inch to more than 1/2 inch. All the factors affecting the rate of runoff must be considered in deciding upon the correct value.

If the rate of runoff is equal to the removal of ½ inch depth of water per 24 hours, the flow will be 0.0105 cubic feet per second from each acre. The total flow from 100 acres would thus be 100 times 0.0105 or 1.05 cubic feet per second. When the rate of runoff is 5/16 inch, ¾ inch or ½ inch, the rate of flow in cubic feet per second, from each acre will be 1¼, 1½ or 2 times 0.0105' respectively.

How to Select Tile

THE actual determination of the proper size of tile to be used in any particular location should be left to the engineer who designs the system.

Clay Tile: A large part of the tile that has been laid on golf courses is made of burnt clay. This general use is due largely to the common occurrence of clay adapted to tile manufacturing. The porosity of clay tile is not an advantage because the water enters through the crack between the tile. The high water content of the walls is a distinct disadvantage where tile are subjected to sudden freezing and thawing many times during the winter. The sudden expansion and contracting of the water held in the walls may cause the tile to crumble in a single winter.

Shale Tile: Shale tile resemble clay tile but have a more glossy surface. They are also less porous and harder than clay tile. They are made of ground shale rock, wet and mixed until it is plastic. The walls of shale tile hold so little water that they are not injured by repeated sudden freezing and thawing. If the tile are to be subjected to unusual abuse the slight extra cost of shale tile is a wise insurance against possible loss.

Vitrified Tile: Vitrified tile are harder and more glossy than even shale tile. They are used commonly for sewers. Their only disadvantage is that they cost more than clay tile of the same size. Where the fall is more

than 1 foot in 100 feet in a main tile, water flows with such force that it may wash ordinary tile out of place while vitrified tile stay in place. The collar or bell on the larger vitrified tile make it possible to cement them together. This stiffens the line so that it endures the violence of the rushing water. Two or three lengths of vitrified tile cemented together are desirable at the outlet of every main line of tile. Such an outlet bears undermining and exposure without injury.

Tile To Be Rejected

A LINE of tile is no better than its poorest tile. The man laying the tile is in position to cull out the poorer ones and to lay only the good ones. Nevertheless the shipment as a whole should be examined before the tile are taken from the freight yard. Reject the entire lot if 5 per cent appear to have been below standard upon leaving the factory. Excessive breakage due apparently to inferior quality is also cause for wholesale rejection. If the breakage is due to rough handling, accept the unbroken tile but reject the broken one. Let the shipper settle with the railroad company, but notify the railroad agent of the breakage at once.

Clay tile whose weight can be increased more than 14 per cent by absorbed water are too porous. Twelve per cent is the maximum limit of permissible absorption for cement tile. The less the absorption capacity the better the tile endure repeated freezing.

Tile that cannot bear the weight of 800 pounds of linear foot without crushing are below established standards. A 4-inch tile requires this strength as an indication of quality. The larger tile require strength because of the weight of earth that they must actually bear. A 16-inch tile under 10 feet of wet clay must bear a weight of about 2,000 pounds a linear foot.

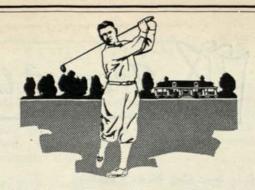
Tile that are cracked may be detected by a dead sound when struck with a light hammer. They are unsafe. Somewhat objectionable, but more permissible are tile with notched ends. Where these notches are more than one-fourth inch deep, patches or bats made of pieces of broken tile are necessary. Tile of good material but patched or warped are less objectionable in a clay or a peat soil than in a sand. Tile of poor material are to be avoided in any soil.

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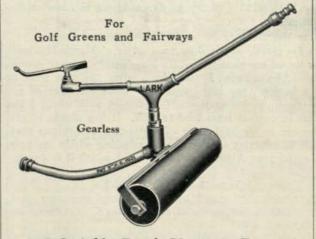
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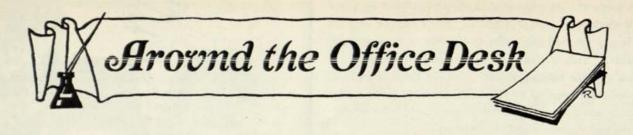
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Get New Members

After all the strife and turmoil that you as president, and the National Association of Greenkeepers passed through in 1927 it is with an optimistic feeling that I think we can look forward to 1928 being a banner year for the success of the National Association of Greenkeepers of America.

We are certainly fortunate to have such good men at the helm to guide the cause along, even so it behooves all the greenkeepers of America and Canada to help and try to get new members into the association. What we need to help good, hard working officers are good, hard working members and plenty of them.

I certainly enjoyed my trip to Detroit. It was indeed a pleasure to meet all our fellow greenkeepers, and the pleasure will be still greater when we meet in Buffalo next year with an enlarged membership.

With all good wishes for your welfare and the continued success of the National Association of Green-keepers of America and Canada.

Fred W. Sherwood.

Bok 662, Ravinia Park, Ill.

FOWNES APPRECIATES MEMBERSHIP

John Morley, President The National Association of Greenkeepers of America Youngstown, Ohio.

Dear Mr. Morley:

I am greatly honored by your letter of March 17th advising me of my election to Life Membership in your Association. As you know, I take a keen interest in your work and also have a very high regard for those members of your profession, including yourself especially, with whom I have come in contact from time to time. It is a source of great pleasure to me to be one of you and I assure you that I shall be ready at all times to do anything within my power to assist your Association in the work which it is doing.

Yours truly,
(Signed) WM. C. FOWNES, JR.
Member of Rules Committee,
United States Golf Association.

JACOBSEN COMPLIMENTS GREENKEEPERS

Mr. Fred Burkhardt c/o Westwood Country Club Cleveland, Ohio.

Dear Mr. Burkhardt:

Permit me to extend my heartiest thanks to yourself, as well as to Mr. Sheldin and Mr. Power for the very splendid manner in which the competitive demonstration was conducted at the Country Club last Monday.

It was indeed a pleasure to participate in this event as it was so well arranged that the manufacturers as well as the greenkeepers were actually able to get some good out of it. We have attended a great many demonstrations of this kind in the past and must admit that in most instances the events were so poorly arranged that no one was able to derive much benefit therefrom.

When you have the next meeting of greenkeepers I should like to have you tell all of the boys that I considered it a privilege and a pleasure to spend the day with them and look forward to similar occasions in the future; also kindly extend my greetings to Mr. Mitchell, and with kindest personal regards to yourself, I remain,

Very truly yours,

(Signed) JACOBSEN MANUFACTURING COMPANY April 27, 1928 By O. T. Jacobsen.

BROWN-PATCH CONTEST EXTENDED

Mr. Robert E. Power Editor, The National Greenkeeper Cleveland, Ohio.

Dear Mr. Power:

As a Judge in the contest on How I Control Brown-Patch and how to Prevent It, I would suggest that the closing date scheduled to be on May 1st, 1928, be extended to about June 1st on account of the short notice given and also the present busy season of most all of the greenkeepers. Many of the greenkeepers now would be too tired after a day's work to give this article the attention it deserves and the officers of the association thought that by postponing the closing date it would give everyone a fair chance.

Trust the above meets with your approval and with kindest personal regards, I am,

Sincerely yours,

April 28, 1928 (Signed) JOHN McNAMARA.

UNITED STATES GOLF ASS'N GREEN SECTION

May 8, 1928

Mr. John Morley, President

The National Association of Greenkeepers of America Youngstown, Ohio.

Dear Mr. Morley:-

As you no doubt already know, our summer meeting of greenkeepers will be held at Atlantic City, June 4 and 5, following which there will be an informal meeting at the Arlington Turf Garden. At these meetings we hope to see some interesting features of the work at Pine Valley and Atlantic City Country Club before visiting the experimental work at Arlington. The meetings will be so arranged as to permit of free discussion of all phases of the work and it will be possible for one to attend either or both of the meetings at Atlantic City and Arlington.

I think it is well understood that all greenkeepers or club officials from our member clubs are invited to attend. We would like to extend this invitation also to any members of your organization who may not have any direct connection with the United States Golf Association Green Section. I hope that you will be present at this meeting and that all members of the National Association of Greenkeepers of America will feel entirely free in attending or in joining any discussion during the meeting, even though they be employed by a club not affiliated with the United States Golf Association.

Very truly yours.

(Signed) JOHN MONTEITH, JR.