

Small Town Golf Maintenance Demands Smart Greenkeeping

By V. T. STOUTMEYER*

Dept. Horticulture, Iowa State College

A CONSIDERABLE number of golf courses are found in towns with a small population. It would be erroneous to imagine that very many of these courses are still in the cowpasture stage. A few, it is true, have sand greens and perhaps charge an annual fee of \$10.00 or \$15.00, but as a rule, small courses are not operated very long before several grass greens are installed. Eventually the sand is replaced entirely by grass.

Cost studies are of little value in this period of change, but it may be said that during the past few years many small 9-hole clubs have been providing bent grass greens and fairly good playing conditions with some clubhouse facilities for dues of about \$25.00 or \$30.00 per year. Wherever the maintenance is on a somewhat higher level or where the clubhouse facilities are more elaborate this figure may be doubled.

Satisfactory golfing facilities may be secured for a very modest sum in the small community, but very often the clubhouse facilities prove excessively costly for the small golf club. There are many clubs which would have larger memberships today and be in better financial condition if they had maintained good greens and fairways and had spent less on high priced crystal and chinaware. If this be true, perhaps the greenkeepers have been too retiring and too modest in their demands for the good of not only themselves but their clubs.

Cost Analysis

Regardless of the accounting system used by the club officials, the greenkeeper should use a simple cost analysis system of his own. An individual account should be kept for each green and a record should be made of the date of each treatment such as fertilization or topdressing, together with the amount of material used. An estimate of labor cost is useful also and a standard time can be determined and used for each treatment. This will be accurate enough for all practical purposes. Fairway costs can be treated in the same manner.

Where such records have been kept, the

**Digest of Greens Convention address.*

variation in the cost of maintenance of the different greens has often been marked. A green with faulty construction is likely to prove expensive in some items, such as fungicides and in the removal and replacement of turf. Thus when a green should be taken out and rebuilt, the greenkeeper has something definite to support the facts presented to his committee. The personal records of the greenkeeper put the facts about the operation of the course in their true light, while the accounts of the club officials are usually too generalized to do this.

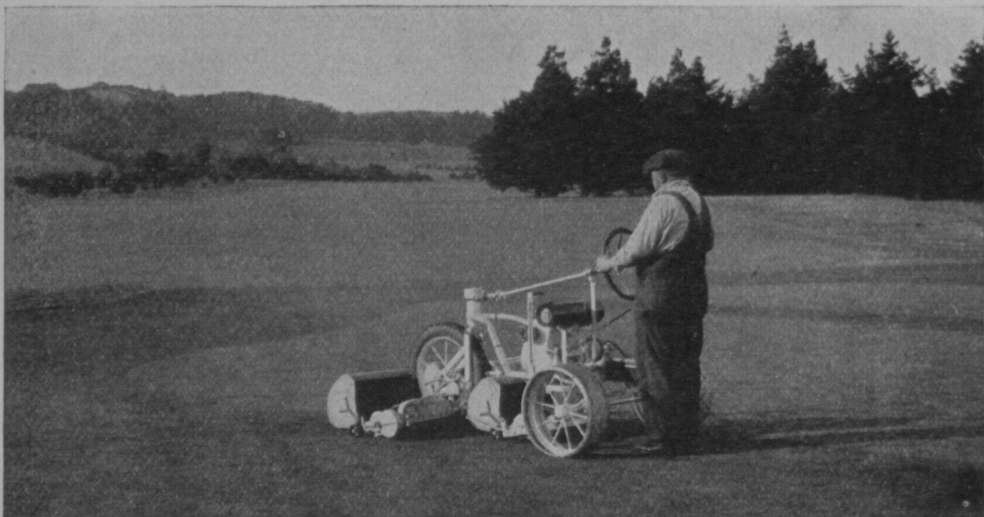
Layout and Maintenance

The small town golf course is apt to have defects in construction which interfere with the growing of good turf. A few common examples may be cited: Sharp rolls in the surface contour of the green necessitate continued cutting from a certain angle. Steep, rough backs or sides of greens cause difficulty with the use of any kind of mower and may require much hard work with a scythe. Certain types of terraced greens and some freak designs in vogue a few years ago have proven unsatisfactory and are being taken out. Greens with rolls placed without due regard to the surface drainage have given endless trouble with scald and brown-patch. There are courses on which the surface water from a long slope runs across the green, or where the seepage from surrounding hills keeps the soil soggy.

Oversized Greens Costly

Oversized greens on smaller golf courses increase the cost of labor, power, fertilizer, fungicides and every other item of maintenance expense. Greens of over 6,000 sq. ft. are apt to be regretted by the small club. A green need not appear small, but it certainly will do so if it is given a very irregular outline with large sand traps on the approaches. A wide untrapped approach from the front or from one side will help to make the small green playable for the relatively unskilled players who predominate in most clubs.

The situation is quite the reverse with tees. They are often not large enough on



The NEW Toro 3-Unit Power Greensmower

HERE is the latest and by far the most improved high-grade power putting green mower. Cuts a swath fifty inches in width. Greens can be mowed in one-fourth the time formerly required . . . without loss in quality of smooth cutting.



OFFICE OF THE MANAGER

The Olympic Club
at Lakeside
San Francisco

December 28th, 1932

Toro Manufacturing Company,
Minneapolis, Minnesota

Gentlemen:-

During the past three (3) months I have had on trial at The Olympic Club at Lakeside a Toro Power Gang Putting Mower. This machine has been given an extensive trial and has been used under all conditions, both normal and wet greens, and have found it to be perfectly satisfactory and certainly a great savings in green cutting expense, - and example of this is as follows. Our No. 18 Green on the Ocean Course has an approximate area of 8500 square feet and this was cut in fifteen minutes, whereas, it would have ordinarily taken one hour cutting it by a hand green mower.

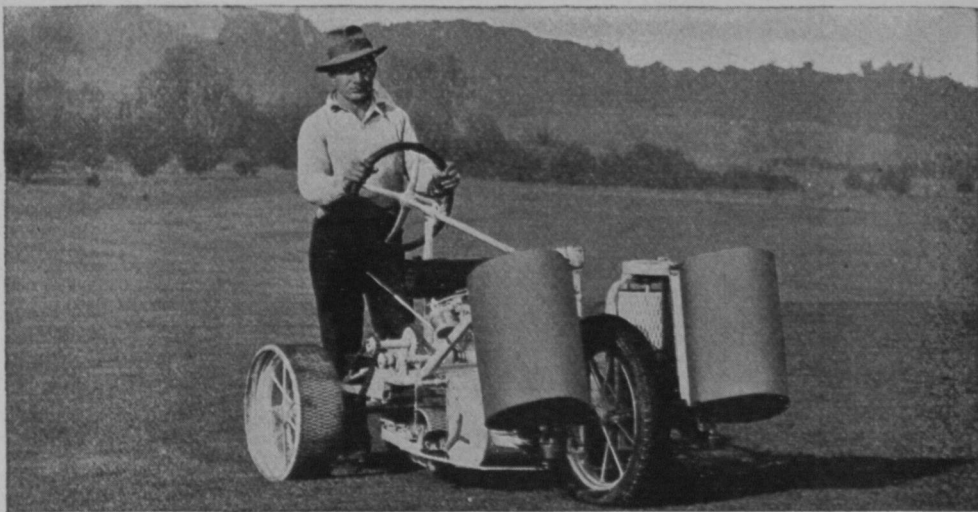
Personally, I am more than grateful to Mr. Bishop for the time and interest shown to prove the amount of time and labor that it would save. In fact, its performance has been so good that I am making arrangements to purchase three (3) more in the near future and by doing this I will save approximately \$300.00 per month in labor on the twin courses.

Also, I have discussed with several of the Clubs in the Bay area the possibility of their installing this equipment, and have advised Mr. Bishop that I will be more than pleased to cooperate with any of the Greens Committees at the other Clubs in giving a demonstration at any time.

Yours very truly,

W. N. Tier
W. N. Tier, Manager,
The Olympic Club at Lakeside

The three wheel feature is highly important because the two front mowers are connected to the front wheel frame and are steered by the same action which guides the machine. This permits accurate control, together with the ability to make short turns. The two front mowers being placed ahead and in direct line of vision of the operator enable him to follow the cutting swath easily. The mowers are mounted so as to provide full floating action instantly, yielding to the undulations of the ground. There is no possible chance of scalping the turf.



You can Use Your Old Toro Mowers with this New Power Unit

By simply removing the handle, your old Toro Hand Putting Green Mowers will fit the frame of the new Power Unit without any alterations whatsoever. Here is a substantial saving that makes it worth while for every user of Toro Greensmowers to convert their present single units into one large capacity outfit.

In simplicity, ease of operation, and with very definite cost-saving advantages, the Toro Three-Unit Power Greensmower meets every requirement of present day conditions.

Get full information about this and other Toro Cost-Reducing Maintenance equipment in the new Toro catalog. Write today.

Toro Manufacturing Co.
3042-3168 Snelling Ave.
Minneapolis, Minn.

Castlewood Country Club
PLEASANTON, CALIFORNIA

January
Second
1933

TORO MANUFACTURING CO.,
Minneapolis, Minnesota
Gentlemen:-

We have just finished tests with your new Toro Triplex greens mower and find it very satisfactory. Our greens are very heavily contoured and your mower could cut these very satisfactorily without scalping. We found that we could cut our 18 greens in $5\frac{1}{2}$ hours.

Very truly,
Roy K Hanna
ROY HANNA, Supt.,
CASTLEWOOD COUNTRY CLUB

the average small course and require much repairing and reurfing.

Sand traps and water hazards are often sadly neglected on the smaller courses. Where they have been put in, an effort should be made to maintain them. Probably clubs will be less hasty in placing them over the course in the future.

The Grass Problem

Taken as a whole, the smaller golf clubs of Iowa have made many serious mistakes in the selection of putting green grasses. The vast majority of the greens are in some sort of bent. The early seeded greens were sown to mixed South German bent, and under our conditions the various grasses formed small segregated patches which gave the green a spotted appearance. The early experiences with stolonized greens were even more unsuccessful because of the inferior strains which were being sold at that time as Washington bent. Spurious grasses are still on hundreds of greens in our state and, in spite of all the efforts of the greenkeeper, remain coarse, nappy, diseased at times and undesirable in color. The dissatisfied players and club officials often do not realize that a misnamed grass is the one and only source of their troubles.

It is well to keep the greens of a course all in one strain of grass; otherwise one has the bother of growing various sorts of grasses for turf repair. Where there are a number of bents on one course they tend to be carried by the mowers and in time become mixed, causing the greens to take on a spotted appearance. The best place for the trial of new grasses is on the practice putting green and a certain amount of such experimentation is to be encouraged.

Give Greenkeeper Incentive

An interesting development in the status of the greenkeeper is found in Iowa and has attracted some attention locally. It is essentially a contract system which increases the responsibilities of the greenkeeper and allows him to share directly in the economies which he is able to effect in the use of labor and materials.

This arrangement, found at the Green County G. C., a 9-hole course located at Jefferson, Iowa, has worked ideally in practice. The club has just completed its fifth season. Most of the present greens are but 3 years old. They are in Washington bent and are nearly all of a quality worthy of the finest course.

The club pays the greenkeeper, C. B. Whitson, a fixed stipend each year. From this he provides his own salary and the necessary additional labor for course maintenance and a tractor, which is practical in this instance as he also operates a farm. Fertilizer, tools and other materials are furnished by the club. The greenkeeper collects the green-fees and by the provi-

sions of his contract is allowed to retain one fourth of the fee money. As this course does not have a pro, he also operates a concession for the sale of golf merchandise.

At the start, this greenkeeper was a farmer in the vicinity who took over the job without any previous experience or knowledge of turf culture. By obtaining information from every source and by hard work he has secured unusually good playing conditions.

There are some good features to such a contract system, although the organization would have to vary according to local conditions. Perhaps it is time to get rid of the idea that a greenkeeper is simply another laborer at so many dollars per week or month and strive to effect arrangements whereby he is able, in addition to his fixed salary, to share in the economies which his management secures. Good greens mean an increase in new members who are attracted by the fine playing conditions on the course. The attraction of non-resident players is also becoming the financial salvation of many clubs.

Other types and extremes of organization are found also. There are small courses which do not have a greenkeeper in the true sense of the word. The green-chairman, usually a retired business man with some leisure, spends considerable time on the course and directs the labor. While the budget of such a course may show a very low labor cost, the best playing conditions are not apt to result.

Golf Course Management

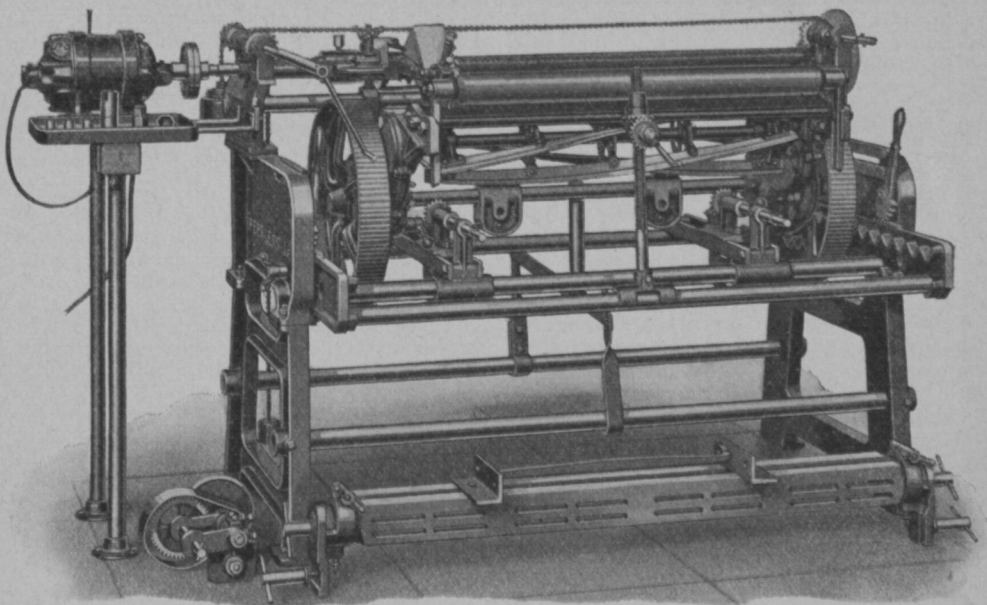
There is a faster way to pull a weed, topdress a green, or route a fairway mower than most of us are using. A great many useful methods which would make for cheaper and quicker maintenance have never been collected and organized and must be learned from experience or from personal contact with the greenkeepers who are the leaders in their professions. At the points where greenkeeping touches the sciences of pathology, entomology, agrastology, and a dozen others, much information is available. The whole subject is expanding so rapidly that textbooks on greenkeeping soon get out of date.

The men who have charge of the smaller golf courses have sometimes been too isolated to keep in touch with the best information in greenkeeping. The educational work of the various greenkeepers' organizations, the USGA Green Section, GOLFDOM and the specialized short courses given at a number of the colleges undoubtedly is leading to great improvement in the average standard of golf course maintenance.

What About Labor?

Very little has been said about the selection and handling of laborers, but the sub-

A NEW MOWER SHARPENER
at a new LOW PRICE “ “ “ “



The **PEERLESS JR.**
MOWER SHARPENER

Here's a real Mower Sharpener that meets the demand for a high-grade Sharpener of ample size and capacity at a *very low price*.

It grinds all makes of power mowers and tractor units with blades up to 36 inches wide, as well as putting green and hand lawnmowers, without removing mower wheels or reel knives. It employs the well-known Peerless principle of *grinding* the blades with the proper clearance or bevel. It also grinds the reel knives to make a perfect contact with the straight blade, even though the latter is bent or sprung. New automatic weight feed—very fast and accurate.

Equipped with Reconditioner for "lapping in" putting green and thin-bladed mowers with emery paste; Attachment Bar for grinding badly worn straight blades, and Special Grinding Wheel for grass and hedge shears, sickles, scythes, etc.

Direct-drive 1/3 H.P. Westinghouse motor, or with tight and loose pulleys for belt drive.

Now every Golf Club—small as well as large—can afford a high-grade Mower Sharpener. Mail coupon for descriptive folder and price.

All Peerless Jr. Mower Sharpeners are equipped with Reconditioner for "lapping in" putting green and thin-bladed mowers with emery paste.



The Fate-Root-Heath Company,
 433-469 Bell St.,
 Plymouth, Ohio.
 Send free descriptive folder and price of the new Peerless Jr. Mower Sharpener—without obligation.

THE FATE-ROOT-HEATH CO.
 433-469 Bell St.
 Plymouth, Ohio, U.S.A.

**MAIL COUPON FOR FREE
 DESCRIPTIVE CATALOG**

Name

Golf Club.....

Address

City..... State.....

ject is worthy of consideration regardless of the size of the course. Machinery and golf turf are both too expensive to trust to any kind of worker, and possibly the higher type of laborer could be used with real economy. A different situation exists in every club. Greenkeepers differ widely in the methods which they use and in the response which they can get from their men. Definite working rules are useful in some cases.

Learn to Plan

It will be more of a problem than ever to maintain a contented, interested and loyal working force after a series of pay cuts during these times. Yet it can be done. Men will work wholeheartedly under adverse conditions if they feel that they are treated fairly and that their efforts are appreciated. Much of the responsibility for the working force rests on the greenkeeper. Usually he must be a hard worker himself if the others are to have the right attitude, and yet who has not seen the foreman who is so engrossed in the work he himself is doing at the moment that the labor force is wondering what to do half of the time. At any rate, he must plan his work or lose much time.

Improved machinery made it possible for some clubs to keep up normal maintenance last summer. Others practically abandoned topdressing and fertilization throughout the season. While the grass held up remarkably well, a day of reckoning will probably come if such a practice is continued. Radical changes in such operations as topdressing enabled certain clubs to get along fairly well in spite of a reduced labor force. Some clubs are handling topdressing soil in sacks, which eliminates some shoveling, and are using one of the newer types of topdressing distributors. These enable the work to be done in a fraction of the time that the work formerly took by hand and the application is much even. In this and other cases, the money spent by some clubs for equipment of this type is proving to be a far-sighted economy.

There are great opportunities for the extension of golf in the smaller communities of the country. The small town golf clubs are playing an important part in the social and recreational life of the community. Those responsible for keeping the smaller courses should aim high. Already many small town greenkeepers have demonstrated that the large clubs have no monopoly on good layouts.

Greenkeeping Progress Through Self Education

By JAMES G. MOORE*

Dept. Horticulture, Univ. of Wisc.

THERE is nothing in golf more important or vital than greenkeeping. It has had more to do with the development of the game and the amazing strides it has made than anything else, until today there are more than two million players in this country. Very few play for exercise, and were it not for the pleasure connected with the game, it never would have attained its present popularity which is rapidly increasing every year.

To the greenkeeper is primarily due the responsibility of making courses playable and attractive. The more he makes them so, the more players the game attracts and the greater the appeal to all classes of people.

If links are in a condition which leads only to complaint and irritation, some other means of recreation will be sought

as players today not only want, but demand, almost perfect putting greens, and fairways. When links which receive little attention, or are neglected, are contrasted with those in charge of a competent greenkeeper, then his great value to the game is realized. His work has led to more than 5,000 links and clubhouses in this country, the municipal courses which are being constructed everywhere, the daily fee courses which are becoming so popular, and hundreds of millions of dollars invested in the supplies and accessories of the game. It is no exaggeration to say that over one billion dollars is invested in some way in the playing of golf.

The Forgotten Man

The greenkeeper, however, has not I fear, received the appreciation and gratitude from golfers to which he is entitled. They keep in touch with the professional

*Digest of Greens Convention address.

through lessons or the buying of supplies, but they seldom see or have any contact with the greenkeeper. It is very much like a general in command of a battle. The soldiers do the fighting and are visible to onlookers, but the commanding officer is behind the lines, often unseen, but it is his thought, experience, initiative, and planning which directs the battle and wins victories.

We see men working on a golf course, we play over fine turf, we have a pleasant afternoon, but how often do our thoughts turn to the greenkeeper whose ability, experience and direction have made all this possible? If he is interested in his work, which with many, is his very life and soul, he is often on the links very early in the morning and late at night. Few realize his anxiety when owing to some climatic condition or something else, brown-patch or some disease strikes the grass, and how he strives to effect a cure so the players may enjoy their game. He is to golf what the mainspring is to a watch. I am convinced that the part the greenkeeper plays in bringing elderly men out of their poorly ventilated offices, clubs, and homes, into the open and with the exercise they obtain, has done more for the preservation of health than tens of thousands of doctors could ever do. He has been the means of prolonging and saving many lives, and if he has done nothing else it is something well worth while.

Greenkeeping today is more or less a profession, requiring technical and scientific knowledge, and it is to the credit of greenkeepers that they are anxious to obtain it. One of the ways is membership in an outstanding greenkeepers association like yours, which among other things is doing such splendid work in arranging the instructive addresses you hear at your conventions.

Your success is due to the many years of service and loyalty of your officers, among whom the most credit must be given to the founder of your organization, whose devotion to its interests should never be forgotten, Colonel John Morley. In his resignation as president, he carries with him the affection and gratitude of us all, but we rejoice that in his successor you have a man who is splendidly equipped to go on with the work, John MacGregor.

In referring to the educational side of greenkeeping, I feel I should speak of the benefits greenkeepers have received in the instructive articles appearing in GOLF-DOM and *The National Greenkeeper*.

Green Section Cooperation

Another way in which greenkeepers have been helped is in the results obtained by the Green Section, USGA, in its experimental and research work, and I wish to take this opportunity to express to the green-

Control
BROWN PATCH
Safely

WITH

BARBAK WHICH MAY BE APPLIED AS OFTEN AS CIRCUMSTANCES REQUIRE WITHOUT DANGER OF SHOCKING, BURNING OR DISCOLORING THE TURF...

USE BARBAK FREELY—
 YOU CAN AFFORD TO

AT THESE LOW PRICES

BARBAK	5-lb.	25-lb.	100-lb.	300-lb.
211	\$ 8.00	30.00	115.00	330.00
XX	\$11.75	46.25	180.00	525.00

AMERICAN CYANAMID AND CHEMICAL CORP.
 535 Fifth Avenue New York City



USE WHERE THE SOIL FERTILITY IS LOW USE WITH A BALANCED FERTILIZER PROGRAM

TURF DISINFECTANT

keepers our hearty appreciation of the cordial support they have given our efforts for many years past.

Years ago, I fear, there was a feeling by some greenkeepers that we were usurping their privileges and treading on forbidden ground. We were and are only desirous of being helpful to those who know very little about the conditioning and proper maintenance of new golf courses continually springing up, and giving to greenkeepers of experience valuable information obtained from experimental and research work. There has been absolutely no thought or intention of forcing this on greenkeepers or clubs, and they have been entirely free to use or discard it as they think best.

The Green Section, Mr. Depew went on to point out, is only too glad to have greenkeepers conduct their own experiments, but elaborate tests are generally financially beyond the means of the individual, while the Section has funds to carry such work forward. Appreciation of this work is shown by the increased attendance at Green Section meetings and by the increased daily mail received at Arlington from greenkeepers everywhere.

Many problems remain unsolved, the speaker continued, such as leaf spot dis-

ease, turf insect control and fairway improvement. Solving these will reduce greatly the cost of course maintenance. He went on:

States Turf Problems

May I briefly state some of the problems to which we all should direct our earnest attention, but they require in experimental and research work far more money than is at present available. Insects still continue to be the greatest source of trouble on many golf courses, such as the mole cricket in the south, ants, grubs, earth, army and grass webworms, and many others and until adequate information is obtained, a large sum of money is spent each year on golf courses without results. At Arlington some opportunity was afforded for study of cutworm and sod webworm control, and it is now felt that these pests may be satisfactorily controlled on fine turf or by any of several poisons. Earthworms were particularly troublesome, as elsewhere in the country, and remained so in spite of repeated trials of remedies hitherto effective. More work is needed on this problem. Most of the experimental work thus far has been in the growth and treatment of putting greens, but the con-

Take the Right Step

this Spring

Invest
in a

STAUDE

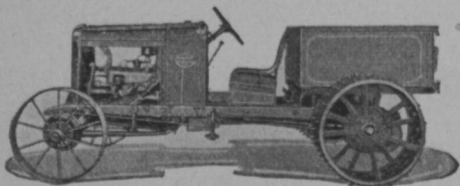
General Utility

TRACTOR

An outstanding tractor of light weight, speed, power, economy, service. Manufactured continuously since 1916. Sold on a money-back guarantee. Buy from your local Ford dealer or direct from us.

E. G. STAUDE MAK - A - TRACTOR CO.

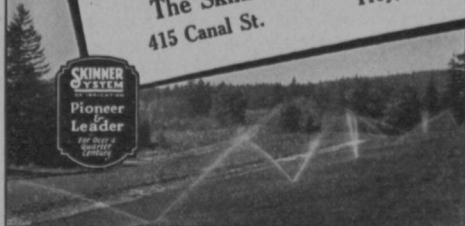
2696 University Avenue, St. Paul, Minn.



SKINNER SYSTEM
The **PIONEER and LEADER** OF **SKINNER SYSTEM**
NOW OFFERS CORRECT **SKINNER SYSTEM**
COURSE WATERING. **SKINNER SYSTEM**

Skinner System watering has behind it an exhaustive experience. Its aim has always been to achieve the best. In the golf field, it offers a range of equipment for portable, hoseless or underground watering not heretofore attained.

Your investigation is solicited.
The Skinner Irrigation Co.
415 Canal St. Troy, Ohio



dition of fairways is just as important, and few clubs have perfect ones.

This brings to the front problems which in most cases have been unsolved, such as the best methods of preparing, fertilizing and seeding various soils in different degrees of climate; time of application of the fertilizers, and their rotation; best use of water, particularly in view of the sprinkling systems which many clubs have installed; best height to cut, control of weeds, particularly clover which too great use of water promotes; the renovation of poor, weedy turf; the perpetuation of good Bermuda grass; and the treatment of brown-patch, concerning which we have learned much in the past two years.

A systematic study and experimentation is necessary to enable us to solve and successfully meet these problems. In all of

them the greenkeeper can be of the greatest assistance and in our combined efforts, success will be finally attained.

Midwest Garden Continued

The USGA regrets the necessity of the strictest economy which will materially curtail the activities of the Green Section, but I am glad to tell you that it has decided to continue the midwest turf garden near Chicago in the interest of the many clubs in this district and adjacent states.

Each year we are getting closer and closer together in our mutual efforts and we like to think you are a part of us in 6 of your members being on the Advisory Committee of our Green Section. As I said in my address two years ago at your Columbus Convention, only in a hearty and cordial cooperation among us all can the best results be obtained.

Grass Growth Factors That Control Cutting Practices

By C. M. HARRISON*

Among the problems confronting the greenkeeper today is the problem of cutting. What responses are made by the grass plant to close and frequent removal of the green leaf blades?

The life of a plant is probably more dependent on the proper functioning of the part that is above ground than on that of the part that is below. Roots serve a plant primarily in absorbing water and nutrient material from the soil; they also serve as a storage place and as a means of anchorage. The leafy portion, on the other hand, serves mainly as a factory in which the carbon dioxide of the air is changed into carbohydrates (starches and sugars).

The chief function of the leaves is the combining of carbon dioxide with water, which is absorbed by the roots. The green parts of plants contain a certain green pigment called chlorophyll which is necessary to this process, and only in its presence can the plant make carbohydrates. The whole process of putting together the carbon dioxide and water is called photosynthesis.

Several factors influence the rate at which this manufacturing process will go on. The amount and intensity of sunlight has a marked influence. In most plants,

the process is probably checked when temperatures fall below freezing or rise above 90° F. Given some green leaves to serve as a factory, sufficient water absorbed by the roots, an available supply of carbon dioxide, light, and a proper temperature, the synthesizing process will go on.

Close Cutting Retards Grass

The products of the process—the carbohydrates—are very necessary to the plant in building new leaves and roots, and in keeping alive the parts that already exist. The more green leaf area there is exposed to the light, the larger the factory, and the more food can be manufactured. Whether the efficiency of the factory as it enlarges remains the same as when it was small is not definitely known, but usually as the leaf area exposed to light becomes larger, more food is manufactured. As the amount of food increases, more is available either to increase the size of the plant, both top and bottom, or to be stored for use when the synthesizing process is checked.

Partial or complete removal of the top or green part of the plant seriously affects the amount of food it can manufacture. The shorter the grass is cut, the more of the factory is removed, unless the plant responds by flattening out on the ground in

*Digest of Greens Convention address.

such a way as to produce leaves so close to the ground that the mower blades do not catch them. Certain grasses, notably the bents, exhibit this response and are consequently valuable when short cutting practices are the rule.

Certain other grasses, however, such as Kentucky bluegrass, usually continue their upright habit of growth and may be completely defoliated by severe and frequent cutting. As the amount of defoliation increases, the food manufactured by the remaining top decreases, and consequently less food is available to build new plant parts. When cutting practices which virtually defoliate the plant at each cutting date are maintained, any food previously stored is gradually used up in building new parts and in keeping the plant alive, and when these cutting practices are coupled with adverse growing conditions, the plants recover very slowly and sometimes not at all. Cutting of the top of the plant results, then, not only in lessening the amount of new top growth produced after cutting, but also in decreasing the production of roots, and even in extreme cases in actually killing the underground parts of the plant.

With lantern slides Mr. Harrison showed effects of cutting on the subsequent growth of grass plants under more or less con-

trolled conditions. It is possible by controlling the amount of nitrogen supplied a plant, the temperature under which it is growing and the amount of cutting of the tops to produce results which he exhibited by means of the slides. Most of these results were obtained while working in the greenhouse of the University of Chicago on funds supplied by the Green Section.

French Lick's Second Midwest Tourney April 7-9

SECOND ANNUAL Midwest Tournament will be played at French Lick Springs, Ind., April 7, 8 and 9. Events will be run in scratch and handicap classes and for men and women.

The inaugural of the event drew a good field last year. Its success established it as a welcome competitive feature of the central states amateur calendar.

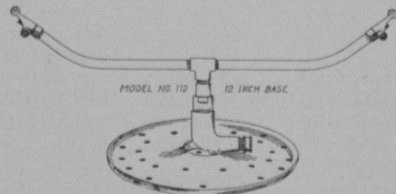
Special combination rates covering transportation and accommodations at the French Lick Springs hotel, have been arranged at a very moderate figure.

Thomas Heneage, 120 S. La Salle st., Chicago, is director of the event and will supply complete details to prospective entrants.

And NOW—for 1933

PERFECTION announces another very important IMPROVEMENT

A NEW, INDESTRUCTIBLE, PRESSED STEEL, DISC BASE (Pat. Appl'd for) that can be dragged around the finest of greens all day without causing the slightest damage.



MODEL NO. 112, \$10.50

AND REMEMBER THIS

ONLY PERFECTIONS REALLY GIVE BY ACTUAL
TEST AND DAILY USE:

Perfect distribution at all pressures—never over 40 lbs. required. Constant slow motion under all conditions without adjustments. Not affected by side-hill settings or by any wind. Nothing to adjust—Self-starting—Fool-proof—They just go. Maximum coverage for any given pressure—75-ft. circle at only 10 lbs. No small holes to become clogged—No expensive repairs. Only $\frac{3}{4}$ " hose required—Operate perfectly on low pressure. Entirely rust-proof by Cadmium Plating—Will last "forever".

Over 50 of America's Leading Golf and Lawn Equipment Dealers—after actual comparative tests and upon the advice of leading Greenkeeper acquaintances—have selected Perfection Sprinklers as their first choice. Prices from \$6.50 to \$12.50.

THERE IS A PERFECTION SPRINKLER DEALER IN YOUR VICINITY

If he fails to show you
Perfections write direct.

PERFECTION SPRINKLER CO.
PLYMOUTH, MICHIGAN