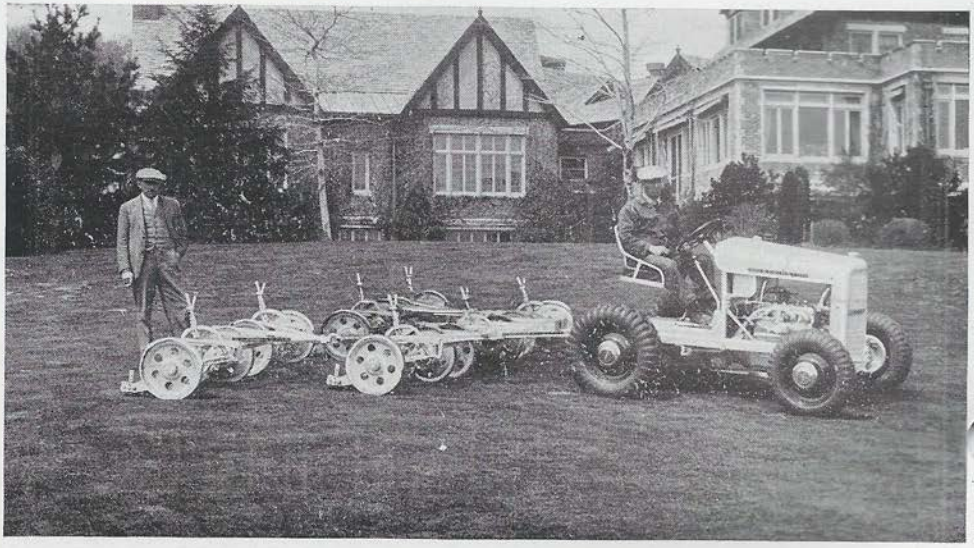
NEWS LETTER

To overcome difficulties is to experience the full delight of existence, no matter where the obstacles are encountered, whether in the affairs of life, in commerce or business, or in mental effort—the spirit of inquiry that tries to master its subject.

—Schopenhauer.

MAY

1937



7-gang mower and tractor at Baltusrol Country Club during 1936 U. S. Open Championship.

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Save Money: Worthington Gang Mowers have been built for 23 years of the finest materials for long life and lasting satisfaction. Any Worthington Cutting Unit fits easily into any Worthington frame. That means no expensive frame replacements when you need new cutting units.

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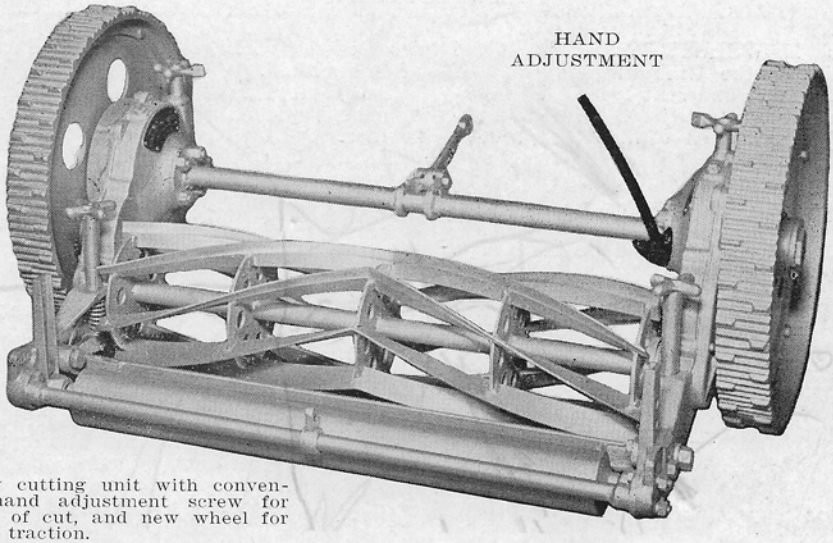

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Worthington cutting units last longer - - serve better

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This NEWSLETTER is published monthly by the Greenkeepers Club of New England, and sent free to its members and their Green's Chairmen. Subscription price ten cents a copy, or a dollar a year.

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May, 1937 Vol. 9, No. 5

PREPARING THE GOLF COURSE FOR A NEW SEASON

by John Counsell

(Read at Service Section Dinner)

I have been asked by the Directors of the New England Greenkeepers Club, to read a short paper on the subject of "Preparing the Golf Course for a New Season". Incidentally this will answer in part the question so often asked by some golfers; "What does the greenkeeper do during the winter months"?

Preparing the golf course for a new season really starts before the closing of the course in the fall and continues during the winter. Much of the success of the playing season depends upon this preparation. Opening the golf course in the spring is more than performing certain routine operations. A great deal depends on the condition in which the turf has come through the winter—such as—injury from Winter Kill, Snow Mold, etc.

In the fall before the ground freezes, the soil should be tested for its pH value, which determines its degree of acidity, and the Greenkeeper decides from the results of these tests if Lime is needed. The soil may also be tested for the available Phosphorous and Potash content, and the fertilizer program for the following spring planned accordingly. This analysis may be made by the Greenkeeper who owns a suitable testing kit, or a sample of the soil may be sent to a soil testing laboratory, such as the Massachusetts State College or the Waltham Field Station.

Turf that enters the winter in an unsatisfactory condition may need special attention the following spring and these needs can be anticipated. The turf should be treated in the late fall with a Fungicide, which is usually in the form of some Mercurial for the control of Snow Mold.

Temporary greens must be prepared and cups placed before the ground freezes.

About this time the greenkeeper spends considerable effort and study on his proposed budget for the coming year. If a record of the cost of each maintenance operation on the golf course is kept, an attempt is made to reduce the cost of these operations by more efficient methods and the use of up-to-date equipment. Any savings due to this increased efficiency can be used for improving the turf and a higher standard of maintenance.

Each item in the budget should be given careful consideration. The equipment should be thoroughly examined so that the cost of repairs or replacements may be estimated. Up-to-date price lists should be secured from the competitive golf supply concerns to determine the costs of seed, fertilizer, fungicides, etc. Labor costs may change due to higher wages.

If any item in the budget is considerably larger than the previous year, a written explanation should accompany it when it is sent to the committe for approval. After the proposed budget has been O. K.'d or reduced by the Budget Committee the greenkeeper receives the approved budget; then the suit can be cut to fit the cloth.

The greenkeeper should prepare himself for the coming season by keeping abreast with the latest developments in his profession. The New England Greenkeepers Club have lectures by competent research men and other educational features at their monthly winter meetings, and I would like to suggest to the Greens Chairmen that they encourage their Greenkeepers to attend these monthly meetings. I am sure that both the Greenkeeper and his club will benefit by the knowledge gained from the lectures and the discussion of his own particular problems with other Greenkeepers. The Annual Conference at the Massachusetts State College is both interesting and instructive. He may take a short winter course at some Agricultural College and learn more of the technical side of Greenkeeping.

There should be a general overhauling of all equipment during the winter months. The engines in the tractors, trucks and power mowers may need a complete going over. The various types of mowers used for cutting Fairways,

Greens, Tees and Approaches usually need grinding and worn bed-knives, bearings etc. replaced. All the small hand tools should be put in condition and the cutting tools sharpened. Other equipment such as Tee Benches, Tee Markers, Ball Washers, Flag Poles should be repaired, cleaned and painted. Buildings, sheds and bridges can be repaired and painted, and dead trees cut down and removed from the borders of the golf course.

In the early spring program the rough should be cleaned of all dead branches, leaves, rocks and other debris. Traps should be checked, banks repaired and sand added if necessary. Ponds and brooks should be cleaned and all tile drains inspected to see that they are clean. Wash outs can be filled and walks regraded.

The rolling of fairways, tees, and in some cases greens, is probably the next operation. This must be done at the proper time. Some areas may be ready for rolling before others because they dry out sooner due to elevation, soil conditions, etc. If the roller gets wet when rolling, it is because there is too much moisture in the soil and it is too early to roll.

The date for opening the regular greens in the spring depends on local conditions. Some courses dry out sooner than others due to types of soil and climatic conditions. The opening will also depend upon the kind of turf. Greens planted to Creeping Bent stolons such as the Washington or Metropolitan strains lie dormant longer than the seeded type.

As soon as the turf on the fairways produces new roots the fairways may be fertilized. The greens and tees should be topdressed and fertilized after the spring growth has started. It may be necessary to apply Arsenate of Lead for worm control to the greens, tees and approaches.

The water system that was disconnected and drained the previous fall must now be attended to. The drains should be closed, the water turned on, and the pipe lines inspected for leaks, which sometime occur due to improper drainage.

The foregoing is but a brief recital of the many and varied duties of the greenkeeper in preparing the golf course for a new season. And now the golfers enjoyment begins and the Greenkeeper's trials and tribulations commence.

GOLF COURSE RECORDS

By Robert Lee Mitchell

Edison Club, Rexford, New York

Golf course records may be classified in three main divisions. They are cost records, turf records, and miscellaneous records. Under these three classifications will of course be subdivisions or individual records.

Cost records as the name implies are records of the actual dollars and cents expended for various purposes or on various areas. They should be kept by the greenkeeper primarily as an aid to him and club officials, in controlling the golf course expenses intelligently. They are sometimes used for minor purposes such as gathering data for gas tax refund claims.

Turf records are records kept regarding the condition of turf at various times, and of different factors that may affect the condition of the turf. They should be kept to give the greenkeeper a history of past treatments, conditions, and methods of construction. They should be used by him as an aid in the correct formulation of future policies of construction and maintenance, and to correct diagnosis and treatment of turf troubles.

Miscellaneous records are records which should be kept in order to have available certain necessary information, but which do not fit into either of the other classifications. A good example of this is the inventory.

Sometimes the comparative value, to the greenkeeper or club, of various records is brought up. This is especially true as regards costs and turf records. It must be admitted that the keeping of cost records is of great value to any club. However if serious consideration is given to the fact that turf records, when used as an aid to proper maintenance and construction methods gives greater player satisfaction, I feel that it will be seen that turf records are of far greater value than cost records to both the greenkeeper, the club, and finally the players.

Before keeping any records the greenkeeper should make up his mind what information he desires to gain or have available from them. Records compiled and not used, or at least kept on file for a probable or possible future use, are worthless, and only represent work done with no value received.

The first step in the keeping of records is the collection of data. In all cases this should be done daily, and then summarized in periodic statements. Data should be collected in as much detail as is practical or possible. The reason for details being that they can be combined into larger items at will, with accuracy, whereas large items cannot be broken down accurately if the details are not available. Accuracy is of the utmost importance, as inaccurate records are but little better than guesses or estimates, and are likely to lead to misinformation and trouble.

To be of most value records must be kept up to date and be interpreted frequently.

Wherever possible, printed forms should be used for recording in order to cut the necessary work to the smallest possible amount. There are two general types of forms used. One is a large sheet having a large number of details on one page. It has the advantage of giving the greenkeeper a number of details before him at one time on one page, but it has the disadvantage of being bulky and hard to file and harder to change. The other type is the card system. On this a single item or detail is kept on each card. It has the advantage of being easy to file and to change, but has a distinct disadvantage of having to get out a large number of cards when using for interpretation etc. Probably both kinds will be used in the average system of golf course records.

It must be recognized that a certain amount of time and labor is involved in the keeping of all records. The amount of this time and work must be balanced against the value to be received from the records, when deciding whether or not to keep records. always keeping in mind that the labor involved will decrease as the greenkeeper becomes more familiar with the system.

I will consider cost records briefly, noting only some of the information that is available from a good cost system and some of the data that must be kept to gain the information.

Some of the items of information that may be gained from costs are:

1. Time worked by each man.
2. Amount of social security tax, unemployment tax, and compensation insurance premium that must be paid.
3. Labor costs of any operation.
4. Cost of work done by golf course labor for other departments.
5. Cost of materials, supplies, repair parts, and new equipment, and the place or for what they were used.
6. Total maintenance costs of certain areas such as greens, tees, fairways, etc.
7. Hourly or mileage costs of operating any certain piece of equipment.
8. Comparative costs of operating different pieces of equipment.
9. Amounts that can be claimed as gas tax refunds.
10. Supervision costs.
11. Total expenses at any date and amount left in the budget.

Some of the data necessary to have the above available are as follows:

a. Weekly or daily time book.

b. Labor distribution sheet.

c. Material purchase order—showing date, vendor's name, price, amount, and kind of materials, and where and for what used.

d. Equipment records — showing hours or miles run and gas and oil used.

e. Budget sheet — showing amount budgeted for each item and in total, and spaces for weekly or monthly posting of amounts spent and total spent to date for each item.

Briefly:

Items 1 & 2—obtained from item b.
Items 3 & 4—obtained from item c.
Item 5—obtained from item c.
Item 6—obtained from b & c.
Item 7—obtained from c & d.
Item 8—a comparison of costs of different pieces of equipment under item 7.
Item 9—obtained from c & d.
Item 10—obtained from e.

I also think that cost records should be only of costs charged by the club bookkeeper or by his system to the golf course budget on account. The greenkeeper should either have access to the club's books in so far as the golf course maintenance account is concerned or should have a monthly statement of everything charged against his budget in order that he may check his records for correctness.

The turf records should be divided into two main groups. The first one is the conditions records and the second one the factor records.

First, I shall consider the condition records. Under this heading we have

turf condition records and construction records. The turf condition records should be kept in the form of an evaluation record or in the form of notes. The evaluation record is a score card of each area, scoring to be made on the basis of so many points for the different items such as texture, amount of weeds, etc., and a final score for each area figured up. If in the form of rates, they should be made for each area on texture, amount of weeds, variety and amount of grass, etc. In using either type the records should be made at regular periods, without referring to previous record before or while doing, so as to get a true picture or record of the condition.

Construction records are records of these methods of any construction work. They should include an outline plan and profiles of the work done. On the back of the plan or on an attached sheet should be notes on the amount of soil, tile, etc. used, and on special conditions such as excess rainfall during construction, and finally of the amount of labor etc. used to complete the work. The outline plan should show tile drains, pipes or special areas treated differently from the area as a whole.

Next are the factor records to be considered. I shall list all of them, and then treat each group separately. They are as follows:

a. Disease—fungicide treatments.
b. Top dressing — fertilizer, spiking, watering.
c. Amount of clippings.
d. Weather (precipitation, temperatures, humidity).
e. Mechanical analysis — PH, and nutrient tests.

Group a and b should be kept on cards, one card being used for each factor, but only one for all areas. For instance, in keeping a disease record, on one card you would have the date the disease occurred, the name of the disease, the greens affected, and the extent and location affected, and any other notes of peculiar conditions that you might want to keep. Under fertilizer, top dressing, spiking, watering, and fungicide treatments you would have the date, amount, kind, method of treatment, and a note of any greens treated differently from the rest.

Group c is a record of the amount of clippings. This will probably be of doubtful value to many greenkeepers on first consideration. When you stop to think that the first thing you generally ask your greensmen is "how much grass are you getting", it must be of some value. If it is not, why do you follow it so closely?

Group d—weather records should be kept daily. They are of great value in predicting attacks of disease, amount of watering to do, etc.

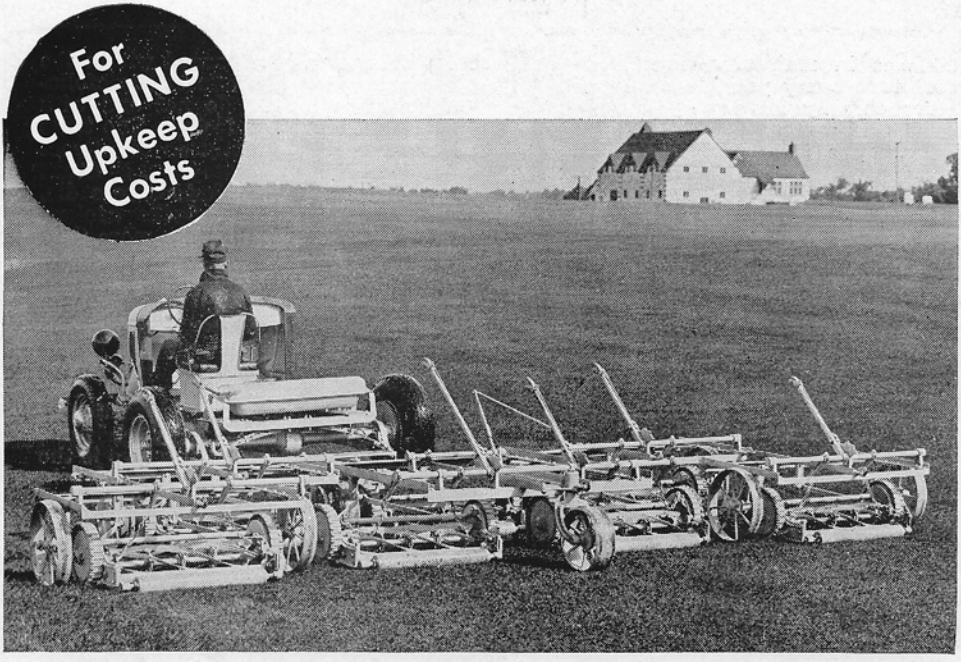
Group e—The mechanical analysis of soil, pH and nutrient tests of soil could probably be kept most easily on one sheet for all areas. They should be made at regular periods. The mechanical analysis probably will not be made more than once every two years or more. The pH and nutrient tests should be made once or twice a year as they change more rapidly than the mechanical analysis. They always should be made at the same season of the year.

The miscellaneous records probably include the inventory and blue prints of the course, water lines and drains. The inventory should be taken at least once a year, and should include all equipment and supplies and materials. It should be kept up to date from the materal purchase orders. It is of value in making out the budget and in promptly renewing exhausted supplies and equipment.

The blue prints of the course, waterlines and tiles should be kept up to date, each change in the course being promptly shown on the blueprints. They are invaluable in planning construction work, locating broken pipe, tile, etc.

Many greenkeepers are probably keeping some form of cost records at the insistence of their club officials, or possibly because cost records have had a relatively large amount of publicity. They also probably have inventories and blue prints, although I doubt, if a real survey was made, that a very large percentage of them would be up to date.

However, I wonder how many greenkeepers have turf records, and if they do not, why not? Are they not of invaluable aid to a greenkeeper? They certainly should be of vast help to him in diagnosing turf troubles, in treating disease, in keeping his soil in the proper condition, and ultimately in giving his club the best possible golf course for its members to play on. Remember that in the final analysis, within reasonable limits, a greenkeeper is judged not so much by his costs as by the condition of his course, and in the case, as it is with most of us, of a limited budget, we certainly cannot afford to make many



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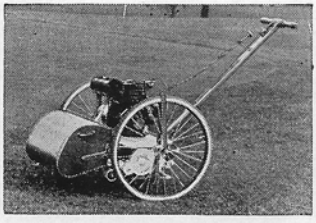
Available in 3, 5, 7 and 9 gangs, interchange able. Seven or five-blade units optional. "Bulldog" units have drop-forged ring gears, cut steel pinion gears, one-piece steel roller, chrome-nickel steel double-edged bottom knife, and heavy chrome-nickel steel reels. Units may be lifted off the ground for speedy transportation over the roughest areas.

A copy of the new 1937 catalog of mowing equipment for golf courses should be in your files for ready reference. Write for your copy today.



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mistakes in maintenance methods and must take every possible advantage.

Probably by this time you are thinking, "what a mess of work and detail"! Well maybe it is. That is something that you will have to decide. There may be some records that I have mentioned that would be of no value to you. There may be others that are of value that I haven't mentioned. That is a decision every greenkeeper will have to make for himself. In conclusion, I will only say, keep what records you feel will be of value to you, keep them in detail, keep them accurately, and above all after you have kept them, use them.

MAY MEETING

The May meeting was held on May 3rd at the Kernwood Country Club, Salem, Mass. The late morning was devoted to demonstrations and inspection of the course and equipment. A demonstration of the new Ideal power unit in conjunction with the Buel Junior Spiker proved of interest.

The results of the 18 hole medal handicap tournament held in the afternoon were as follows:

1st net, S. Mitchell, 103-30-73.
2nd net, J. Counsell, 93-18-75.
3rd net, A. Ohlson, 85-9-76.

TALKS ON TREES

by E. Porter Felt

Bartlett Tree Research Laboratories
Stamford, Conn.

The small white webs of the tent caterpillar may be seen here and there and cankerworms are due to appear shortly.

There is probably not much tent caterpillar as compared with the last two seasons. The somewhat conspicuous tents give ready clues to local abundance. It is comparatively easy to remove the tents and the contained caterpillars on a few small trees and on larger trees and in somewhat extensive areas, spraying is effective.

The cankerworms are by far the more serious pest. There has been extensive injury in woodlands here and there within fifty miles of New York City and the probabilities are that much more damage will be caused within the next few weeks. The effects of defoliation by these insects do not end with the destruction of the leaves. The trees are weakened so greatly as to attract borers, especially the two-lined chestnut borer. Many of the infested trees die, especially in areas where the cankerworm has been numerous for more than one season.

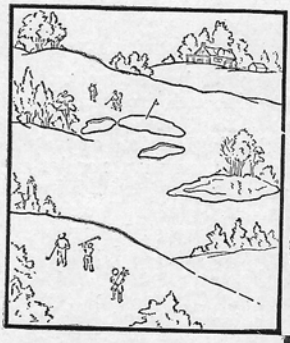
Thorough spraying controls cankerworms. Ordinarily it is too expensive for woodland trees. Some fifteen years ago experiments were conducted to determine the possibility of controlling gipsy moth by distributing poison from a dirigible. It was found impracticable and work along that line was abandoned. Applying poison with the autogiro is the latest. Experimental work conducted in the Morristown National Park in New Jersey last year under Government direction, indicated a higher degree of efficiency at about half the cost of spraying from the ground. The autogiro has also been used for work in the south and as a result, the spraying season has been greatly extended, permitting a marked reduction in costs. It is quite within possibilities that such treatment may become somewhat general on the more valuable wooded areas within commuting distances of our larger cities, particularly Boston, New York and Philadelphia.

No one should assume that the practical limits of insect control have been reached by present day methods, even though these are greatly in advance of those of ten or twenty years earlier.

The effects of general conditions on shade trees are becoming more apparent as trees are given more attention.

In the late '90's and early 1900's there were a series of exceptionally dry seasons, especially in early summer. Following this period many thousands of hickory trees were killed by the hickory bark beetle, the result of lowered vitality following years of drought. This was true of ornamental birch trees except that the final killing agent was the bronze birch borer. The death of the birches on lawns suggests that trees growing under such conditions are exposed to maximum drought effects. There was no such mortality of native birch trees.

Similar conditions prevail here and there with oaks along the northeastern



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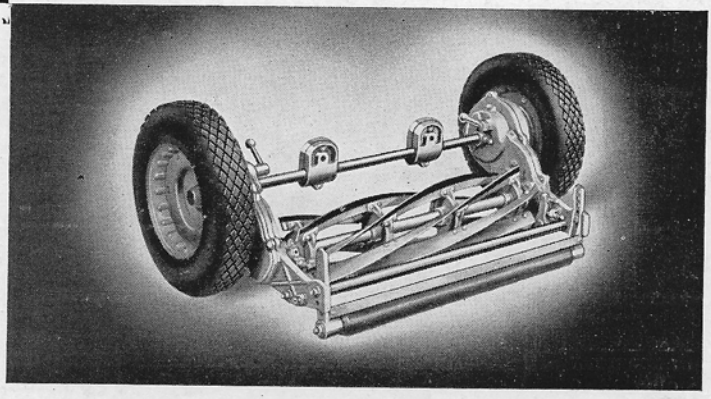

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SECOND, *Goodyear pneumatic tires* protect the mower against jolts and jars when crossing hard surfaced roads or rough ground. Moreover, generously wide treads provide plenty of traction and prevent bogging down when the course is soggy. They do not groove, or tear the turf on hillsides.

Why not get first hand information on the host of other features exclusive to Pennsylvanias?

Literature sent you immediately upon request.

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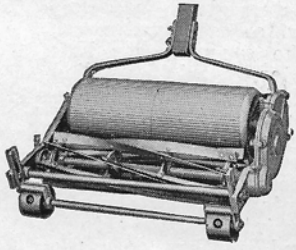

Light weight, high speed, smooth cutting, 8 crucible steel blades. Positive precision adjustment. Alemite lubrication. Cuts ribless 18-inch swath.

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PRIMOS PENNA.

seaboard, the precipitating causes being drought and repeated defoliation by cankerworms, or other leaf-feeders, the final agent being the two-lined chestnut borer. Here a reduced tree vitality favored the borers and in most cases damage was proportional to the defoliation. Repeated stripping of the trees during several years or even an almost complete defoliation in one season produces conditions favorable to attack by this borer.

The forest tent caterpillar was extremely destructive to sugar-bush in New York State and Vermont early this century, the repeated stripping weakening the trees seriously and resulting in the death of many. This insect was abundant in the Berkshire region and adjoining sections last year and more injury may be expected the coming season.

The above suggests that defoliation by insects or the loss of foliage by fungus diseases may be more serious than most people realize in spite of the fact that a new crop of leaves usually appears within a few weeks. The production of these new leaves makes a draft upon the reserve vitality of the affected trees and produces conditions, as suggested above, which are favorable to the development of deadly borers.

The creation and protection of the title "certified tree expert" is being considered by the legislatures of Connecticut and New Jersey.

The bills are drafted along lines similar to the laws establishing the "certified public accountant". The average owner must depend in large measure upon the judgment of the tree expert, and it is only reasonable that he should be aided in the selection of a thoroughly competent person or company by state approval. The proposed bill is permissive, not mandatory. It establishes higher qualifications than have heretofore been required of tree experts, requiring four years of college training or an equivalent education in fields of knowledge related to tree care, or practice as a tree expert continuously for the preceding five years at least. The administration of the law is placed with a group of well-qualified state officials. The fees are ample to cover administration costs. There are provisions for revocation and punishment for violations. The bill is drawn in such a way as to avoid conflict with existing mandatory laws.

Is there a need for legislation of this character? It benefits tree men rendering a superior service by certifying their qualifications. This aids the man concerned with the welfare of his trees. The bill recognizes the need of fundamental training and wide experience for satisfactory tree care. There are literally hundreds of species and varieties of ornamentals, each with its special requirements and subject to diverse insect pests and fungus diseases and with marked diversities in tolerance and intolerance of spray materials. The certificates now issued to tree men in various states are based on quite limited requirements, due to the fact that they are mandatory and it is difficult to establish higher standards under such conditions. These laws have been of value.

It is believed that conditions justify, if they do not necessitate, the stamp of state approval upon the "certified tree expert" with his manifestly higher qualifications.

FURTHER RECREATION CONFERENCE REPORT

Introduced by Professor L. S. Dickinson as one of the country's leading designers of irrigation systems, John Buckner Gill spoke before the Greenskeepers of New England at Amherst, March 13th on the subject of irrigation.

Mr. Gill prefaced his talk with a few remarks about the division of authority between the agronomist, the greenkeeper and the designer of irrigation systems. He pointed out that the engineer or designer of watering systems should confine his efforts to the mechanics of distributing water over given areas and should not under any circumstances attempt to tell the greenskeeper how much, or when water should be applied to turf. He stated that the greenskeeper and the agronomist knew more about propagation of turf and other plant life and the relation of soil structures to the growth of plants and that the engineer whose training was purely mechanical, knew nothing of these things. On the other hand, neither does the greenskeeper or the soil chemist as a rule know anything about the mechanics of hydraulics. Therefore those in

charge of growing turf should go to the engineer and tell him how much water they would like to have and ask the engineer to design them a system that would distribute the water evenly over the specified areas. Mr. Gill criticized severely so called irrigation engineers who after laying out the watering systems for greenskeepers would attempt to tell these greenskeepers how much and how often the water should be applied. Mr. Gill also pointed out the fact that many golf clubs have made the mistake of operating their fairway sprinkling systems to suit the whims and fancies of the members and not the needs of the turf. He stressed the point that the greenskeeper himself knows more about his own course than anyone else and that the greenskeeper's word should be followed in any irrigation program.

True to his policy, Mr. Gill confined the rest of his talk to the mechanical means of distributing water over large areas. The distribution of water from large coverage sprinklers; the many different types of coverage patterns, methods of saving labor, horse power, and current consumption were all discussed by Mr. Gill in an interesting hour of instruction.

Mr. Gill's wide knowledge of the subject of irrigation comes from many years of practical experience. He is employed as Manager of the Eastern Division of the Buckner Manufacturing Co. at Elizabeth, N. J.

Priced the Wrong Product

"Miss M—, I don't want to be harsh," said R. E. B., "but I just want to suggest that you had better not write to your boy friend during business hours."

"Don't I turn out enough work?" she asked.

"Yes, but letters are likely to get mixed."

"So what? Have I made a mistake, mister?"

"Well, a customer reports we quoted him on a ton of love, hugs, and kisses, instead of the lawn fertilizer he needed."

A Good Idea to Inculcate

Two sweethearts from Aberdeen were rambling about a Scotch town and came to a motion-picture show.

The young man glanced at the display in front and was attracted by the title of the current film "The Woman Pays".

"Jean", he said, "I think we'll gang in here."

—Anon.

Telling Time

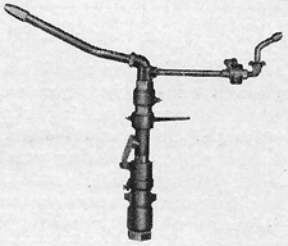
The time of day I do not tell,
As some do by the clock;
Or by the distant chiming bells,
Set on some steeple rock,
But by the Progress that I see,
In what I have to do;
It's either Done o'clock to me,
Or only Half-past Through.

—John Kendrick Bangs.

Professor—"Tell me something about nitrates."

Student—"Well—er — they're less than day rates."

Irrigation Systems



BY

The Originators of Golf
Course Irrigation
Complete Watering Equipment From
Tee To Green

●

Buckner Mfg. Co.

ELIZABETH—NEW JERSEY

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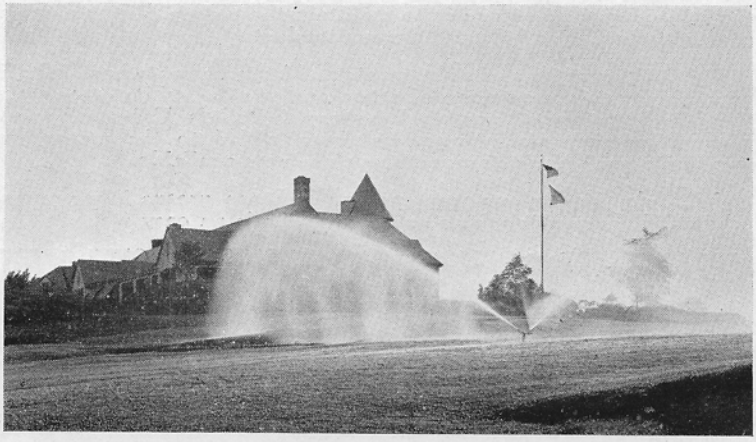
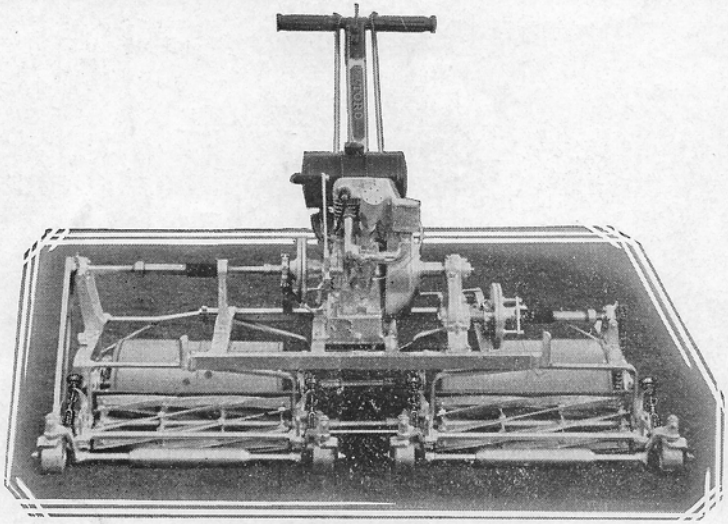
NEW ENGLAND TORO CO.—WEST NEWTON, MASS.



The Buckner—"Perfect Curtain of Water"

Will Mow Eighteen Greens in Six Hours

The Duplex was first introduced in 1936 and offered a new and proven means of cutting grass by power, at the same time maintaining all the well known advantages of hand mowing. The principle involved is simple enough. It consists of two 17½″ mowers held in line and separated by a width approximating one mower less the normal lap. As the mower travels over the green, it cuts two swaths and misses one. On the return trip the mower is moved over and cuts the swath that was missed, at the same time missing the swath that was cut. This routine is followed until the green is completely mowed.



There are many advantages to the Duplex. In the first place it has a cutting swath of 35 inches, or double that of a hand mower. In the second place, because of its construction, it is reasonably light and the weight is spread over a larger surface so there cannot be any packing of the soil. Thirdly, it allows the operator to maintain the ribbon effect in the green, which is desired by all Course Superintendents.

For 1937 a number of refinements and improvements have been added. The drive drums are now made in two sections to facilitate easy turning; a simplified system of gearing has been installed; Universal joints are rubbered covered; more power has been added to the motor, and an ingenious power driven transport truck is now available.

With the Duplex one man can cut eighteen greens in an average of six hours. Transporting from green to green is an easy matter.

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