NEWSLETTER

Play is pleasurable mental and physical competitive exercise where the issues involved are trivial and transient. It is a fit preparation for more important tasks. And it is the law of life that you only do those important tasks well at which you have played in childhood.

—Stanley Hall.

APRIL

1936

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.

GUY C. WEST ..... Editor
312 Mt. Pleasant St., Fall River, Mass.

JAMES McCORMACK .. Business Mgr.
450 William St., Stoneham, Mass.

April, 1936 Vol. 8, No. 4

SERVICE SECTION DINNER

The fourth annual joint dinner of the Service Section of the Mass. Golf Assoc. and the Greenkeepers Club of New England was held on April 16th at the Woodland Golf Club, Auburndale, Mass. Speakers included Pres. Charles E. Mason of the M. G. A., George C. Carens of the Boston Transcript, E. R. Sawtelle of the Worthington Mower Co., James H. Kimball of South Shore C. C., and Frank H. Wilson and Philip I. Cassidy of the Greenkeepers Club.

The feature of the evening's program was the presentation by President Howard Farrant of the Greenkeepers Club of the John Shanahan Memorial Award of Merit for 1935 to the Mass. Golf Assoc., for the outstanding contribution to greenkeeping, thru its Service Section activities. In making this award, Pres. Farrant spoke as follows:

The Greenkeepers Club of New England was formed in 1924 with the following purpose, as taken from our constitution:

"Whereas we find that in all lines of endeavor concentrated thought and action amongst men gathered together in the interest of any one vocation are of great benefit; therefore the object of this club shall be the advancement by co-operation of the interests and welfare of its members and the establishment of uplifting standards of dignity and skill among greenkeepers by co-operative education and training in the varied requirements of our profession and the education and training of employees under us in the various departments of our work."

A large amount of the success of the club has been due to the men who have been its leaders. For eleven years the club looked to John Shanahan for guidance. For the first five years as president and thereafter as Hononary president and Director of the club, and as member of the Advisory committee of the U. S. G. A. Green Section, he was an outstanding leader in greenkeeping in the United States. In October, 1934, the Greenkeepers Club of New England suffered a real loss in the death of John Shanahan.

In memory of a man who had given the best years of his life to Golf, the Greenkeepers Club and the New England Section of the P. G. A. have honored John Shanahan by designating their annual Greenkeeper-Pro Championship Tournament as John Shanahan Day. The names of the winners of this tournament are inscribed upon the John Shanahan Shield, which is hung in the Trophy Room at the Brae Burn Country Club.

Having in mind the fine qualities of John Shanahan as a man and as a greenkeeper, the Greenkeepers Club of New England has further honored his memory by awarding each year a medal to be known as the John Shanahan Memorial Award of Merit, to be presented to the person or persons who during the year have contributed the most outstanding service to the profession of Greenkeeping in New England.

For the past few years the Massachusetts Golf Association, by establishing a Service Section, has contributed a real service to greenkeeping. By appointing three greenkeepers on the service section, confidence has been instilled in the minds of greenkeepers throughout New England. Through the co-operative efforts of club official and greenkeeper members of the Section, much has been accomplished to benefit greenkeeping. By establishing experimental work close at hand, greenkeepers have been able to obtain first hand information on various golf course problems. Advisory work by various members of the Section has aided many greenkeepers in their work. The annual dinner of the Service Section, at which greenkeepers and club officials meet together, has created a closer relationship between the greenkeeper and his chairman.

In recognition of this outstanding service to greenkeeping in New England, for the year 1935 we are pleased to award the John Shanahan Memorial Award of Merit to the Massachusetts Golf Association.

REDUCING THE COST OF GOLF

By E. R. Sawtelle

Vice-Pres. Worthington Mower Co.
(From Service Section Dinner)

I feel that the subject of reducing the cost of golf is timely. It is also a subject that should be of interest to everyone connected with the game.

Golf is only a sport to the player—everything else connected with golf except the player himself is a business in some phase making this sport possible.

It is to the interest of everyone connected with this business of golf to preserve and improve upon the progressive steps that have taken place in the past few years.

Those steps have been to place the business of golf on a more businesslike basis.

The cost of golf has been reduced approximately $50,000,000 annually since 1929.

It is not necessary to point out what this reduction has meant to the player—the club member,—who support golf.

Of this amount approximately $12,000,000. annually has been saved in the cost of the golf course maintenance. The balance of this saving has been through reduced initiation fees, dues and cost of playing equipment. Also the fact that the Club House Management which has nearly always operated at a considerable loss in the past—is now through several influences being operated at a profit.

I know unquestionably that the $12,000,000. saved in the maintenance department has made possible the additional savings in these other directions.

Education in the field of maintenance I believe should receive credit for making this saving possible. I wonder how many golfers realize what effort and special initiative the greenkeepers—the men they know simply as Bill—Joe—or Tom on the course—are spending to educate themselves to enable them to further reduce the expense of their game—that out of their own salaries the greenkeepers over the country spend some $35,000 in education.

You probably expected me to say the development of machinery was responsible—in a large measure machinery was the means of this saving—but the machinery itself was available several years before 1929, but its general adoption was forced and brought about largely by the financial conditions of the clubs which lead to investigation of labor saving methods and claims.

Education has played its great part—the way to this saving has been opened by several influences on the people connected with this business of golf—by the Turf and Labor Management schools that are established all over the country—by the influence of writers and by the influence of advertisements on the subject—and of course by the old school of practical experience. Many clubs were forced to cut operating expenses or close.

I represented my Company here in New England for five years. This period extended several years before 1929 and covered several years of the depression. I had the opportunity, and of course it was to my advantage as a salesman, to study the maintenance costs of golf clubs. A **decided** change took place during this period.

I remember that many, many prominent clubs expressed the opinion that it was necessary to have 18 or more men—that it was necessary to spend upwards of $25,000 annually to keep up a satisfactory standard of maintenance. A fear prevailed at any suggestion of reduction.

I remember in one of the first "Open Forums" of a convention at Massachusetts State College, a long general discussion took place as to whether 16, 18 or 20 men were necessary on an 18 hole course. As I remember, the discussion closed with a compromise that one man a hole and that approximately $1,000 a hole for maintenance—was pretty well in line.

This has all changed—today many of these same clubs are using only 6, 8 or 10 men and are spending only one half the dollars and cents annually. It has also helped to simplify a greenkeepers problem. He has been able to pick the smaller crews from the most efficient men available.

When these thousands of dollars are saved at individual clubs—the saving over the country has amounted to these millions of dollars. It has reduced the cost of golf.

When this change first took place, well meant warnings were broadcast verbally and editorially to guard against budget and labor reductions—to guard against accepting labor saving machinery. The thought being that it would lead to the ultimate ruin of the capital investment of golf courses, and that temporary savings would only lead to higher expenditures in the future to

bring the Golf Course back to the same playing standards.

Now in my opinion the point that was overlooked in these warnings was to specify what part of the budget could be reduced without harmful effects.

The labor cost is the largest item of the maintenance budget—and of this, the labor cost of cutting grass takes the greatest percentage.

The effect of reductions by the use of labor saving machinery was based in those days in terms of available men and not broken down into the terms of available labor hours.

If you are paying for 1000 labor hours a week and are satisfied with the playing condition of your course and modern equipment enables you to save 400 hours a week, and you keep on 600 hours—where is the damage? It is simply a question of a redistribution of labor.

This change **has** taken place on a great many courses, and I haven't found that the playing conditions have suffered. During the year I visit many prominent courses in nearly every section of the country and in my opinion, the 1929 playing standard has been maintained or even improved.

The attitude of the men in charge of these courses has also changed—the same men that were alarmed at the thought of reductions in 1929, are now rightfully proud of their accomplishments and boast of the reductions they have made in their operating expenses. They are eager for ways and means to operate still more efficiently.

This places a greater responsibility than ever on the equipment manufacturers, for after all you need the same amount of seed, fertilizer, water and appurtenances that you always did, to keep up a satisfactory standard of maintenance. Since the grass cutting item takes by far the largest part of the budget—it is in this direction only that you can look for still further savings with safety, and without danger of impairing the playing condition of your course.

At this point I want to express my definite convictions—that equipment manufacturers and their representatives —contribute a real service to golf.

In most cases as yet, no one individual connected with a golf club is given the full responsibility of spending these millions of dollars on golf course maintenance. The responsibility is divided between the greenkeeper and the club officials, all of whom, have more to do, than to take the time to study the art of cutting grass. To us, grass cutting is not only a business, but a profession. Our entire time and thought is spent studying this subject.

Of course, we're licked if someone develops a dwarf fairway grass that will grow ⅞ of an inch and stop.

I feel that the golf clubs should call more freely for a real service which is available from the equipment manufacturers. Let us analyze your present methods and costs and give us the opportunity to make suggestions. It costs nothing to investigate and may lead to the savings of many thousands of dollars over a relatively short period of time.

The statement that "our course is different" has circulated very freely in many discussions of labor saving methods and machinery. To my mind this thought has retarded many investigations. Courses are different, yes—as to soil analysis, seed requirements and fertilizer requirements and the amount of money allotted to refinements. All clubs have individual problems. But when we are aiming at the big target of saving—the grass cutting item of your budget—all courses are very much alike. They have nearly the same yardage—the same area of fairways, rough and greens to cut. If we base our grass cutting costs on the averages taken from thousands of courses all over the country—we cannot be very far out of line for any **one** particular course.

The golf course equipment field is **so small,** that a manufacturer could not afford to make claims and statements that could not be supported to the golfing public, and expect them to remain undetected. Golf is like a small town —everybody knows everybody else's business.

My suggestions as to how the costs of golf can be reduced still further by the golf clubs and equipment manufacturers cooperating, are as follows:

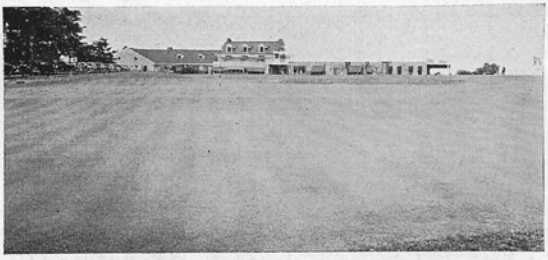
1. For the golf clubs to thoroughly investigate labor saving claims made by the established firms in the field who specialize on their problems. The investigations cost nothing, and will lead to substantial savings.

2. For the golf clubs both large and small—to keep accurate costs records, to break down the budget so that separate costs of all operations are kept. It is much easier for the specialists to render a service if the present costs are known. If the costs are **not** known, a certain amount of risk and uncertain-

USE Hyper-Humus For Firm, Elastic, Durable Turf

NATURE'S SOIL BUILDER

Many golf and country clubs throughout the East are proud of their fine, green turf. They give Hyper-Humus credit for the firm, long-lasting, deep-rooted, sturdy and uniformly green grass stand. They know that watering costs are cut . . . that freedom from summer heat and winter freeze is due to their regular use of this excellent soil builder.



This new green (18th) has been built with Hyper - Humus. More than 200 tons have been used in top-dressing mixtures on all the greens of this famous Club.

Army and Navy Golf Club, Arlington, Va.

"Ranks first among the greens of the country due to its remarkable turf. The excellence of the turf on both the bowling green and the golf course is due to the use of Hyper-Humus" . . . from a letter of Buck Hill Falls Inn.

Golf Course at Buck Hill Falls Inn

For new construction or for top-dressing of greens and fairways, use Hyper-Humus, fine, rich, black, cultivated humus. It is economical (long lasting in your soil), it is concentrated (a smaller quantity is required), it is ready for immediate use and is clean, sweet and free from weed seeds.

You can get Hyper-Humus in bags of 100 lbs., in truckload and carload lots. Order now from our Distributor in New England . . . **New England Toro Company,** West Newton, Mass., who carry a stock of Hyper-Humus on hand for prompt shipment of your needs.

Hyper-Humus Company

Newton, New Jersey

Distributed by

New England Toro Company

WEST NEWTON, MASS.

ty must be taken by both parties.

3. For the golf clubs both large and small and ever more particularly the smaller club, to adopt the business procedure, of writing off capital investments on equipment over a four or five year period, so that the burden of these investments will not fall on any one year's budget and that during this period to plan systematic replacement purchases by setting up each year a reserve fund for this purpose. Too many clubs, who have **not** provided for replacement purchases, are forced to continue for years—to use worn out and obsolete machinery. Although the machinery probably will run, there are many intangible expenses, in wasted time and quality of results, that do not amount to very much money in just **one** day's time—but over a period of a season amount to many hundreds of dollars wasted.

Because of the lack of such a reserve fund for new equipment purchases, the large majority of clubs, find that they are unable to afford new equipment when needed, and are forced to spend unwisely many hundreds of dollars in repairs to keep obsolete machinery running. The improvements of machinery are advancing so rapidly that today equipment becomes obsolete sooner than ever. Golf clubs **must** protect themselves by such a reserve to keep up their operating efficiently and further reduce the cost of golf for their members.

HOW EXPERIMENT WORK HELPS THE GREENKEEPERS

By Frank H. Wilson

(from Service Section Dinner)

The greenkeepers' problems are many and varied. He is chiefly concerned with the growing of a superior turf that will meet all the requirements of a first class golf course. To accomplish this he must understand the limitations of his particular soil type or types (there are often more than one on a course). Greens soil can be modified but fairway soils are more difficult to change. Surface drainage and sub-surface drainage are problems to be worked out. The depth of loam and the sub-soil are often limiting factors; I remember well on my own course when the fairway watering system was installed, a ditch was dug through the center of each fairway; what an open book of information that ditch was. The amount of organic matter in the soil, the available phosphorous present, and the soil acidity are valuable information to possess. The kind of fertilizer best suited to soil conditions, to the development of a vigorous root system, and the formation of a dense turf can not be passed lightly by. The greenkeeper works under artificial conditions; many more grass plants are grown on a given area of a golf course than in any farming operation; over-watering of greens so that they will hold any kind of a golf shot; the use of high analysis nitrogenous fertilizers to keep greens a spring color throughout the season are problems to be reckoned with. Because of this over-watering and fertilization the turf is susceptible to disease and insect attack; to combat these, high power and extremely dangerous chemicals are used. The greenkeeper is faced by a multitude of fungicides, insecticides, fertilizers and what not, offered by dealers in golf course supplies and he welcomes any experiment work that will help him solve his problems.

The greenkeepers problems can be divided into two groups; practical and technical. Experiment work to be of the greatest benefit should be conducted in a locality easily accessible in order that it may be visited at frequent intervals. The average club has not the money available nor has the greenkeeper the time to conduct extensive experiment work. It is not practical for the greenkeeper to attempt scientific experiments which require the services of a trained chemist, disease pathologist, or entomologist, where the use of various chemicals is involved. The Service Section of the Mass. Golf Assn. has for the past eight years conducted experiment work which has proved the worth of various grasses to golf club use. They have also proven the worthlessness of other grasses. The susceptibility of certain grasses to large and small brown patch, snow mold, leaf spots, the rapidity with which damaged turf of various grasses heals. Fertilizer experiments on greens and fairway turf; green and fairway turf treated with arsenate of lead for the control of grubs; watered and unwatered fairway turf; the effect of different heights of cut on the root systems of various turfs. At what rate various fertilizers increase the phosphorous content of the soil and its effect on turf. Studies of

the effect of acidity on the growth of fine turf were some of the problems worked upon; this work I think has benefited the greenkeeping.

There are plenty of problems yet to be solved. The Service Section of the Mass. Golf Assn. plans to start a new set of experiment work this year. Some of the problems to be worked upon are: The effects of spike rolling on putting greens. The benefits of sub-drainage. Effects of arsenate of lead on turf. To determine the value of different velvet bents. Control of chickweed. Clover and Poa Annua. Further information on organic and inorganic fertilizers. In conjunction with the above experiments several clubs have agreed to conduct similar work on their courses. Bear Hill will study the effects of spike rolling on putting green turf. Brae Burn the effects of the use of arsenate of lead. Charles River the effect of spike rolling on the control of Poa Annua. The Country Club night and morning watering. Fall River scald and air drainage. Salem night and morning watering. Unicorn elimination of clover and chickweed. The technical work recommended is as follows: Control of Poa Annua by chemicals. Crab grass control. Weed control. Disease control. Insect work on the white grub, cut worm, sod web worm and the chinch bug.

On April 10th, I received a letter from Dr. John Monteith, head of the experiment work of the United States Golf Assn. Green Section, as follows: "We are arranging a series of weed control treatments to check up on the effects of chemical weed killers under a big variety of soil and climatic conditions.

"I wonder if you would be interested in giving these treatments a trial on your course. I am enclosing directions for applying the chemical, together with charts showing the plan for the tests. If you have a suitable area and want to make the tests, please advise me and I will send you a carton containing 20 packets of the chemical all weighed out ready for use.

"If you know of any other courses where there is someone who would be interested in conducting such tests and where there are suitable weedy areas for the test, please let me know and I shall be glad to send you whatever number of cartons you wish to have.

"I want to emphasize that we don't know what this material will do to the grass under your particular conditions, so the places selected should be out of the way so that any possible severe injury to the turf grasses will not be considered serious. We feel reasonably sure that the material will be safe to use, but nevertheless we think it is important to emphasize the risk involved.

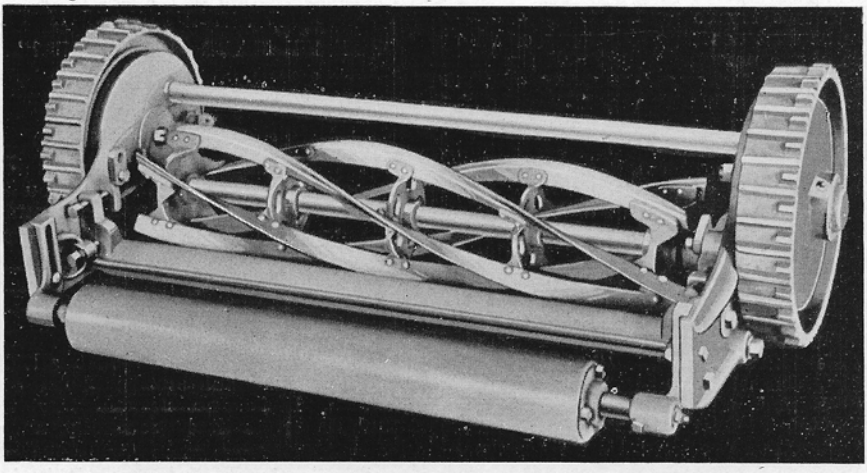
"We are sending similar lots of material to different parts of the country and it will be interesting to learn how the treatments work under different soil and climatic conditions."

This experiment should prove an interesting addition to those outlined by the service section.

Experiment work is conducted under artificial conditions. In nearly all instances the work is done on a plot of land not used for golf course play. Greens experiments are conducted on an absolutely flat surface whereas greens are contoured giving high and low areas on which the same grasses do not make the same growth. The greenkeeper often wonders if experiment work would give the same results on greens under the heavy traffic of play or on fairway turf mowed with a tractor and five or seven fairway units and walked over by an army of golfers in a growing season. However, experiment work anywhere is preferable to none at all.

The discontinuance of the bulletin published by the United States Golf Assn. was a loss keenly felt by greenkeepers. I was glad to receive from the green section a leaflet entitled "Comments On Turf Culture" which came early this month. As it is marked, Vol. 1, No. 1, I am hoping for other numbers. In the leaflet is a paragraph headed information, which reads as follows: "While referring to overhauling and repairing of course equipment, it is well not to forget the most important piece of equipment used in maintaining a modern golf course—the greenkeepers mind. Perhaps there are a few worn out or antiquated parts there in the form of theories or so-called practical ideas. Perhaps some of these ideas had better be scrapped or replaced, others may need only a few repairs and adjustments, others may need only a little polishing and sharpening by rubbing against similar ideas from other minds either through personal contact or through the printed page."

All worthwhile experiment work has for its ultimate purpose education. I would like to refer to an experiment started 12 years ago, the Greenkeepers Club of New England. Its primary pur-



For 1936 --

A New and Better Mower

-- The IDEAL BULLDOG

The new "Bulldog" mower marks the greatest advancement that has been made in the production of fairway mowing equipment in recent years.

It is just as sturdy as it looks—it is the very acme of simplicity—and its design embodies the finest possible mechanical features.

The "Bulldog" mower which will produce the finest possible job of cutting is furnished in four frame combinations—3 gang, 5 gang, 7 gang and 9 gang.

We invite your inspection of this superior mowing outfit. Also remember that we operate the best equipped service station in the New England states.

IDEAL MOWER SALES and SERVICE

111 Cypress Street, Brookline, Mass.—Telephone Beacon 2898

pose was to try to prevent such a condition as that described by Dr. Monteith in the above paragraph. To achieve this during the winter months many of the foremost authorities on golf maintainance have lectured on turf, soils, fertilizers, insects, diseases, irrigation, drainage, golf course architecture, machinery, gas engines, experiment work and other course problems. Question box meeting has been productive of much information. Talks by members of the club on various subjects of interest, talks by seedsmen, implement men, landscape gardners, winter sports experts, have been productive of much valuable information. The "News Letter", a monthly publication, has been found a worthwhile experiment. Many articles of interest and much information of value are found in its pages. Recently a library committee has been appointed with an initial appropriation of one hundred dollars to assemble a lending library of books, bulletins and pamphlets on greenkeeping and allied subjects for the use of club members.

The summer meetings held out of doors at various clubs all over New England have been a wonderful source of education; demonstrations of some new piece of machinery in the morning, golf in the afternoon, the opportunity to see what the other fellow was doing, has been productive of a few new ideas taken home each time, and has perhaps made golf more enjoyable. The answer to this twelve year experiment can only be found in the golf courses of New England.

At a recent meeting of the officers of the greenkeepers club a committee was appointed to look into the possibility of the acquisition of a piece of land, and the raising of sufficient funds to employ a trained greenkeeper. On this piece of land experiment work would be conducted. It would become the headquarters of the club with the possibility at some future date of erecting some sort of a small building for meetings. Perhaps the idea is visionary, nevertheless the greenkeepers would have a personal interest in the work, a place to go for information and it shows that they are keenly alive to the benefits of experiment work and the need of keeping abreast of the times.

"SHOULD PUTTING GREENS BE CUT BY HAND OR POWER?"

By Philip I. Cassidy

(from Service Section Dinner)

The title of this subject might lead you to believe that I will give you the only solution of this much disputed question. I doubt if you will think so, but I do hope in the incidents and comments I have seen and heard there will be some helpful solution to those contemplating purchasing power units to replace hand ones.

While it seems to me that all discussion on this subject has been conservative, I see no reason why this should be so, as it is generally understood that all just criticism is constructive and the dealers with a very few exceptions are promoting the sale of both types of units in question.

In these observations of both power and hand mowing, I will attempt to bring out in conclusion a close relationship of all greens mowers, whether hand or power ones.

Here are some interesting quotations from Greenkeepers who have given an opinion on the subject:

One says, "I think I would like to mow by power but I have heard that the weight of the machine packs the turf, and I have a soil that packs easily."

Another, "I have a power mower and find that it does a wonderful job and saves an unbelievable amount of time."

Still another says, "I have mowed by power but have given it up for my hand units in order to keep an extra man whom I otherwise might not have."

And still another says, "I think the power mowers are all right, but they like that ribbon effect at our Club."

Here are some quotations from a few dealers who are interested in the sale of both hand and power greensmowers:

One says, "A unit that was practically designed by Greenkeepers, and so it must be the correct thing for greens mowing."

Another says, " In the --- ---", and he names a district outside New England, "power units are being sold for a song by Golf Clubs who are turning again to hand mowing of their putting greens."

Still another says, "Ten sales in almost that number of days, that shows that power mowing is an accepted fact."

Read the ads as well as the news.

In all these statements there is no mention of the hand mower by the dealers. By that I mean they do not compare the hand mower and the power mower when selling except for example as the automobile dealer would who has a low and a high priced car to sell: the high priced one gets you there in a hurry and makes a nice appearance, while the lower priced one although not so fast makes a fine appearance and accomplishes the same purpose.

Let us compare the two types of cutting units in their outstanding points of discussion.

First the step of the operator, an important factor. When the operator pushes a hand mower he naturally leans forward and pushes the machine. As he pushes, he presses the ball of his foot firmly on the turf. The action that takes place under his foot might be easily explained by comparing it with the result of a step one takes when climbing up the side of a sand covered bunker. Of course the action is greatly exaggerated on account of the looseness of the sand but I think that this action does actually take place, however slight.

On a green of which the approximate diameter is 90 feet, 35 steps were taken to travel the length of it by the operator of this hand machine.

When the operator of the power unit starts to walk he steps with a free stride usually, with his weight evenly balanced and with no digging effect. On a green of the same diameter the operator took 6 less steps than the operator of the hand unit.

This conclusion seems to give the power mower a point over the hand mower but I feel that the added weight of a power mower, no matter how evenly distributed, counteracts this advantage.

It has been said that the power unit tends to pack the edges of the green when turning, but I have noticed that where this claim has supposedly taken place and a hard dry thinly turfed section appears, it has nearly always a high section of the green over which a majority of the players travel when leaving the green toward the next tee, or where the green is elevated near the outer edge and the soil so constructed that moisture usually retained in lower sections of the same green soon leaches away.

I recall that this condition also existed on one particular section of a green I have in mind during the use of a hand mower but for some reason the hand mower escaped all blame.

A spectator at a demonstration of golf equipment said to me, "I saw that power unit cross a certain point on that green four times when it was being mowed." There is no question but what this did happen. What he didn't notice was that the hand unit turned at least as many times in the same given area with a sharp twisting motion when turning, a motion which tends to pack decidedly more than a sweeping turn or a turn off the green surface.

New England soil being on an average of sandy loam content will stand a great amount of foot traffic. I believe that the operator of the putting green units, power or hand, does the most packing of the soil on the green, for example, on a certain piece of rough connecting two fairways a tractor and cart had travelled innumerable times and crushed the grass flat to the ground in two distinct swaths, parallel to this, caddies crossing from one fairway to the other walked constantly and finally wore a path free from grass. I do not believe that any more rolling effect was made by the foot traffic of the caddies than by the tractor and cart, and I was surprised to see that the marks where the tractor and cart had travelled were taking on the appearance of a fertilized area while the foot path had become barren of grass. To me this seemed to show that the feet of the operator and not the power driven or hand cutting unit is the major feature in packing the edges of greens by turning where it can be blamed on no other cause.

If it were possible to arrange the weight of the operator of a hand unit and the mower so that they equalled the weight of the operator and power unit, then there would be very little comparison in actual performance outside of the difference in time.

I take this point from the fact that units are being made for power mowers that may be detached to be used by hand.

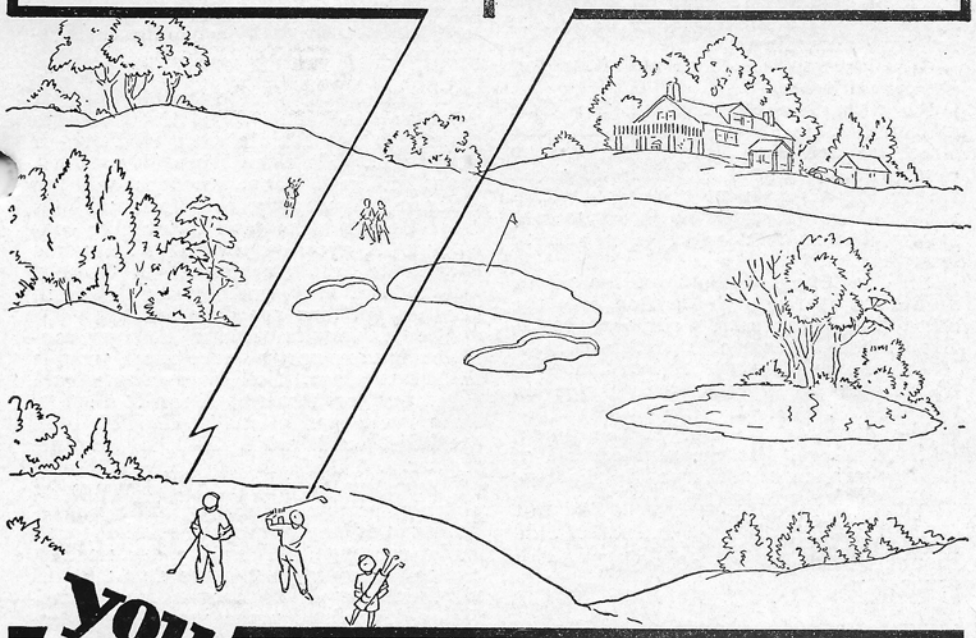
This also seems to disprove a statement that fast mowing is detrimental to the grass blade and stem in that it produces a pulling effect when travelling above the normal speed of a hand mower.

Let us take the hand and electric hair clipper used in the barber shop as an object where this condition might be easily visualized.

The hand clipper with a certain number of teeth and a slow speed forward

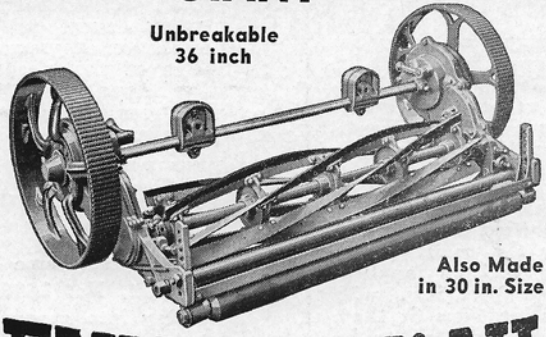
PERFECT CONDITION JIM! THE COURSE WAS NEVER IN AS GOOD SHAPE AS IT HAS BEEN SINCE THEY MADE YOU CHAIRMAN OF THE GREENS COMMITTEE

THANKS, BUT GIVE THE CREDIT TO THOSE NEW PENNSYLVANIA MOWERS, THEY HAVE NOT ONLY IMPROVED THE PLAYING CONDITIONS BUT ARE SAVING US MONEY.



you CAN SAVE 20%—WITH THE PENNSYLVANIA **GIANT** DE LUXE FAIRWAY

Unbreakable 36 inch



Also Made in 30 in. Size

Six heavy blades double riveted to five spiders.

Lower blade reversible.

Dust Proof casings.

Three gears on each side.

Timken Bearings.

Alemite Lubrication.

Protected single ball bearing on roller.

Adjustable ground roller.

Model "K" Low Priced

This 30 in. unit has the features of the "De Luxe" but is made of cast iron.

PENNSYLVANIA

LAWN MOWER WORKS

Primos, Penna.

Send for Catalogue

cuts without pulling if the gear ratio, or rather the speed with which the fingers move the handles and teeth, develops a frequency great enough to cut all hair the instant it comes between cutting edges.

The electric clipper you probably have noticed may be pushed through the hair more quickly without pulling because the electric motor moves the teeth with the same gear ratio at such a speed that the frequency of cut is built up accordingly.

This same principle of speed cutting applies to grass.

At a certain meeting of the Golf section at Amherst last month one Greenkeeper stated that he didn't save any time by power mowing as when trying out a power unit in competition with a hand mower the hand mower mowed the same number of greens in less time.

This cast no reflection on the power mower as it really did a fine job, the extra time being used up in transportation, which has since been remedied.

The choice of power or hand mowing of putting greens seems to hinge on these few facts:

The operator whether of the power or hand mower has the real control of the appearance of the green to the eyes of the Golfer who insists on that ribbon or striping effect.

A hand mower and power mower should be considered of equal value, except where time is the deciding factor and, if time is the deciding factor, everything being equal, by all means own both for you will most certainly use them.

When a country club seeks the services of a greenkeeper it is faced with the tedious task of investigating the records and references of numerous applicants, many of whom lack the proper qualifications.

Our Employment Committee offers a happy solution to this problem by placing the country club in contact thru written application or personal interview, with men whose qualifications fit them for the particular position to be filled.

Guy C. West, Chr.

RHODE ISLAND ASSOCIATION MEETING

The Rhode Island Greenkeepers Association met on March 24th at the Narragansett Hotel, Providence. The speaker was Dr. O. J. Noer of the Milwaukee Sewerage Commission. Dr. Noer gave an interesting resume of his visits around the country examining various golf clubs this past year. Some highlights of his address follow:

"The greenkeeper's problem is to maintain good grass irrespective of weather conditions. It is impossible to return to the maintenance methods of years ago. We must learn how to get grass in such shape that it will go through bad weather conditions without loss. Use grass adapted to weather conditions. A greenkeeper going from one section to another often has trouble, due to fact that weather conditions in the two sections are different.

"Soil is very important. A layer condition is very apt to cause much trouble in hot weather. Soil on greens should be of uniform texture, of medium sandy loam, with gradation in size of sand particles, and with 20-30% organic matter.

"Drainage is important. Beware of sharply contoured greens. Tile underdrainage is needed unless soil has good under-drainage. When tile are needed, the tendency is to use too few tile.

"Tendency is to over-water. Sometimes dry winds make watering necessary often to keep top from drying out.

"Excess topdressing on stolon greens may cause a mat which will cause much trouble. This is one reason why stolons are often condemned; do not allow thick mat to develop.

"Ventilation of greens is very important. Use of fan near one green has actually helped.

"The greenkeeper needs a knife with a big blade to use to see what causes the trouble before trying to cure it."

IT'S BEEN A HARD WINTER

The weather-man doesn't have to tell us—we all know it's been a mighty hard winter, the worst in a good many years. So it's all the more important this Spring to give your greens extra attention—and that means extra good fertilizer.

Don't take chances—use a fertilizer specially compounded to meet the exacting needs of putting-green grasses—use the famous Netco 8-6-2 Greens Formula.

Netco Special Putting Greens Fertilizer is the answer to requests made by the many users of Milorganite on Fairways, for a specially prepared Greens fertilizer of the excellent 8 per cent (Nitrogen), 6 per cent (Phosphoric Acid), 2 per cent (Potash) analysis, using as much Milorganite as possible for the organic base.

WHAT IS NETCO 8-6-2?

Netco 8-6-2 is compounded from Milorganite—Dried Blood—Superphosphate—Ammos Phos A—Muriate of Potash—Sulphate of Ammonia, with a correct amount of Dolomite Limestone as a conditioner. It is free of filler. Over 35 per cent of the Nitrogen is organic, coming from the Milorganite and the Dried Blood.

HOW DOES ACTION TAKE PLACE?

By properly balancing the organics with the in-organics we have immediate nitrogen action from the Sulphate of Ammonia, followed by the Ammo Phos, then the Dried Blood, and lastly the Milorganite, thereby assuring a steady and even feeding of nitrogen over a long period of time with no lapses.

SPRING IS ON TOP OF US

Why Use Milorganite—Which Is Already a Good Fertilizer?

The fact that Milorganite is used by a great many of the New England Clubs assures us that its excellent qualities are already known, that it is an excellent organic nitrogen fertilizer for grasses, and lastly that it contains those rarer elements so vitally necessary for the continued and improved growth of grasses, such as Calcium, Magnesium, Barium, Manganese, Copper, Boron, Iron, Aluminum, Sulphur, Iodine, etc.

How We Know It Is a Good Fertilizer

Through the co-operation of competent golf greenskeepers, who have been willing to work with us on the mixing, trials and use of this Netco 8-6-2, we have seen greens and tees which have been fed regularly with this mixture for several full seasons. The guess as to results has been removed. We know it will produce results and so recommend it to you.

Netco 8-6-2 is manufactured by The American Agricultural Chemical Company of North Weymouth, Mass., for

New England Toro Co.

WEST NEWTON, MASS.