MOWING MACHINES

WHERE tractors are already available, Toro pull type gang mowing outfits can be used with any make using a standard drawbar hitch. Furnished in three sizes ... as shown on opposite page. Built of steel, electrically welded, strong and durable. Substantially braced, they will not twist out of shape.

Either Toro Trojan high speed mowers or Toro Super mowers can be used with these Toro pull frames. The weight of the frame is carried on wide rimmed wheels so that no strain is placed on the mowers. The drawbar hitch is standard and will fit any make of tractor.

The individual mowers are attached to the frame by means of ball and socket drawbar. A free pivot is provided at all times and the mowers float over the ground independently and follow the undulations closely, assuring a clean job of cutting.

Toro pull type mowers are used on thousands of Golf Courses, Park Systems, Airports. They will deliver excellent service for you. Write for the new TORO catalog.

TORO MANUFACTURING CO.
3042-3168 Snelling Ave. Minneapolis, Minn.

TORO MASTER TRACTOR

Model A. Powerful, flexible, sturdy, Economical.
HERE is growing evidence that trap-shooting and especially skeet are worth while around a club from other angles than the principle one of offering something to keep up member interest through the non-golf season. Clubs are reporting growing interest and growing patronage and at the customary charge of $1.25 for a round of 25 shells and targets few layouts are losing money. In fact many of them are cutting the price to $1.15 or even $1.00 and still manage to get out with an even break on the season, although these lowered charges are not generally made for the first year or so, until enough shooting has been done at the traps to bring back to the club treasury whatever investment was needed to make the original installation.

The added benefits shooting brings to clubs, other than holding member interest, are lead in importance by the ability of trap-equipped clubs to remain open or partially open during the winter, keep a skeleton crew of employees on the job and heat the clubhouse on the profits arising from patronage of the various department of the clubhouse. This is particularly important at clubs located in states with high liquor license fees. If the club closes down for six months in the year, it buys a 12-month license in order to serve liquor but six of them.

Another department of the club to benefit from trapshooting is the golf shop, not because very much golf equipment is going to be sold while snow is on the ground, but because running the traps is a fine solution of the average pro's problem of where he is going to find a job in winter. With trapshooting details to be watched every week-end, a pro can be kept sufficiently busy to warrant his staying on the job. And if he is on his toes, he should not find it bad business to put up a practice net somewhere in the clubhouse and solicit lesson business both from the shooters and from member-spectators who will always be on hand to watch the sport.

From Matt Melville, greenkeeper at Fox Hill CC, W. Pittston, Penn., comes this recent word: "I was sorry to have to miss the Toronto greens show, but trapshooting and skeet have been going so well here this winter that I had to stick on the job. In fact it has been paying my salary all winter."

Frank Macdonald, manager of Beverly Shores (Ind.) GC, writes interestingly of his clubs experience with trapshooting. He reports:

"Inasmuch as you have been carrying a number of articles on skeet and trapshooting in GOLFDOM, thought you would be interested in hearing of our experience. It was your articles that interested me, as I had never shot at a clay pigeon before."

"Last fall we bought a cheap hand-operated trap, and built a traphouse out of old bridge plank and laid out a field between the front and back tees on the first hole. This was done to be close to the pro shop for shelter, as our clubhouse is not heated. We had our first shoot the Sunday after Thanksgiving with nine members turning out. This has steadily increased, until recently we had a fine day and fifty spectators turned out to watch thirty shooters.

"We have cleared enough money on these shoots to buy a new Western Automatic trap and build a new traphouse. This we are going to do this spring, in a new location close to the clubhouse. We intend to shoot all summer and install gas heat in the clubhouse next fall so that we can keep the bar and grill room open for the shooters next winter. This will undoubtedly give us an additional income and help us to pay a license fee based on a full year that we have been only able to use six months of the year.

"Unfortunately we don't seem to have the space for a skeet field but in view of our experience, I believe that any club can increase clubhouse business, maintain interest and keep the name of the club in the newspapers all winter and in addition show a nice profit from the installation of either skeet or trapshooting. We have signed four new members this winter on account of the traps."
Skeet Perfection!

The New Western MASTER Skeet Traps

Western Cartridge Co.,
East Alton, Ill.

West Englewood, N. J.
February 1, 1935.

Gentlemen:

I want to convey my enthusiasm for the new Western Master Skeet Traps. I recently installed a set with the electro-magnetic release and automatic timer at the Knickerbocker Country Club. The performance surpasses anything I have seen in skeet equipment. It is a perfect gem of mechanical perfection.

One day when there was very little wind I adjusted the traps and found I could throw White Flyers through a sugar barrel hoop fastened to a 15-foot pole at station 8. These targets all dropped within an area of 10 square feet and about 17 yards behind the trap houses. In my opinion that's as near to perfection as any skeet traps will ever perform. The automatic timer has worked flawlessly, even in temperatures close to zero.

The protection of trap operators against injury is always an important consideration. The new safety feature, which prevents accidental discharge of the Master Trap during loading, eliminates what was a constant hazard to the operator.

I would recommend the Master Trap particularly to large clubs sponsoring important shoots, although their low price would bring them within the budget of the most modest skeet club. The continuous malfunction of inferior equipment wastes time, annoys the shooters and makes a club unpopular.

Very truly yours,

ARTHUR STRAHLENDORFF

Skeet Now Within Reach of Everyone

Complete Field for Less Than $300

You can now install a complete Skeet field for less than a golf putting green or tennis court, including the most modern, newly developed electric traps. And an entire afternoon at Skeet now need not cost more than 18 or 27 holes of golf.

The above letter leaves little to be told except the price of the traps. There are 3 combinations:— Wire-Release, manually controlled, as low as $66; Electric Release at $137.50; Electric Release, using storage battery, for about $152.

We'll gladly send approximate costs of all items of a Skeet installation—instructions for laying out the field—and tell how to make it pay for itself! Mail the coupon.

WESTERN CARTRIDGE COMPANY
Dept. C-07, East Alton, Illinois
"Window-Shop" at Other Courses for Labor-Saving Ideas

By T. T. TAYLOR
Supt., Pomonok C.C.

REFERENCE to labor-saving in these times may seem contrary to the spirit of the re-employment enterprises but it is not in the golf field. With budget reductions, higher rates of pay and shortened hours combined with the urgent seasonal demands of golf work, the course superintendent who does away with waste and maintains steady, efficient men in jobs is doing his part toward recovery.

When we buy labor-saving equipment we are not only aiding the recovery of manufacturers whose hard-hit position has been unhappily reflected on their normal-time employees, but we are making it easier for our clubs to survive and flourish as employers of labor.

Consequently the greenkeeper who is working according to the responsibilities of an executive position cannot dismiss labor-saving in 1935 with the simple conclusion that he will discharge some men or neglect some work.

New equipment for reducing labor costs must necessarily pay for itself if the budget is not to be exceeded, unless, of course, provision has been made for such expenditure. This means that for the increase in expenditure above the budget allotment for replacements there must be a corresponding decrease in expenditures below the amount allocated to labor.

Where the budget is insufficient, equipment purchased must not only show a reduction in man-hours sufficient to offset its cost, but must show a further saving by being capable of doing that necessary work for which insufficient funds have been provided.

The use of maintenance machinery in reducing manual labor costs, so that operations may be kept within the budget, naturally has its limitations. Just what the limitations are depend upon the circumstances prevailing on each course. The handwork necessary on one course may far exceed that of another and this is too frequently overlooked or forgotten when comparisons of budgets and expenditures of various clubs are made. In some cases, perhaps, this handwork may be reduced by the use of various mechanical devices, but very often available machinery is impractical or too costly. The only alternative is manual labor, and we resort to the scythe, sickle, or shovel after thoroughly famili-
Figuring Handicaps This Way Saves a Lot of Time

A RECENT release from the USGA tells of a short-cut formula for figuring handicaps under the Calkins' system, the one recommended by the USGA and generally used by clubs. Handicap committees will find this method very efficient.

The usual way to figure a player's handicap is to (a) add together a player's five best scores, (b) average them by dividing by 5, (c) subtract the par of the course and then (d) figure 4/5ths of this difference.

Under the short-cut system, simply multiply by .16 the difference between the total of a player's 5 games and a figure equal to 5 times the par of the course.

For example, if a player's 5 best scores are 90, 89, 89, 88 and 87 his total is 443. Your course has a par of 72. Five times 72 is 360. The difference between 360 and 443 is 83, which multiplied by .16 equals 13.28. The player's handicap is 13. Fractions of one-half or over count as a stroke; fractions under one-half are dropped.

Still Time to Attend Wisconsin Greens Short Course

SHORT Course for Greenkeepers given annually by the University of Wisconsin will be held on March 7 and 8. The course is under the direction of Prof. J. G. Moore of the Horticulture dept. The following program has been arranged:


New developments in fairway weed control. Kenneth Welton, USGA, Green Section.

Using annuals and perennials on golf courses. James G. Moore, Dept. of Horticulture, U.W.

The fairway fertilization problem.—Welton.

Factors in fairway watering.—Noer.

Fairway watering systems.—P. A. Harper, Skinner Irrigation Co.

Golf Course Economics.—Welton.

Experiences and Lessons of 1934.—Noer.

When—What—and Why.—Moore.

The course is open to greenkeepers, golf club officials, park and estate superin-
tendents, and any others interested in turf culture. The fee for the course is $4.00, which includes a get-together dinner to be held at 6:00 p.m. on March 7.

Course Maintenance Men Meet at Kansas City

A dinner and meeting attended by 36 greenkeepers, chairmen and green-committee members in the Kansas City section was held at Hotel Ambassador, Feb. 18. Wm. Peters, head of the sectional greenkeepers' organization which called the meeting, outlined the problems and aims of the greenkeepers. M. R. Hall of Old Mansion presided over the rest of the session which heard Chester Mendenhall on the high spots of the NAGA convention, O. J. Noer on fairway management in the Kansas City district, and officials of prominent private clubs in the district who are encouraging and cooperating with the greenkeepers association.

Those at the meeting were asked to promote the proposed congressional appropriation of $50,000 for turf research problems which Kansas City men pray will be granted as further curtailment of Green Section activities due to lack of funds is considered to be dangerously in prospect.
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DETROIT MOTOR SCYTHE

- Here is the most economical and easily handled cutter on the market.
- It goes anywhere, cuts anything, and enables one man to do the work of four or more with hand scythes.
- It has a 36-inch sickle driven by a powerful one-cylinder gasoline motor and is mounted on a free running 30-inch wheel, allowing it to be backed up, pivoted sharply, or tilted up or down slopes similar to a wheelbarrow.
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outdoor swimming pool using a chlorine disinfectant through a recirculating system. He has yet to discover a paint that will hold up for over a period of years under the conditions mentioned. So far, the most satisfactory is a cement paint applied yearly. It is economical, produces a pleasing effect, but does not stand up for any length of time under the tremendous wear and tear given the floor of the pool by the thousands of people walking upon it.

In hiring a lifeguard require a senior Red Cross lifesaving certificate or a Red Cross examiner's certificate.

Avoiding Winter Damage to Greens

Leo Feser, greenkeeper at Woodhill GC, Wayzata, Minn., had as the subject of his talk "Preparing Putting Greens for Winter." At the start Leo made it clear that he was talking about winter green protection in the North where heavy snow is usual.

There are two causes of injury to turf in winter—organic injury, represented by snow mold, and mechanical injury, which can be divided into three distinct types: suffocation, dehydration and bruising.

On the subject of suffocation, he said, a plant in dormant condition is not in need of air, but once it starts to grow in the spring and then is covered with sufficient water to prevent air from contacting the plant for 2 or 3 days, it may be killed. Prevention is the elimination of faulty surface drainage. Sub-surface drainage does little good because the subsoil frost prevents the water from seeping away.

Dehydration is the drying out of the plant caused by inability to absorb water when water is essential. Greatest injury from this cause takes place when the subsoil is frozen and the surface soil is warm enough to encourage plant growth. The frozen subsoil prevents water rising by capillary attraction. On the surface, the plants grow rapidly, evaporate the available surface water, then dry up and die. Poa annua appears to be more susceptible to this form of injury than the bent grass.

The third form of injury to greens is bruising, caused by walking on the green when the surface is frosted, or when the surface is thawed and slippery and the underground is frozen. Walking over a frosted green bruises the leaves, but does not affect the roots and recovery of the turf is but a matter of a few growing days. More serious is the bruising when surface is thawed and the ground below frozen. If traffic is heavy, the slippery
surface soil becomes puddled and the roots cannot perform their function. Prevention of this damage is simple—keep players off the greens during the critical thawing days of spring.

To minimize snow mold injury Feser does not fertilize his greens in late fall so heavily that the turf becomes succulent, as this seems to make the plants more subject to the disease. He also keeps his greens close-clipped. Less grass on the green lessens the chance of injury. He likes 1/8 to 3/16 inch growth after the final cutting and before the final freeze.

During November, as soon as there is little chance of a thaw, Feser applies 1 cu. yd. of topdressing to 5000 sq. ft. of green surface. Material is compost, screened through a 1/4 in. screen, mixed with Milorganite and Calo-Clor. Care is taken to get this thoroughly mixed. After rubbing the topdressing in lightly, Feser covers the greens with brush to encourage a heavy blanket of snow. The snow prevents mechanical injuries and, if the snow comes before the ground has frozen more than 2 or 3 inches, the blanket of snow will not only prevent further freezing but will actually permit the warmer subsoil to thaw away the small layer of frost that does exist.

Another type of spring injury is described by Feser:

We have had one or two springs when the grass, growing well, had been cut once or twice. Then we had a freezing wind lasting for over 24 hours, accompanied by a light snow. After warm weather came again, the exposed slopes of the greens were in bad shape. Most of the grass on these slopes was dead. Upon reseeding, we had a good germination, but the plants died. The second seeding did likewise. I then spiked in a fairly heavy topdressing of good, active compost, and the third seeding was applied with good results.

This experience led me to believe that sudden lowering of soil temperature by freezing wind actually sterilizes soil much as milk is pasteurized. The soil organisms were killed, leaving a condition similar to a place where a hay stack or brush pile burns. Upon inoculating this area with active soil, the organisms were introduced and began to thrive immediately.

An address on fertilizing fairways and greens was given by R. L. Emslie of Canadian Industries, Ltd. He brought out many helpful points in Canadian and general practice and in talking about experiments made by his company said that successful results had been obtained with
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Compete with a complete line of beautiful new golf bags. Win the approval of your customers. Priced to give you a good profit and easy on golfer's purse strings. Start selling the close buying public.

Send for our new 1935 illustrated circular and price list.

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Know where you stand at the end of each day with this system of records designed by experts exclusively for Pro shops. A lifetime set of books—nothing to wear out or break—

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A REAL PROFIT MAKING PROPOSITION. WRITE AT ONCE FOR COMPLETE DETAILS.
(Over 3000 Clubs Now Profit with Fulname Marking)
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LeBlond Building

alternate applications of 5-12-2 and organic fertilizer.

Interesting and instructive addresses on Canadian practice also were made by Chauncey Kirby of Rivermead GC, Toronto on "Compost Preparation and Uses" and by H. Hawkins of the Lakeview GC on "Greenkeeping Yesterday and Today."

JACKMAN AFTER PRO TRADE ON NEW CONGO HAT

Chicago, Ill.—The 1935 model Congo hat promises to be more in demand this summer than ever before because of several new features. It is made of preshrunk white or tan duck, with a green transparent or a white opaque celluloid no-glare eyeshade in the front brim. Breathers in the crown assure free circulation of air around the head for maximum comfort. These hats, light in weight and flexible, may be rolled up and tucked away in a golf bag or pocket. They allow a wearer perfect freedom of movement, will not interfere with a golf swing or any other activity. Priced to sell at 50 cents, with a good pro margin, they are distributed by Jackman Sportswear Co., Inc., 218 S. Wabash ave., who merchandise a complete line of sportswear to pros throughout the country.

PENNSYLVANIA INTRODUCES MODEL K MOWER

Primos, Del. Co., Penna.—Pennsylvania Lawn Mower Works this year comes out with a new Model K fairway mower at a price lower than its Standard model. Model K is the same as the Standard unit except that it is made of gray iron instead of unbreakable malleable iron. The company figures that many of the smaller clubs and resort courses will find this mower right in service and price.

Pennsylvania looks forward to a continuation of the yearly increase in business its Giant 36 in. fairway unit has en-
joyed since its introduction. Wider cut at lower cost is the Pennsylvania story on this unit.

**SPALDING TIPS PROS TO PUSH DROMMIE SHOES**

New York City—Golf shoes are a “natural” for the pro to push and sell, according to Spalding’s. Recognizing how the professional fits into the shoe picture, the Spalding company for 1935 advocates that every effort be made to secure this business. Certainly foot comfort is a vital essential to good golf and maximum enjoyment. No one should have more to say on this point than the pro.

To aid the pro, Spalding’s are offering their famous Drommie shoe with detachable spikes. When the spikes wear down they can easily be replaced as refills can be purchased separately. This feature plus the Drommie’s waterproofing and other qualities, gives the pro powerful sales arguments.

**GOULARD & OLENA HAVE PRACTICAL CATALOG**

New York City—Goulard & Olena, Inc. 140 Liberty st., have issued their 1935 catalog of course, lawn and clubhouse maintenance supplies in handbook form which gives in addition to details of the supplies some excellent reference information on course maintenance, horticulture and tree care. A copy will be sent free to greenkeepers and chairmen on request.

**DETROIT MOTOR SCYTHE NOW USING MORE POWERFUL MOTOR**

Detroit, Mich.—Twenty per cent more power has been given the Detroit motor scythe, according to its makers, the Detroit Harvester Co., through substitution of a Jacobsen Utilimotor for the power unit formerly used in this mower, when it was known as the Rawls motor scythe. This added power permits the sickle to saw through growths of weeds and brush that would stall a horse-drawn mower.

The 30-inch wheel is independent of the motor, so that the operator can guide the machine wheelbarrow fashion up and down slopes, over obstructions and around sharp corners. It can be backed up or

---

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True to a policy of understating our claims, we recommended dosages of CUREX last season which, apparently, were heavier than necessary to control Brown Patch under ordinary conditions.

Greenkeepers using CUREX in 1934 have reported satisfactory and economical control of large and small Brown Patch with ONE POUND PER AVERAGE GREEN. In one case Curex was used in even as low a dosage as 1/2 a pound per green throughout the season, giving satisfactory results.

You can therefore use Curex, the safe and quick fungicide, in the same dosages recommended for the inorganic fungicides.

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On direct sales, the National Mower Co. will give you the best VALUE, the finest mower for the least money.

Using the most powerful frame, double sets of tempered steel cut gears in oil tight cases, Timken Bearings—it lasts longer.

GREATER VALUES PER DOLLAR

Write for catalog and prices on Fairway mower equipment, gangs and tractors. Thousands of NATIONAL mowers have satisfied owners covering every state.

titled as necessary. Except by means of hand labor, many common mowing jobs around the golf course can only be accomplished with the aid of this machine. From the economy angle, it will do the work of four men with hand sickles, the makers claim.

Detroit Harvester has just issued an interesting folder describing the Motor Scythe, which can be had on request.

BRUNSWICK INTRODUCING NEW PORTABLE COCKTAIL BARS

Chicago, Ill.—Brunswick-Balke-Collender Co., 623 S. Wabash ave., has added a new latest design portable cocktail bar, the "New Yorker," to its line. The 6-foot long bar is mounted on rubber-tired casters and can be easily moved from location to location as business demands. This portability makes the unit particularly useful to clubs, permitting quick and cor-