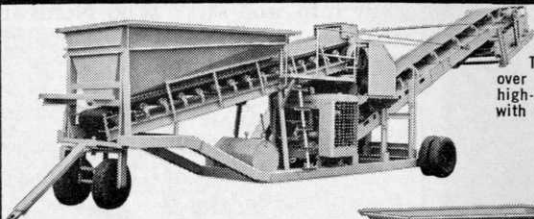


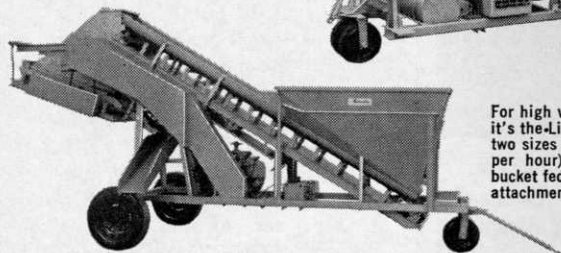
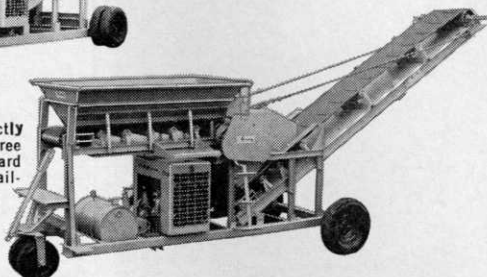
LINDIG

Makes the Good Earth Better!



CL Models load directly into truck. The three capacity sizes: 75, 125 and over 200 cubic yards per hour, provide high-volume processing plants. Available with optional screener attachment.

L Models load shredded materials directly into trucks or direct to storage areas. Three sizes available (25, 40 or 60 cubic yard capacity). Rotary screener attachment available.



For high volume and high discharge level it's the Lindig "D". Use inside or out — two sizes available (20 or 15 cubic yards per hour). The Lindig "D" is tractor bucket fed. Shown with vibrating screener attachment.



For soil preparation it's LINDIG, the complete line with versatility for all types of jobs . . . big, little and in-between.

LINDIG equipment processes soil materials wet or dry: manure, peat moss, sludge cake, compost — cinders and rock salt, too.

All LINDIG Shredders have exclusive hammermill action — shred, aerate, mix and screen soil materials for healthier plant growth.

All around the world Lindig equipment is preferred for superior, economical processing. There is a LINDIG Model for you . . . Select One Today!



K-10 Shredder-Elevator and Screener. Hand Shovel Feed. Elevates soil materials (up to 6 ft.) for discharge to transport or stockpile.



"B" Models — hand feed — available in several sizes with capacity range of 3 to 25 cubic yards per hour. Screener attachment available. Removes debris from shredded materials.

For additional information and free literature write:



1875 West County Road C, St. Paul, Minnesota 55113

Phone 612/633-3072

For more information circle number 111 on card

**Which type of
irrigation system?**

When to install?

**How much
will it cost?**

Fleming Irrigation takes the confusion out of golf course irrigation. Starting from your course, they plan and design the system to fit your exact needs.

With their knowledge of sods, turfs and grasses, as well as irrigation, Fleming keeps the green in your greens and fairways.

You are assured of a fail-safe installation from the beginning because Fleming has the experience that comes only from installing systems on a variety of courses.

Doesn't it make good sense to have an irrigation specialist and water engineer plan, design and install your irrigation system?

Take time out to talk to Fleming . . .



**FLEMING
IRRIGATION INC.**

6511 Line Avenue Shreveport, La. 71106
Telephone (318) 865-7253

For more information circle number 212 on card

Weight It Out

This is a table published by the Wisconsin Golf Course Superintendents Association in its newsletter which every superintendent should keep within easy reach. Any man who says "Who Needs it?"—that he has all this stuff committed to memory—has got to be kidding.

VOLUME

- 1 liter = 1.056 qts.
- 1 gallon = 281 cu. in. or .1337 cu. ft.
- 1 gallon weighs 8.33 pounds
- 1 million gallons = 3.0689 Acre feet
- 1 cu. ft. = 1728 cu. in. or 7.48 gal.
- 1 cu. ft. weighs 62.4 pounds
- 1 g.p.m. = .00223 cu. ft./sec. or 1440 gal./day
- 1 m.g.d. = 1.547 cu. ft./sec. or 695 gal./min.
- 1 cu. ft./sec. = 7.48 gal./sec. or 448.8 g.p.m. or 646,272 g.p.d. or .992 Acre inch/hr.
- 1 acre inch/day requires 18.7 g.p.m. cont. flow
- 1 cu. ft. = 1,728 cu. in.
- 1 cu. yd. = 27 cu. ft.
- 1 Acre ft. = 1,613 cu. yds.
- 1 sq. yd. = 9 sq. ft.
- 1 Acre = 4,840 sq. yds.
- 1 Acre = 43,560 sq. ft.
- 1 pt. = 16 oz.
- 1 qt. = 32 oz.
- 1 gal. = 128 oz.
- 1 oz./1,000 = 2.72 pts./Acre
- 1 gal./1,000 sq. ft. = 43.6 gal./Acre

AREA:

Circumference of a circle

$$C = d \times 3.1416$$

Dia. of a circle $D = c \times .3183$

Area of a circle $A = d^2 \times .7854$ or $A = r^2 \times 3.1416$

Area of a rectangle

continued on page 84

Cooper Champion

GREENS MOWER

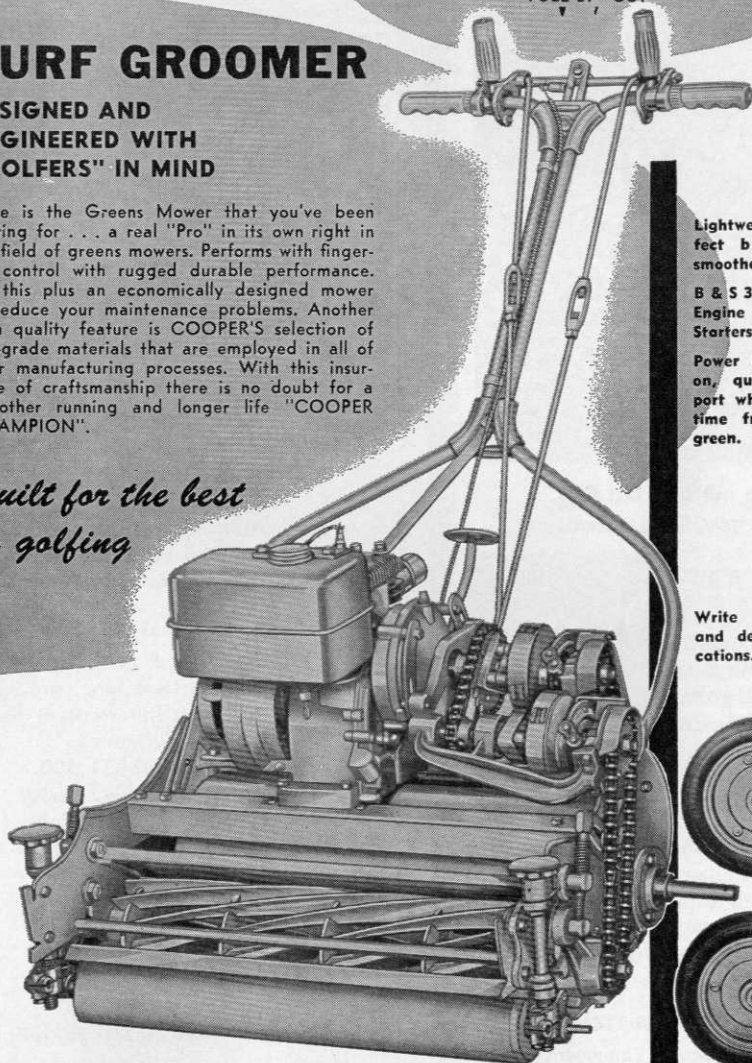
FULL 21" CUT

TURF GROOMER

DESIGNED AND
ENGINEERED WITH
"GOLFERS" IN MIND

Here is the Greens Mower that you've been waiting for . . . a real "Pro" in its own right in the field of greens mowers. Performs with fingertip control with rugged durable performance. All this plus an economically designed mower to reduce your maintenance problems. Another high quality feature is COOPER'S selection of top-grade materials that are employed in all of their manufacturing processes. With this insurance of craftsmanship there is no doubt for a smoother running and longer life "COOPER CHAMPION".

*Built for the best
in golfing*



Lightweight with perfect balance for smoother cutting.

B & S 3.00 HP 4-cycle Engine with Recoil Starters.

Power driven, quick-on, quick-off transport wheels — saves time from green to green.

Write for literature and detailed specifications.

COOPER MANUFACTURING CO.

422 South First Ave.

MARSHALLTOWN, IOWA, U.S.A.

For more information circle number 107 on card

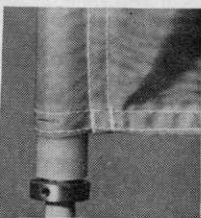
NEW FORE-PAR FLAG CAN BE CHANGED IN 5 SECONDS! Looks Better, Lasts Longer



1. Remove nut and old flag.
2. Slip on new flag, replace nut.

THE SECRET?

A "built-in" tubular swivel, permanently constructed in each flag instead of grommets. Aluminum collar supplied by us easily converts *ANY* flagpole for this new "QUICK CHANGE" flag.



FORE-PAR'S new, smoothly rotating Flag makes all others obsolete. Usual FORE-PAR high quality 2-ply nylon with double row of **LOCK** stitches, reinforced corners and . . . **PERSONALIZED** with your Club Emblem at No Extra Cost.

FORE-PAR MANUFACTURING CO.

Foremost in Golf Course Equipment
P.O. Box 126, Laguna Beach, Calif. 92652
Area Code 714 494-5282
Write for brochure and supplier's name

Pat & Reg. Applied for

Weight it Out

continued from page 82

$$A = L \times W$$

Area of Triangle $A = \text{Base} \times \frac{1}{2} \text{ Perpendicular height}$

Area of Parallelogram

$$A = \text{Base} \times \text{Height}$$

$$\text{Volume of tanks } V = d^2 \times L$$

Vol. of cylinder in gals.

$$V = d^2 \times L \times .0034$$

$$1 \text{ mile} = 1,760 \text{ yds.}$$

$$1 \text{ mile} = 5,280 \text{ ft.}$$

$$1 \text{ rod} = 16\frac{1}{2} \text{ ft.}$$

$$1 \text{ Acre} = 43,560 \text{ sq. ft.}$$

$$1 \text{ sq ft.} = 144 \text{ sq. in.}$$

WEIGHT:

$$1 \text{ pound} = 453.6 \text{ grams}$$

$$1 \text{ long ton} = 2240 \text{ pounds}$$

$$1 \text{ oz./1,000 sq. ft.} =$$

$$2.72 \text{ pounds/Acre}$$

$$1 \text{ pound/1,000 sq ft.} =$$

$$43.6 \text{ pounds/Acre}$$

$$100 \text{ pounds/Acre} =$$

$$2.3 \text{ pounds/1,000 sq. ft.}$$

TEMPERATURE:

$$\text{Cent. Temperature } \frac{5}{9}(F-32)$$

$$\text{Fahrenheit Temp. } \frac{9}{5}(C+32)$$

FERTILIZERS:

Ammonium nitrate, ammonium sulphate, potassium chloride, sodium nitrate.

$$435\#/A \text{ or } 10\#/1,000$$

$$110\#/A \text{ or } 2\frac{1}{2}\#/1,000$$

Ground limestone, ground dolomitic limestone or potassium sulphate.

$$870\#/A \text{ or } 20\#/1,000$$

$$280\#/A \text{ or } 6\frac{1}{2}\#/1,000$$

Ammonium phosphate, mixed fertilizers (10-10-10), etc.

$$300\#/A \text{ or } 7\#/1,000$$

$$50\#/A \text{ or } 18 \text{ oz./1,000}$$

$$11\#/A \text{ or } 5 \text{ oz./1,000}$$

Urea.

$$44\#/A \text{ or } 1\#/1,000$$

Activated sewerage sludge or ureaform.

$$(50\#/A \text{ or } 15\#/1,000$$

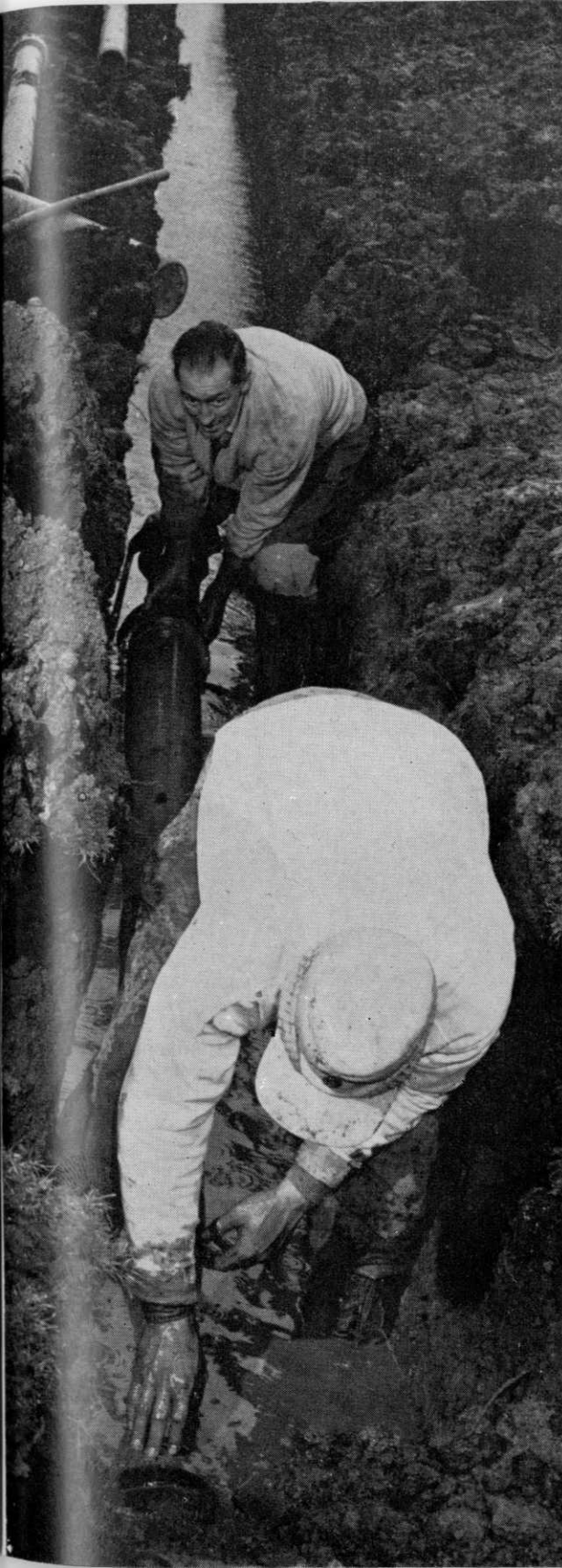
$$150\#/A \text{ or } 3\frac{1}{2}\#/1,000$$

Hydrated lime

$$1,100\#/A \text{ or } 25\#/1,000$$

$$220\#/A \text{ or } 5\#/1,000$$

For more information circle number 208 on card



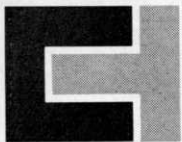
Robert Porter (l.), club president, discusses installation with Hal Dance, past president. Note copper mill in background.

What's par for this course?

Sometimes there's so much moisture at the Copper Golf Course in Magna, Utah, that the water table is within 2 inches of the surface. Sometimes there's so little moisture that the clay-gumbo ground bakes hard as rock. Another difficulty at this unique course, located near the Great Salt Lake, comes from corrosive fluids seeping out of the "tailing pond" of a nearby copper mill. To keep the course up to par all season long, the management and superintendent chose Certain-teed FLUID-TITE® Asbestos-Cement Pipe for their new irrigation system. They needed (and got):

Quick, secure installation even below water level (see photo). Pipelines unaffected by salty, alkaline ground water. Resistance against "hot" soil. Send for new brochure and full details on this durable, economical pipe!

Write to Certain-teed Products Corporation, Pipe Division, 25 Skippack Pike, Ambler, Pennsylvania 19002.



CERTAINTEED

For more information circle number 124 on card

Fire Insurance: Part II

continued from page 63

the lonely country clubs are overlooked and, therefore, fail to receive the fair consideration which these systems deserve.

Auxiliary or remote station systems are within the reach of every country club, regardless of size or budget.

Approved watchman service is another method to assure fire protection and accomplish insurance premium reductions, provided the possibility of human error and human frailty is overcome by approved time recording apparatus. To gain credit, watchman service must extend to all parts of the clubhouse or other buildings with recording stations properly installed and approved by the rating bureau.

Finally, insurance premium credit is afforded for adequate and properly located first-aid fire extinguishers. In order to maintain the credit on manual extinguishers, it is necessary to have the unit recharged annually and hydrostatically test-

ed every three to five years.

There are many ways for a country club to reduce its fire insurance premium burden. Local fire prevention officers, insurance company fire protection representatives, and local rating bureaus will gladly make the necessary recommendations. Unfortunately, too many country clubs are content to take their chances with hostile fire. With the annual fire record what it is, the gamble is foolhearty.

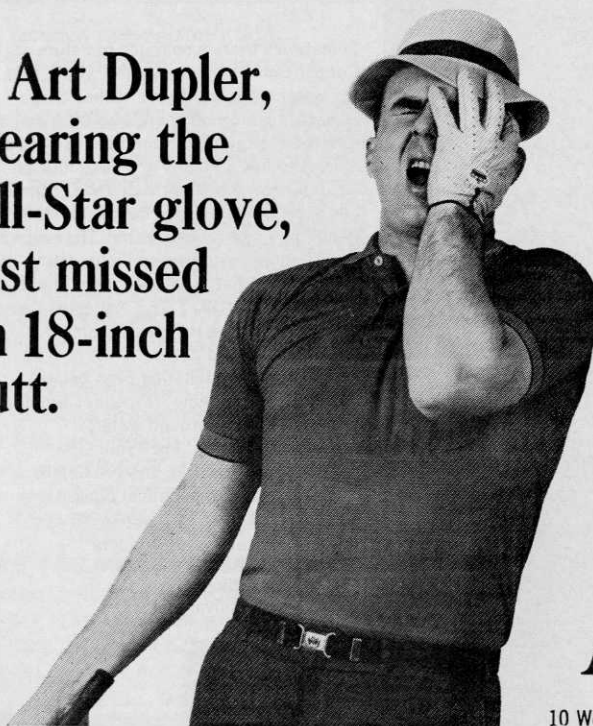
Has your country club had a fire protection review recently? •

Golf Ball Trivia

Worthington Ball Company manufactures 1,350,000 dozen golf balls each year and each ball takes 21 working days to completely finish.

They market 13 different grades of golf balls with four different centers. They also produce balls in pastel shades of pink, yellow and lavender for the women golf players.

**Art Dupler,
wearing the
All-Star glove,
just missed
an 18-inch
putt.**



It happens. And it hurts. But maybe it happens less often with an All-Star glove. This is the glove that feels a putter so sensitively. The same glove that grips a driver so ferociously.

It doesn't matter much that so many golfing greats wear All-Star gloves. Only your own hand can properly judge the fit and the comfort of the glove with the crown. About \$5

Ask your pro.

ALL★STAR

All-Star Industries

10 West 33rd Street, New York, N.Y. 10001

For more information circle number 235 on card



Municipal Golf Course, Lafayette, Louisiana

Lighting makes night golf possible. Wide-Lite® lighting makes it practical!

Want to see your profit picture in a new light? Then look to night golf. It will increase your revenues without materially increasing your maintenance... will give more golfers more time to play... and does the same as extend your golfing season. Night golf gets higher fees and brings new revenues to your club house, snack bar and concessions!

And "Wide-Lite" lighting will help you enjoy these benefits with true, long-lasting economy. Because "Wide-Lite" floodlights are completely sealed, they deliver more usable



light—without the need for frequent and costly cleaning!

"Wide-Lite" fixtures are built to last. Heavy cast aluminum construction and tempered glass lens shrug off flying golf balls, rocks and BB-shots and protect the sealed lamp and reflector compartment. Even bugs and moisture can't get inside.

Want more information about "Wide-Lite" lighting for your course? Contact your "Wide-Lite" distributor (see the Yellow Pages), or write Wide-Lite Corporation, Dept. 24A-457.

WIDE-LITE.

FLOODLIGHTS • POLES • INDOOR LUMINAIRES • BALLASTS • TRANSFORMERS
Wide-Lite Corporation, A Division of Esquire, Inc., 4114 Gulf Freeway
Houston, Texas 77001. Also manufactured in Australia, Belgium, Canada,
Mexico and Spain. *Trademark of Wide-Lite Corporation

Grounds too Green

continued from page 50

flowers themselves. Gerber keeps one of his veteran employees, Mike Arone, on the flower detail from the latter part of May until October. Another man is occasionally taken off turf maintenance to trim the yews and pfitzers.

Flowers are expensive. Cannas, salvia, petunias, marigolds, dwarf dahlias, snapdragons, Dusty Miller, etc. are bought in flats. Dahlias and marigolds can be obtained in dwarf, medium and tall varieties. Zinnias are the only flowers that are planted from seed at Glen Oak because they germinate much faster than others.

Gerber doesn't plant spring flowers such as tulips because there aren't enough members around to enjoy them. Pretty much the same is true of fall flowers although salvia, dahlias and marigolds linger until well into October.

Maintaining flower beds doesn't take as much work as most people suppose. The important thing is finding an employee who has a feeling for flowers.

The soil at most clubs probably doesn't require much preparation for flower growing. When the plants are put in they should be fertilized with a handful of 12-6-4 or 10-6-4. Later, a sprinkling of 10-7-3 is enough to keep them in bloom. The only exception are zinnias which require a rather constant light fertilizing.

The rule of thumb for watering is to turn on the sprinklers when the ground is dry, meaning that watering should be fairly constant in July and August.

After flower beds are established for two years, weeding isn't much of a problem. It can be done by hand, especially if the weeds are kept out the first two years. At the end of the season the dead plants should be removed from their beds.

October or November isn't too soon to

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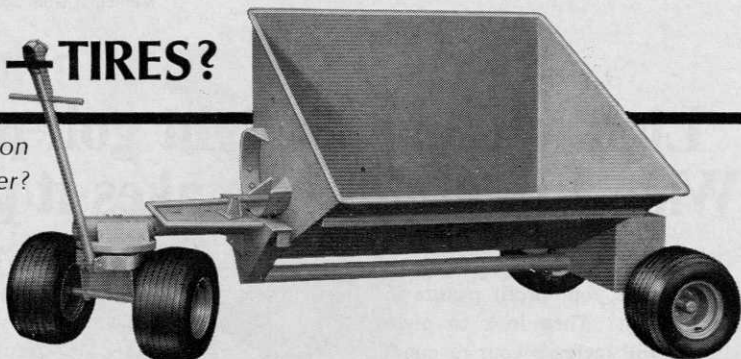
TERRA-TIRES?

*On a Champion
Doo-All Trailer?*

YES

**ALL CHAMPION
DOO-ALL TRAILERS NOW
AVAILABLE WITH TERRA-TIRES**

We have sold a lot of dual-wheel trailers but, like you, have always felt a big, soft tire could do a better job of protecting fine turf from wheel ruts. Now, we have finally found a perfect flotation tire—a soft, wide-tread tire whose 6-ply strength is sufficient to carry the heavy load you can put into any of our Doo-All Trailers.



For full details and prices, write us or ask your turf equipment jobber about the Model 05130 units. We'll be pleased to send you specifications and prices.

We also have a conversion kit if you want to put these tires on older Champion Trailers. Give us the serial number of your trailer when you write, and tell us whether you now have 7" or 8" wheels.

THE CHAMPION COMPANY

Established 1878
Springfield, Ohio 45501
610 16th Street, Oakland, Calif. 94612
856 Millwood Road, Toronto 17, Ontario

For more information circle number 167 on card



Ready to go when you are

Hudson Peerless* power sprayers are "at ready" all the time—on the course, or in storage.

Two features almost eliminate downtime caused by stoppages from clogged nozzles, inoperative or sluggish pump:

1. Nickel stainless steel-clad tank—won't rust, corrode or scale. Flushes out clean, too.
2. Our Ten-O-Matic* pump. Has no gears, sliding pistons, packing cups, exposed working parts. Three moving parts run in oil. Output up to 10 gpm. Pressures up to 400 psi.

It's a *husky worker*. Sprays up to 30 feet of fairway at a pass. Reaches high into dense trees. Just right for feeding or "blowing" greens for grubs.

You can get a *complete line* of accessories—booms up to 30 feet, any length hoses for gun attachments, tandem wheels with soft tires so easy on turf. Models up to 300 gallons capacity.

Write us for full details.



SIGN OF THE BEST BUY



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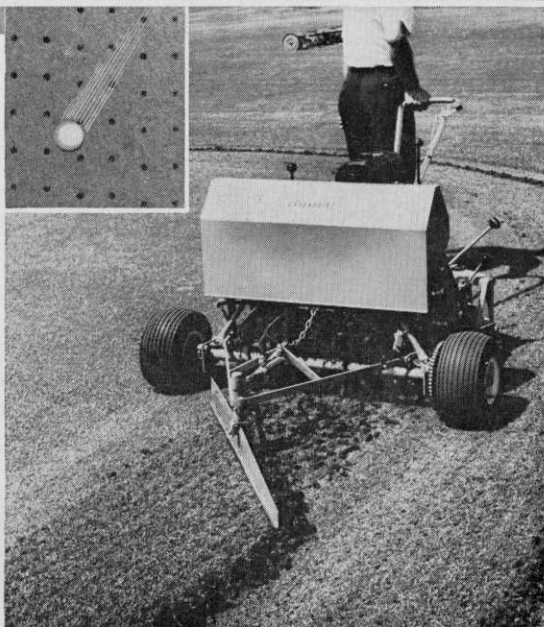
*Trademark

H. D. Hudson Manufacturing Company
589 E. Illinois Street, Chicago, Illinois, 60611.

For more information circle number 168 on card

**Big new
RYAN
GREENSAIRE
aerates 150 sq. ft.
of green
per minute!**

- **Most cores (36) per sq. ft.**
- **Evenly spaced aerating holes on 2" centers**
- **Every hole over 3" deep**



Aerating immediately relieves compaction so ball "bites" on green, rolls true.

The self-propelled Ryan Greensaire will help you build your greens to tournament quality—and keep them that way—the first year you use it. Greensaire aerating is thorough: 36,000 evenly spaced cores per 1,000 sq. ft.—all over 3" deep! Play can resume as soon as wind-



rowed cores (optional attachment) are raked away or cores are crumbled into top dressing (see photo at left). The Greensaire covers up to 150 sq. ft. per minute so the average green is ready for tournament play again in less than 2 hours. Transport speed is over 3½ mph from green to green. And the Greensaire has earned a world-wide reputation for superfine aerating—plus trouble-free maintenance!

See how Ryan units team up to do more jobs: Pulverize windrowed cores, remove thatch and control grain with a fast-working Ryan Ren-O-Thin or Mataway. Snap-out reel allows fast change from thin blades and narrow spacing for fine turf grasses to heavier blades and wider spacing for coarser grasses. See your Ryan Distributor or write:



Manufacturers of **WORLD FAMOUS** turf equipment

EQUIPMENT COMPANY

2055 WHITE BEAR AVE., ST. PAUL, MINN., 55109

AERATORS, RENOVATORS, VERTICAL MOWERS, SPREADERS, ROLLERS, AND SOD CUTTERS

For more information circle number 181 on card