

For **FAST, CLEAN-PLUG AERIFYING**
 you need the **POWER DRIVEN, VERTICAL TINE ACTION**
 OF The **NEW Model 54 FERGUSON**

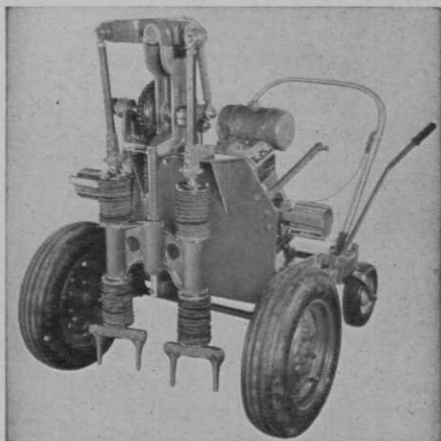
**GREEN
 AERIFYING
 MACHINE**

NIGHT CRAWLER

**12 important improvements
 with these 10 advantages:**

1. No damage to putting surface. The Night Crawler can be used any time.
2. More holes per square foot.
3. Deeper penetration under all conditions.
4. Fast (18 greens in two days).
5. Clean cutting tines will not transplant crab-grass and Poa Annua.
6. Turns around on green while in operation.
7. No mechanical clutches — cam operated from one lever.
8. Climbs steep banks and approaches.
9. Operates easily — not a man-killer.
10. Straight-in straight-out aerification.

Works turf improvement wonders wherever it is used. Write for the name of the Night Crawler dealer nearest you.

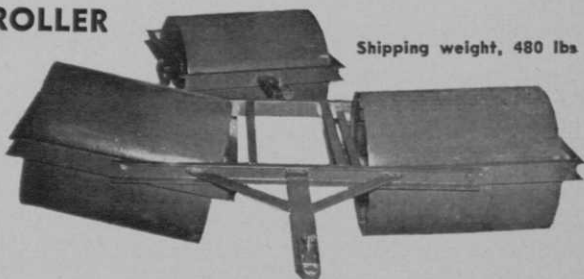


TWO OUTSTANDING ROLLERS FOR TURF MAINTENANCE

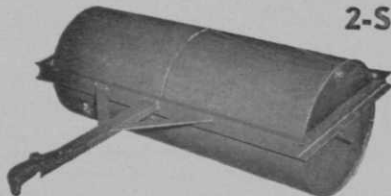
3-SECTION ROLLER

An 80 inch roller with full oscillation for all sections. Water ballast 12 gauge welded steel rollers with rounded edges. Sand and dirt resistant alemite equipped hardwood bearings. Filled weight 600 lbs. per section. Frame of heavy welded steel construction complete with ball type hitch and mud scrapers. Painted rust resistant dark green.

Shipping weight, 480 lbs



2-SECTION ROLLER



A compact easily stored five foot water ballast roller of simple rugged construction. Welded and tested 12 gauge steel rolls with rounded edges.

Grease fitting equipped, replaceable hardwood bearings. Welded steel frame complete with ball type hitch and mud scrapers. Filled weight 1200 lbs. Painted rust resistant green. Shipping weight 325 lbs.

WRITE FOR NEAREST DEALER'S NAME OR WRITE US DIRECT IMMEDIATE SHIPMENT

BERRIEN TOOL & DIE Inc. Eau Claire, Michigan
 DIVISION OF SOUTH BEND SCREW PRODUCTS, INC., SOUTH BEND, IND.

the large audience and the short time, gave the supts. who were taking roles valid excuses for not giving or getting instructions completely or clearly, all the participants frankly admitted that the demonstration was one that emphasized the necessity of giving orders that were certain to be completely understood, remembered and followed.

Discussion brought out the wisdom of giving written orders in some cases, explaining the job on a blackboard or by pencil sketches in the maintenance shop in other instances, or having — as Norm Johnson has at San Jose CC, Jacksonville — large diagrams of greens areas in the shop to show the help exactly what the superintendent wants done.

In view of the many labor management problems confronting supts. it was the consensus at the Midwest conference that a session similar to that at Purdue be put on as a valuable feature of the Golf Course Supts.' national conference in St. Louis next January.

Williams Memorial Trophy for Air Force Championship

A permanent golf trophy honoring Lt. Morris Williams, young Texan who died last fall in an aircraft accident, has been established by the United States Air Force.

The huge loving cup, to be known as the Morris W. Williams, Jr., Memorial Trophy, will be placed in the custody of the winner of the U. S. Air Force World-Wide Golf championship yearly according to provisions of the memorial.

Maj. Gen. E. J. Timberlake, who is primarily responsible for the trophy, presented the cup to Williams' parents March 2 in a public ceremony at the University of Texas.

Williams was a jet fighter-bomber pilot in Gen. Timberlake's Ninth Air Force at the time of his death last September. He was stationed at George Air Force Base, California.

He was never defeated in service tournaments during his military career. Williams held the All-Service championship competing against the top golfers of the Air Force, Army and Navy.

At the time of his death he was the U. S. Air Force champion and champion of the Ninth Air Force.

His previous titles included the Air Force Training Command championship, the Air Force Pacific Coast championship and the Hawaiian Coast Conference championship.

Before entering service he led the Texas University Golf Team to the Southwest Conference championship in 1948, 1949 and 1950. He also won the Texas Amateur and Texas PGA in 1950.

MAINTENANCE PRACTICE

(Continued from page 46)

Many of our courses now have been in play since the turn of the century and the strains of grasses are not tolerant. Many of our greens were built without concern for surface drainage and are being rebuilt for that purpose.

Some of our courses are still maintaining a collar around the green of several feet that is cut at an intermediate height. This adds to expense in maintenance but is an asset to the player and general appearance of a green.

Tee Maintenance Differences

Tee maintenance varies considerably in our district from surfaces similar to green condition to surfaces similar to fairway condition. At our club we have predominantly bent grass on the tees and treat them rather similar to greens. We cut our tees at about $\frac{3}{8}$ in. and follow a fertilizer practice very nearly the same as for the greens. On occasion we treat the tees with fungicide. We do not plug the tees as we used to years ago but instead we use a mixture of soil and seed in the divot holes about once a week. We use ryegrass seed with some bent seed mixed in. Four men can cover all our tee divots that accumulate over a week's time in about 4 hours and it is usually done on Monday afternoon.

At Beverly we are continually rebuilding our tees to provide approximately 4,000 sq. ft. of teeing surface on all the holes. With adequate areas for tee marker placement we find much less wear on the turf. Several courses are trying Merion bluegrass on tees and the reports thus far are somewhat varied. Some seem to like it and some have not. Where Merion and bent have been mixed, the bent has taken over.

Fairways the Headache

Fairways have probably given us our biggest headache in recent years. The players have demanded close cut fairway turf which has forced the courses with fairway irrigation to go to bentgrass on their fairways.

Then after going to close cut bent we gradually go into large quantities of poa annua in the fairways. Of course when the hot weather comes along we lose poa in

A TOP SELLER...
OFFERS SO MUCH FOR SO LITTLE!

"Pro" CADDY CART

MODEL 6100

RETAIL PRICE
\$13⁹⁵

All These Top Quality Features at a Low Price!

- ADJUSTS TO FIT ANY BAG
- FOLDS IN A FLASH WITH ONE HAND
- ALL STEEL — BRIGHTLY PLATED
- HARDENED STEEL LOCKING DEVICE
- 10 x 1.75 BALL BEARING WHEELS
- PUNCTURE PROOF SEMI-PNEUMATIC TIRES
- WIDE TREAD FOR STABILITY
- BALANCED FOR EASY PULLING
- UNCONDITIONALLY GUARANTEED

A Proven Value

Dealer Cost,
 \$8.40 each. Sold
 Nationally
 through leading
 jobbers. Inquiries
 invited.

NOTE: "Pro" Cart comes semi-assembled (can be completed in a few minutes) in compact individual carton 3½" x 10½" x 34½". Ideal for warehousing, shipping, and parcel post deliveries. Shipping weight, each 17½ lbs.

MANUFACTURED BY
UNITED METAL PRODUCTS Corp.
 8101 LYNDON AVENUE — DETROIT 38, MICHIGAN



BUILT FOR LIFETIME DURABILITY!

Proven strength and ruggedness, achieved through sound design and construction. Unsurpassed by caddy carts selling at any price. Ideal for rental by pro shops and public golf courses.



ONE HAND FOLDING ACTION!

Folds and opens in a flash, with just one hand. Merely lower handle and the "Pro" collapses—raise handle till it locks, and "Pro" is ready to go. Spring action handle releases with finger pressure.



EASY TO HANDLE — EASY TO STORE!

"Pro" rolls easily even when collapsed—can be lifted with little effort and "wheeled" into car deck or storage rack. Women particularly like "Pro" because they can pull and handle it without strain.



the fairways. Not all of it, but usually a considerable amount. At the same time we have pretty well learned to live with poa on our greens and tees. The main difference is in the degree of moisture control between the two areas. With this point in mind several clubs have already doubled their irrigation capacities for fairways.

We are planning to do the same with our fairway system in the near future. When we can go out and water all of our fairways in one night, we will have gone a long way in preserving poa annua.

The water shortage in the city supplies have also helped many of us to make the same decision. Last year many courses suffered when municipal water supplies were rationed during the drought. Several courses are trying to compete with the poa on fairways through sodium arsenite treatments and reseeding with bent. They have been successful where they have repeated the treatment every few years.

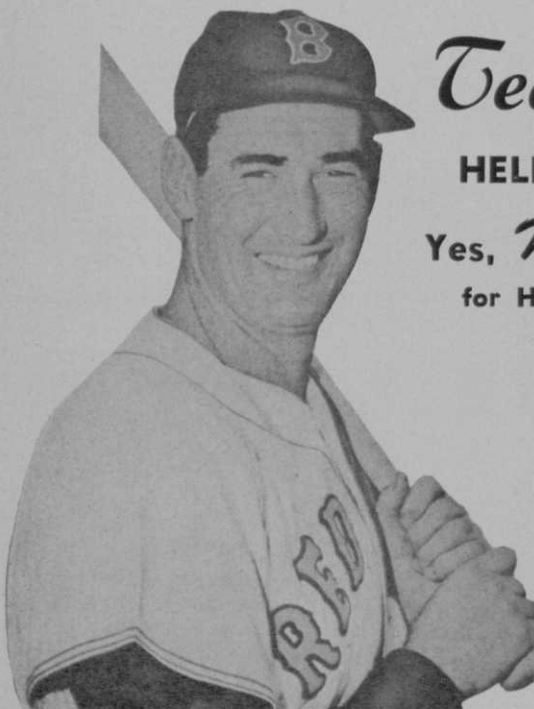
Clover control on fairways is becoming more evident all the time in Chicago through the use of 2,4-5T. Some superintendents are using the material in the Spring and others late in October. We are using very little 2,4-D on bent fairways

particularly in the Fall of the year due to ill effects to the bent grasses.

Insects gave us plenty of trouble last year on fairways in the form of a specie of the sod webworm. Large areas of lawns were killed out and many of the courses were hard hit on the fairways. We had three attacks during the season and neither Chlordane nor DDT seemed to have any effect on them. We expect to treat with arsenate of lead this Spring in an attempt to keep them under control. We expect also that the arsenate of lead will help to keep down the crabgrass population in fairways as it has been on the increase since the use of arsenate of lead has been discontinued. Also phenyl mercury will probably be used to help combat the crabgrass.

We have licked the angleworm casts on fairways through the use of Chlordane at 8 to 10 lbs. of toxicant per acre. This is a fairly cheap treatment and requires less than a day to apply.

Our fairways at Beverly are cut about $\frac{5}{8}$ in. during the Spring and then raised to $\frac{3}{4}$ in midsummer. In the Fall we usually go back to the closer cut again. Some of the other courses cut about the same and others cut higher at about $\frac{3}{4}$ in. to 1 in.



Ted Williams

HELPS YOU SELL SKOR

Yes, *New* SKOR Grip Cream
for HANDS, GLOVES OR HANDLES

for GOLF
and ALL SPORTS
is now endorsed by
TED WILLIAMS

RETAIL 50¢ PER TUBE

SOLD IN PRO SHOPS ONLY

SOLE DISTRIBUTOR U.S.A.

The TED BISHOP CO., Inc.
101 Tremont St., Boston 8, Mass.

At Beverly we find that our need for fairway aerification is more of perforation than of cultivation due to thatching of the bent. Also we want to do the least possible amount of damage to the surfaces, so we do not impede the golfers. We are accomplishing this through the use of a new tine on the Soilaire machine that we have developed through the cooperation of Kenneth Goit of Soilaire Industries.

Our fairway fertilization program starts in March with an application of 6-12-12 at 600 lbs. per acre. We try to apply this chemical fertilizer before the grass starts growing and while we still have surface frost in the ground. The next fertilizer treatment is usually applied about July 15th. This time we use Milorganite at approximately 400 lbs. per acre. Milorganite

PROFESSIONALS!



Increase your earnings!
Regrip all clubs
with...



*Finest "Feel"
in Golf*

Flange Wrap Grips

Obtain from your distributor

C.S.I. Sales Company

Solon Center Bldg. • Solon, Ohio
Exec. Office: 536 Terminal Tower, Cleveland 13, Ohio

EVERY GOLFER IS A CUSTOMER

for



Rolls like a Cadillac...

Carries like a Feather!



*WHEEL IT
CARRY IT!*

**WEIGHS
ONLY
10 LBS.**

• **COMBO-CART** is always "at the lie." Takes the work out of Golf... gives you ALL the advantages of both a Golf Bag and Golf Cart, with none of the inconveniences! Won't tip or spill on steepest hill. Fits in your car!



\$39.95 RETAIL

OPTIONAL COMBO-CART EXTRAS

DeLuxe Carry-All (illustrated on Combo-Cart above) Extra \$5.95
OR—Smaller Ball 'n Tee Bag Extra 2.95

Also available: Rainproof Combo-Cart Cover with zippered opening Extra 4.95
(Less Usual Dealer Discount)

Order Today—Immediate Delivery!

BURKE INDUSTRIES, INC.
97 Chestnut Street, Newark 5, N. J.

is used again about the middle of August at the same rate. Our fourth and final treatment is applied in mid-September and is usually a 5-10-5 ratio material applied at 500 lbs. per acre. This program gives us close to 50 tons of fertilizer for fairways each year.

Another treatment for the fairways is sodium arsenite. We start in March and apply three or four treatments at the rate of 1 to 2 lbs. per acre. This kills back knotweed and chickweed and inhibits the growth of poa annua. As soon as the sodium arsenite treatment is complete we reseed any sparse areas with bent seed.

In our rough maintenance at Beverly and at several other courses, we have just this past year started to cut an intermediate height adjacent to the fairway and one swath wide with a five gang mower. This has eliminated the complaint by many players who found their ball just off the edge of the fairway and lying imbedded in a thick mat of bentgrass. We also cut the area between the tee and the fairway with this same unit so as not to handicap the women who many times cannot reach the fairway from the tee. Like the collars on the greens this also adds to maintenance

cost but pays dividends in appearance and improved playing conditions.

The maintenance of traps in the Chicago area is one item that gives us a characteristic completely different from many Eastern courses. We maintain a groomed appearance on the edges of our traps where the eastern courses usually allow the edges to become rough and the grass to be somewhat long near the edge similar to the way it is kept on the old courses in Scotland. We like the groomed appearance of a neat edge and some of us also add a sharp lip of several inches in the greenward side so that a ball will not roll out. During the Winter months when the ground is frozen we usually have our fresh sand hauled direct to the traps by the supplier.

A resume of our work in the Chicago area would not be complete without a brief mention of the functions of our Midwest Association of Golf Course Superintendents.

One of the most valuable services we render as an association is that of the consultation committee. We have this committee that is ready at any time they may be called upon, to go to any club whose superintendent is one of our members, and

**Build Up Range TRAFFIC
Speed Up Range PLAY
Increase Range PROFITS**

with **PRO-TEE**

Tee off this year to greater play and profits by installing the modern, mechanically perfect PRO-TEE automatic teeing equipment.

No clogging, locking, jamming or spill-outs with PRO-TEE's practical design and patented mechanism. It meets all range conditions—installed in the ground or on platform. Simple, rugged and dependable. Low in cost—easy to install.

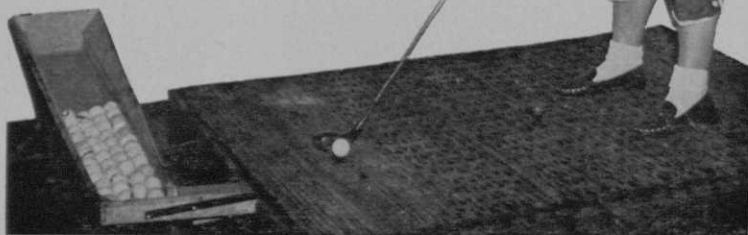
Immediate delivery for the start of your 1954 season. Write, wire or phone for complete details.

Every PRO-TEE is backed by a responsible guarantee

SERVICE METAL FABRICATORS, INC.

2350 W. 58th Street, (Tel: WA1brook 5-1400) Chicago 13, Ill.

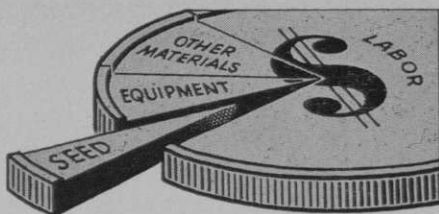
Keep 'Em Swinging
The fresher your players stay—the more they play . . . and the more you profit.



go over his problems with him and give its suggestions as to the proper procedure to follow. Many difficulties have often been overcome or avoided by having several other superintendents come in this way and be of assistance.

This past December we launched a new program on education. We started a two day school that dealt primarily with one subject. The first school's subject was plant disease. We spent two days going over the subject in considerable detail and in microscopic study of the various diseases. Next year we are planning to put on a clinic dealing with soil study and look forward with a great deal of anticipation to assistance from James Watson of the Toro Corp., similar to the assistance and cooperation we received from Dr. Klomprens of the Upjohn Co. at our plant disease clinic.

We believe this sort of concentrated study will and should eventually replace the regular local turf conference as we now know it. After two days of basic study on one subject one feels that he is up to date on all new developments in that subject. Then, too, I believe that our agronomists, pathologists, and other specialists would



The Smallest Slice of your course expenses can make The **BIGGEST** difference

Do your golfers wind up every round praising your turf? If you're not getting your share of compliments, you ought to check that vital 5%—the average course budget expenditure for seed. It's mighty important to spend that slice wisely for top quality.

Call upon Mock's for the newest developments in turf grass seed, sold either pure, or mixed to your special formula. Your inquiry will receive immediate attention . . . your needs will have Mock's specialized service.



MOCK SEED COMPANY
PITTSBURGH 30, PA.

A NEW ELM IS BORN

- Column-like stature
- Sturdy and ample crotches
- Strong anchorage — deep root system
- Vigorous growth — large leaves
- Great indestructibility
- Allows sun to get to grass



Drawing of chromosomes in a root cell. Advantage of healthy resistance to tree plagues; and is a mutation of American Elm.

Golf course superintendents have found this popular new elm variety ideal for enclosures, avenue and fairway borders, wind breaks, and boundary markers. For beauty and economy, it is unexcelled. Each scion produced by grafting so that all have the identical features of the original. Write to us for information. Publication, "A New Elm is Born," sent on request.



**AUGUSTIME ASCENDING ELM
RESEARCH ASSOCIATION**

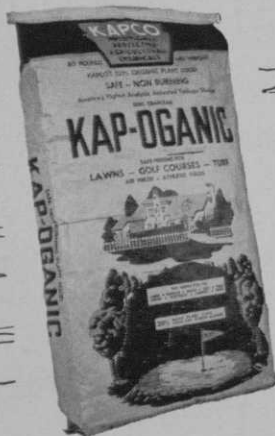
932 East 50th St., Chicago 15, Ill.



Recommended by Authorities

KAPCO
AGRICULTURAL
PRODUCTS

best on earth



best on turf

KAP-OGANIC

**THIS PURE ACTIVATED SLUDGE
CONTAINS MORE PLANT FOOD!**

KAP-OGANIC contains 5 to 5½% organic nitrogen and 5 to 6½% available phosphoric acid. No other sludge gives so much safe, non-burning turf food so low priced for such uniform high analysis! Write for full details.

Kapco Soluble Fertilizers

Ideal for one-operation liquid feeding of Greens while spraying insecticides and fungicides. Complete selection of analyses are available.

See Your Distributor
or Write Today for
Our Price Lists



Look for this Label **KAPCO**
McKEESPORT, PA.
Division of Summers Fertilizer Co., Inc.

feel that they were actually doing more good through education that is so much more complete than merely giving a 45 minute report once a year. We found also that once a subject is developed for a clinic such as we held, it can be repeated for other local groups without a great deal of work in preparation.

Another way in which our local association plans to be of greater help to our superintendents and to our golfers is through a committee recently organized by Ray Gerber of Glen Oak CC. Ray has volunteered the services of his committee to the Chicago District Golf Association to work with its greens committee. We hope that through their cooperation we shall progress together.

"HOMETOWN BOY"

(Continued from page 54)

ner, followed by a bingo game, serving from 70 to 80 meals.

Each activity of the club is handled by a special committee, the chairman of each being under the supervision of a board member. This plan works like a charm. Every one is glad to do his part.

Rebuild the Course

Then we started on the golf course. During the past two years it has been completely rebuilt. The rocks we couldn't blast or bulldoze out were covered up. Hundreds of trees which caused lack of air drainage were removed. Good topsoil was brought in and new fairways built and sodded with Bermuda. Deep gullies were filled. Five greens were built, replacing the old ones which gave so much trouble every summer. Two brand new greens of 10,000 sq. ft. built correctly were opened for play last May. Most of these things were financed by my own money, as well as most of the new maintenance equipment. I have bought an Aerifier, power sprayer, two new greens-mowers, a heavy duty utility mower, and all the other things necessary for the proper maintenance of the course. I bought a new Verticut also.

I owe a debt of gratitude to Bob Dunning of Tulsa for teaching me how to build greens and maintain them. I know nothing whatever about it. All of this work on the course, with very little extra help, had been done by my chef Bob Neely and myself. We haven't even slowed down during the past two years and are still at it. In addition to all this, Bob has done an admirable job in the kitchen. Our only tools have been an old road grader lent to us by a neighbor, our tractor and a borrowed spring tooth

harrow and a disc. All of the material used in the new greens was bought and hauled in, as all our soil is either silt or pure clay.

You Think You Work?

I sleep with my greens, doing all the watering—mostly by hand—and with the exception of mowing, they are not touched unless I am there.

I am up at 5 every morning and on the job — and many a night during the critical months I am out on the course at midnight.

I stay at the club all the time, seven days a week, and 24 hours every day — being the club manager, professional, and green superintendent — and then am on the job every night to take care of the members who come to the club. I don't get any too much sleep but I love this work.

Money couldn't hire me to work this way —and yet I'm happier than I've ever been in my life with this hobby. I love to look at a beautiful green and think I BUILT IT! I love to have the members come to me and tell me how nice everything is—and how they appreciate what I've done. Man—that's living!

Fred Grau was here not long ago and pronounced my greens, "championship".

Our course, which formerly was an easy 35 par, rated by pro playing standards, and a 66 for 18, is now a plenty tough 35 par. Holes have been lengthened, traps built and greens enlarged and undulated. We have built 13 Bermuda tees averaging around 2000 sq. ft. Some of them are U-3. I have a nursery all built of 6000 sq. ft. to grow my own strains of grasses — Merion Blue, and Fred Grau's special "Zoysia", as well as U-3 Bermuda. Give me another year, and I'll challenge anyone to show me a finer 9-hole golf course in the country.

Members Work Cheerfully

As I am writing this, we have just finished painting our swimming pool — 35 members did the job in an hour and a half, followed by a picnic supper. This shows the spirit of cooperation and pride of my members in their club.

They'll dig crabgrass, build boat docks, or anything asked of them. A small town club with limited membership and low dues just can't afford to hire these things done.

Our club financially is as sound as a new dollar. We owe no one a cent outside of current bills and no outstanding indebtedness. I write vouchers each month for all bills, the Board of Directors passes on them and the treasurer writes the checks.

In my own personal affairs, the kitchen and pro shop, I do not keep an accounts payable file. Each invoice is paid at once



The
Swing
Is To

PMAS

The
Proven
HERBICIDE
and
FUNGICIDE

Apply
Early



for complete KILL of
CRABGRASS

More and more, golf course superintendents depend on double acting PMAS to keep greens and fairways free of crabgrass. PMAS gives positive and economical results.

Weekly Applications

COST BUT **55¢** PER GREEN

... and important labor savings are possible too, because regular use of PMAS also gives effective control of such fungus diseases as:

**COPPER SPOT DOLLAR SPOT
BROWN PATCH PINK PATCH
SNOW MOLD**

Helminthosporium-Curvularia

Get PMAS from your Golf Course Supply Dealer . . . write us for literature detailing results of college tests.

W. A. CLEARY CORP.
NEW BRUNSWICK, N. J.

Knockout Weeds



the
**SAFE
EASY
Scott's
WAY**



NO MIXING

APPLY DRY

Use Scott's 4-XD to destroy weeds near greens, on fairways and tees — no dangerous drift — doesn't harm desirable grasses, economical, too! Write for prices.

O M Scott & SONS CO, Marysville, Ohio

upon receipt of the merchandise. All discounts are taken. The pro shop has just been enlarged and remodeled in knotty pine. A new rubber tile floor has been installed. This cost me over \$1000. It has chromium furniture and formica topped tables.

I carry a large stock of merchandise for the convenience of the members — much larger than would be considered good business by a merchant working for a profit. From where I sit I can see 18 golf bags, 10 carts, a rack of slacks and sport coats, shoes, gloves, a wide selection of shirts, 16 sets of clubs, luggage, and a 10 ft. show case filled with balls, socks, head covers, etc.

I have a deepfreeze, an 18 case Frigid-air drink cooler, a safe, and a new cash register, a cigarette machine, and a large stock of hats and caps.

Behind the clubhouse, on a Bermuda lawn, we have a large playground for the kiddies, with chutes, swings, merry-go-round, teter-totter, and May pole. We have a nice picnic ground with tables and benches. There is a new garage and work shop just completed, with cement floor, and plenty of storage space for fertilizers and our equipment.

There is a new boat dock and aluminum



FRIEND
Golf Course Sprayers
for better coverage and better
fungus, weed, and pest control. You'll
have smoother, greener fairways and
greens with a FRIEND Sprayer. And
it's adaptable for hand gun spraying
of trees and shrubs. As low as
\$412.00 FOB Gasport.



FRIEND MANUFACTURING COMPANY, Inc.

4 Greene Street
Gasport, N. Y.

Please send me your catalog for Golf Course Sprayers.

NAME.....

ADDRESS.....

TOWN..... STATE.....