

opinion than the compost pile method.

(4) George Davis of Louisville, Ky., told me that he had changed blue-grass greens to stolon bent by inserting stolons into the turf with a sharp spade or knife. It takes time and perseverance, but can be done. Am afraid covering of stolons with top-dressing would result in the runners drying out.

(5) A light top-dressing is $\frac{1}{2}$ cu. yd. per 5,000 sq. ft., which covers green $\frac{1}{32}$ in. deep; a medium top-dressing is 1 cu. yd. per 5,000 sq. ft., which covers green $\frac{1}{16}$ in. deep; a heavy top-dressing is 2 cu. yds. per 5,000 sq. ft., which covers green $\frac{1}{8}$ in. deep. Clip the grass close from the time growth starts in the spring. Top-dress lightly as growth slows in the fall.

B. R. Leach.

Aiding Faulty Greens

Sir:

We have 18 bent greens, last year being our first year of play. All year we were bothered with small brown-patch, the worst coming at the close of the season. The turf looks very bad at this time, and I am wondering if our top-dressing last year—good black dirt, peat and sand—was the cause. We fertilized with sulphate of ammonia.

The greens are temporary, to be used until our permanent course is completed, and were laid on clay soil with very little care taken in building. Would limestone help, and if so, in what proportions?

Do you suppose the brown-patch will be gone from the greens since they have been dormant all winter?

We are fertilizing our greens and fairways with milorganite, 800 lbs. to the acre on the fairways. What amount would you use on the greens?

B. F. H. (Indiana).

Reply:

Briefly, your problem is to thicken up the turf by encouraging the bent grass to spread. The fertilizer will do this providing the soil of the green and drainage are O. K. If the soil is hard and poor, the fertilizer may not show quick results. All the fertilizers in the world will not remedy insufficient care in the building of a green.

Discontinue the peat and use 10% rotted manure in the top-dressing. Apply 30 lbs. milorganite and 3 lbs. sulphate per 1,000 sq. ft. of green at once.

On May 15, would apply 50 lbs. ground



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limestone (not hydrated lime) per 1,000 sq. ft. of green, mixed with the top-dressing. Also, apply 3 lbs. ground limestone per 1,000 sq. ft. with every top-dressing thereafter. The lime should hold the brown-patch during the coming season; but if the lime is not applied, the disease will return as soon as weather conditions are favorable.

B. R. Leach.

K. O. Punch for Grasshoppers in This Bait

GRASSHOPPERS, cut worms or army worms, if they become abundant enough on golf courses to be injurious, may be controlled by using a poison bran mash bait made as follows:

Bran	20-25 pounds
Paris Green or White Arsenic	1 pound
Oranges or Lemons.....	3
Syrup	2 quarts
Water	2½-3 gal.

The bran and poison should be mixed together quite thoroughly while dry. The oranges or lemons should be grated or ground quite thoroughly and with the two quarts of molasses mixed in about 1½ or

2 gallons of water. The bran with poison mixed into it should then be wet with the water containing syrup and oranges or lemons. After thoroughly mixing the liquid and bran the mixture should not be quite wet enough to squeeze water out of the bran when held tight in the hand. It should be just wet enough so as to be crumbly when sown broadcast.

In controlling grasshoppers the poison bran bait should be sown broadcast lightly but evenly so that the 20 to 25 pounds will cover from 4 to 6 acres of ground. The poison bait should be sown at the time of day when the grasshoppers are noticed doing the most feeding. If it is hot and dry, this may be early in the morning or late in the evening. If the weather is not so hot it will be nearer the middle of the day.—Clyde C. Hamilton, N. J. Agricultural Experiment Station.

What's the Policy on Delinquents?

FROM the central states the treasurer of a certain golf club writes GOLFDOM asking what policy most clubs have in force with respect to handling delinquent accounts. About the only reply we were

LECCO—a sane ration for starving turf

A golf green is one of the most intensively cultivated of all crops. Only by luck does the old-fashioned compost pile give it the balanced diet that it needs to keep it luxuriant and healthy. LECCO, the golf turf fertilizer developed after long years of research by the distinguished turf authority, gives fine grasses the sustenance they need without a weakening stimulation. It goes further and lasts longer.

For a certainty of results, proper speed of development, and healthy disease resistant stamina, LECCO application is used and endorsed by an army of successful greenkeepers. Naturally it's displacing the expensive and uncertain antiquated compost pile with its worry of weeds and brown-patch peril.

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COCOOS CREEPING BENT SEED

... Lyman Carrier developed this seed as the greens-maker that is sweeping the country because of its magnificent production of putting surface. There is only one genuine Lyman Carrier Cocoos.

WASHINGTON CREEPING BENT

STOLONS . . . Lyman Carrier was the originator of this strain. In his own model nursery its purity is carefully preserved, free from weeds, and shipped to the clubs that want the moderated prized strain the majority of good clubs have.

LYMAN CARRIER — Granger, Indiana



BENT GRASS SEED

CREEPING BENT TURF of exactly as fine quality and texture can be produced by planting Creeping Bent seed for about one-third the laborious, expensive job of planting stolons.

REMEMBER when you purchase seed direct from the farms where it grows you are assured of an absolutely fresh, viable, acclimated, winter-hardy product.

SAVE the middleman's profit. Buy your Creeping Bent and Rhode Island Bent seed direct from the farmer who grows it.
A. N. PECKHAM
Kingston, Rhode Island

able to give was that the case is governed by the position of the club. Where there is a big waiting list, delinquents are posted promptly, and then "the air," if they still neglect paying. If the club has vacancies, then there is leniency in collection.

His letter follows in full. If any of our readers care to comment, we shall be glad to hear from them, as the matter of delinquent accounts is a frequent thorn in the side of the newer clubs. The letter:

"Our board of directors has established a 1 per cent penalty per month on all accounts delinquent thirty days. The idea was not so much to secure additional revenue, but to prod delinquent members into paying their accounts more promptly. We have found that it worked very well with certain delinquents, but the real chronic delinquent let the penalty pile up until the golf season got under way. On the whole, I do not consider the penalty of much use in securing prompt settlement of accounts, but it does give the club some return for carrying overdued accounts.

"Regarding delinquents; I have a curiosity about what policy clubs usually use. Perhaps you can enlighten me. Our by-laws provide for the suspension of delinquent members and also posting their accounts on the bulletin board. I believe

most clubs have a similar rule. What I would like to know is, do clubs generally strictly enforce this suspension rule and stop delinquents using the course and other privileges of the club? I have my own views regarding the matter, but as a club treasurer perhaps my vision is not entirely broad in the matter."

Leonard Young Host to Pro Parties

L. A. YOUNG, Detroit financier, golf enthusiast and head of the company making the Walter Hagen line of golf goods, has been doubling as Santa Claus and Lucullus for the pros. Young kicked in \$25 per as entry fee for the pros who were in the La Gorce Open, maintaining that the pros who were risking their own hard-earned dough on long shots at the prize money deserved a good break. Without them the La Gorce circus would be a flop, although he tangled with Carl G. Fisher, promoter of the event, on this matter, it being Fisher's idea that the \$25 entry fee was necessary to keep the field from being of unwieldy size. After the

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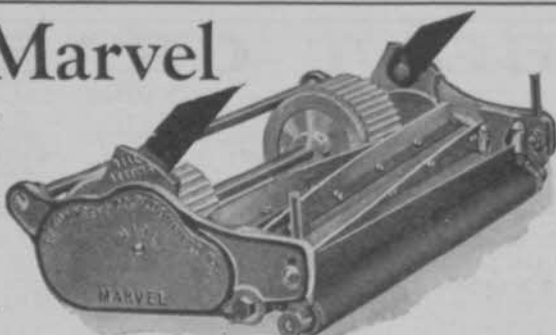
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Don Young, Dinner,
Tendered By J. A. Young To
American Ryder Cup Team

Young's farewell party to America's Ryder cup argonauts who foundered on the fairways, greens and traps of Moortown

shooting was over, Young entertained the boys at a dinner held at the Embassy club. More than 50 were present.

Young's prize party was the farewell dinner he gave for the American Ryder cup team at New York Athletic club, April 9th. This was a gala affair, with Capt. Hagen and his trained troupe of heavy artillerymen being assured of the nation's confidence, pride and good wishes by some of the best professional and amateur speakers assembled under one roof for a golf dinner.

Summarizes Weed Problem on Turf

By HOWARD B. SPRAGUE

[Paper at Rutgers University Greenkeepers
Short Course]

WEEDS are plants growing where they are not planted. They are frequently more aggressive than turf plants. According to length of life, they are:

Annuals, which complete growth in one year and produce seed abundantly.



One of the smaller machines at work

"FRIEND" GOLF COURSE SPRAYERS

Large—Medium—Small

Double compartment tanks. For fairways, putting greens, trees and shrubs. A fast, effective method of eradicating Golf Course pests, and for the application of liquid fertilizers.

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Caswell Adjustable Canopies for Your Course

BEAUTIFY THE COURSE, protect from intense heat, shelter from rain, provide shade at congested tees and add to the pleasure and comfort of the game. THEY ARE ARTISTICALLY AND SUBSTANTIALLY BUILT of high grade material and are quickly installed. They are instantly adjusted against rain and sun and easily removed for winter storage. Send for full details today.

Caswell Manufacturing Co., Cherokee, Iowa

Biennials, which require two seasons to complete growth, the first being used to make and store food for the production flowers and seeds in the second.

Perennials, which live more than two seasons, usually begin forming seed by the second season. The most troublesome perennials have creeping rooting stems which contain stored food and send up new shoots.

Sources of Weed Seed

- Carried by wind, drainage water, and animals, including man.
- Introduced in fresh or partly rotted manure.
- Added in top-soil used for top-dressings.
- Present in seeding mixtures.

Control of Weeds

- Remove sources of weed seeds.
- Maintain turf in vigorous condition to prevent weeds from getting a foothold.
- Close mowing kills many types of weeds; prevention of seed formation in the fairways and the rough by mowing also helps.
- Use of chemicals, as sprays, or in top-dressing (such as lead arsenate).

Control of Troublesome Weeds

Crab grass—Warm season annual, spreads by seed. Hand weed greens in June and July. Use lead arsenate in top-dressings and keep turf vigorous.

Chickweed—Dust plants with ammonium sulphate or ammo-phos.; water thoroughly 24 hours later; remove dead plants and reseed.

White clover—Stimulated by phosphorus and potash fertilizers. Undesirable only on greens. Largely controlled by close mowing plus nitrogen fertilization of the grass.

Silver crab grass—Warm season annual, spreads by seed only. Hand weeding in June and July.

Poa annua—Very difficult to control. Keep soil moderately dry and maintain vigor of turf by proper treatment. Use lead arsenate in top-dressing. Hand weeding is only method practicable for complete control, and this is very expensive.

Foxtail grass—Warm season annual, spreads by seed. Hand weed greens in June and July. Prevent seed formation on fairways and the rough by close mowing wherever seed heads are formed.

Stink grass—Same as for foxtail grass.

Yarrow—Perennials, spreading by root-

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ORIENT, the tested quality hose of moulded construction, made with smooth, heavy cover, is used by many Clubs. Furnished in lengths up to 500 feet.

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stocks. When closely mowed makes fine turf. Remove all turf and soil to depth of 3 in., fill in with clean soil, and sod or replant.

Plantain—Perennials without creeping stems. Hand weed or poison with sulphuric acid.

Dandelion—Same as for plantain.

Poison ivy—Perennials with creeping stems. Poison with sulphuric acid, or spray with sodium chlorate, or grub out roots and rootstocks.

What's New in EQUIPMENT and SUPPLIES

Press Releases from Manufacturers

EXTENSIVE BECKLEY RALSTON CAMPAIGN

The Beckley-Ralston Co., makers of the Stroke-Saver line of clubs for the short game, have inaugurated a far reaching advertising campaign, offering to send to golfers a copy of their instructive book, "The Short Game." This well known firm started manufacturing clubs several years ago, introducing their short-shafted putter with the square grip, to which has been added the Approach Cleek, the Chipper, and this year to complete the matched set of four irons, the Stroke Saver Niblick.

In addition to the growing demand being created for these clubs through national advertising, directing the golfers to see the clubs at Pro shops, the good sug-

BECAUSE we know true "Washington" strain produces the finest putting turf.

EVERY precaution is taken to keep it pure and free of objectionable weeds at our nurseries.

NO disappointed customers for past seven years and we have supplied stolons for hundreds of greens during that time.

TO sustain this reputation we have developed our organization, to give our customers real experienced service.

Hiram F. Godwin

Bent Grass

Box 51
Wayne, Pa.

Canada: 116 Prince Rd.
Sandwich, Ont.

Box A, Redford St.
Detroit, Mich.

gestion is being made that Stroke Savers make a most popular prize for all club events this season. Every player appreciates having one or a set of Stroke-Savers to complete his regular set of irons.

GREENKEEPING'S DAWN

Philadelphia, Pa.—Invention of the lawn mower and the consequent development of greenkeeping "revolutionized golf and made the game of games practicable the world over," notes a recent interesting circular on its lawn mowers sent out by the Pennsylvania Lawn Mower Works. Pennsylvania points out that "Auld Tam" Morris, Jamie Anderson and the rest of that band of illustrious veterans were ruling the roost when the first Pennsylvania mower was put out by John Braun. Braun early got the American invention adopted by the British courses where it continues to enjoy a big sale, as well as in the United States.

An indication of the work done by mowers on golf courses today stands out as the feature of another Pennsylvania folder, where in the company reminds the reader that the fairway gang mower, "only three years old," has covered a working beat equal to a trip from New York to Salt Lake City and return.

SHAFT PRESERVING TIPS

Memphis, Tenn.—Golf Shaft and Block Co., one of the world's biggest hickory golf shaft companies, is sending out to pros and golfers the following tips for "making hickory shafts last indefinitely":

Clubs should certainly be wiped off after playing under extreme conditions.

"They should be given an occasional coat of shellac or a good thorough rubbing with varnish or linseed oil.

"When not in use, clubs should be laid flat on a shelf or in a bin with the heads hanging down over the outside edge.

"Keep nothing in golf bag other than clubs. Stuffing shoes or other paraphernalia in golf bags may warp the shafts."

NEW PRO SUPPLY CATALOG

Chicago, Ill.—Golf Supply Service, 14 E. Jackson blvd., Paul Smith's outfit that specializes in British golf goods, has issued a new catalog listing its complete stock, which will be sent to pros free on request.

SHAFTS FROM FACTORY TO PRO

Good No. 2 Hickory Shafts. Pro Finished. Straight, 50¢ White, Only 15¢ Each. CASH or C. O. D.

Ideal for Muni Courses and Ladies' Clubs

Send \$ 3.75 for 25 shafts, Irons or Drivers

Send 7.50 for 50 shafts, Irons or Drivers

Send 15.00 for 100 shafts, Irons or Drivers

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Grass Seed of Known Quality

TESTED for PURITY and GERMINATION

South German Bent Colonial Bent
Rhode Island Bent Cocoos Bent
Special Putting Green Bent Formula
Superfine Fairway Formula (With Bent)

Special prices on the above, and any other
Grasses or Mixtures, on application

Remember:—All our seeds are of the highest quality, obtained direct from the most reliable sources of supply and are botanically true to name. All seeds are new and are cleaned and re-cleaned until they are brought up to the highest possible state of purity and germination, special care being given to the elimination of weed seeds.

Equipment and Supplies

We carry a most complete line of equipment and supplies always ready for prompt shipment. Catalogue sent upon request.

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Specialists in Golf Grass Seeds and Equipment

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Don't let CHICKWEED spoil your Greens!

DON'T let this pesky weed choke out the grass. Just spray on our PURFECK CHICKWEED ELIMINATOR and in a week or ten days you'll see the difference. All the weeds dried up and gone—in its place thick, sturdy grass. Then you'll have greens that members will enjoy playing on—greens you'll be proud of.



Remember, PURFECK does away with the slow, expensive method of cutting, patching and re-digging. It kills the weed without killing the grass. Many of the leading golf courses endorse it. If your dealer can not supply you write direct to

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Ask for names of users.

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STANDARD'S POLE GOES GOOD

Cedar Falls, Ia.—Standard Mfg. Co. is having excellent business with its spiral steel flag-pole. The pole is of special alloy steel, galvanized and finished with five coats of lacquer. The weight is 27 ounces. An aluminum ferrule, aluminum cap and three brass rings for the flag are standard equipment with the pole. Standard also reports good business in its one-piece rust-proof aluminite hole rim. This hole rim is cast true to size and straight up-and-down on the outside, with a slight taper on the inside so when the cup is pushed down it tightens, and when pulled up it loosens, permitting extraction of the cup without damage to the turf.

WHAT DO GOLFERS WEAR?

Chicago, Ill.—H. L. Friedlen & Co., clothing manufacturers, recently made extensive mailing of a questionnaire to pro golfers for the purpose of determining preferences in golf wearing apparel. Results of the questionnaire may be of value to professionals in helping them to order their apparel stocks, although regional variations must not be lost sight of in considering the following returns as buying guidance.

The Friedlen results:

What percentage of golfers wear golf suits?	40
What percentage of golfers wear linen knickers?	47.8
What percentage of golfers wear wool knickers?	64.1
What length of knickers are worn most?	

Plus-4's

Plus-2's

Regulation

Plus fours were pronounced the most practical length of knickers by the pros, who also stated that the buckle button knicker was greatly preferred. Over 60% of the pros said plain pattern knickers were preferred by their members. Plaid patterns got the play in 27% of the cases, and stripes with the remainder.

According to the questionnaire, the average price the golfer pays for linen knickers is around \$4.75, and for wool knickers, around \$8.50.

About 34% of the players wear leather blouses. Almost 75% of them wear sweaters. Although 76% of the pros said they think a rain-jacket is a practical item of golfing apparel, the same survey showed that only an estimated 20% of the players carried these wet weather coats.

SOL METZGER WRITES NEW BOOK ON PUTTING

PROFESSIONALS are pretty well agreed that putting is the most difficult branch of the game to teach; the pupil is almost forced to develop his own stance, grip and stroke. Sol Metzger, nationally known as

the writer of a syndicated golf feature appearing in several hundred daily newspapers, evidently believes the same thing, for in his latest book, "Putting Analyzed," fresh off the Doubleday-Doran presses, he makes no effort to recommend any one putting style over others.

Instead, he contents himself with illustrating and describing the putting styles of the cream of the golfing talent, puts forth the reasons for these styles and leaves it to the reader to select the style best suited to his own use.

Metzger is a close and expert analyst of the game and has the happy talent of being able to present, in pen drawings with which the book is profusely illustrated, the vital and essential points of the subject at hand. He has done a great deal of competent investigative work before writing this book.

While the book is not long, it is handsomely assembled and is priced at the very attractive figure of \$1.50, far below any similar volume on the market. It should be a record-breaking seller among golf books, particularly since Doubleday-Doran plan to merchandise it through the golf professional.

SAND-BOX VANISHING

Cleveland, O.—Sand-boxes at golf courses are joining the hitching post in the limbo of forgotten things, according to Edward Goldberg, president of the General Timber and Lumber Co., who gets his "close-up" on the situation as manufacturer of the Rite-Hite golf tee.

"Even many of the municipal courses have put the sand-box out of the picture these days, following the lead of the vast majority of the private courses," states Goldberg, who adds: "The players at the public links have registered no complaint at the minor expense to them which is involved, for the patented tee habit is now a matter of course. Undoubtedly much advance in the patented tee sales has been caused by certain playing points featured by the various manufacturers on the order of the patented uniform height detail of our construction which we spotlight. But basically the convenience, cleanliness, and, in the last analysis, economy, of the patented tee is such that sand tee doom is logical.

"Considering the cost of filling the sand-boxes with sand and water, the added cost, replacement and laundry of towels, and even the cost of the sand itself, the club official doesn't have to figure very far before he finds that the tees on the Rite-Hite order give the club a good proposition financially. We have noted that a number of clubs this year have done away with the free supply of tees to their members, letting the pro get his rightful profit."

Personal: to Greenkeepers

LET us show you ways and means of saving time, work and worry on each job in your daily work. Let us show you how to make each job—whether big or small—more productive in the results you get. Let us show you how to get the results that gain quicker and higher recognition from Club officials. More and more greenkeepers are discovering a new quickness, thriftiness and efficiency in their daily work through the unusual assistance to be had from our complete line of supplies and equipment.

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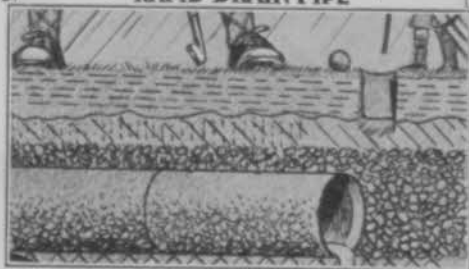
Economical and Efficient Golf Coarse Drainage!

"POROSWALL" Rapid Drain Pipe is more quickly and more economically placed, the result of its tight joints. No time is lost getting alignment because the spigot-end of one length fits automatically into the bell-end of the next.

Laying is economical, too, because coarse, sandy, bank-run gravel may be used as backfill which is readily available nearly everywhere. Crushed stone, which is not only expensive but difficult to obtain near at hand, is not necessary for this purpose.

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Little Ferry, N. J.

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Contains 86 to 89%
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51 Park Place
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TRADE MARK REG
Hyper-Humus
Makes Greener Greens

Weeds and the Grass Diseases on Golf Courses

By C. R. ORTON*
Boyce Thompson Institute

BECAUSE the weeds which are most troublesome in fairways may not be important on greens this problem may be divided into two sections: (1) fairway weeds and (2) weeds most troublesome on greens.

(1) Weeds on fairways are chiefly broad-leaved plants such as *plantains*, *dandelion*, *thistles*, *yellow*, *hawkweeds*, and others which may be locally important.

(2) Weeds on greens are more generally the smaller leaved forms, such as *chickweeds*, *speedwell*, *knotweed*, *pearlwort* (in eastern regions) and *white clover*. *Crab grass* and *goose grass*, two annuals, are often serious weeds on greens but appear late in season and die off after a few weeks.

Control Methods

The four chief lines of control presented are:

(1) **Hand pulling**, the most practical method of removing weeds from well established greens;

(2) **Prevention of reseeding with weed seeds** is very important, especially with such annuals as crab grass and goose grass. Therefore take special precautions to avoid using weedy soil in preparing compost. Steam sterilization of compost may be practiced to kill weed seeds;

(3) **Chemical treatment** may be practiced on areas in fairways which are badly infested and where the danger of injuring turf is minimized. Iron sulfate, sodium arsenite, and lead arsenate have been successfully employed for such purposes but none of these appear to be very practical for killing weeds in greens or in well established turf.

*Penn State Greenkeepers' Short Course Paper.

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100 Main St., Park Ridge, Ill.