

A circular piece of galvanized sheet iron, with a hole in the center to receive the sprinkler casing is used as a cap for the tile, to keep the dirt away from the gravel chamber.

Winter drainage is provided by laying the feed line uphill from the main, or if this is not possible, by hand valve, ball and socket, cross-tee wells, or other types of drains. The sprinklers and casings are self-draining.

Underground concealed sprinklers are here to stay, very definitely so, and it behooves every greenkeeper who wishes to be up to date to acquaint himself by testing sample sprinklers and making trial installations. Any manufacturer of such equipment should be glad of the opportunity to send any responsible Green chairman or greenkeeper on or more sample sprinklers with blue print instructions covering their installation.

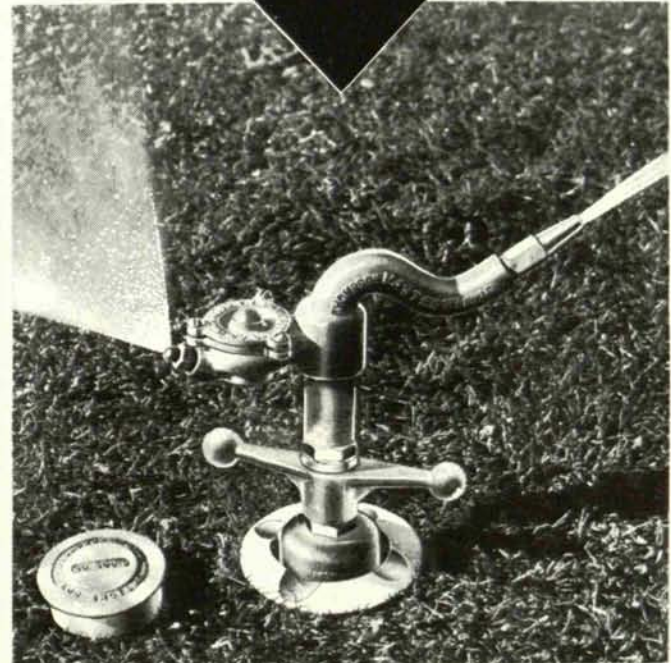
Hoseless Green Systems

HOSELESS green irrigation is not new. For several years the California irrigation systems have been used on the greens. The outlets were placed on the edges of the greens. Unfortunately this method is not adaptable to greens surrounded by sand traps, particularly on tight ground. Wet traps are not desirable on any course.

The recent introduction of satisfactory "half-circle" sprinklers adjustable to any arc, has facilitated the adoption of hoseless irrigation to greens regardless of size or shape, confining the water entirely within the irregular perimeter of the greens.

In a current installation at Cascade Hills Country Club, each of the eighteen greens is equipped with two to four "half-circle" sprinklers which are permanently mounted on fixed risers. Each sprinkler is adjusted to swing through the exact arc it is to irrigate. The radius covered is from thirty-five to fifty feet. By changing the setting of the automatic control of the pumping plant to a higher pressure, radii of fifty-five feet could be secured, but this distance is usually not necessary.

There is an objection to using these sprinklers on a portable basis in connection with snap valves where the contour of the green is very irregular. Each sprinkler is adjusted



IT'S AN EAGLE!

AFTER a series of competitive tests against sprinkling systems of other manufacture, Thompson Master Sprinklers and Quick-Coupling Valves were chosen by the Sportsman's Club of Chicago for their famous 27 hole golf course! 100 Master Sprinklers, 450 Thompson Quick-Coupling Valves, and 100 Thompson Quick-Couplers were ordered.

Al Espinosa, the Sportsman's Club pro, will now be sure of sleek, velvety greens and fairways with minimum labor and water. Edward Dearie, architect and designer of the grounds, knows that his course will always be fresh and green despite hot mid-western droughts. For Thompson Master Sprinklers are designed to give thro, even coverage.

SEND FOR OUR INTERESTING BOOKLET
It shows everything that a modern country club needs in sprinkling equipment. Use the coupon below. No obligation on your part.



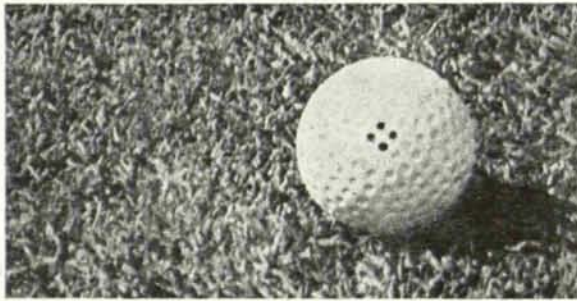
Thompson
Sprinkling **Systems**
and Hose **Sprinklers**

LAWNS
ORCHARDS
GARDENS
NURSERIES
GOLF COURSES
Etc.

THOMPSON MFG. CO., INC.
2251 East 7th Street, Los Angeles, Cal. 325 West Huron Street, Chicago, Ill.

Send me your booklet showing the kind of sprinkling equipment that's going into the Chicago Sportsman's Club grounds

Name _____ Address _____
Club _____



Cocos Bent—The turf that has made California greens famous.

Nearly 2000% INCREASE IN DUTY on Bent Grass Seeds

In anticipation of this increase, we have protected our customers and have on hand a supply of Bent Grasses and Mixtures containing Bent Seed, which we are offering at a saving while this supply lasts.

For the Finest Turf, Sow Bent

Grass Seed of Known Quality

TESTED for PURITY and GERMINATION

South German Bent	Colonial Bent	Rhode Island Bent
Astoria Bent	Special Putting Green Bent Formula	
Seaside Bent	Standard Putting Green Formula	
Superfine Fairway Formula	(with Bent)	Bent Stolons

Wholesale prices on the above, or any other turf grasses, such as Fancy Red Top, Ky. Blue, Chewing's N. Z. Fescue, etc., on request.

COCOOS BENT Because of the fine turf producing qualities of this Creeping Bent, it is meeting with favor in sections other than the Pacific Coast, where it is already recognized as the outstanding Putting Green Grass.

Cocos Bent is botanically known as *Agrostis maritima*, but all strains of *Agrostis maritima* are **not** Cocos Bent. We offer the **true Cocos Bent**, the finest of the *Agrostis maritima* grasses, in sealed bags.

Per lb. \$2.50, per 10 lbs. \$22.50, per 100 lbs. \$200.00

Special formulas for Tees, Rough, Bunkers, Lawns, etc., on request.

Remember:— We are one of the largest direct contractors for foreign-grown Grass Seeds in the United States. Over thirty years of Seed Service have enabled us to segregate those collectors of Bent Seeds who are reliable from those who are not; to single out those growers of Chewing's Fescue whose strains are pure; also to contract for true American-grown seeds of high vitality. All our seeds are botanically true to name and are cleaned and re-cleaned until brought up to the highest possible state of purity and germination, special care being given to the elimination of weed seeds.

Without obligation we shall be pleased to send a representative who, from long experience, is qualified to advise regarding grasses and furnish such other information as is necessary for the best results.

Stump & Walter Co.

Specialists in Golf Grass Seeds and Equipment

30-32 Barclay Street

New York City

to its own location. If the sprinklers are used as portables, then each sprinkler must be numbered and likewise each outlet and each evening every one of the sixty numbered sprinklers must be placed in its correct and correspondingly numbered outlet. Quite a job.

On the other hand perhaps there will be objections from the players to two, three and, in some cases, four fixed sprinklers standing ten inches high and just off the putting surface. True, none of the sprinklers interfere with direct approaches. A ground rule is necessary for the balls which come to rest close to the sprinklers or are stymied.

In the case of Cascade Hills Country Club, the Green committee does not anticipate objections from the players. Perhaps there is a psychological element involved. With the club going through the throes of a bond issue, followed by construction of a deep well, reservoir, pressure pumping plant, hoseless tees, and fairway hose irrigation, it is probable that the players will accept the fixed sprinklers around the greens as merely another innovation. Perhaps, if only the hoseless green sprinklers were installed, there might be plenty of objections.

Why not an underground half-circle sprinkler? So far there is none that has the necessary range combined with the necessary adjustability. Manufacturers are working on this development, with considerable hope.

Greenkeepers should appreciate the fact that most of the "lapping" in hoseless irrigation is imaginary rather than actual. All sprinklers "taper off" at the edges of their distribution areas. The distribution curves of the better sprinklers show a sharp falling off at the end of the "throw." For this reason some lapping is necessary in order to secure a good distribution.

We should add that we are using numbered portable half-circle sprinklers on several trial hoseless greens at Pomonok Country Club, Long Island. After the full season's operations conclusions can be drawn as to the relative merits of the fixed sprinklers and portable sprinklers for hoseless greens.

Rolling Stock vs. Underground Equipment

EASTERN greenkeepers are having some difficulty in accepting snap valve equipment; "it leaks"—"the couplers break"—"the tractors wreck it." One greenkeeper whom we encountered in our travels objects to snap valves and concealed sprinklers because the lugs one and one-half inches long on his tractors play havoc with the valves and sprinklers. Some day this estimable gentleman will wake up and announce to his tractor men that running the lugged drive wheels over valves or sprinklers constitutes automatic walking papers.

The trouble with snap valve and concealed sprinkler equipment lies not in the equipment but in the greenkeepers who are not familiar with the newer equipment. Pacific Coast greenkeepers laugh at the fuss our Eastern greenkeepers make about the underground equipment; say that the Easterners are not "snap-valve minded." Of course the California courses, with nearly one hundred thousand pieces of concealed irrigation equipment of all kinds, are in a position to appreciate the advantages of such equipment.

You could not induce any California greenkeeper to go back to their methods of ten years ago, any more than you could get a resident of Southern California who come from say, "Hoosierland" or "Ioway," to go back to Indiana or Iowa to live.

The use of concealed irrigation equipment East of the Sierras is increasing by leaps and bounds. Many of our greenkeepers are not familiar with its care and use and of course have minor troubles with it; but as their familiarity increases so will their appreciation of these labor-saving, time-saving conveniences increase.

Concealed equipment is with us permanently—it is rapidly being accepted by all forms and conditions of golf course owners, and it is our firm belief and recommendation that all of us who are interested in fine turf should do all we can to familiarize ourselves with these money and disposition savers, make every effort to popularize their use, and induce our own clubs to get the irrigation equipment on an automatic underground basis



Returns Handsome Dividends On New Fairway Seedings

The belief that two to three years are required to produce good fairways is wrong.

It is true that sparse turf once obtained is difficult and expensive to improve, and often deters prospective members from joining new clubs.

Experienced golf course builders know that success depends upon supplying the young expanding seedling with ample nitrogen and phosphorus during the critical first six weeks.

Milorganite has been used prior to seeding with conspicuous success on more outstanding courses than any other fertilizer.

Milorganite is an ideal source of organic nitrogen, more effective than manure and free from objectionable weed seeds. It is easily applied and will not injure the sensitive young seedling.

We are prepared to make soil examinations and specific recommendations.

For further information address

**The
Sewerage Commission
Milwaukee, Wisconsin**

Milorganite used on Established Fairways this fall will produce better turf next year

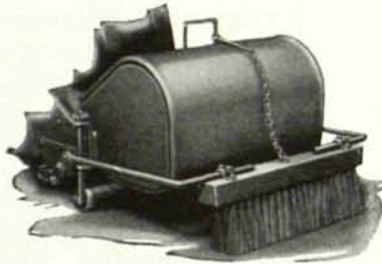


Designed to Help You Save Club Funds

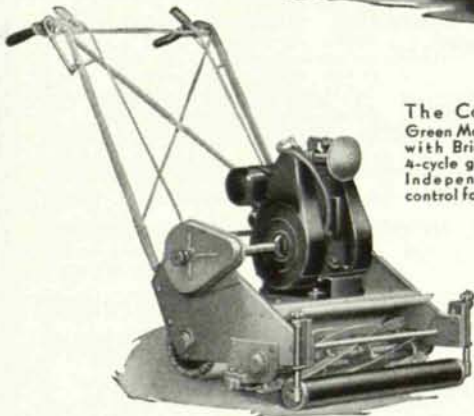
The very next time you go out on your greens to trim the grass or to roll and brush the turf, consider for a moment just how the Cooper Putting Green Mower would serve to make each task more easy. This self-powered mower is light in weight, short coupled, perfectly balanced and extremely easy to operate. It is equipped with a full 20 inch, high-speed, seven blade reel with independent drive and is reversible for self sharpening. Reel and bed plate comprise one quick detachable "drop-out" unit, pioneered by Cooper.

This reel trims the turf grasses to perfection and the large traction roller levels the turf after each cutting. This roller is assembled in sections with differential action that permits easy turning without injury to turf. Independent roller drive makes the use of a transport cart unnecessary. The mower frame is light but strong, being constructed of steel and aluminum alloy. Ball and roller bearings are used throughout and all gears are packed in grease.

Cooper Putting Green Mowers come equipped with metal grass catcher. At small additional cost the Cooper brush attachment, is available, for aerating the soil, brushing in top dressing and cleaning off debris.



The Cooper Putting Green Mower is equipped with Briggs & Stratton 4-cycle gasoline motor. Independent finger tip control for all operations.



Before the season becomes too far advanced, acquaint yourself with this wonderful time and labor saver . . . Mail this coupon today for complete information, specifications and prices.

COOPER MANUFACTURING COMPANY
551 S. First Ave. Marshalltown, Iowa

Please send complete information, specifications and prices on your Putting Green Mower to

Name _____

Club _____

City _____ State _____

where it properly belongs.

The ideal irrigation system of the near future (within two years) will be entirely hoseless, entirely automatic, entirely time-clock controlled, and operate without any labor whatsoever, except occasional adjustments by the greenkeeper's mechanic. The operating pressure will be from eighty to one hundred pounds or even higher at the farthest outlets and the pumping plant will be entirely automatic in all respects.

The clubs will gradually become educated to these installations as sound investments which permit the greenkeeper to devote his entire energies to duties other than irrigation, maintain the course at uniform playing length (playing condition) throughout the season, permit the players fullest enjoyment of their game, prevent assessments and hold the membership intact.

Hose is doomed on large turfed areas and while it will be some years in passing, the greenkeepers of America can read the handwriting on the wall, and will govern themselves accordingly.

BUCKNER SPRINKLERS

for Golf Course Irrigation

Wherever golf is played, Buckners are supreme. We originated the Hoseless System of golf course irrigation, installed by the best courses of the country.

Using this system, and our famous Golf King No. 6 sprinklers, one man can easily irrigate an entire 18 hole course. Such an installation cuts operating costs remarkably. A word from you will bring all details.

BUCKNER MANUFACTURING CO. FRESNO, CALIFORNIA

SPECIAL REPRESENTATIVES

J. Oliver Johnson, Inc., Chicago, Ill.
Philadelphia Toro Co., Philadelphia, Pa.
New York Toro Co., 67 Warburton, Yonkers, N. Y.
H. V. Carter Co., San Francisco, Calif.
Guy R. Champlain, Paris, Ky. P. O. Box 154.
Joseph P. Breck & Sons, Boston, Mass.
Ritchie Bros. & Co., Vancouver, B. C.
Ivan W. Lee, Seattle, Wash.
Golf Equipment Co., Pittsburgh, Pa.
Huey & Philip Hardware Co., Dallas, Texas.
EASTERN ENGINEERING REPRESENTATIVE
Wendell P. Miller & Associates, Columbus, O.—
Chicago, Ill.

Mid-West Greenkeepers' Page

BY A. L. BRANDON, *Secretary*

THE June meeting of the Midwest at Harlem Hills Country Club, Rockford, was one of the best attended outdoor meets held this year. It seems that the farther the boys have to go to attend these meetings the larger the turnout. Mr. Alfred Buller of Lakeside, Michigan, (Chikaming Country Club) who has only missed three meetings in as many years, had about 150 miles to come.

Our next meeting will be at Skokie Country Club, Glencoe, July 28th. Come on Midwest members let's see if we can't out do the Rockford attendance record. Mr. Charles Korsgren is the greenkeeper at Skokie.

Those of you who recall Mr. C. M. Harrison's talk to Midwest members last March, when he attempted to show that the amount of root system depended upon the area of leaf surface of that species of grass, providing that there were no other limiting factors, had visible proof to its correctness when they examined those plots at the U. S. Green Section

demonstration gardens July 8th. The first plot had been cut continuously at $\frac{3}{8}$ inch and showed a weedy thin turf with frequent bare spots. The other plot, cut continually at $\frac{3}{4}$ inch, had uniform coverage and was less weedy. It required no expert to ascertain which was the proper method to follow.

We might add that Mr. Harrison is studying for his doctor's degree and expects to finish by the latter part of August, certainly we all hope him the best of luck and success in his thesis.

Mill Road Farm Course (Mr. Lasker's private course) certainly rates as one of the best in the Midwest. This was the unanimous opinion of the 140 that played it following the U. S. G. A. Green Section meeting. It was also very apparent that Mr. Tregillus, could handle Virginia bent.

Small brown patch is as prevalent as ever in the Chicago district and as usual some strains of grasses are more susceptible than others. Those who have no small patch certainly don't realize how lucky they are. During the afternoon of the Green Section meet, small brown patch was observed working in the Cocos bent plot.

Although the U. S. G. A. Green Section meet July 8th, at the Lasker estate had not been advertised as greatly as the previous year the attendance of those interested in turf and its problems, produced an enthusiastic gathering. The garden had been enlarged and a greater variety of experiments are being made. Probably the most noteworthy and impressive results are those in connection with fertilizing practices. As the age of these plots increases of course, the results will be more evident.

These experimental plots and demonstration gardens are always open to all interested persons, and frequent visits surely would prove beneficial.



MATT BEZEK
President Mid-West Greenkeepers Association

How I Fertilize My Greens

BY LAWRENCE HUBER, *Greenkeeper*

Elks Country Club, Worthington, Ohio

Read at the Green Section meeting of the Central District Golf Association, June 10



LAWRENCE HUBER
He has made a great reputation in the Columbus district

fertilizer is "Weeds."

Last year I used Milorganite but had to use

EARLY in the spring after rolling is completed, I topdress my greens with one yard compost mixing about half sand with one hundred pounds of fertilizer added to each yard of compost for each green. I use half sand on account of our soil being heavy clay. The fertilizer I used this year is 8-5-3 purchased from the Smith Agriculture Chemical Co., Columbus. The name of this

as much again in the topdressing as 8-5-3 to get the same results. I noticed, however that the Milorganite lasted longer than the 8-5-3. Being an organic fertilizer, the grass had a supply of nitrogen to keep drawing from. In weed control the 8-5-3 was much better than the Milorganite. Our greens were infested with chickweed before using "Weeds" but since using it this year we are gradually getting rid of it. We still have plenty of it, but it will take time to completely control it.

In March of this year while the ground was still frozen I took some sulphate of ammonia and sprinkled it heavy on spots of chickweed on about half of our greens. It was so cold that it laid there and didn't burn at all until the sun came closer and then it did its work. By putting it on heavy it burned the chickweed and also the bent. I finally had to plug some

A FEW PETERSON SPECIALTIES

FEEDGREEN—An Organic Fertilizer of Real Merit

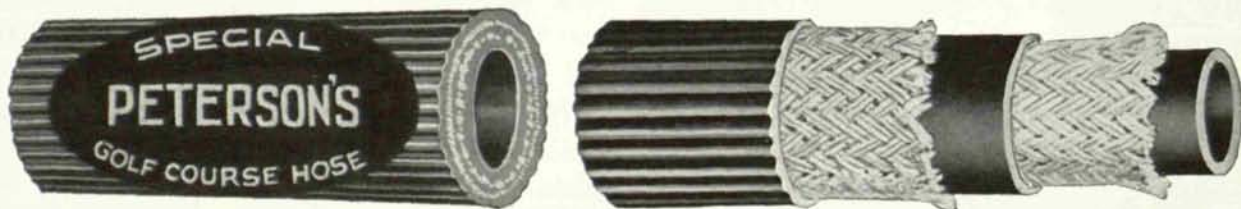
Analysis 8-5-3

We claim for Feedgreen all the virtues of well turned barn yard manure concentrated ten times. We claim that it more nearly approaches the natural plant food for grass than any manufactured fertilizer on the market.

Its benefits are quickly apparent and long sustained. A trial will prove our contentions. Compare dollar for dollar value with other products.

PRICE—Per ton \$70.00—100 lb. Trial Bag \$4.00 Also Other Golf Course Fertilizers

NU-GREEN and SEMESAN FOR BROWN PATCH CONTROL



A Flexible, sturdy hose with an attractive red cover. Note the cord tire construction as shown in illustration. Price, 3/4-in. size, coupled, per ft. 17 1/2 cents.

SAVE TIME ROYER COMPOST MIXERS SAVE MONEY

Our New Flags—Flag Poles—Hole Cups—Something Different—and Better

SEND FOR CATALOGS

ARTHUR D. PETERSON, INC.

11 E. 44th St., New York - Phone Murray Hill 3070-3071

seed - - - or SEED?

If we were to wrap each single seed separately in a sanitary package and place a fancy label on each package...it would still be seed. The package might make you think it was different.

The point is this...most seed is similar in appearance. The big difference is demonstrated not in the package but in the results it gives after it is put in the ground.

For over sixty years the name of SCOTT has been the prefix to seeds that may look more or less similar to other seeds. But it is only because seed with that name has proved by uniformity of results in over 1,000 Golf Courses that the prefix becomes significant. If there is a difference in seed—therefore—it's between seed and SCOTT'S SEED. Sow it once and you'll have a much better idea of what we mean.

A quotation on your fall requirements will be sent promptly on request.

O. M. SCOTT &
SONS CO.



Marysville,
Ohio

of the larger burnt spots to get them together quickly.

About a month later when we got our 8-5-3 I thought I would try it on the other half of the greens to kill the chickweed. We sprinkled it on the spots the same as I did the sulphate and the sun by that time was plenty warm. I left it on the spots from noon until the next morning and then washed them off with the hose. On every spot where I used the "Weeds" or 8-5-3 the chickweed disappeared but the bent kept on growing and wasn't even scorched.

Every three to four weeks since our first topdressing I topdress the greens the same way only instead of using one hundred pounds of fertilizer I use only about forty to fifty pounds. Also after cutting the greens down to putting length I can only work about one-half yard of compost into them and still have them playable.

Topdressing with Pure Sand

I HAVE this year given our greens two topdressings of pure sand, one of which I am now putting on. Our greens have been pack-

ing by using heavy roller mowers but since I have added more sand to our topdressing the soil doesn't pack like it did and we are getting along fine with our power mowers.

I think that keeping these topdressings up during the entire season will work anywhere. Some don't think you should fertilize during July and August, but I think a light topdressing with around twenty to twenty-five pounds of fertilizer added will be a big help in keeping greens during that time.

I use lots of water especially after putting on the topdressing. We wash it in thoroughly with water. I haven't put anything on the greens to keep them over winter and they have always come back in the spring healthy.

About fairways: We intended this year to put three hundred pounds of 8-5-3 to the acre. We were going to put it on in three applications. I put one hundred and fifty pounds on the first part of April and intended to put one hundred pounds on now, but since it is so dry, will wait until September and then put on the other hundred and fifty pounds. I use an end-gate fertilizer spreader to put this on with and it fastens on the back of our Toro steel wagon. One man sits in the cart and feeds it and the other man runs the tractor. We are lucky to have around one hundred loads of manure to use in thin spots this fall and will put that on with a manure spreader.

Now let's hear how some of you do your fertilizing.

Greenkeepers Visit Toronto

(Continued from page 6)

of mutual interest and to effect sound economies in the interest of the game while protecting the interests of all, and that Columbus had been accepted as the next convention city.

As he left Mr. Morley was extended another invitation to visit Toronto and was assured of a greater measure of hospitality from the Canadian members of the association, who, although not large in numbers, were unanimous in their view that the association was vital to their interests and that it would play a larger part in the development of golf.

533 golf clubs

from Maine to California

protect turf against BROWN PATCH

with SEMESAN and NU-GREEN



These prominent clubs, as well as many others, control brown patch with Semesan or Nu-Green, or both.

- CALIFORNIA**
- Fort Baker Officers' Club..... Ft. Baker
 - Gilroy Golf & Country Club..... Gilroy
 - Hollywood Country Club..... Hollywood
 - Fox Hills Country Club..... Los Angeles
 - Rancho Golf Club..... Los Angeles
 - Hillcrest Country Club..... Los Angeles
 - Montebello Park Golf Club..... Montebello Park
 - Riveria Country Club..... Pacific Palisades
 - Rancho Santa Fe Country Club..... Rancho Santa Fe
- CONNECTICUT**
- Keney Park Golf Club..... Hartford
 - Wepawaug Country Club..... Milford
 - Shuttle Meadow Club, Inc..... New Britain
 - Woodway Country Club, Inc..... Springdale
 - Watertown Golf Club..... Watertown
- DELAWARE**
- Municipal Golf & T. Ass'n..... Wilmington
- FLORIDA**
- Howey-in-the-Hills Club..... Howey
- ILLINOIS**
- Bel Mar Country Club..... Belvidere
 - Lakeside Country Club..... Bloomington
 - Pipe O'Peace Golf Club..... Blue Island
 - Champaign Country Club..... Champaign
 - Beverly Country Club..... Chicago

- MINNESOTA**
- Interlachen Country Club..... Hopkins
 - Somerset Country Club..... St. Paul
- MISSOURI**
- Bogey Golf Club..... Clayton
 - Crystal Lake Golf Club..... Clayton
 - Oakwood Golf Club..... Dodson
 - Oak Hill Golf Club..... Joplin
 - Indian Hills Country Club..... Kansas City
 - Kansas City Country Club..... Kansas City
 - Meadow Lake Country Club..... Kansas City
 - Milburn Golf and Country Club..... Kansas City
 - Mission Hills Country Club..... Kansas City
 - Osage Country Club..... Kirkwood
 - Bellerive Country Club..... Normandy
 - Glen Echo Country Club..... Normandy
 - North Hills Country Club..... Normandy
 - Highlands Golf & Country Club..... St. Joseph
 - Sunset Hill Country Club..... Sappington
 - Algonquin Golf Club..... Webster Groves
 - Westwood Country Club..... Webster Groves
 - Normandie Country Club..... Wellston (St. L.)
- NEBRASKA**
- Country Club of Lincoln..... Lincoln
 - Omaha Country Club..... Omaha
 - The Omaha Field Club..... Omaha
 - Lakewood Golf Club..... Ralston
 - Happy Hollow Club..... Summer
- NEW HAMPSHIRE**
- Forest Hills Golf Club..... Franconia
 - Mojalaki Country Club..... Franklin
 - Androscoegin Valley Country Club..... Gorham

- Manchester Country Club..... Manchester
 - Newport Golf Club..... Newport
 - Portsmouth Country Club..... Portsmouth
 - Kingswood Golf Club..... Wolfboro
- NEW JERSEY**
- Seaview Golf Club..... Absecon
 - Pine Valley Golf Club..... Clemenston
 - Alderss Golf Club..... Cresskill
 - Hollywood Golf Club..... Deal
 - Glenridge Country Club..... Glen Ridge
 - Atlantic Pines Country Club..... May's Landing
 - Montclair Golf Club..... Montclair
 - Moorestown Field Club..... Moorestown
 - Elmwood Country Club..... Paterson
 - Plainfield Hills Country Club..... Plainfield
 - Laurence Brook Country Club..... South River
 - Suburban Golf Club..... Union
 - Crestmont Golf Club..... West Orange
- NEW YORK**
- Albany Golf Club..... Albany
 - Wolferts' Roost Country Club..... Albany
 - Briar Hills Country Club..... Briarcliff Manor
 - Briarcliff Lodge Sports Club..... Briarcliff Manor
 - Leewood Golf Club..... Bronxville
 - South Shore Country Club..... Buffalo

- The Rockaway Hunting Club..... Cedarhurst
 - Whippoorwill Country Club..... Chappaqua
 - North Hills Golf Club..... Douglaston
 - Fairview Country Club..... Elmsford
 - Knollwood Country Club..... Elmsford
 - Old Country Club..... Flushing
 - Garden City Country Club..... Garden City
 - Old Westbury Golf Club..... Garden City
 - Highlands Country Club..... Garrison
 - North Shore Golf Club..... Glen Head
 - Deepdale Golf & Country Club..... Great Neck
 - Lakeville Golf & Country Club..... Great Neck
 - Sound View Golf Club..... Great Neck
 - Scarsdale Golf Club..... Hartsdale
 - Huntington Valley Club..... Huntington
 - Bonnie Briar Country Club..... Larchmont
 - Piping Rock Club..... Locust Valley
 - Lido Country Club..... Long Beach
 - The Winged Foot Golf Club..... Mamaroneck
 - Quaker Ridge Golf Club..... Mamaroneck
 - Siwanoy Country Club..... Mt. Vernon
 - Broadmoor Country Club..... New Rochelle
 - Locust Hill Country Club..... Pittsford
 - Blind Brook Golf Club..... Port Chester
 - Belle Terre Golf Club..... Port Jefferson
 - Progress County Club..... Purchase
- Brook-Lea Country Club..... Purchase
 - Links Golf Club..... Purchase
 - Rye Country Club..... Purchase
 - Westchester-Biltmore Club..... Purchase
 - Sleepy Hollow Country Club..... Purchase
 - Quaker Ridge Golf Club..... Purchase
 - Scarsdale Golf Club..... Purchase
 - Rockwood Hall Country Club..... Purchase
 - Mt. Vernon Country Club..... Purchase
 - Oak Ridge Golf Club..... Purchase
 - Knollwood Country Club..... Purchase
 - Westchester Hills Golf Club..... Purchase
 - Century Country Club..... Purchase
 - Woodmere Club, Inc..... Purchase
 - Wesley Sprain Golf Club..... Purchase
 - Hudson River Country Club..... Purchase
- NORTH**
- High Point Country Club..... Purchase
 - Lenoir Golf Club..... Purchase
 - Penrose Park Country Club..... Purchase
- OH**
- Portage Country Club..... Purchase
 - Turkey Foot Lake Golf Club..... Purchase
 - Tuscarawas Country Club..... Purchase
 - Oak Grove Golf Club..... Purchase

Results obtained by many coast to coast have defined Semesan and Nu-Green as the outstanding prevention and control of brown patch.

Semesan controls brown patch in severe conditions but is not so effective where soil fertility is high. Nu-Green is more effective on less fertile soils.

For the control of brown patch, Semesan or Nu-Green to 50 gallons per acre or square feet of turf by spray power sprayer, 50 gallons per acre treat from 2000 to 3000 gallons of Nu-Green solution to 2000 square feet.

ORDER NOW FROM YOUR NEAREST

SEMESAN

- 5 lbs..... \$ 13.00
- 25 lbs..... 56.25
- 100 lbs..... 220.00
- 300 lbs..... 645.00

SEMESAN

REG. U. S. PAT. OFF.

BAYER-SEMESAN CO., INC., 1



In hot weather, brown patch is most dangerous. Kill it now before it kills your costly greens

leading greenkeepers from
ately established Semesan
standing fungicides for the
brown patch.

m patch under the most
recommended where soil
is advised when the soil is
s are harmless to turf.

atch, 1 pound of Semesan
s of water will treat 1000
rinkling. When applied by
s of Semesan solution will
square feet of turf and 50
tion will treat from 1500

Mt. Hawley Country Club.....Peoria
Northmoor Country Club.....Ravinia
Riverside Golf Club.....Riverside
Saukie Public Golf Club.....Rock Island
Glendale Country Club.....Roselle
Westmoor Country Club.....Roselle
Coal Creek Country Club.....Sheffield
Grandview Country Club.....Springfield
Rock River Country Club.....Sterling
Westward House Golf Club.....Westward

INDIANA
Bloomington Country Club.....Bloomington
Surprise Golf & Boat Club.....Cedar Lake
Ft. Wayne Country Club.....Ft. Wayne
Orchard Ridge Country Club.....Ft. Wayne
French Lick Springs Golf Club.....French Lick
Kokomo Country Club.....Kokomo
Tippecanoe Country Club.....Monticello
Delaware Country Club.....Muncie
Coquillard Golf Club.....South Bend
South Bend Country Club.....South Bend
Rea Park Golf Course.....Terre Haute
West Baden Springs Golf Club.....West Baden

IOWA
Albia Country Club.....Albia
Cedar Rapids Country Club.....Cedar Rapids
Charles City Country Club.....Charles City
Wakonda Country Club.....Des Moines
Country Club of Ft. Dodge.....Ft. Dodge
Cedar Rapids Country Club.....Marion
West Okoboji Golf & Country Club.....Milford
Sunnybrae Country Club.....Osage
Storm Lake Country Club.....Storm Lake
Des Moines Golf & Country Club.....Valley Junction

KANSAS
Shawnee Golf Club.....Topeka
Topeka Country Club.....Topeka
Crestview Country Club.....Wichita
Wichita Country Club.....Wichita

KENTUCKY
Bowling Green Country Club.....Bowling Green
Middlesboro Country Club.....Middlesboro
Richmond Golf Club.....Richmond

MAINE
Webhannet Golf Club.....Kennebunk Beach

Old Orchard Golf & Country Club.....Old Orchard
Oakdale Country Club.....Rumford

MARYLAND
Druid Hill Park.....Baltimore
Royal Swan Club.....Berterton
Columbia Country Club.....Chevy Chase
Cumberland Country Club.....Cumberland
Edgewood Arsenal Golf Club.....Edgewood Arsenal
Rogers Forge Golf Club.....Rogers Forge
Elkridge Fox Hunting Club.....Woodbrook

MASSACHUSETTS
Ashfield Community Golf Club.....Ashfield
Fall River Country Club.....Fall River
Falmouth Country Club.....Falmouth
Lexington Country Club.....Lexington
Quabog Country Club, Inc.....Monson
Needham Golf Club.....Needham
Wianno Golf Club.....Osterville
Petersham Country Club.....Petersham
Wachusett Country Club.....West Bogieston

MICHIGAN
Ot-Well-Egan Golf Club.....Allegan
Knollwood Country Club.....Birmingham
Oakland Hills Country Club.....Birmingham
Crystal Falls Golf Association.....Crystal Falls
Dearborn Country Club.....Dearborn
Detroit Golf Club.....Dearborn
Hawthorne Valley Golf Club.....Dearborn
Sylvan Glen Country Club.....Detroit
Glenoaks Golf Club.....Farmington
Grand Beach Golf Club.....Grand Beach
Grayling Golf Club.....Grayling
Greenville Country Club.....Greenville
Jackson Country Club.....Jackson
Jackson Masonic Country Club.....Jackson
Walnut Hills Golf Club.....Lansing
Midland Country Club.....Midland
Monroe Country Club.....Monroe
Gowanie Golf and Country Club.....Mt. Clemens
Mt. Pleasant Country Club.....Mt. Pleasant
Meadowbrook Country Club.....Northville
Orchard Lake Country Club.....Orchard Lake
Lake Angelus Country Club.....Pontiac

Club.....Rochester
.....Roslyn
.....Rye
.....Rye
.....Tarrytown
.....Tuckahoe
.....Tuckahoe
.....White Plains
.....White Plains
.....White Plains
.....Woodmere
.....Yonkers
.....Yonkers
CAROLINA
.....High Point
.....Lenoir
.....Reidsville
IO
.....Akron
.....Akron
.....Akron
.....Alliance

Brookside Country Club.....Canton
Highland Golf Club.....Canton
Shady Hollow Country Club.....Canton
Cincinnati Country Club.....Cincinnati
Three Rivers Golf Club.....Cleveland
Pickaway Country Club.....Circleville
Columbus Country Club.....Columbus
Elka Country Club.....Columbus
Indian Springs Golf Club.....Columbus
Scioto Country Club.....Columbus
Winding Hollow Country Club.....Columbus
Dayton Country Club.....Dayton
Maegregor Golf Club.....Dayton
Odevena Country Club.....Delaware
Ridgewood Golf Club.....Elmwood Station
Mahoning Valley Country Club.....Girard
Shawnee Country Club.....Lima
Losantville Country Club.....Pleasant Ridge
Raven Rock Golf Club.....Portsmouth
Sebring Country Club.....Sebring
Belmont Hills Country Club.....St. Clairsville
Springfield Community Golf Club.....Springfield
Urbana Country Club.....Urbana
Trumbull Country Club.....Warren
Willowick Country Club.....Wickliffe
Youngstown Country Club.....Youngstown

OKLAHOMA
Oklahoma City Golf and Country Club.....Oklahoma City

OREGON
Albia Country Club.....Albia

PENNSYLVANIA
Pittsburgh Field Club.....Aspinwall
Bala Golf Club.....Bala
Philadelphia Country Club.....Bala
Highland Country Club.....Bellevue
Saucon Valley Country Club.....Bethlehem
Butler Country Club.....Butler
West Shore Country Club.....Camp Hill
Philadelphia Cricket Club.....Chestnut Hill
Whitemarsh Valley Country Club.....Chestnut Hill
Conneaut Lake Golf Club.....Conneaut Lake Park
Course.....Conneaut Lake Park
Pup's Foot Country Club.....Edgewood
Melrose Country Club.....Elkins Park
Gulf Mills Golf Club.....Gulf Mills
Merion Cricket Club.....Haverford
Old York Road Country Club.....Jenkintown
Kennett Square Golf & Country Club.....Kennett Square
Valley Forge Golfers' Club.....King of Prussia

Mahoning Valley Country Club.....Lansford
Country Club of Lansdowne.....Lansdowne
Cedarbrook Country Club.....Mt. Airy
Pike Run Country Club.....Mt. Pleasant
Aronimink Golf Club.....Newton Square
Manufacturers Country Club.....Oreland
Pennsylvania Golf Club.....Philadelphia
Reading Country Club.....Reading
Shawnee Country Club.....Shawnee-on-Delaware
The Springhaven Club.....Wallingford
Latrobe Country Club.....Youngstown

RHODE ISLAND
Misquamicut Golf Club.....Watch Hill

TENNESSEE
Oriental Country Club.....Nashville

VERMONT
Lake St. Catherine Country Club.....Poultney
Woodstock Country Club.....Woodstock

VIRGINIA
Country Club of Virginia.....Richmond

WEST VIRGINIA
Clarksburg Country Club.....Clarksburg
Preston Country Club.....Kingwood

WISCONSIN
Morse Hills Golf Club.....Beloit
Brown's Lake Golf Ass'n.....Burlington
Lake Lawn Hotel Co.....Delavan
Eau Claire Country Club.....Eau Claire
Nippersink Lodge.....Genoa City
La Crosse Country Club.....La Crosse
Rhinelander Country Club.....Rhinelander
Plum Lake Golf Club.....Sayner

NEAREST GOLF SUPPLY HOUSE

NU-GREEN
REG. U. S. PAT. OFF.

NU-GREEN

5 lbs.....\$ 9.00
25 lbs.....37.50
100 lbs.....145.00
300 lbs.....420.00

05 Hudson Street, New York, N. Y.



Golf Course Construction from the Greenkeeper's Standpoint

By EDWARD B. DEARIE, JR.
Noted Chicago Greenkeeper and Golf Course Architect

CHAPTER V—*Irrigating the Golf Course*

BEAUTY, the natural beauty of nature, and a velvety carpet of turf upon which a fair shot will go far, are characteristics of the inviting golf course. If the satisfaction of golfers is important, then irrigation is important also.

Water is one of the necessary elements of plant life. To grow grass without water would be as impossible as to grow it without air or sunshine. Hot weather is more injurious to grass than cold weather. Turf often thrives under a blanket of snow but dies quickly under the heat of the summer sun when not properly watered. Scorched dead grass instantly ruins the appearance of any golf links.

Fortunate indeed is the golf course where the rain always falls at the right time and in the right amount. Such localities exist but they are rare in United States. In the Hawaiian islands there is usually a light shower every noon and in the Rockies a short down-pour may be expected every afternoon during the summer.

While it is true that lawns have been sprinkled for many generations, it was not until a couple of decades ago that the first attempts were made to extend sprinkling to such large areas as golf courses. First efforts were confined to watering tees and greens. These experiments bore such fruitful results that the desirability of irrigating the fairways, too, was soon apparent.

California the Pioneer

CALIFORNIA deserves credit for pioneering in fairway irrigation. The absence of rain

during the long dry season there made irrigation for the entire course absolutely necessary. The wonderful transformations of semi-desert land into attractive regions created a most favorable impression upon eastern golfers attending championship matches.

Too often country clubs admit the desirability of fairway irrigation but refuse to consider it seriously because of the cost. Such a viewpoint is looking through the wrong end of the telescope. The real question should be: How much is an irrigation system worth? It is true that the average irrigation system costs from \$15,000 to \$30,000 but such an investment is trivial when compared with the total expenses connected with the establishment of the club.

Economies from the operation of the system will benefit the course for many years. Water is cheaper than grass seed. Sprinkling involves less inconvenience than reseeding. When the cost and value of an irrigation system are weighed together, usually the former will seem insignificant.

There is a tendency to give the subject of irrigation the attention which it deserves and many systems are being installed each year



NOTE THE COMPLETE COVERING EFFECT OF THE TWO "POP-UP" SPRINKLERS ON THIS DOUBLE TEE