MUCH OF THE SEED that is used on golf courses is imported. In a report recently published by the Division of Seed Investigations of the Bureau of Plant Industry, U. S. Dept. of Agriculture, is given a table of imports of different seeds during the past two government fiscal years. From that report are quoted items that are of chief interest to the golf course trade. Naturally only a small part of the imports listed are used on golf courses but the figures serve to show the extent of the foreign grass seed import business as well as the relative amounts of the different grass seeds that are imported. Two of the interesting figures in the accompanying table are those of chaff of bent and fescue. No doubt much of this chaff is used for lawn mixtures but undoubtedly much of it finds its way to golf courses where purchases are made on the basis of "bargains" instead of on the basis of guaranteed purity and germination figures.

Three of the most important grasses used on golf courses in this country, namely, Kentucky bluegrass, redtop, and Bermuda grass, are not listed in the report. This is because seed of these grasses are produced in this country in sufficient quantities to supply the demand. The other commonly used grasses on golf courses—colonial bent, seaside bent and rye grasses—are also produced in this country in large quantities. The utilization by golf courses of large quantities of these home grown seeds is only one way in which the golf course business of the country directly helps the American farmer.

The importations of Italian ryegrass did not come from Italy, which might be expected from its name. The government records show that the Italian ryegrass importations were from the following sources:

11,200 pounds from New Zealand.
6,000 pounds from Denmark.
4,500 pounds from Great Britain (of Irish origin).
4,500 pounds from Ireland.
200 pounds from Netherlands.

Over 80 per cent of the perennial ryegrass importations originated in Ireland.

Ky. Blue and Redtop Seed Reduced

Golf courses, especially those in the drought area, will probably use more seed of Kentucky bluegrass and redtop this fall than has been used in the past two years. Officials of clubs contemplating the purchase of seeds for fall planting or planting next spring will be interested in the reports of the seed crop of the most important fairway grasses on northern golf courses.

The Bureau of Agricultural Economics of the U. S. Dept. of Agriculture has estimated that the Kentucky bluegrass seed production in 1934 is about one-fourth that of last year. The production of Kentucky bluegrass in recent years is shown in the

<table>
<thead>
<tr>
<th>IMPORTS OF GOLF TURF SEEDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 1, 1933, July 1, 1932, to June 30, 1934 June 30, 1933</td>
</tr>
<tr>
<td>Bent grass ............ 58,700 51,900</td>
</tr>
<tr>
<td>Bent grass, chaff .... 5,700 5,700</td>
</tr>
<tr>
<td>Bluegrass, Canada 128,100 191,100</td>
</tr>
<tr>
<td>Carpet grass ....... 2,000 800</td>
</tr>
<tr>
<td>Dogtail, crested .... 5,700 15,700</td>
</tr>
<tr>
<td>Fescue, Chewings 1,077,000 919,900</td>
</tr>
<tr>
<td>Fescue, other ...... 168,800 307,000</td>
</tr>
<tr>
<td>Fescue, chaff ........ 5,400</td>
</tr>
<tr>
<td>Meadow grass, annual, (Poa annua) 2,000 4,600</td>
</tr>
<tr>
<td>Meadow grass, rough-stalked (Poa trivialis) 426,000 426,600</td>
</tr>
<tr>
<td>Meadow grass, wood .... 9,300 5,500</td>
</tr>
<tr>
<td>Mixtures, grass from Great Britain .......... 400 900</td>
</tr>
<tr>
<td>Ryegrass, Italian 26,400 42,300</td>
</tr>
<tr>
<td>Ryegrass, perennial 531,600 462,800</td>
</tr>
<tr>
<td>Yarrow .......... 500 400</td>
</tr>
</tbody>
</table>
The figures represent bushels of rough, cured seed.

<table>
<thead>
<tr>
<th>Year</th>
<th>Produced</th>
</tr>
</thead>
<tbody>
<tr>
<td>1934</td>
<td>325,000</td>
</tr>
<tr>
<td>1933</td>
<td>1,300,000</td>
</tr>
<tr>
<td>1932</td>
<td>1,400,000</td>
</tr>
<tr>
<td>1931</td>
<td>3,500,000</td>
</tr>
<tr>
<td>1930</td>
<td>775,000</td>
</tr>
<tr>
<td>1929</td>
<td>1,350,000</td>
</tr>
<tr>
<td>1928</td>
<td>300,000</td>
</tr>
<tr>
<td>1918-1927</td>
<td>963,500</td>
</tr>
</tbody>
</table>

*Average each year.
†Estimated.

The bluegrass seed crop was reported as being practically a complete failure in Iowa, Nebraska and Kansas. The long severe drought of spring is supposed to have been the chief cause of the reduction in the crop. Freezes, a cold spring, and insects, probably also helped in reducing the crop.

The yield of fancy or clean seed was expected by the Department of Agriculture to be even lighter than that of the 1933 crop, which was below average. The percentage of clean seed from rough seed is expected to be only between 30 per cent and 40 per cent.

**Bluegrass Surplus Gone**

During the past two or three years there has been a large surplus of Kentucky bluegrass seed. A large share of this surplus was taken up by relief agencies of the Federal government. The seed was distributed among many Federal and State relief projects and otherwise disposed of. The result is that the large surplus of Kentucky bluegrass seed which has had a decided tendency to hold down the price of Kentucky bluegrass seed has practically been removed. The price of Kentucky bluegrass seed has been rising and it is likely that it will continue to rise. Golf clubs which are anticipating the use of any large quantity of this seed for fall or spring planting need not expect the price of this seed to be any lower than it is at present.

Dealers reported larger sales of Kentucky bluegrass seed this spring than those of last year. At the end of June the Department of Agriculture estimated that 150 carloads of the 1932 and 1933 crop seed were held by dealers and growers' pools. In addition approximately 80 carloads of 1930 crop seed was being held. The demands for Kentucky bluegrass for new plantings and for reseeding turf injured by the recent drought have by this time very largely cut down on the amount of the crop held over from previous years.

According to the figures of the Bureau of Agricultural Economics the prices of Kentucky bluegrass are shown herewith. The figures represent the price per bushel for rough, cured seed paid to growers in Kentucky and in the Western (Missouri, Nebraska, Iowa, Kansas) districts.

<table>
<thead>
<tr>
<th>Year</th>
<th>Kentucky</th>
<th>Western</th>
</tr>
</thead>
<tbody>
<tr>
<td>1924</td>
<td>$1.65</td>
<td>$1.75</td>
</tr>
<tr>
<td>1925</td>
<td>1.75</td>
<td>2.30</td>
</tr>
<tr>
<td>1926</td>
<td>1.20</td>
<td>1.25</td>
</tr>
<tr>
<td>1927</td>
<td>.70</td>
<td>.90</td>
</tr>
<tr>
<td>1928</td>
<td>1.25</td>
<td>1.75</td>
</tr>
<tr>
<td>1929</td>
<td>1.20</td>
<td>1.20</td>
</tr>
<tr>
<td>1930</td>
<td>1.40</td>
<td>1.70</td>
</tr>
<tr>
<td>1931</td>
<td>.70</td>
<td>.65</td>
</tr>
<tr>
<td>1932</td>
<td>.40</td>
<td>.40</td>
</tr>
<tr>
<td>1933</td>
<td>.50</td>
<td>.60</td>
</tr>
</tbody>
</table>

The early prices paid this year in these districts indicate a decided increase over last year. The average price recently offered growers averaged 70 cents a bushel in Kentucky and $1.35 in Missouri.

**Redtop Crop 20 Per Cent Smaller**

The U. S. Bureau of Agricultural Economics recently estimated that the redtop seed production this year would be 20 per cent smaller than the crop of 1933. The hot dry weather, particularly in April and May, was held accountable for the reduced crop. New seedings this spring and last fall were seriously damaged or killed by the dry weather that followed. It is impossible to fully determine the effect of the hot dry weather on the yields of fancy seed until the crop has been completely threshed. It is estimated that about 200 carloads (15 tons each) of fancy seed will be produced in 1934 as compared with the following figures for 10 previous years.

- 1924—350 carloads
- 1925—200 carloads
- 1926—275 carloads
- 1927—600 carloads
- 1928—475 carloads
- 1929—250 carloads
- 1930—250 carloads
- 1931—600 carloads
- 1932—525 carloads
- 1933—250 carloads

The quality of the 1933 crop is said to be inferior to that of last year because the seed is thinner and the meadows were reported to be weedier, especially with yarrow.
The U. S. Bureau of Agricultural Economics estimated that the carry-over on July 1, 1934, was approximately 550 carloads of fancy seed. This did not include the 70 carloads purchased up to that date by the Federal Surplus Relief Corp. which is now said to have been completely disposed of. The carry-over figure is based on the production figures for 1927 to 1933 and an average annual consumption of 330 carloads for the past seven years. The Government estimate on July 1st indicated therefore that there was on hand in addition to the 1934 crop nearly a two years' supply of redtop seed. Therefore there should be an ample supply for everybody even though it is likely that there will be an increased demand this fall for redtop seed for reseeding areas injured by drought.

Recent reports indicate that the price of redtop seed is rising rapidly along with that of Kentucky bluegrass and other grasses of which there are smaller surpluses. The average price for redtop seed to the growers during the past 11 years was as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1923</td>
<td>11c</td>
</tr>
<tr>
<td>1924</td>
<td>11c</td>
</tr>
<tr>
<td>1925</td>
<td>22c</td>
</tr>
<tr>
<td>1926</td>
<td>22c</td>
</tr>
<tr>
<td>1927</td>
<td>10½c</td>
</tr>
<tr>
<td>1928</td>
<td>12½c</td>
</tr>
<tr>
<td>1929</td>
<td>14½c</td>
</tr>
<tr>
<td>1930</td>
<td>18½c</td>
</tr>
<tr>
<td>1931</td>
<td>6½c</td>
</tr>
<tr>
<td>1932</td>
<td>3½c</td>
</tr>
<tr>
<td>1933</td>
<td>5½c</td>
</tr>
</tbody>
</table>

Golf Seed Dealers Comment
Several of the seed companies in close touch with the golf club situation have favored GOLFDOM with their views. One of these large dealers who does not wish to be directly quoted says:

"In grass seed markets, everyone is going crazy, on account of the drought. The timothy crop is the shortest on record, and has gone up to 18 or 20c a pound, and it is our opinion that a lot of other things have gone up in sympathy with it. The bluegrass crop is also very short, and it is believed there is approximately 300 cars, or a year's supply, in new and old seed, chiefly in the hands of three or four people. The weight method of quoting seems to be going out of style, and they are quoting on a purity-germination basis only; 75 to 80 per cent in germination, 80 to 85 per cent pure. The market in a carload way is somewhere around 19 to 20c a pound, and it would probably reach the golf clubs around 25c a pound."
25c a pound. There is no use encouraging any of the clubs to ask for extra high quality, because it will not be obtainable. Just before the new crop, they persuaded the government to take over the entire 1931 crop of bluegrass, which the relief administration did. They already had money advanced on it, and took it over at approximately 7c a pound. This amounts to a year's supply itself, so the government is therefore holding a year's supply of bluegrass. It is not expected to come back into trade channels, but be used up on government projects.

"They also took over a number of cars of redtop at the same time. However, it is believed that there is at least two years' supply of redtop available, and they put the price up very sharply in sympathy with timothy and bluegrass, which was to be expected. The carload market on redtop today is approximately 15c. No one can make any predictions, of course, particularly as the drought in Europe has cleaned up European grasses. There is practically no Chewings available, and common Sheeps Fescue is selling at 30 to 35c in Europe. We believe the market will be practically bare of fancy grasses this fall, or at least by spring.

"There is only one thing plentiful that we know of, and that is ryegrass from Oregon, where they had a big crop, and suppose they will get the price-raising fever very soon themselves.

"We believe that markets will be stronger during the next 30 to 60 days, but whether they will recede a little during November and December remains to be seen. Bents are all practically in control of a few people out in the west, and will go just as high as the traffic will stand. Seaside creeping bent will reach the golf clubs at about $1.00 a pound, Astoria possibly a little less. There is practically no New Zealand bent, and very little German bent, so anything can be expected."

Spring Prices Probably Higher

Stump & Walter Co. is of the opinion that there is not much hope of expecting that seed price advance will come to a halt for some time. They report:

"While there apparently is no acute shortage in such grasses as fancy redtop and Kentucky bluegrass, nevertheless, with higher prices prevailing, especially on a grass such as timothy, which today costs more than either one of the first two grasses mentioned, it is natural to expect further rises in bluegrass and redtop, as they will be used in place of timothy, for we doubt if there is more than half of the normal consumption of timothy available today.

"Foreign grasses are even in a worse position than our domestic grasses; this is particularly true of Chewing's fescue and the other fescues from Europe, all of which have been affected by drought and prices have advanced to points even higher than those reached during the pre-depression years.

"The bent grasses are also somewhat stronger in price than last fall and this spring; supplies are limited, crops have been fair, but with no carry-over, and with a good demand, it is very difficult to see where any lower prices will prevail.

"Bent grasses, fancy redtop and Kentucky bluegrass are still selling under prices it was necessary to get before the collapse of the grass seed markets.

"There is no telling what spring prices will be on golf course seeds; from present indications they certainly will be considerably higher than this fall, for with shortages in so many varieties, even though there may be a feeling that certain prices have advanced too rapidly, we do not see where there can be much falling off."

How Golf Clubs Are Caught

Golf clubs unfortunately find themselves with a necessity to extensively seed just as prices are climbing. Some aspects of this condition come from O. M. Scott & Sons Co.:

"A great many greens have gone bad and fairways up until August 10 looked badly shot. Of course recent rains have done wonders. The unfortunate thing is that prices are advancing rapidly.

"There was a good sized carry-over of bluegrass and redtop but several million pounds of seed have been bought up for various governmental projects simply because the government had loaned more on the seed originally than it was worth and decided it was better to take it off the market. Immediately a short crop came along and prices began to advance.

"Chewing's fescue which we were selling last spring at $18 per hundred pounds is wholesaling in New York today at 45 cents. Bluegrass has advanced from $15 per hundred to $25 and redtop from about ten to eighteen. These prices are necessarily discouraging some clubs that had good intentions. For instance we received an order from a club out of a clear sky for something like 3,500 pounds of seed. A letter from us crossed in the mail in which we quoted present prices. The greens chairman 'phoned to cancel the order saying that they simply didn't have the money. Of course there are plenty of clubs that will pay the price. High market levels do however cut down the buying of the course.

"There doesn't seem to be much in sight to indicate lower prices for spring. In fact if there is a heavy seeding this fall the average club.
spring prices will be still higher as there is not much chance for decline until another crop is in the bag.

"We have had good business on bent seed. It has stayed fairly reasonable, as there was a rather good production."

**Peak Prices to Come**

Fred Radway of New York believes there is no chance for increase in seed prices to be checked until the middle of 1935. He sizes up the situation by the following comment:

"Golf course seed market right now and for later fall delivery is so much higher than the average buyer realizes that it cannot be expressed easily in words. A hand to mouth local policy is advocated by those who hold the strings to the purse. Consequently where 2,000 pounds of bent were purchased a year ago, 200 pounds suffices and instead of Chewing's fescue 10,000 pounds, 1,000 pounds looks like a whole lot.

"Cablegrams come to our office about crop failures in France, Germany, Hungary and portions of Poland. Cables come in from New Zealand requesting us to resell our purchases and holdings of Chewing's fescue. This one market which opened at about 80/- some time ago, which roughly is 20c a pound, is between 140/- and 160/- today for import, which means between 50c to 60c per pound for first class or good grade Chewing's. This automatically means a 70c Chewing's fescue market at the golf courses, whereas in the past they have been paying around 30c only.

"I look for a healthy demand on a small scale at high prices for fall seeding and also for early spring season. $1.00 and $1.50 bent grasses are stylish again and I don't mean maybe. Personally I hate to see these high prices, as they retard business. But with our own Minnesota and Iowa timothy and hay crops nearly a double failure and drought conditions, what else could be expected? There can be no price relief until June or July, 1935 when new crops will start to trickle in.

"Even outside matters like yarrow, for which we used to pay $1 a pound wholesale, costs us $2 a pound today. The quicker golf courses purchase their immediate requirements, the less they will have to spend, because the peak of grass seed prices has not been reached yet. The relief will only come after next summer, provided there is not another drought."

**Jimmy McGonagill, Hagen Man, Is Blushing Bridegroom**

DALLAS, TEX.—Jimmy McGonagill, L. A. Young Golf Co., southwestern salesman and formerly with that company at Chicago and Detroit, recently was married to Miss Doris Robertson of Tyler, Tex.

All the dolls in Detroit and Chicago were running high fevers over Jimmy's nice boyish mugg, his lovely blue eyes, classic figure and "you all, honey" line of hooie, but getting nowhere with Doris' own true love. Now they can get back to work batting those typewriters while Doris and Jimmy are playing house in the dear little rose-covered cottage in the southland.

**Carl Hornkohl, Golfdom-Golfing Heavy Man, in New Job**

CARL HORNKOHL, who has been in charge of Golfdom and Golfing circulation work since the start of these publications, resigned September 1 to join his father in the bakery supply business.

The Hornkohl youth has been associated with the Golfdom-Golfing publishers, in various enterprises, for 13 years. We signed him as fifteenth vice-president in charge of stamps, mailing and dirty work when he was a school kid.

Carl knows hundreds of pros, greenkeepers and managers, and many a night the kid left the padded cell at midnight or later, having spent extra hours trying to get jobs for fellows. He developed a marvelous command of the golf club situation and personnel location. In all the time he worked for this mob there never was an assignment he wouldn't eagerly accept and work out while the rest of us were bellyaching about having too much to do.

The difficult position as end man upon whom the buck was passed, he filled in great shape. He was the greatest picker of racehorses we ever saw, having finished the last 10 seasons with a total of $2.10 ahead.

The Illinois PGA, for whom Carl would drop everything or stay late in getting out notices and digging up dope, presented him with a traveling bag as he bade a formal farewell to the golf field.

His daddy has a great son and a great worker to help him with a rapidly growing business in the bakery field and the boy will make good there.

**Greens Should be Top-dressed at Least 3 Times a Season**

GREENS SHOULD be top-dressed at least 3 times a season, and since players object to playing over recently top-dressed greens, smart greenkeepers always plan this necessary maintenance operation for some Monday, the day of the week when play is least.
PUTTS AT HALF PRICE

Akron Muny Players Test Idea of Counting Putts Half Stroke

By C. W. HOWARD

Tommy Armour's half-stroke putt idea would be a boon to the high-handicap players. Records to prove the assertion are at hand.

Low handicap men as well as high handicap men, in a recent test at the Akron municipal course, discovered that the way to actually score is to count each putt a half stroke.

George Brady, one of the outstanding public linksmen in the Akron sector, fired a tired 80 in the tests—but at half a stroke for putts he was around the course in exactly 62 blows.

Your humble galloper, who has played from a 12-stroke handicap for y'rs and y'rs, knocked in an 85—but when the half-stroke computation was chalked up, he had carded 37—34½—71½.

Par for the Municipal layout:

Out ... 4 5 4 3 5 3 4 4 3—35
In ... 5 4 3 4 4 4 5—37—72

Brady's card at the half-stroke for putts read like this:

Out 3½ 4½ 4 2½ 5 2½ 3 3½ 2½—31
In 5 3 2½ 2½ 4 4 3 3—31—62

Jackie Lahmer, one of Municipal's younger stars, carded 30—31½—61½, while Charley Burns, the Municipal manager, was around the back nine in exactly 29½ knocks. Here is how Burns' card for the homeward tour looked:

In... 4 4 3 3 3 3½ 2½ 3 3½—29½

Ed Harrah, another of the district's star public linksmen, collected a 79, scoring regularly—40—39—79—while at a half-stroke for putts he had 34—31½—65½.

Armour advanced the theory of counting putts at half a stroke, instead of a full stroke, to take some of the premium off putting, and to afford some advantage to the fellow who plays the hole perfectly from tee to green.

How that worked out in the tests at Municipal was proven beyond question on the finishing hole, a tough par 5.

The wind was following the fellows. Burns, Brady and Harrah lashed out beautiful tee shots well up to the 250-yard stake. Harrah, in fact, was in the valley in front of the green, 300 yards from the tee.

Brady hit the green with his second, a spoon. Burns was in the grass trap at the right. Harrah was on with a spade.

Burns chipped and was on the green in three. He sank the putt for a regular four—a 3½ under the Armour system. Brady was down in two putts, for a regular 4, but under Armour's plan, a 3, counting the putts at half a shot each, thus giving him the hole and a half stroke advantage because he played perfectly from tee to green, and was down in the regulation number of putts.

Harrah three-putted, and got a 3½, the same as Burns.

In your correspondent's case the trick scoring proved that he is a better golfer than he had believed. That 37 going out was the result of some three putt, holes, due to the slippery condition of the greens—how's that for the old alibi?—but the 34 coming back wasn't half bad.
Armour's plan probably never will be adopted generally, but from this commentator's point of view it would be a grand thing for the rank and file of the world's golfing army—and it certainly would be an advantage for the fellow who can hit his woods and irons as they should be hit.

At any rate it provides a very interesting feature for a club tournament where the members are looking for a novelty event on the program.

Chinch Bug Control More Trouble for Courses

Many courses this year have suffered damage from chinch bugs. Especially the Philadelphia district has been troubled by this pest. Chinch bugs do not often affect greens, probably because greens are kept constantly moist, but O. J. Noer reports having inspected cases of serious injuries to nurseries and even to trees. The chinch bug is a sucking insect. Its operations cause the grass to become flabby, then wither and turn brown.

So far the following two treatments appear to be effective:

Rotenone (%%) has been successful at 10 pounds per 1,000 sq.ft. The material is broadcast over the surface and watered in. About four days are required to effect maximum kill. There is a feeling that it might be well to use only 5 pounds per 1,000 sq.ft. at first application and repeat the application a week later if first application does not effect a clean-up.

The other method consists of hydrated lime and nicotine. These are used at 10 pounds hydrated lime and 1 qt. nicotine (Black Leaf 40) per 2,000 sq.ft. The two materials are dissolved in 100 gals. water and the area sprayed or drenched with the solution.

Business Recovery Item: Jack Fulton, Jr., Gets Married

Jack Fulton, Jr., for 7 years a teammate in the Golfdom-Golfing outfit, was married August 23 to Miss Katherine M. Kenny at the University of Chicago chapel. Jack and Kay have been golf playmates for some time and now that they are knotted have begun to play house in the cottage colony at Olympia Fields.

These nuptials register the triumph of love over what the golf business has been for the last two years.

Course Landscaping Need Gives Tournament Prize Tip

Harry Nash, whose golf reporting in the Newark (N. J.) Evening News is one of the best jobs of sports handling in the country, tells of a tournament idea that should find a place in many club schedules.

Writes Nash:

"John V. Martin, militant leader of Essex County public linksters, is sponsoring a tournament which may be aped with benefit by a number of clubs anxious to promote the growth of foliage and perpetuate the memory of their tournament heroes. "John has been campaigning for additional landscaping and the planting of shade trees at Hendricks Field. His pleas have not elicited a ready response from the authorities, so he claims, and he has devised an ingenious method of meeting the contingency.

"Regardless of Martin's original plan or the underlying motives, his tree tournament is a master stroke. The idea is simply this. The caddies at Hendricks Field will engage in a tournament. There will be the customary prizes, but the chief award will consist of a tree. This young sapling will be presented to the tournament winner, who, in turn, will be obliged...
to plant it at a prescribed spot on the course.

"At the tree base will be placed a granite block containing a bronze tablet, simply inscribed with the tournament winner's name an the date of his victory.

"Martin, who is something of a dreamer, visions these slender shoots grown into full-blown trees. He even sees the youthful victors, grown to manhood, revisiting the scene of their conquest and pointing a proud finger at the bronze encrusted granite.

HEATS CLUB
Oregon Owner Devises Simple System for Clubhouse
By HENRY YOUNG

IT HAS BEEN common practice in certain parts of the country to heat clubhouses from the fireplace, employing the ordinary heating coil in the fireplace and connecting it to hot water radiators. Sufficient volume of heat cannot be liberated in the radiators in this way, except for the mildest weather.

To get greater heating capacity, Frank Stenzel, proprietor of the Agate Beach Golf Links, and Glendoveer Golf Course, at Newport and Portland, Ore., respectively, has designed a special fireplace heating system, which keeps both houses warm throughout the winter with the expenditure of no more fuel (wood) than would ordinarily be required to keep the fireplaces going.

In both cases he has built substantial, workmanlike installations, employing a plumber, so that there in none of the ap-
pearance of a home-made job. It is understooed that he has applied for a patent on his system.

He simply digs out the floor of the fireplace to the depth of about a foot. It is not necessary to even brick this up at the bottom. A rectangular, welded sheetiron tank, (a hollow square) of about 4 ins. cross section is made to fit the hole in the floor, and is mounted flush with the original floor of the fireplace. In the rear of the fireplace is set up an ordinary steam radiator of small size, which is connected to the piping of the hot water heating system. T's are inserted in the pipes from the radiator and connections made to the hollow tank. The tank thus provides heating surface to supplement that of the fireplace radiator. Finally a large pipe "fender" is mounted in front of the radiator, which prevents wood being thrown in and banged against the radiator. This fender also is connected to the tank, giving still more heating surface. Altogether, he gets about 25 sq. ft. of heating surface.

That's all there is to it. The rest is the same as any hot water heating system. Build a fire in the pit, and you have as nice and cheerful a fireplace fire as before. The flames rise and heat the radiator and tank effectively and the radiator, set clear at the back, is not unsightly. Ordinarily it is covered with black deposit and is hardly visible.

He added a refinement by taking out the front brick work and building a recess in which slide a metal screen and a pair of sheet iron doors. Thus the fireplace may be screened, or, by shutting the metal doors, can be closed off at night so that the fire merely smolders and keeps a low, even heat all night.

RODENT REPELLENT PROTECTS COURSE TREES

Castle Rock, Minn.—Castle Chemical Co., makers of Sulphonol, report that this sulphur emulsion preparation is proving invaluable to nursery and seed companies in the northwest, who find that rabbits and other rodents will not touch or gnaw at trees and shrubs that have been treated with it.

As the makers point out, rabbits and other rodents destroy many trees every winter. Many preparations have been introduced to check this damage, but they are too easily washed off. Screens are too expensive. Oils are often injurious to the tree.

Sulphonol mixes with water, is economical, easy to apply, effective and lasting.
Who's getting it?

Golfers are staging a great comeback... players are crowding tees again... house accounts are showing far better... things are pitching up in great shape.

But, more than ever, golfers are looking for their money's worth—successful courses are giving it and getting it back by attracting more play.

Well-turfed greens and fairways are your most obvious selling points—and the most convincing, too.

Start building Better Turf now with a natural grass food...

PREMIER Poultry Manure

—the greenkeepers' health diet for turf.

1—It is a natural grass food and stimulant.
2—It is a balanced manure containing 6% Ammonia, 2.50% Phosphoric Acid and 1% to 2% Potash.
3—It contains no live weed seeds.
4—Being organic, it aids humus and aids bacterial action.
5—It can be applied with a minimum of labor and expense.
6—Being more soluble than other manures, it is more available.
7—Being finely pulverized, it is quickly absorbed into the soil.

Order NOW for Fall Feeding!

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327 S. La Salle Street Chicago, Illinois

COTTON, BREWS PLAYED HAGEN CLUBS IN BRITISH OPEN

London, Eng.—Walter Hagen can take some patriotic consolation from the Henry Cotton victory in the British Open. Cotton played Hagen's Tom Boy woods and irons in making his amazing scoring record to jolt the Yanks out of the British Open title for the first time in 10 years. Sid Brews, second in the event, played Hagen irons, as did Dallemagne, who tied for fourth.

Hagen with his four British Open titles and his clubs winning another title in the hands of Cotton seems to have the British situation well in control.

W. P. MILLER WINS INJUNCTION ON FAIRWAY WATERING

New York City.—Wendell P. Miller and Miller Eng. Co., Inc., has been awarded an injunction against Arthur D. Peterson in a case involving fairway watering system design.

The issues were referred to Referee Emanuel B. Cohen, New York City. Numerous hearings were held before the referee and a considerable amount of evidence and exhibits submitted. Blue prints and designs of a large number of golf course irrigation systems installed in the east by the plaintiff were submitted. Testimony by deposition from witnesses in California were also submitted to the referee.

The injunction as finally issued restrains the defendant from selling or offering for sale or using plans and designs similar to the Miller system, from installing any irrigation system upon a golf course adopting the distinctive methods and designs of Miller and further restrains the defendant from using the words "One Man System of Irrigation" or similar expressions which the referee has determined are particularly applicable and identified in the trade as the product of Miller.

Portsmouth, O.—H. C. Brownson, manager Vulcan Golf Co., is on a business tour of West Coast cities. Curley-Bates Company, with offices in Los Angeles, San Francisco and Portland, Ore., are exclusive West Coast jobbing representatives for the Vulcan line.

SOMERSET WITHDRAWS ACE SCOTCH OFFER

New York City.—Somerset Importers, Ltd., have been awarding as a free prize to all golfers scoring a hole in one a bottle of Haig & Haig or Dewar's Scotch whisky. Effective September 15, 1934, this offer will be discontinued.