

# PERFECT GREENS



Those who have the responsibility of establishing and maintaining greens should make sure of success by using the best grass obtainable.

For the past seven years, my selection of "WASHINGTON" strain has been used on many of the finest courses in the United States and Canada and has proved, without exception, to be unsurpassed for its fine, smooth, velvety texture, without nap or grain, and its particular resistance to fungus. It makes a firm, uniform turf on which the ball runs true.

The grass in my nurseries is kept carefully true to type and free of objectionable growth. It is grown and prepared for planting under the personal supervision of trained men, familiar with turf requirements for golf greens.

The stolons I supply are from strong, vigorous year old plants only, shredded ready for planting; delivery in good condition guaranteed.

Will be glad to furnish names of satisfied customers from Wisconsin to New York and Winnipeg to Tennessee. Inquiries given prompt attention.

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**HIRAM F. GODWIN**  
— BENT GRASS —  
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**Easier and Quicker  
to use**



*It only takes half the time to treat  
your greens with dry*

## **Calo-Clor or Calogreen**

The mercury salts recommended as a result of experiments by the United States Dept. of Agriculture for **Brown-Patch**.

### **Are Cheaper to Use**

1. Only 3 ounces per 1000 square feet of turf.
2. With practically the same cost per pound it requires only one-fifth the quantity to treat a given area.
3. Greens are longer protected against renewed attacks.

#### **Write for Free Booklet**

Describing the government experiments. It also contains complete directions for using.

### **Mallinckrodt Chemical Works**

St. Louis    Montreal    Philadelphia    New York

were put up for turf research by other institutions, and I refer mainly to the federal and state governments. The Green Section couldn't last two weeks on \$28,000.

As an instance of where the money comes from for this research, I can give no better instance than my own work on grubs. The discovery and the working out of the lead arsenate method cost every penny of \$100,000. You must appreciate the fact that the first five years of that time, my salary list covering myself, three technical assistants, and two workmen was well over \$10,000 a year, to say nothing of the thousand and one things that enter into the research all the time.

Now, of that \$100,000, the contribution of the Green Section of the golf clubs of this country was \$2,500. A little bit of golf club money going in, but it would not last five minutes without the tremendous sums of money from the government. As the Green Section is now organized, a little group of bankers acting for the clubs control the Green Section. They control its activities. They control its program. You know bankers are clever men. We have an apt instance right here, \$28,000 controlling five times that amount of money.

So when any question is made regarding my code of ethics in bringing up this question, I simply say the golf clubs of this country are putting in \$28,000, but you and I, as citizens, are putting in all the balance. Therefore, it would seem logical and only fair that some of the pre-conceived and set ideas of the Green Section might be very wisely modified.

The greenkeeper has a great deal at stake on this point. To the greenkeeper, turf is a living—his means of income. To the greenkeeper, it is a hobby and a side line—not a vocation. Whether turf lives or dies, whether turf continues or stops, they will go right on making money in the banking and insurance business just the same. The influence of these things on the greenkeeper are paramount.

Until the greenkeeper—until the business interests catering to golf are given adequate representation on the Board of Direc-

tors of the Green Section, we will never progress at the pace we should.

Now a talk of this sort five years ago—or four years ago (How long is it, Mr. McGregor? A. Three and one half years.) four years ago would have been just as valuable as practically nothing. But the greenkeepers are now organized. You have some means of giving them information. I don't suggest anything drastic. I believe these golf clubs and Green Section officials are essentially fair-minded. I think that's a fair statement to make. But the great difficulty is that their education has been neglected along certain lines, and I would most certainly suggest that this organization begin the rather difficult task of awakening them to a sense of their responsibilities and a sense of what is most efficient, just, and right.

Now, before I left home, my wife, who is of the cautious type, said to me: "When you get up there, for God's sake, keep quiet about service bureaus. The subject is loaded with dynamite." But fortunately the madam isn't here!

So I shall exercise my freedom as a free-born white man to do as I please.

It is very easy to see the fundamental theory of a service bureau from the viewpoint of golf club officials. To their mind, the Service Bureau simplifies their job of purchasing, and it cheapens the cost of their supplies, so that there was every reason that Service Bureaus should be permitted. From an impersonal angle, I have learned some very significant and enlightening things about these Service Bureaus.

Let me give you an illustration.

All of us are finding our lives lengthened, our pleasures increased, by these individuals, whom we sometimes think of as impractical. As far as doing our work is concerned, they are no more impractical than we would be in doing theirs. They are filling a very worthy place in society, which we cannot commence to estimate in money or comfort.

It is only when we work with them, and tell them what we have found out in our practical work, and then accept and apply what they have found in their work, do



## Keep grounds in play with.. Armco perforated Pipe ..

GROUND<sup>S</sup> can be kept in condition for play, except during actual hours of storm, by proper drainage. Drains can be provided that will remove rainfall immediately and without fail.

Club officials and engineers have found in Armco Perforated Iron Pipe a way of increasing the playing hours. Efficient, non-crushable, durable, this sturdy pipe will withstand, without damage, the impact of tractors, rollers and other heavy ground equipment, as well as the tremendous pressures of freezing or swelling soils.

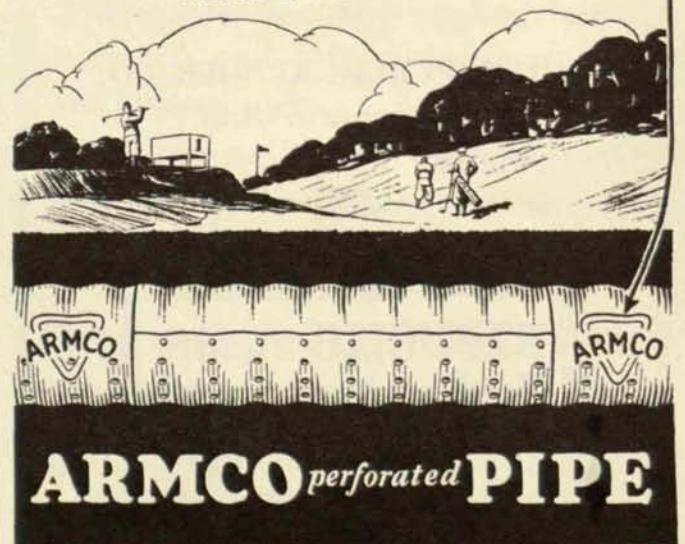
Once installed, Armco Perforated Pipe gives complete assurance of continued and dependable drainage. Throw away the "Wet Grounds" sign. When the rain stops, the grounds will be ready for play.

23 years of drainage experience is at your service. Write today for complete information; no obligation.

Armco Culverts and drains are manufactured from the Armco Ingot Iron of The American Rolling Mill Company and always bear its brand.



Armco Culvert Manufacturers Association  
Middletown, Ohio



# FAIRWAY Water Hose



## Points of Excellence

- 1—A tough, but silky brown cover.
- 2—A heavy-quality tube.
- 3—Two plies of double strand braided threads.

Ask for a sample and see for yourself how good Fairway is

**I**f you first inquire into the actual service records of all brands of mechanical rubber goods you will eventually buy Republic. But it is only fair to mention that Republic's success in placing high grade merchandise on the market at competitive prices has been partly due to efficient distributor handling. And since an Industrial Supply Distributor can serve a consumer even more effectively in keeping down costs, it is suggested you use every facility he offers. Ask your distributor about Republic rubber.

THE REPUBLIC RUBBER CO.  
Youngstown, Ohio



BELTING - HOSE - PACKING - MOLDED GOODS - LATHE CUT GOODS

either of us make the progress that we should.

## How Service Bureaus Operate

**A** COUPLE of weeks ago, I went to see a friend of mine who is in the golf supply business. He was called out on business, and I was sitting there, smoking one of his cigars, and looking over a copy of the Police Gazette. Everything was quiet and peaceful. Suddenly the telephone rang. The clerk went to the phone, answering: "Yes, this is so-and-so Service. Yes, we have some very good and durable rakes for \$1.35." He spoke this into the phone.

There was a little interruption while the other party talked. "Oh! we can supply rakes at 85c also. Two dozen?" He took the order down and cursed a little under his breath. The incident aroused me from my perusal of the magazine, and I said: "Jack, it's none of my business, but would you mind telling me who that was?" "That was Lillian Russell of the Hoboken Service Bureau." "What was the difficulty?" "She said she could get plenty of rakes for 85c." That was interesting to me.

I said: "Do you mind letting me look at those rakes? I use a great many in the course of a year. If you have some real rakes for 85c, I am in the market." He took me in the back room, and pulled out one of these rakes. For 85c it was a good rake. But it wasn't the kind of rake that we would ordinarily buy. In the first place, it had a poor handle. You know when you use a rake of that nature all day, it knocks into your hands. The teeth had never been milled. They were rough as cast. It would be much more difficult to pull grass from them than from a rake with a smooth and milled tooth. This rake had the customary curve in the line of the teeth of a cheap rake. This interested me very much.

"Jack," I said, "do you sell very many of these 85c rakes." "Yes, we do, we sell a good many other service bureaus." The greenkeeper wouldn't buy a rake like that. He knows they are not a good buy at 85c which I consistently say, and which is true with us in my nursery.

If that incident is typical of the service bureau situation, there are one or two significant things disclosed. In the first place, the club isn't getting what the greenkeeper should have, so that the greenkeeper is greatly affected by the service bureau movement. In the second place, the unsurmountable argument for the service bureau is saving—cheaper buying. Answering that, I submit to you that that incident, if it is indicative of conditions, is not cheaper buying. It is more expensive buying, as any man in business or running a golf course knows.

I doubt if many clubs realize this condition. I think some do. I have heard, if what I have heard is true, that there is some pulling away from service bureaus. Now, it would appear that if the service bureau is to prosper—if the service bureau is to continue as a factor in the turf maintenance game, it might possibly be better to give competitive business a better break, and to confine the buying on a basis of quality as well as price.

Now, I hope to live to see the day when the greenkeeper runs the course. I hope to live to see the day when his chairman is simply a sort of curb on expenditures, a sort of balance wheel which will help to keep the greenkeeper on an even footing. I hope to see the day when the professional and amateur greenkeeper are touring around the course as a combination.

There is a club in Philadelphia, the Aronomik Country Club. They have made a decidedly new development in maintaining their club. I understand that they have simply eliminated the "Green Committee." Simply voted it out of existence. The greenkeeper has to handle the situation, be responsible for the running of the course, responsible for the buying, and once a month he has to report to the President or the Board of Directors. I offer that we propose to watch that experiment with a great deal of interest and watch its progress and from time to time get some idea of how it is going. When the time comes that the greenkeeper is such that the maintenance is left to him, then the greenkeeper will come into his own.



## Hastens Turf Formation on New Fairways

Proper fertilization prior to seeding fairways, usually neglected, is essential for quick formation of dense, uniform turf.

The first six weeks after seeding are critical. Unless amply fed with nitrogen and phosphorus, thin, disappointing turf results.

Poor, thin turf once obtained is difficult and expensive to improve subsequently.

Milorganite equals results obtained with manure at lower cost and without danger of introducing undesirable weeds.

Milorganite is easily applied, economical, and will not injure the young seedlings.

We make detailed soil examinations and specific fertilizer recommendations.

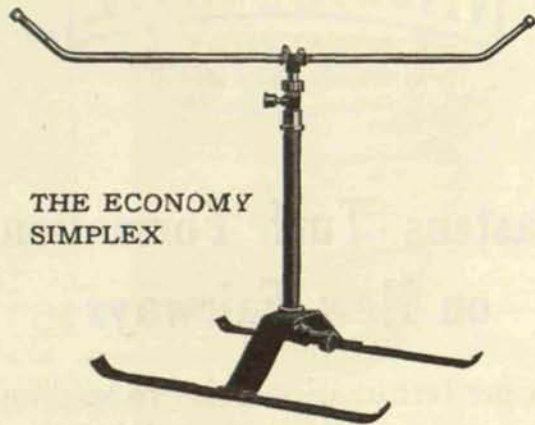
### The Sewerage Commission

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MILORGANITE PRIOR TO SEEDING WILL  
INSURE EARLY PLAY NEXT YEAR

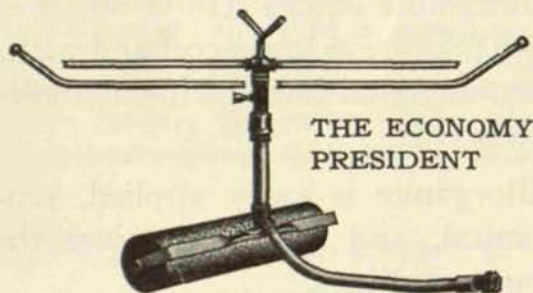
# Most Efficient Sprinkler for its cost



THE ECONOMY  
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Under all conditions with moderate water pressure, the Economy Simplex is outstanding as an efficient sprinkler. It is simple in design and construction, yet extremely durable. It is adaptable to any type of watering giving good coverage and even distribution of water. Unexcelled for its purpose.

The Economy President, used with water pressure about 40 pounds, is without a peer in the sprinkler field. It gives even distribution and greatest coverage. Slow speed. Gearless. Has long life. Ideal head for hoseless systems. Equipped with either sled or roller base.



THE ECONOMY  
PRESIDENT

The Economy Traveler, Spectacular, Super Simplex are also well known as correct watering equipment on thousands of golf courses. See our nearest dealer or write us.

**ECONOMY IRRIGATION CO., Inc.**  
21 Spokane St., Seattle, Wash.  
*Distributors in leading American and  
Canadian cities*

# ECONOMY SPRINKLERS

## About the College Man

JUST one other little point I want to bring up and I am through. There has been a great deal of talk lately among greenkeepers about the college man.

Now, any man who has served a four year term in one of our so-called higher institutions of learning is fully aware of the fact that a certain percentage of our college professors are partially or entirely full of bull. On the other hand, a certain percentage of these men are unusually capable. One of my old professors in Cornell is a man of this type. I am much reminded of him in hearing Professor Dickinson. This professor had a streak of humor in his cosmos, and one morning when he had had a fight with his wife at the breakfast table, he came to class and delivered barrels of wisdom to we young hyenas. I will never forget a little oration he gave us one morning. He began this way.

"Now, gentlemen, before we continue our discussion on the economics of the cotton crop, I propose to give you a short discourse on the whys and wherefores of this and that.

"Your mamas and papas send you here four years, pay all the bills, and you live the 'life of Riley.' You are sent here to learn to be farmers, agriculturists, or what not. Fortunately for posterity and the states of the union, most of you will develop into bond or automobile salesmen, because of the small percentage of you who eventually gravitate back to the farms are going to be a disappointment to your parents and society at large.

"Agricultural is three per cent science and ninety-seven per cent business. We can teach you in a measure the three per cent science, but," he said, "we can't teach you the ninety-seven per cent business. In other words, you can't make a silk purse out of a fertilizer bag."

As I say, it is almost twenty years since that occurred, but I have never forgotten it. It was with that idea in mind that I made those remarks yesterday about the percentage of "jack-asses" among college men. We college men don't kid ourselves. Certain factions do kid themselves. We have had cor-

response recently which shows that so clearly that there is no doubt of it. You know city men dominate golf clubs, and the city man naturally knows city conditions, but he doesn't know other conditions—he doesn't have the faintest conception of what goes into any question in which soil is involved.

Professor Dickinson is maintaining his ten week course for greenkeepers. It is tragic that he can't at the same time run ten one week courses to teach Green chairmen the error of their ways.

Now, the entrance of the college man into green-keeping is something I don't feel personally should be blocked. I have known a great many greenkeepers in my time, and as a class they are a very interesting type of men to know. They are strictly individual, independent, resourceful, and in every way worth cultivating. They are a type of men typically American.

### More About the Seed Markets—Chewings

#### Fescue Crop Poor

By E. E. PATTISON

IT IS expected that the market on Rough Stalk Meadowgrass and Wood Meadowgrass will be much higher. No new crop seed will reach here in time for Fall planting and stocks on hand of both articles are exceptionally small.

At this time of the year there is a natural interest in the 1929 crop of Chewings fescue and the early shipments from New Zealand or in other words those made during May and June will arrive in time for Fall planting.

The quality of the 1929 crop of fescue will not be as good as that of the 1928 crop. This is due to unfavorable climatic conditions existing at the time of harvest. In the wholesale market there has been quite a fluctuation in price.

The market opened low, went to a high level as the result of an unusual brisk American demand and during the last three weeks has receded somewhat. Based on the average price at which American importers have bought Chewings it is safe to say that the price this coming Fall will be approximately the

(Concluded on page 34)

## For the Control of Brown-patch



TURFCALOMEL is the outcome of experiments to determine the most satisfactory, efficient, convenient, and safest fungicide for both large and small brown-patch. It contains both corrosive sublimate and very finely powdered calomel carefully adjusted in composition with mineral matter. This composition has distinct advantages. It prevents caking, gives bulk, and allows of a more even distribution of the active ingredients—thus reducing to the minimum any possibility of burning the turf. The same results cannot be obtained with the chemicals either alone or mixed with sand or compost.

Ask your dealer

Send for Bulletin

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MANUFACTURING CHEMISTS

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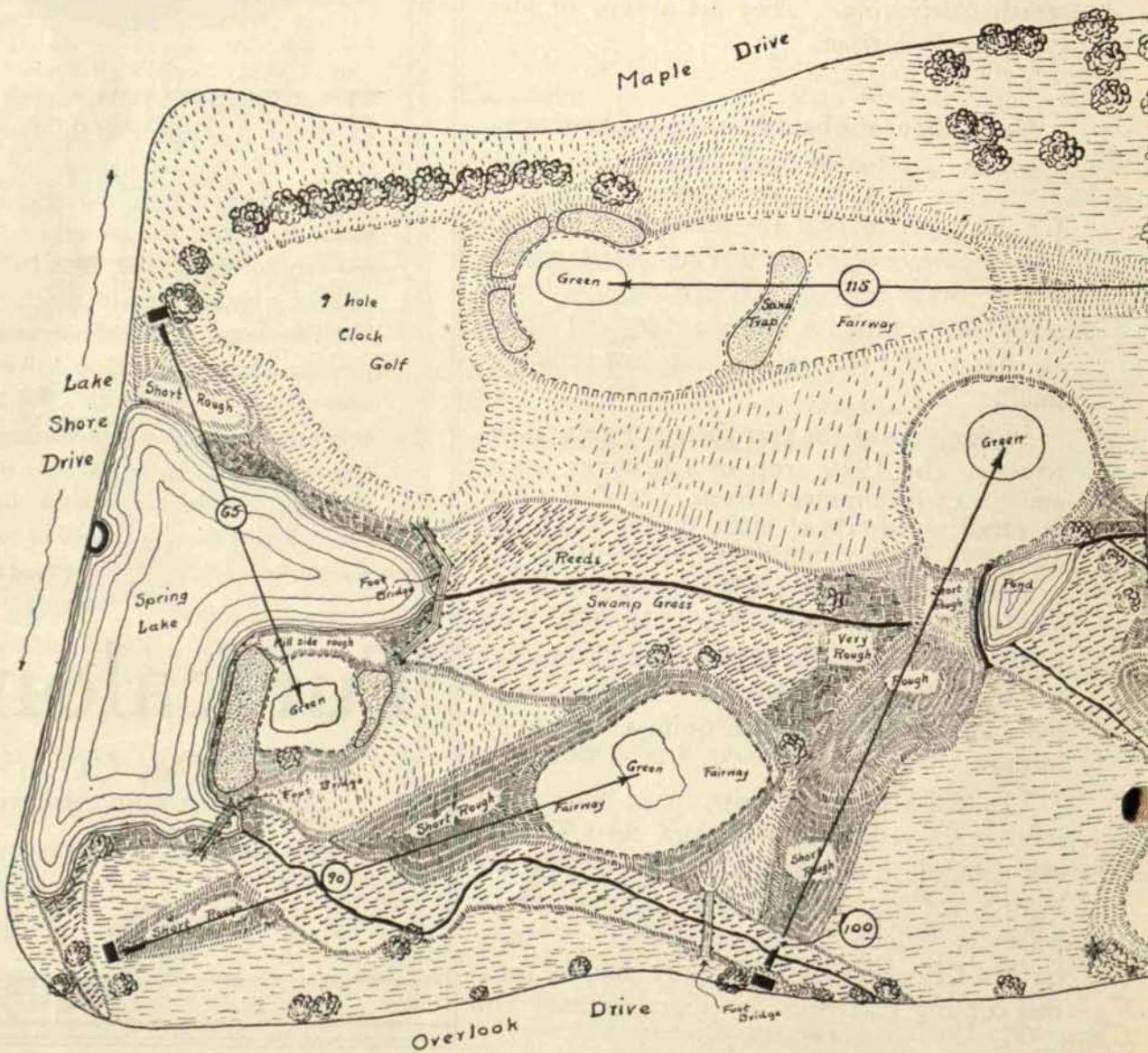
# Miniature Courses Find

**M**INIATURE golf courses for pitching and putting are rapidly finding favor with golfers who wish to brush up on their short game. They are also ideal for elderly people who cannot stand the grind of full 18-hole rounds on the regulation lay-outs.

In response to many requests which have come in to the NATIONAL GREENKEEPER, we are publishing herewith the design of a miniature, 9-hole golf course laid out on ten acres of land by the Lake Lucerne Club Co., at Lucerne on the Youngstown Road, eighteen miles southeast of Cleveland. This course is being constructed in connection with a private residential development of two hundred and fifty acres of hills and woods and lake, of which one hundred and five acres, including lakes of thirty acres, are deeded to

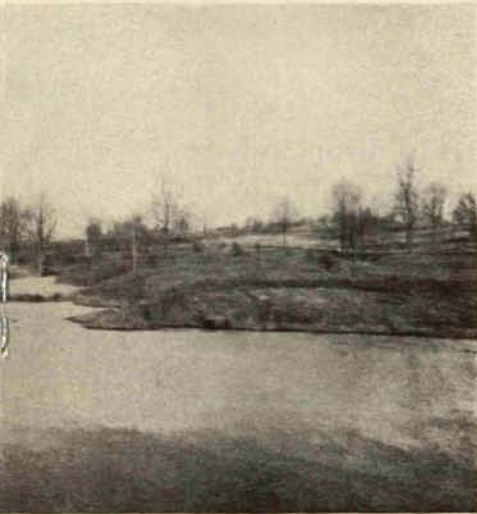


LOOKING ACROSS THE LAKE COUR





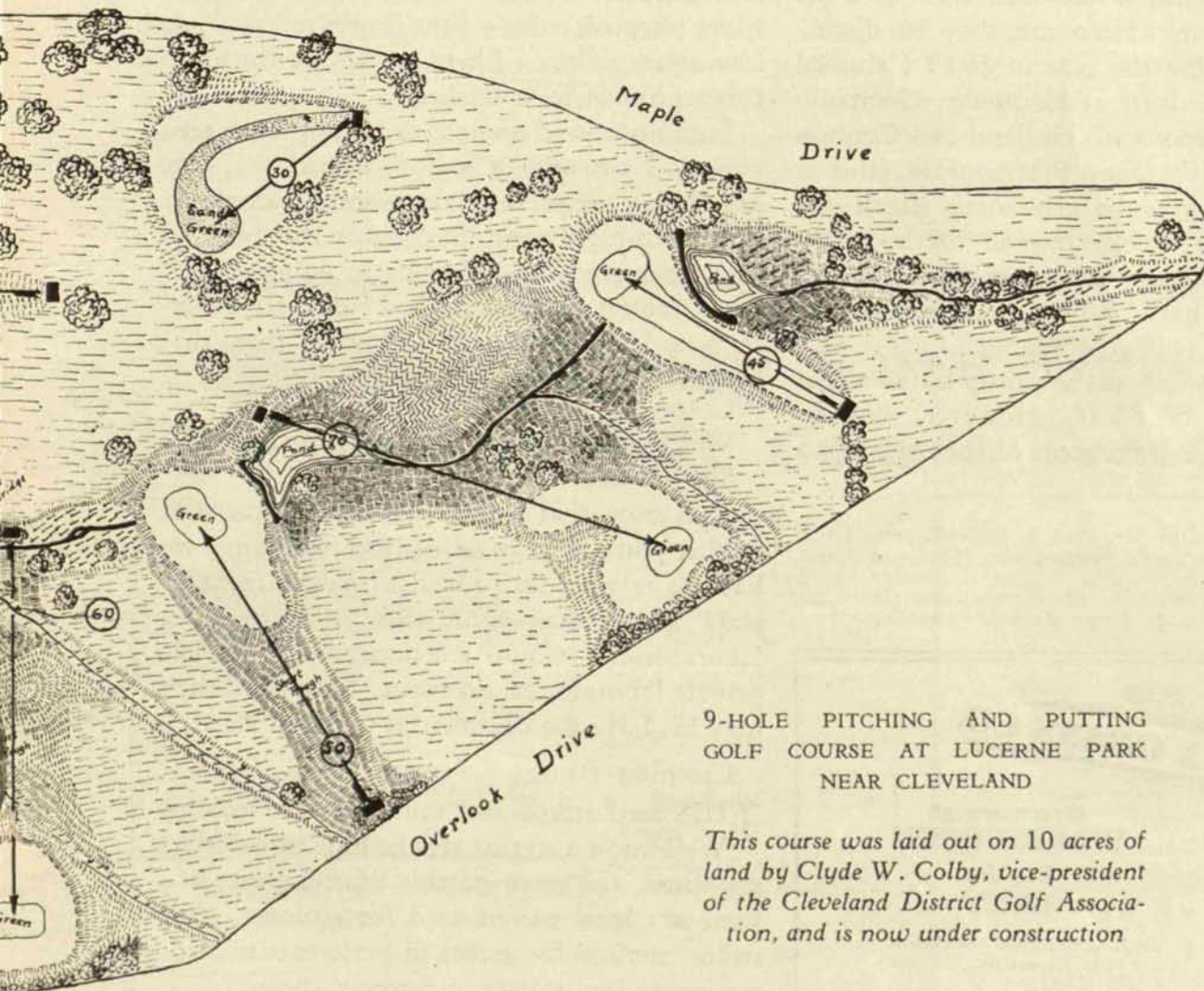
# Favor With Golfers



HERE THE LUCERNE MINIATURE IS BUILT

home owners as a park. It is in this recreational center that the golf course is being built, so that this popular sport will be included with the regular features of tennis, swimming, fishing, horseback riding, etc.

The fact is obvious that this miniature golf course will be immensely popular with the families of those residing in the neighborhood. It has many sporty features, including water carries and natural hazards which will test the skill and accuracy of even the best shooters. The cost of construction and upkeep will be relatively small with only tees and greens to take care of and short rough to be mowed. If present plans mature the greens and tees will be planted with Metropolitan bent stolons, including the large practice putting green which will also serve as a turf nursery.



9-HOLE PITCHING AND PUTTING GOLF COURSE AT LUCERNE PARK NEAR CLEVELAND

*This course was laid out on 10 acres of land by Clyde W. Colby, vice-president of the Cleveland District Golf Association, and is now under construction*

# Bent Grasses \*

An expert's views on various species and their origin

By FRED S. RADWAY

IT IS a rare privilege for a tradesman to be able to address a body of men who have not only book knowledge but also actual experience with seed and turf of bent grasses. I will try not to make a long drawn out speech but to tell you in my humble way what I learned and what I know about agrostis. Please do not hesitate to stop me if you have any questions to ask.

## Red Top (*Agrostis Alba*)

AGROSTIS Alba is the mother of all bent grasses. Redtop is bent grass in a refined form, now—what is the difference between redtop and bent? How can they be distinguished? During the year of 1913 I studied seed and turf culture at Hamburg, Germany, and had experience with Holland and German redtop also with fancy Fiorin grass (this is a mixed bent grass which comes from the local district of Griesheim and Darmstadt). Redtop is a larger coarser grass than bent and sometimes it is hard to distinguish the two, especially when redtop is planted thickly and kept closely mowed, as the redtop leaf is about the size of the bent leaf. However, mowing constantly will kill the roots of the redtop in a year or two.

\*Address delivered by Mr. Fred S. Radway, president of the I. L. Radwaner Seed Company, Inc., 115 Broad Street, New York City, New York, at a monthly meeting of the Philadelphia Golf Superintendents at the North Hills Club, on Monday, May 13, Mr. Lewis M. Evans presiding.

Authorities can very easily distinguish between the blade of the bent and redtop by the ligule. To distinguish the seed of the bent from the redtop one needs a 200 to 250 power magnifying glass, a microscope, technical weed seed knowledge, a lot of patience, a cool head, and maybe a warm heart.

## German Bent

BOTH the Rhode Island bent and redtop are small seeds. There are about four to eight million seeds to a pound. Sometimes the bent can only be distinguished by the weed seed contents. When redtop is clean it has a silver purplish color—bent however has a yellow straw color. There are about thirty to forty pounds to a bushel.

I am not a seed analyst and I am not a seed expert, I am only a seed merchant and dare say that a sample of redtop and a sample of bent grass highly and thoroughly re-cleaned, so that there are no weed seeds in either one of them, cannot be distinguished from each other. In a seed laboratory the following three distinguishing methods are employed:

Color—Silverpurple—Straw

Weed Seed—Origin (Domestic or Foreign)  
Size of seed.

And now that I have proven to you that neither you nor I can tell redtop from bent, we have to rely on tests given by government or state laboratories—and these are the only laboratories I would recommend as I believe private laboratories, no matter how good they may be, have the commercial point in view.

Creeping Bent: (*Agrostis Stolonifera*)

THIS seed creeps and multiplies by stolons. Well known strains are the blue tinted Metropolitan, the green patchy Washington, etc., these are local names used for stolons. The stolon method for greens in preference to seeding greens is a matter of personal choice.

Creeping bent grows on low land and needs plenty of water.

Established  
1925

**ILLINOIS GRASS CO.**

**Growers of  
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BENT**

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