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A MONTHLY PERIODICAL TO PROMOTE THE BETTERMENT OF GOLF COURSES

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The Green Section Meeting at Inwood

By R. A. Oakley

If the greencommitteeman who casually remarked that the trouble with the Green Section's field is that it is too soon worked could have been induced to stay for the Green Section meeting at Inwood the evening of July 13 he would have had to acknowledge his error without argument. When the Vice Chairman arrived at the Inwood Country Club, where he went almost solely to enjoy the thrills of the open tournament, he had no notion of trying to hold a Green Section meeting, but the faithful and ever enthusiastic fans decreed otherwise. To help matters along, Mr. Steiner, President of the Club, very kindly made the big information tent available, and Mr. McMahon, Executive Secretary of the United States Golf Association, who, as is customary with him at tournaments, was working only about twenty hours a day, took the time to print the notices and advertise the event. Mr. George Sargent, President of the professionals and one of the most ardent of turf fans, assisted materially in arousing interest in the meeting. It was the intention from the outset that the meeting should be informal; and those who attended can vouch for the fidelity with which this good resolve was kept. In fact, it wasn't really a meeting that was held, but a sort of catch-as-catch-can discussion. There was no speaker, moderator, or sergeant-at-arms, but just a bunch of fellows who wanted to talk grass. It didn't take long for them to warm up and discuss the things about turf growing that interested them most. That is why we say that if the gentleman referred to at the beginning of this account, and whose name we will not divulge, had stuck around, so to speak, he would have been convinced beyond all possibility of doubt that there is still a large area in the field of the Green Section not only to be plowed but also to be disked, harrowed, and cultipacked. Incidentally, the gentleman in question is one of the Green Section's best supporters; so we are going to send him a marked copy of this number of The Bulletin.

One of the most encouraging things about the Inwood meeting was the fact that the faithful few were composed largely of professionals and greenkeepers, men who bear the burden in the heat of the day and fight the brown-patch and crab grass between meals. They were men who were there to ask intelligent questions and who were looking for intelligent answers. Mr. J. Ebb. Weir, Jr., and his party had come all the way from Jamesport, Long Island, that evening especially for the meeting. Several professionals, including Messrs. Sargent, Mackie, and Ogg, had had two stiff rounds of golf that day in the finals. Mr. Haddon, of the Van Cortland Park Public Course, had chased around scoring for Jock Hutchison; but this wasn't so much of a job with Jock shooting 142. Had it been the following day, Mr. Haddon would probably have been present in spirit only. Most of the others deserve credit for being there because of the inconvenient hour with relation to train schedules to their respective homes.

The greatest amount of interest centered around the vegetative planting of bent grass greens. Questions galore were asked on this subject. It was evident from the nature of the questions that there is still a great deal of confusion in the minds of many who would like to try out the method, as to how the job is actually done. The articles in The Bulletin apparently

have not made the steps entirely clear. The articles have not explained with sufficient clarity that no seed is used, that the stems (called runners or stolons and which lie flat upon the ground) are the part of the plant that is required, and that it is from the joints, or nodes, of these stems that the new plants come, the plants that make the close, fine turf provided they are properly top-dressed and closely cut. The questioning indicated that there is still some haziness with regard to the difference between planting a bent nursery and planting a green. It was explained that in the nursery the bent runners are planted end to end, or nearly so, in rows wide enough apart to cultivate with a horse cultivator; and that the nursery is planted for the purpose of growing runners for planting greens a year later. Although it was dark in the tent because, as one fan said, "that is what mosquitoes are for," pencil and paper were used freely if not artistically to illustrate the planting of the bent runners, or stolons, in nursery rows, the lifting of the runners produced from such plantings a year later, the chopping of them into lengths of 3 inches or less, and the scattering or covering of them on the green after it has been properly prepared as though it were to be newly seeded. Other points that were brought out were that after a green is planted with chopped-up runners it should be kept moist until the new plants which come from the joints have made a good start, and that after they have made a good start—that is, a growth of about 2 inches—they should be kept cut down closely and well top-dressed. George Sargent said he had let some of his plantings grow away up and when he cut them down they looked like a stubble field, but after top-dressing they made the finest turf ever. But George is an experienced hand at the game and he can take liberties that the rest of us should not take.

The discussion on vegetative planting covered all the important points and consumed lots of time. Of course it was punctuated here and there by "How do you kill ants?" and a lot of other mighty vital questions. As a matter of fact, it never did really end. Speaking of ants and other animal pests, it is certain that we need a really satisfactory method, one much better than the carbon disulfid method, which a majority of those present agreed is about the best one now in use, before we have solved the ant problem. Caution was urged regarding the use of poison baits containing borax. It doesn't take much borax to make the soil unfit for growing plants. While on the subject of ants, Mr. Inglis, of Savannah, told us how he kills moles. He takes raw peanuts, squeezes the end of each shell, and inserts a crystal of strychnine, and then puts a nut in each runway. This method he says beats trapping.

Second in interest to vegetative planting seemed to be brown-patch. We were told that a man out in Ohio had a dead-sure-shot prevention and cure for this curse; but as he was too far away to be paged it was agreed that the Vice Chairman should investigate the alleged treatment, by correspondence or otherwise. The discussion brought out the fact that there are two kinds of brown-patch, one kind that makes large patches circular in pattern, and one kind that kills the turf in circular spots usually 2 to 4 inches in diameter. The one making large patches is a fungus disease and the one making the small patches is also probably a fungus or a living organism of some kind. To summarize: The most significant points brought

out in the brown-patch discussion were, that light applications of Bordeaux mixture (a mixture of bluestone and lime) either as dust or spray, to the leaves of the grass during hot, muggy weather, when trouble is to be expected, will go far toward controlling the big brown-patch, but that apparently Bordeaux is not the least bit effective in the case of the little brown-patch; that the excessive use of Bordeaux, because of the copper it contains, is likely to prove poisonous to the grass, so that the cure becomes worse than the disease itself; that liberal watering seems to be decidedly helpful to the grass during the attacks of either of the brown patches; and, last but not least, that light top-dressings of good compost with possibly a small quantity of ammonium sulfate or preferably some quickly acting organic nitrogenous compound, helps turf in recovering from brown-patch attacks. Attention was particularly called to the matter of watering with relation to brown-patch treatment. At one time it was thought that watering would help spread the disease, but the evidence now seems to be pretty clearly in favor of using lots of water even in the evening.

We talked about crab grass and pearlwort, and all agreed that the time to pull crab grass is when the first leaves appear, not after the grass has branched. There were lots of good questions asked that no one present could answer. Mr. Inglis told us something of how he makes Bermuda greens at Savannah even better than those at the Montgomery Country Club; but this is too important a story to treat briefly here. The time was all too short for the interest that was manifested. Mr. Weir and his party had to get back to the east end of Long Island. Most of us had to catch trains for the city and points beyond. And so the curtain was rung down on a most satisfactory little meeting. Would that we might have more like it!

Does your greenkeeper receive The Bulletin? It has come to our attention that a number of clubs are having one of their two copies of The Bulletin sent to an address which is not that of their greenkeeper. It is considered important that one of the two copies reach the hands of the greenkeeper promptly.

New Member Clubs of the Green Section

Lafayette Country Club, Syracuse, N. Y.
North Fork Country Club, Cutchogue, N. Y.
Colonial Country Club, Harrisburg, Pa.
Forsyth Country Club, Winston-Salem, N. C.
Highland Country Club, Fort Thomas, Kentucky.
Marion Country Club, Marion, Ohio.
Acacia Country Club, Cleveland, Ohio.
Auburn Country Club, Auburn, Indiana.
Lewanee Country Club, Adrain, Michigan.
Willowbrook Golf Club, Hutchinson, Kansas.
Casper Country Club, Casper, Wyoming.

Volume I of The Bulletin (1921) has been reprinted and may be obtained in one cover for $2.25.

U. S. Golf Association Decision on the Rules of Golf

Question.—A and B are playing against each other at match play. A's second shot stops 3 inches from the cup. B's second ends in a trap. B plays his third and does not get out of the trap, and then takes a sort of hopeless swing at the ball, which hits the face of the trap, flies off at an unexpected angle, and strikes A, and from A goes on the green and in the cup for a four. A's ball in the meantime is, of course, still within 3 inches of the cup in two. B claims the hole, and the question is, whether or not he gets it. The rule, of course, says if a player's ball strikes his opponent's, the opponent loses the hole.

Answer.—Rule 18 covers the situation. It is the opponent's duty to keep out of the way until the hole is given up. A hole is given up when contact of the two minds agree, when they then pick up their balls and continue the game.

Spreading Top-Dressing

By Lyman Carrier.

One of the important details in greenkeeping is the spreading of top-dressing. Many of the older men in the profession know how to do this to get good results. But some greenkeepers apply top-dressing by such slipshod methods that the greens are damaged as much as benefited. It should be understood that top-dressings are used for two different purposes. If the right materials are employed they promote the growth of the grass. This is perhaps the more important reason for top-dressing. But it is highly desirable to top-dress sometimes even when the growth of grass is satisfactory, in order to fill up depressions and produce a smooth putting surface. We hear much about rolling to make the greens smooth; but it is the writer's observation that it is easier and more satisfactory from a turf-growing standpoint to fill the depressions than to roll out the bumps and ridges. An uneven surface is the cause of several of the ills with which putting greens are afflicted. It is often impossible to mow them without scalping the high points; and pounding away at these bumps with a roller does not do the grass any good.

Materials to Use.—The subject of composts and top-dressings has been quite thoroughly discussed in past issues of The Bulletin. It is the purpose of this article to call attention to the methods used by some successful greenkeepers in spreading the materials on the turf. Briefly, any soil is useful for top-dressing turf if it does not run together with water and then bake into a crust, does not contain gravel stones or other coarse particles which will deflect a ball, and does not contain seeds of troublesome weeds, pests of various kinds, or substances poisonous to grass. Top-dressing materials for putting greens should be screened. Screens with a quarter-inch mesh are most frequently used. Sand with a considerable quantity of gravel stones in it should be screened through an eighth-inch mesh. This fine screening is best done with the sand alone before it is mixed with manure or other soils. There are power machines now on the market for mixing and screening compost and other top-dressing materials. These are efficient and save a great deal of hand labor.

AMOUNT TO USE.—There is a temptation, when greens have not been properly top-dressed in the past, to overdo the matter when the practice is once started. Light and if necessary frequent top-dressings are better than a very heavy application at one time. Dressings of from ⅛ inch to ¼ inch are ample. This takes from 2¼ to 4½ cubic yards of material for a 6,000-foot green.

HOW TO SPREAD TOP-DRESSING.—The first step in top-dressing is to get the material on the green. As it is not advisable to drive on a green with carts, wagons, or tractors, the next most efficient way is to take it on with a wheelbarrow. When reasonable care is exercised it is perfectly safe to use a broad-tired wheelbarrow on a green. If the wheelbarrows are equipped with the usual narrow tires, they can be remedied by having any blacksmith shrink a 3 or 3½-inch tire over the one that is on the wheel. The load should be dumped over the wheel and not tipped off sidewise; this prevents cutting the turf with the rim of the wheel. An ordinary wheelbarrow load is about the right amount to spread from one place; that is, a wheelbarrow load will give about the proper dressing to the area that a man can conveniently cover while spreading from one pile. It is easier, and the work can be done in less time, to spread it from a pile on the green than from the wheelbarrow.

The spreading is done with a shovel. A neater job can be done with square-pointed shovels than with the round-pointed ones, and there is also less danger of injury to the turf by careless workmen where the square-pointed ones are used. It takes some practice to spread top-dressing evenly with a shovel. It is not a job for a man with a stiff back or a wooden head. Those who bat right-handed usually swing the shovel of top-dressing to the left, throwing it so as to cover a curved strip about 1½ feet wide and 5 to 7 feet long. (See illustration on page 75, March, 1923, BULLETIN.) By taking a short step backwards with each successive swing of the shovel, an area 10 to 12 feet across is covered from each dump of the wheelborrow.

FINISHING THE JOB.—No matter how evenly the spreading is done, the top-dressing should be worked off the leaves and down around the crowns of the grass. Whether this is properly done or not is the main cause of the difference between a green with a smooth, even putting surface and one which is rough and pitted. A heavy top-dressing covering the green leaves will cut off the sunlight and kill the plants. There are several methods of smoothing out top-dressing. Mr. William Flynn and many others use the backs of wooden rakes. A good job can be done that way, but it is a little slow. Some whip the greens from one side to the other, or from the middle, both ways to the sides, with long bamboo poles. Others use home-

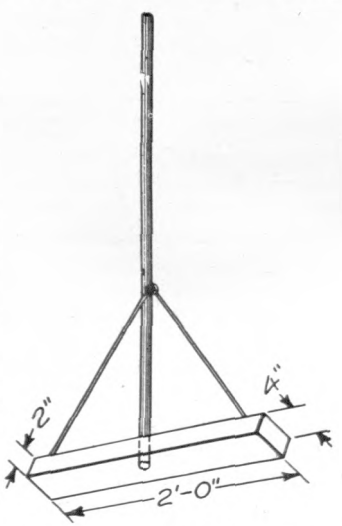


Figure 1. Wooden rubber used as spreader for top-dressing.

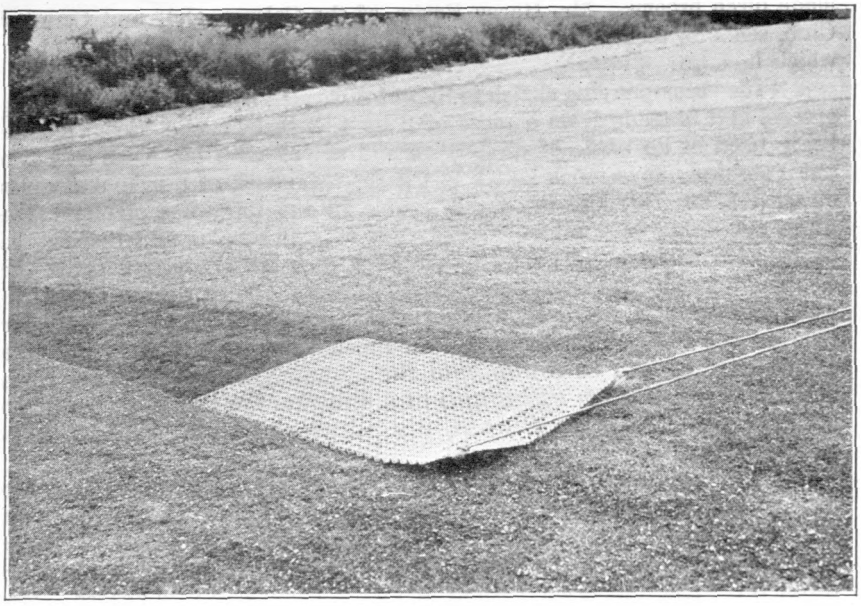


Figure 2. Metal door-mat used as spreader for top-dressing.

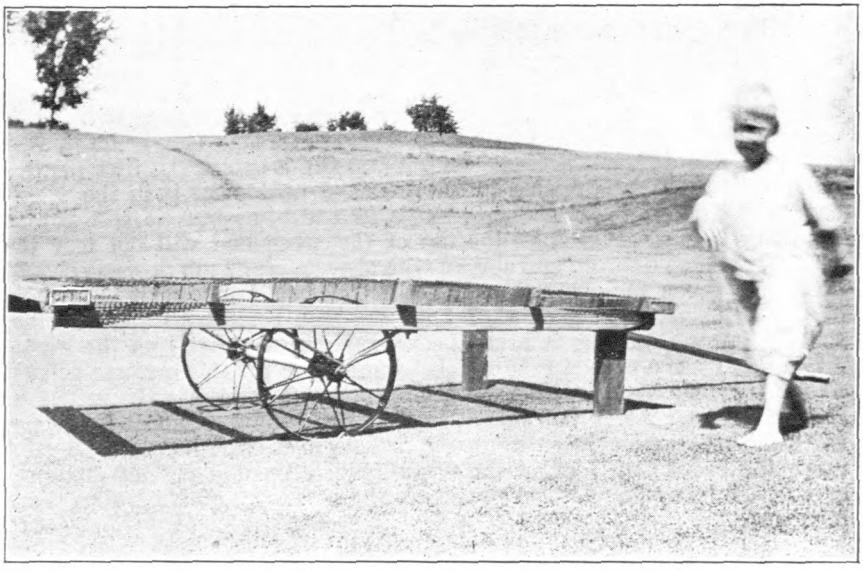


Figure 3. Woven wire bed-spring used as spreader for top-dressing.

made birch brooms. Mr. Harry Pryke, of the Calgary Golf and Country Club, sends in a sketch of a rubber, here illustrated (figure 1), and about which he says:

"The accompanying sketch is that of a wooden rubber for top-dressing greens, and is made from a piece of 2 by 4, 2 feet long, a broom handle being fixed at an angle of 45 degrees and stayed with hay wire and two small staples. It is much better to use than the back of a rake and gives better results. We use it on our course in the following manner: We place our sifted compost on greens with a hand-barrow and scatter the heaps with a shovel. The men then each take a rubber and draw the compost toward them from one end of the green. They do not rub backward and forward, but draw firmly toward themselves, keeping the rubber true on the turf. This trues up the green as well as dresses it. The coarse material can be drawn onto the approach, or taken away, as is desired. Naturally the rubber acts as a straight-edge and fills up all the little hollows. The green is afterwards matted, and a wonderful improvement is found."

Several greenkeepers use heavy cocoanut-fiber doormats, which are drawn over the green. The writer prefers the flat-link metal doormat (figure 2), a device used by Mr. William Connellan. This does the work very rapidly. If there is too much top-dressing in one place it works up through the mat and is carried to the depressions where it is needed. Mr. Charles Erickson, of the Minikahda Club, has still another kind of spreader (figure 3). He uses a woven-wire bedspring, single-bed size, to the under side of which he has attached two wheels so as to make it easier to move from green to green. In use, the spring is turned upside down, with the woven wire next to the grass, and it is then hauled back and forth across the green.

With regard to the bed-spring which Mr. Erickson uses he gives us the following interesting information, at the same time detailing the steps he follows in the complete process of top-dressing:

"I am enclosing a picture of the bed-spring which I use when top-dressing the greens. You will notice it has wheels on it, so that it is not necessary to haul it around in a wheelbarrow but may simply be pushed around to the different greens. In top-dressing a green, the first thing I do is to haul my top-dressing to the green. I next place it in the wheelbarrow, which has tires about 6 inches in width, so that it will not be necessary to place boards on the top of the green and will not tear the turf. It is then dumped and spread with shovels. The top-dressing should lie on the green for about 20 minutes or one-half hour, until it is thoroughly dry. After it is dried, I have one man come with a bed-spring, turning it over, pulling it around, and rubbing the dirt into the green. After this I use a special rake which I have made for this purpose as well as for the purpose of raking up crab grass and removing the refuse or the extra dirt. After this operation I use a scraper about 2 feet long, with which I go over the entire green, making it as smooth as a table. By using the bed-spring I avoid the necessity of screening my top-dressing; and we all know how slow a process is the screening of black dirt when it is wet."

After the top-dressing is evenly distributed and smoothed out, the green should be rolled and watered.

The Behavior of Rhode Island Bent Redtop Mixtures

By R. A. Oakley.

Ever since 1914 there has been more or less of a scarcity of all kinds of bent grass seed. This has brought golf clubs face to face with the problem of using the bent seed to the best advantage possible. It has been quite generally thought that the small supply of bent seed could be made to do greater duty by mixing with it a liberal proportion of redtop seed, but there have been very little critical data upon which to make authoritative statements regarding the behavior of bent-redtop turf mixtures. Therefore the arguments favoring the mixing of the two have not been very convincing. Furthermore, there is such a strong aversion to redtop on putting greens that even the dogmatic assurance that the redtop plants will soon disappear under putting green conditions has not resulted in making many converts to the practice of using a mixture of the two grasses. Of course many clubs have sown a mixture of bent and redtop seed, but in most cases they have done so unknowingly. Some dealers have not always been as careful as they should have been to protect their patrons against accidental or malicious mixtures of bent seed with redtop seed. Until Hillman of the Bureau of Plant Industry, United States Department of Agriculture, demonstrated the practicability of distinguishing between the seed of the bents and the seed of redtop, the purchasers of bent seed were not amply protected. But now it is very different. No member of the Green Section need be in doubt as to the trueness to kind of the bent seed he purchases. If he will send to the Executive Secretary of the Green Section a representative sample of the seed that has been offered to him, he will get a report on the purity and identity. It is desired that the name of the dealer offering the seed for sale be indicated on the packet. In this connection it should be explained, however, that the Green Section is not equipped to make germination tests. A simple method of making germination tests is described on page 83, of the March, 1923, number of The Bulletin. These tests moreover can be made by the clubs with a greater saving of time than if the Green Section should attempt to make them.

Although the different kinds of bent seed used on American golf courses have been described many times in The Bulletin, a brief statement would not seem to be out of place here. There are two kinds of bent seed at present on the market, namely, that known as German mixed bent and that known as Colonial or Rhode Island bent. German mixed bent seed on a chaff-free other-seed-free basis is composed of approximately 85 per cent of seed of the species commonly known as Rhode Island or Colonial bent and approximately 15 per cent of the one commonly known as velvet bent; in addition, it has a mere trace of seed of true creeping (or carpet) bent. Rhode Island bent and Colonial bent are identical as to species; seed of the former is that harvested in Rhode Island and seed of the latter in New Zealand. Redtop seed is very frequently found in commercial seed of all the bents. In parts of Germany where bent seed is harvested there is considerable redtop grown. It is also common in sections of New England where Rhode Island bent seed is harvested. But apparently the fields from which Colonial bent seed is harvested in New Zealand

are quite free from redtop. The seed of redtop and the seed of the bents appear to be identical to all but the most skillful of analysts. Therefore it is easy to account for the fact that bent seed as it appears on the market frequently has more or less redtop seed in it. Attempts have been made to justify the presence of redtop seed in the seed of the bents, on the ground that it does no harm there and on the perfectly absurd basis that there is no difference between the bents and redtop. Whether or not redtop seed does any harm in seed of the bents is beside the point so long as the mixture is offered at the price of bent seed and while the price of redtop seed is very decidedly lower than that of the bents. As for redtop and the bents being identical, only a grossly ignorant person or a fakir would make such a statement.

In September, 1921, a series of plots was started at Arlington Experimental Farm in which seed of Rhode Island bent and redtop was sown in the following proportions: ¼ redtop and ¾ bent; ½ redtop and ½ bent; ¾ redtop and ¼ bent. To make the series complete, a plot was sown with pure redtop seed at one end of the series and a plot with pure bent seed at the other end. An excellent stand of grass resulted on all the plots, and the proportions of plants of the two species in the plots sown with mixed seed were essentially the same as the proportions of seed of the species in the mixtures. The plots were mowed once or twice late in the fall of 1921. Since the spring of 1922 they have been cut, rolled, top-dressed, fertilized occasionally with ammonium sulfate, watered, and in general treated as are putting greens. From the spring until the fall of 1922 the differences between the various plots were quite marked. The plot of pure redtop took on the characteristic redtop appearance as the season advanced and the plants passed from the seedling stage, and consequently the contrast between it and the plot of pure bent increased proportionately. The different proportions of redtop in the plots containing the mixtures remained much the same throughout the entire season. The plot sown with ¾ bent and ¼ redtop produced very satisfactory putting turf from the first, not quite as fine as the pure bent turf, but the percentage of redtop in it was really not objectionable. This scarcely could be said of the plot sown with ½ redtop and ½ bent seed, although the turf on this plot was very good. But the plot sown with ¾ redtop and ¼ bent seed plainly had too much redtop in it to make satisfactory putting turf.

At this date (August 1, 1923) the turf on all the plots sown with mixtures of bent and redtop is really very good indeed, although there is still some redtop in all of them. None of these plots is as good as the plot sown with pure Rhode Island bent seed; and the one sown with ¾ redtop and ¼ bent seed has more redtop now than a good putting green should have.

From the behavior of the series of plots at the Arlington Experimental Farm it seems reasonable to draw the following conclusions.

1. When bent seed is scarce or there is need for strict immediate economy, redtop seed may be mixed with bent seed for sowing putting greens. This will make the bent seed go farther and effect an immediate economy of funds.

2. A mixture of ¾ Rhode Island bent and ¼ redtop seed sown as to produce a good stand of grass makes very satisfactory putting turf.

3. A mixture containing ½ Rhode Island bent seed and ½ redtop seed may be counted upon to make very good turf but the redtop plants are likely to be more abundant in it than they should be for good putting quality.

4. A mixture of ¼ Rhode Island bent seed and ¾ redtop seed results in too many redtop plants. Even two-year-old turf from this mixture is likely to have a superabundance of redtop plants.

5. In plots sown with seed of Rhode Island bent and redtop, the number of redtop plants is very appreciably reduced the second year if the turf is kept in putting condition, but even at the end of the second year there are still a good many redtop plants in evidence.

It is thought that the results at Arlington will be applicable in general elsewhere. If seed of German mixed bent had been used in the experiment instead of seed of Rhode Island bent the percentage of redtop plants in the resultant turf might have been reduced more quickly.

Nothing in this article should be taken to justify the careless, accidental, or fraudulent mixing of redtop seed with the seed of any of the bents, and anyone buying bent seed should see to it that bent seed is delivered to him. If for any reason he wishes to mix redtop seed with bent seed he should buy the two separately and pay only the market price for each. If mixtures of bent and redtop seed are offered for sale they should be offered at a price determined by the relative proportions of the constituents.

Seeding Fairways and Rough

By Lyman Carrier.

Much of the fairway seeding which was done last fall on newly-constructed courses in the northeastern quarter of the United States turned out badly. It is advisable to study the causes of these failures and guard against having a repetition of the heartaches and disappointments with the new seedings this year. Several courses with almost perfect greens were delayed for months in opening because the fairways were unplayable.

Time to Seed.—One cause of failure was the lateness of the season when the seeding was done. There is no question but that late summer or early fall seeding is safer and more satisfactory in the northern parts of the country than seeding in the spring. This does not mean that the seeding can be delayed until frosts and freezing weather have come and expect the young seedling grasses to survive the winter. Farmers have learned that the latter half of August is the safest time to seed grass if a crop of hay is expected the following year. It is true that much grass seeding is done later in the fall with wheat; but the farmer does not expect a hay crop in that case until a year after the wheat is harvested. Fairway seeding from Virginia and Kentucky northward should be done between August 15 and September 10. It is not necessary to wait for a rain before seeding grass if the seed bed is in proper condition. Farmers have a saying which golfers should adopt as a guide—"it is better to dust in seed than to mud it in." If the ground is dry the seed will not germinate,

but it will be there when the rains come, and one week of good growing weather in the fall often makes the difference between success and failure in grass seeding.

There is seldom a year when there are no rains in September. There were two or three last year which were quite general. But after those rains there was a protracted drought over much of the North which lasted until freezing weather. As a result, even where there was good germination the grass seeded after the rains did not become sufficiently rooted to go through the winter.

PREPARING THE SEED BED.—Saving of expense in the proper preparation of the ground before seeding the fairways is false economy. Harrow and roll, and roll and harrow until there is a fine, mellow layer of two or three inches of soil on top of a firm, compact subsoil. Be sure that there are no ridges and hollows to interfere with the mowing after the grass is up. While you are about it you had better roll and harrow again.

SCATTERING THE SEED.—Few seem to be able to do the seeding without having the grass come up in rows as if it had been put in the ground with a grain drill. This drill effect is very objectionable and makes the playing on the fairways unsatisfactory for a year or more. These rows of grass where the broadcast or the wheelbarrow types of seeders are used, are caused by the seeds collecting in the harrow marks. Dividing the seed into two portions and seeding one part at right angles to the other will not do away with this objectionable feature of rows if the land is not harrowed between the two seedings. One caution should be observed: the seed must not be covered deeply. A spike-toothed drag is the coarsest working type of harrow which should be used after seeding, and this should have its teeth slanted well backward. A weeder with slender spring-teeth is better for covering the seed than a drag. A well-made brush harrow is perhaps better than either for this purpose. Rolling after seeding is usually beneficial.

The writer would suggest the following procedure in seeding fairways:

1. Have the seed bed prepared as described above, the last operation being a light harrowing.
2. Sow half of the seed, using a broadcasting type of seeder.
3. Harrow lightly.
4. Sow the remainder of the seed crosswise of the line of direction of the first seeding.
5. Roll. If the soil is a heavy clay which is inclined to bake, it should have a light harrowing after the rolling in order to leave the surface slightly rough. A harrowed surface is not as likely to wash in case of a heavy rain, nor will the soil blow as badly as if it had been left smoothly rolled.

KIND OF SEED TO USE.—We have seen no evidence which makes it advisable for us to change our previous recommendations for fairway seeding in the North. Four parts of Kentucky bluegrass and one part of redtop, using 100 pounds of the mixture per acre, has given very satisfactory turf.

SEEDING THE ROUGH.—The rough is often treated like a stepchild. Usually a thin covering of vegetation is all that is desired, so the seeding is delayed until all of the other work is over. Rough which players have

to walk over in going from tees to greens or greens to tees should be seeded at the same time as are the fairways, otherwise the players will have to walk in mud during wet spells. Sheep's fescue and Canada bluegrass appear to be the best species for the rough. In case the land has been broken during the construction work, it is advisable to add some redtop to the sheep's fescue or Canada bluegrass, as the case may be, in order to get a covering quickly on the bare places.

A Rapid Renovation of Putting Greens

By Almon Brooks Wilder

On our northern Michigan course, where the soil is very sandy, it was decided to introduce water and to renovate the greens. These greens had irregular turf with a poor growth of redtop, Kentucky bluegrass, and a few scattered bunches of red fescue. In previous years the unwatered greens had been mowed and rolled regularly and had been seeded occasionally on top of the turf, the seeding probably being of no benefit. Also, to overcome the roughness of the greens, there had been frequent top-dressing with finely screened sandy loam. By the time the work of renovating the greens was begun there must have been over an inch of this good top soil directly on top of the original sand soil.

Late in May a water system was installed. The old turf of the greens was thoroughly scarified with a spiked roller (a 10-inch log full of spikes protruding 1½ inches), first thoroughly soaking the turf so as to provide for good penetration of the spikes. Redtop was then seeded broadcast at the very heavy rate of 25 pounds to 1,000 square feet, and a thin coating of sandy loam mixed with pulverized sheep manure was applied, and the greens were then again heavily watered. The watering was continued every day except when it rained, and in about a week's time the redtop had sprouted, and it grew rapidly. Every fortnight during June and July the greens were reseeded, but much less heavily, and more sandy loam was applied. Sheep manure was omitted after the second treatment, as it was found that it burned the young grass considerably.

By July 1 there was a very heavy stand of fine young grass which had apparently crowded out the old stiff grass, the greens having a soft, velvety surface very pretty to see and perfectly accurate for putting. Once the grass was well under way, say by June 12, biweekly mowings had been commenced, and after July 1, when the greens began to be used regularly, they were mowed daily.

The loam used for top-dressing had enough clay so that it tended to cake a little with the frequent watering and drying. To overcome this, several times during the summer finely screened beach sand was used as a top-dressing. The greens continued in perfect condition throughout the summer, being beyond criticism, neither too fast nor too slow, and of perfect surface.

It is clearly recognized that these greens are not in permanent condition. The expedient was adopted simply to save time. Our present intention is to plant these greens with creeping bent stolons, letting the bent gradually run the redtop out. It is, however, gratifying to know that perfect greens of this emergency type may be grown any spring if the per-

manent turf for any reason is in poor condition. It is indeed barely possible that on this northern course with light sandy soil and long hard winters it may prove better to renew the greens each spring in the way described, much as the greens are replanted each fall on many of the sandy courses in Florida.

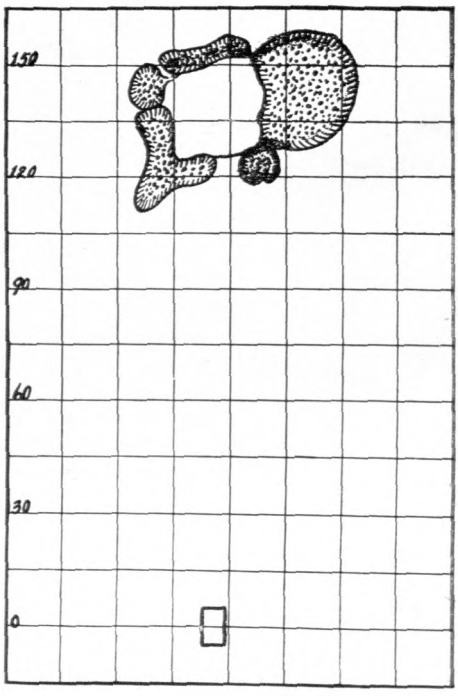
A surprising and puzzling thing was that by fall volunteer white clover, not present in the old greens or fairways, began to appear in the greens to a considerable extent and by frost time was abundant. Five years earlier there had been considerable white clover in the fairways and a little in the greens. This had become less and less until, at the time the new work on the greens was begun, it has almost entirely disappeared. Did the constant watering cause old and long-dormant seed to sprout?

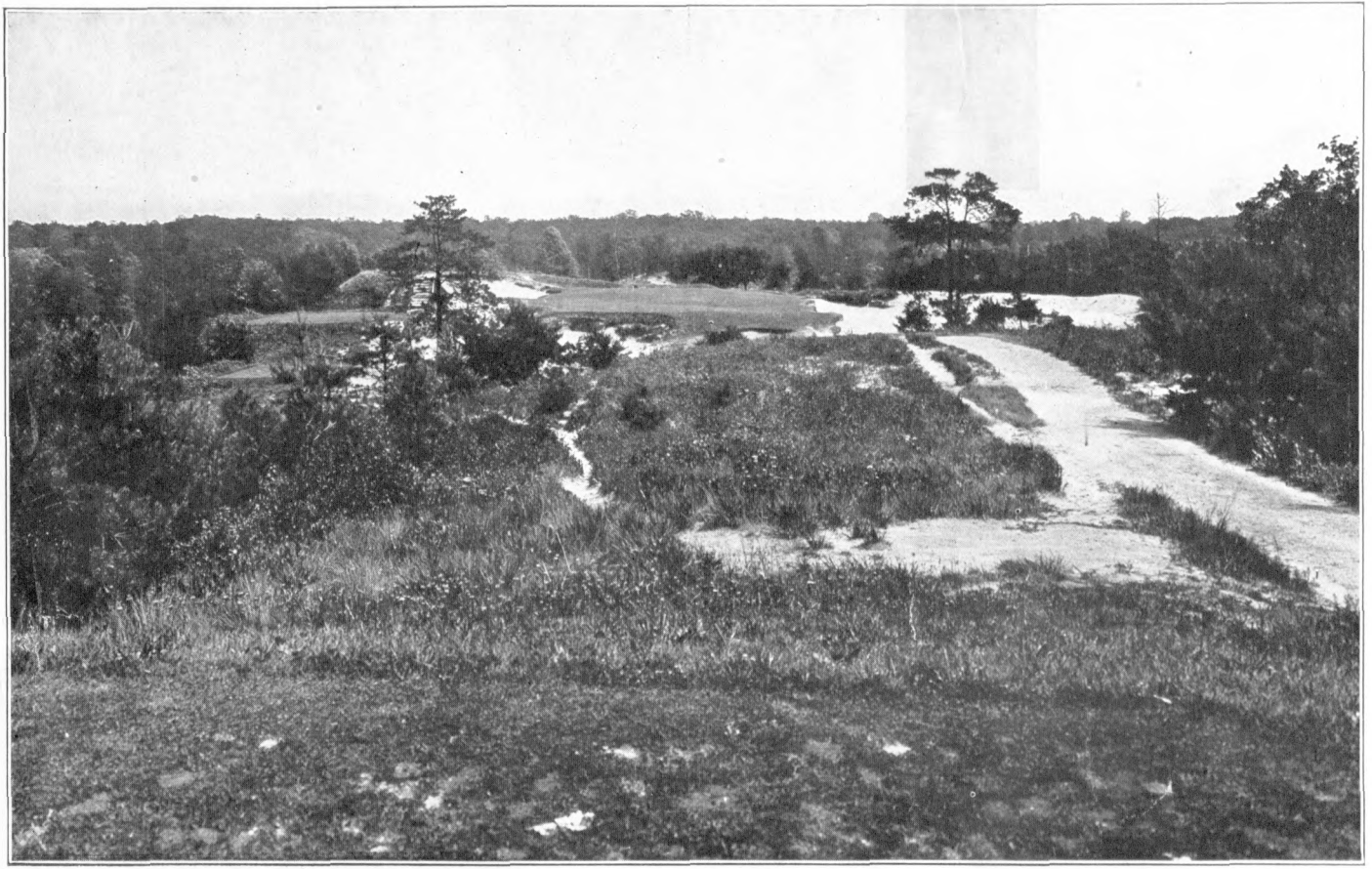
Construction of Tees.— There is a serious question as to whether players should be "coddled" by having perfectly flat tees prepared for them. This is often expensive and usually unnatural in appearance. Is it not better and more economical to select a fairly large and level area and keep that reasonably smooth by top-dressing and rolling and have ample spaces between tee markers and leave each player select a fit place to drive from? Is that not better than smaller but unnatural-looking tees? A large tee is to be preferred to a series of small ones, though it is good practice to keep a set of tees in reserve for tournaments where the length of hole permits the construction of a large tee for ordinary play a little short of the greatest length of the hole.

Instructive Golf Holes II

No. 10, Pine Valley Golf Club, Clementon, N. J. 134 yards.

The hole here illustrated and described is one that is designed to inspire fear in the heart of the player on the tee. The wide expanses of sand bunkers almost completely surrounding the green make the latter appear a small target. In reality the green is unusually large for a hole of this length, measuring as it does 6,500 square feet, approximately 70 feet wide and 95 feet deep. The tee is perhaps 15 feet higher than the green, the land in the middle between the two about 15 feet lower than the green and covered with rough grass that does not look inviting. The "mental hazard" of this hole is exceptionally great, even if the green is unusually large.





Hole No. 10, Pine Valley. View from tee.

Hole No. 10, Pine Valley. Close-up view of putting green.

Announcement of the Twenty-seventh Amateur Golf Championship of the United States.

The competition for the Amateur Golf Championship of the United States, open to all golfers whose names appear on the Official 1923 Rating List of the United States Golf Association, and to those foreigners visiting this country who may be invited by the Executive Committee of the Association, will be played on the course of the Flossmoor Country Club, Flossmoor, Illinois, beginning Saturday, September 15th, when the Havemeyer Cup and four medals will be competed for under the Rules of the United States Golf Association.

The winner of the competition shall be the Champion Amateur Golfer for the year, and the cup shall be held for that year by the Club from which the winner shall have entered.

The winner shall receive a gold medal.

The runner-up shall receive a silver medal.

The other semi-finalists shall receive bronze medals.

The player making the lowest score in the 36-hole qualifying round shall receive a special prize.

The conditions of the play for the Amateur Championship shall be as follows:

Saturday—First qualifying round. Eighteen holes to be played by each contestant.

Monday—Second qualifying round. Eighteen holes to be played by each contestant; the thirty-two players having the best scores for the 36 holes of the first and second qualifying rounds to qualify for the Championship.

Tuesday—Thirty-six hole match play rounds.
Wednesday—Thirty-six hole match play rounds.
Thursday—Thirty-six hole match play rounds.
Friday—Thirty-six hole match play rounds. (Semi-final.)
Saturday—Thirty-six hole final round.

In the event of a tie or ties for the 32d place on Monday, the contestants so tied shall continue to play until one of them has gained a lead by strokes at any hole.

In the event of a halved match, the players shall continue to play until one of them shall have won a hole, which shall determine the winner of the match.

All entries are subject to the approval of the Executive Committee of this Association, and any entry may be rejected by the Committee. All disputes shall be settled by the Executive Committee of this Association, whose decision shall be final.

Any player who fails to appear at the tee within fifteen minutes of the time he is called to play by the Committee shall be disqualified unless reasons satisfactory to the officials in charge of the Tournament be given.

Any person paying his entrance money shall be considered thereby to have submitted himself to the rules of the Association, both as to restrictions enjoined and penalties imposed. On these conditions alone he is entitled to enjoy all the privileges and advantages of the Association Competition.

All score cards in the Medal Play Round must be kept in strict accordance with "Rule 5, Special Rules for Stroke Competitions." Competitors failing to comply with the requirements of this Rule will be disqualified.

The privileges of the Club House and the Grounds are extended to all competitors in the Championship for one week previous to the Tournament.

The pairing and starting time of each pair in the First Qualifying Round of 18 holes will be announced through the press.

PROGRAMME

Saturday, September 15th. First qualifying round (18 holes).
Monday, September 17th. Second qualifying round (18 holes).
Lowest 32 aggregate scores for first and second qualifying rounds to qualify.
Tuesday, September 18th. 9.00 a. m.—Match play round (36 holes).
Wednesday, September 19th. 9.30 a. m.—Match play round (36 holes).
Thursday, September 20th, 10.00 a. m.—Match play round (36 holes).
Friday, September 21st, 10.00 a. m.—Match play round, semi-final (36 holes).
Saturday, September 22d, 10.30 a. m.—Final match play round (36 holes).

Cornelius S. Lee, Secretary

All eligible competitors shall enter directly for the Championship and not through the Secretaries of their respective clubs. An entrance fee of $5 must accompany each entry and must be delivered to The United States Golf Association, 55 John street, New York City, not later than Saturday, September 1, 1923. Draw checks to the order of the United States Golf Association.

CHAMPIONSHIP COMMITTEE, 1923.

Mr. Robert A. Gardner, chairman, The Rookery, Chicago, Ill.
Mr. Edward S. Moore, New York, N. Y.
Mr. Thomas B. Paine, Atlanta, Ga.
Mr. Alan D. Wilson, Philadelphia, Pa.
Mr. Charles O. Pfeil, Memphis, Tenn.
Mr. Henry H. Wilder, Boston, Mass.

Notice.—The Eligibility List of the United States Golf Association is compiled from the tournament records of the various players throughout the United States. Players whose names are in the official list are entitled to compete in the Amateur Championship of this Association. Any amateur golfer who belongs to a member club of the United States Golf Association may submit his entry to the Eligibility List Committee on or before August 25, 1923. The ability of all such entrants will be investigated and the player notified as to his acceptance or refusal at least one week before the Championship. Positively no entry will be so considered which is not in the hands of the Eligibility List Committee on or before the above-mentioned date.

UNITED STATES GOLF ASSOCIATION ELIGIBILITY LIST COMMITTEE.
J. D. Standish, Jr., Chairman, 55 John St., New York, N. Y.
Cornelius S. Lee.
Wynant D. Vanderpool.

The Green Section will gladly give its advice or its opinion in any matter concerning golf courses which it can properly handle. It cannot, in all fairness, do anything which would reflect adversely on the reputation of anyone associated in a business way with golf.

QUESTIONS AND ANSWERS

All questions sent to the Green Committee will be answered as promptly as possible in a letter to the writer. The more interesting of these questions, with concise answers, will appear in this column each month. If your experience leads you to disagree with any answer given in this column, it is your privilege and duty to write to the Green Committee. While most of the answers are of general application, please bear in mind that each recommendation is intended specifically for the locality designated at the end of the question.

1. **Impracticability of establishing a bent nursery from seed.**—Why can't rows of bent grass seed be sown in order to start a bent nursery? (New Jersey.)

The bent seed on the market is of two kinds (1) German mixed bent and (2) Rhode Island or Colonial bent. Rhode Island or Colonial bent spreads very slowly from the base and does not root at the joints. In German mixed bent seed there is very little seed of true creeping bent, so little that it would be hopeless to undertake to get stolons from seeding. Mature plants of the true creeping bent must first be developed before vegetative planting is practicable.

2. **Fall renovation of fairways.**—Our fairways have been first class in every respect for years. They showed a little wear last year, and this spring I made up my mind that they would have to be attended to. First, do you think that I am correct in believing that seeding the fairways and then top-dressing is a waste of seed? If seeding has to be done, ought not a spike-tooth harrow to be run over the fairway, the seed planted, and then a good top-dressing applied, and the treatment carried through this fall, which, of course, would interrupt the fall playing? Second, my judgment is that the best plan would be to apply a liberal top-dressing of rich compost about the 15th of September, which would feed the grass and give it a good chance this fall. We have a very heavy growth of crab grass on all of our fairways and I am uncertain as to whether the top-dressing had better be applied in September, while the crab grass is still vigorous, or whether I should wait until the first frost kills the crab grass and then apply the top-dressing. (Maryland.)

As a general rule, our attempts to increase the stand of grass by the use of seed on old turf have been disappointing. We have, however, accomplished the results you desire to secure by the use of top-dressing and fertilizers. It is an excellent thing to top-dress fairways occasionally, not only to feed the grass but to fill up depressions and thereby enable the turf to thicken. From what you say with regard to the history of your course we feel sure that what is needed most of all is manure and fertilizer. If you can get well-rotted manure and mix it with loam and sand in the proportion of about one-third of each, we believe it will put your fairway turf back into fine condition. This need not be applied except where the properly played shots land. All of our experiments with raking and harrowing turf have caused injury rather than benefit. If you are going to use seed it had best be applied early in September—that is, before the crab grass is killed; this will give it a chance to start as soon as the crab grass dies, which is important, as the young seedlings are likely to be winter-

killed if they do not get well rooted this fall. We would advise you to sow the seed right on the crab grass and then top-dress, without any other treatment. It will be necessary, however, to work the top-dressing down into the grass if it is applied at all heavily, otherwise it will smother and kill out the turf you now have.

3. **Improving fescue greens with bent.**—During the past three years we have entirely rebuilt our 9-hole course, seeding 9 new greens with redtop and fescue. Our greens were constructed with a clay base and about 12 inches of top soil on top of this base. The last 4 inches of this soil was mixed well with humus and sand and fertilizer (bone meal and ammonium sulfate), and we have never had any reason to believe that our soil was not of good quality. We had fairly good results at first with the grass on these greens, getting a good catch of both redtop and fescue, and had about a 50 per cent spread of fescue early this spring. However, at the present time (July) the fescue seems to be disappearing, and as we had not sowed very heavily with redtop this year that grass is also very scarce, and considerable clover has come up in its place. We are situated so that we can not very well use temporary greens and have not much facilities for a bent garden. Our water supply is not the best, although we try to give each green a good soaking each day. Would it be advisable to seed just the centers of our greens this year in order to cut down on the expense of this work? Is the statement true that bent grass will crowd out all other grass, such as redtop, clover, and wild grass, as it spreads? (Kentucky.)

It has been our experience that a great deal of the money spent for seed to put on old turf is wasted. However, with greens seeded originally with redtop and red fescue which begins to get thin, there is no other alternative for getting them into good bent turf without putting the greens out of play. Redtop and red fescue almost invariably behave in the manner you describe. We would advise seeding lightly to bent about the middle of September, and then top-dressing. Do not use more than 5 pounds of seed per green; heavier applications are a waste of money. There have been a few attempts made to dibble in creeping bent stolons in old redtop turf. We have done that with fairly good success in our grass garden, but it is a slow process, and we are not yet ready to recommend it as a practical means of getting good turf. We believe it would be more satisfactory to grow the creeping bent turf in a plot of ground by itself and when the sod is in condition for play to resod a green; this should not keep the green out of play for more than two or three weeks. It has been our experience that the bents crowd out redtop, bluegrass and the fescues. This does not however mean that the bent greens do not get infested with crab grass, *Poa annua,* and other weedy grasses; yet it has been our experience that it is much easier to keep bent greens weeded than is the case with greens of other grasses.

4. **Improving injured putting green turf.**—Our greens seem to be deteriorating rapidly. The grass seems to be getting thin and moss is appearing on one green. We have top-dressed the greens lightly three times this year (it is now July) with top soil and sand, half and half, using about two cubic yards to a green. We have also given them four applications of ammonium sulfate, using about twelve pounds to the green. We have water on all of the greens and we believe that the greens have had a sufficient quantity of water even through the exceptionally dry weather which we have had. However, even with this watering

the grass is rather brown on the rolls on the back of some of the greens. Each time we have top-dressed we have put additional seed on the greens, especially on the places where the grass was thin. Three of our greens are in most excellent condition and are as good as any greens in this section, and we cannot understand why these should be so good while some of the others be of much inferior quality. Would you suggest any kind of fertilizer for these greens? Our greenkeeper applied about seventy-five pounds of bone meal to two greens yesterday; this was mixed with about two cubic yards of top-dressing made up of half top soil and half sand. (Pennsylvania.)

You do not say whether or not your greens have been attacked by the brown-patch fungus. Possibly this may be the cause of your trouble. Without knowing specifically of your conditions the only thing we can suggest at this time would be to water thoroughly and top-dress the greens with a light top-dressing of good compost in which, provided your greenkeeper is accustomed to handling it, you might add sulfate of ammonia at the rate of 1 or 1½ pounds to 1,000 square feet. We find that we can not use much sulfate of ammonia at this time of the year without danger from burning; but we also find that liberal watering and a light application of a good compost worked into the turf with the back of a rake or in a similar manner is very helpful to the grass. Bone meal at this time of the year is not likely to prove immediately beneficial, nor is seed added so early in the season. Reseeding is of doubtful value on old turf, although it is possible to get fair results by reseeding in the fall if bent seed is used.

5. **Treatment of bent nurseries which are going to seed.**—The bent in our grass garden is going to seed and does not seem to grow nearly as well as it did last year. What procedure would you recommend to improve its condition? Do you think the abundance of seed on the stalks will germinate to any extent when chopped up and broadcasted with the rest of the material on the greens? (New Jersey.)

It seems that in general the bents are making poor growth in nurseries this year. During the six or seven years we have been experimenting with these grasses we have never before seen such a tendency for the stolons to go to seed as happens this year in a number of grass gardens. We are at a loss to advise a remedy, but would suggest the cutting off of the seed heads immediately. This can be done with a scythe without cutting the runners which are near the ground. An occasional sprinkling with ammonium sulfate should have a tendency to increase the vegetative growth of the grass also. We believe, however, that the grass will commence to spread on the ground again now that the period of seeding is over. As for attempting to use the seed produced on the stalks, we have examined a great many of these seed heads of creeping bent this year and in previous years and never found any appreciable amount of seed. What appears to be seed, when the head stalks are rubbed between the hands, are found to be empty glumes, commonly called chaff.

6. **Seeding and fertilizing new greens and fairways.**—We are now building our first nine holes. The soil is clay. We are advised to purchase for our putting greens 60 per cent red fescue, 20 per cent superfine redtop, and 20 per cent German creeping bent, and to seed this mixture at the rate of 100 pounds to the green. We are also advised to purchase 90 bales of "golf fiber," 63 tons of mushroom soil, and 1 ton of grass fertilizer for the nine greens. We are told

to seed our fairways at the rate of 200 pounds per acre to a mixture of 35 per cent fescue, 35 per cent Kentucky bluegrass, 20 per cent redtop, and 10 per cent Italian rye-grass. The total area for the nine holes is about 27 acres. We are also advised to purchase 7 tons of fairway fertilizer. Last fall some of our members made the mistake of listening to the man who laid out the course, and purchased over $3,500 worth of seed, with the result that we have lost thus far at least $10,000. Your advice in this matter will be appreciated. (New York.)

Our conclusions on seeding are presented in the article on page 159 of the June, 1923, number of THE BULLETIN. In your specific case we would advise seeding your putting greens with a mixture of German bent and redtop. The redtop will last only about two years and then you will have pure bent greens. The fescues, taken all in all, are not satisfactory. We would advise you to seed your putting greens at the rate of 5 pounds per 1,000 square feet, the 5 pounds to consist of 3 pounds of recleaned redtop and 2 pounds of German mixed bent. Five pounds per 1,000 square feet is heavy seeding. One hundred pounds of seed per green, your greens averaging, we judge, about 6,000 square feet, is altogether too much. Mushroom soil is an excellent fertilizer, and if you can get it at a reasonable price you will make no mistake. We do not know what "golf fiber" is. If you can get mushroom soil you do not need any other fertilizer for your greens before they are seeded. In any event we would not advise you to purchase mixed fertilizers. The fertilizers that give the best results are the nitrogenous fertilizers, such as ammonium sulfate, sodium nitrate, and bone meal. These should, however, not be used until the grass is growing nicely.

With regard to your fairways, we would recommend that these be seeded to a mixture of bluegrass and redtop at the rate of 150 pounds per acre in the proportion of 4 pounds of bluegrass to 1 pound of redtop. We would not advise you to buy mixed fertilizers for the fairways. The safest and usually the cheapest and all in all the best fertilizer for you to buy, if you can not get well-rotted manure, will be bone meal, which may be applied on the fairways at the rate of 500 pounds per acre, or at a heavier rate if you care to. You can not do any harm in using bone meal.

On your putting greens endeavor to have the top 4 inches of soil rich. This is an ample depth of rich soil, as you can always control the fertilizing from the top.

7. **Seed-bed and seeding of new putting greens.**—We are building 18 new greens. We do not believe their cost will exceed $1,000 each when finished. We first took the top soil and laid it to one side, and after the beds of the greens were shaped we relaid from 10 to 14 inches of the top soil, the top 2 inches of which we screened. We are using especial care in this work, inasmuch as there is a great deal of hard-pan on our course, which has given us much trouble in the past. Into the average green we are putting 16 yards of well-rotted horse manure, 10 yards of sharp sand, and 200 pounds of a commercial mixed fertilizer. The manure is being harrowed in in the usual way, then the sand, and then the mixture just before seeding. We expect to seed from August 20 to September 5, when the last greens will be ready for seeding. We would prefer to sow the greens to pure bent seed at the rate of 5 pounds to 1,000 square feet, but both our architect and our seedsman advise us to mix fescue and redtop with the bent. We should like to have your opinion with regard to the seed to sow,

with regard to the method we are following in the preparation of the seed bed, and as to whether or not we may expect the greens to be ready for play by June 1, next. (New York.)

If your 10 to 14 inches of top soil is of reasonably good quality we are sure you will find its depth sufficient. In fact, we are inclined to think that it is generally more satisfactory and more economical to start greens with 6 inches of top soil and top-dress liberally afterwards with top soil in compost. You do not give the size of your greens. Sixteen yards of manure for a green between 6,000 and 7,000 square feet is, in our opinion, more than is necessary or than can be used advantageously. If your top soil is rather heavy, 10 yards of sharp sand should improve it very materially. As for the 200 pounds of mixed fertilizer, we would advise the substitution of bone meal at the rate of approximately 25 pounds to 1,000 square feet. The use of manure in the quantity indicated in your letter should make the application of additional fertilizer, with the possible exception of bone meal, unnecessary. The main thing is to get the materials thoroughly mixed, and where manure is used it should be thoroughly comminuted and incorporated with the top soil. As to the kind of seed to use, we think the superiority of bent to fescue is so clearly demonstrated that there can be no doubt as to the relative value of the two grasses. Good bent seed sown at the rate of 3 pounds to 1,000 square feet of well-prepared seed-bed should give excellent results. A heavier rate of seeding is neither necessary nor advisable. The seed-bed should, however, be thoroughly prepared and the seed sown evenly and covered properly. Greens seeded with bent the latter part of August or the first of September in your locality should be in condition for play by June 1 of the following year.

8. **Over-fertilization of seedling grass.**—We built a green last fall and this year sowed it to redtop and bluegrass. Now we notice that when the young grass is about one inch high it seems to turn brown and die. This only occurs in spots. We have given this green 20 pounds of nitrate of soda—5 pounds to 50 gallons of water—and about 75 pounds of sheep manure, mixed with compost as a top-dressing. We took special precaution not to burn the new grass by applying the materials too heavy. The green has had plenty of rain. Do you think the fertilizer we have applied could in any way have been the cause of the condition we have outlined? (Indiana.)

While it is difficult to advise in regard to the putting green you describe we are inclined to think you have overdone the fertilizing. Young seedling grass will not stand as much soluble fertilizer as will old-established turf. We have seen grass killed out completely by the application of nitrate of soda immediately before seeding. We also have had trouble such as you describe where we incorporated too much manure in the soil before seeding. The only explanation we can give is that the soluble materials collect in spots, which cause the trouble. We know that the undiluted urine of animals will kill old turf, and so we must expect the same results from too much manuring or the use of highly soluble materials, as nitrate of soda or sulfate of ammonia, in large applications. Twenty pounds of nitrate of soda to an ordinary sized green should not ordinarily cause any burning. You do not mention the construction of the green and so we are assuming a case that might have happened.

Meditations of a Peripatetic Golfer

One club has made its greenkeeper an honorary member. Let's help hasten the day when every club will do the same and when every greenkeeper is worthy of the honor.

Sickly or dying forest trees on a golf course. This is a common tendency. Plant at least a few new trees each year for beauty's sake.

They made their greens saucer-shaped so that they would hold water better. So they will; but it will make the grass mighty sick.

Crab grass is an annual. Cut if off just below the crown. The roots can not grow another plant.

Crepe-soled shoes will not be so popular when all the turf gets right.

Every man has in his makeup a tender spot for green growing things. Try to develop among your laborers a genuine affection for good turf; it pays.

A well-dressed green reflects the personality of the greenkeeper.

Little drops of water,
Little grains of sand,
Make the green elastic
And the grass to stand.

Why doesn't someone invent something that will make moles work lower in the soil so their burrows might take the place of tile drains?

A wise greenkeeper—piling up top soil in preparation for the construction of new greens this autumn.

White mustard does a lot of damage if not promptly removed from greens; but happily it is easily killed; a cut with a knife and it is done for.

Better weed out crab grass while it is small. The longer you put it off the more difficult will be the job and the greater will be the damage done the turf.

If a machine proves unsatisfactory in any way the proper thing to do is to write the manufacturer at once.

A new course with the soil on the fairways so poorly prepared that there is mighty little chance of getting a good stand of grass. It pays to prepare the soil right for grass turf—that is, a well-fined, smooth, rather firm seed bed.

Put the grass under the players' feet and they will think you are a regular greenkeeper. Ordinarily compost and fertilizers are more essential to this accomplishment than reseeding.

If there are any new courses being built in your neighborhood, tell the club about the Green Section. Or at least give us the addresses of the officers.