

I think Mr. Wilson has really expressed, in that short report, all that I could say. But I do wish to say, on behalf of the United States Golf Association, that I think the golfers of the country owe to these gentlemen, Prof. Piper, Dr. Oakley, and Prof. Carrier, a debt of gratitude which can not be expressed in words; and I would like to say personally that I can not tell them how much we appreciate it in our committee.

I am very glad indeed to see such a large turnout here today, and I wish all the luck in the world during the coming year to the Green Section.

The Experiences of a Green Committee Chairman

Address Delivered by H. Kendall Read, of the Country Club of Atlantic City, Before the Annual Meeting of the Green Section, January 4, 1924.

Mr. Chairman and Gentlemen of the Green Section: When Dr. Piper wrote me asking me to speak on this subject, I made up my mind that they were indulging in a chuckle down there in Washington, because I felt that if any man was qualified to speak as a "green" committee chairman, I was the man, as I do not think anybody was ever any greener than I was a few years ago when I started in with this work.

I got into green committee work very unexpectedly. The Country Club of Atlantic City, I guess, is no different—no better and no worse—in the way in which it has been run than many of the other golf courses throughout the country. The green committees of the past have been recruited from the members of the club—good players, or men who had considerable to do with its management or were interested from a financial standpoint. But the green committees were just the usual green committees, and there was no particular effort made to blaze any new trails or to change any old systems; and they just simply went along.

I was put on the committee first as a member. And, by the way, I am not speaking in any boastful sense, but simply because I have been asked to give my own experiences. I shall not give you all my experiences, because that would be too funny.

We have had all sorts of stormy times, as you always have when you try to break new ground and change old methods. The chairman that year (two years ago) sent down from his office to my home in Atlantic City everything he had relating to green committee work—maps, estimates on different work that was to be done and in course of construction and various plans submitted by different prominent architects as to changes in the course here and there; and with this came the curt advice that I was to go ahead and run the course.

I am reminded of a story of a farmer who was working in a field, and suddenly from a road hard by, a cloud of dust flew up, and he heard the sounds of a fierce struggle going on; and he was naturally interested. He left his plow and ran over to the fence, and, looking down the road, he saw a fellow farmer holding desperately on to a very wild ram—holding on by the horns, and he was having a fierce time of it; and, being friends, the farmer said, "Do you want me to come there and help you hold that ram?" And the friend replied, "Not much; but come here and help me let him go." That was just about my experience; I had a ram by the horns, but had no way of letting it go. I started out to get some information; and there is where the fun began.

Fortunately, we had had audits of our accounts made regularly over a period of years, and I got from the auditing concern reports for the two years previous as fully itemized as I could get them, separating all

the different items that go to make up the greenkeeping budget. That was rather interesting. There were two items on this list of expenditures that stood out very prominently. One was labor, which, of course, is always a big item in green committee work; and the other was grass seed. We had bought lots of seed. The year before, the seed bill exceeded \$4,000. We have 27 holes, by the way, and they used seed very generously, according to that statement. However, they had some excuse, because in the past they had been acting upon advice that had been given to them by "experts." Among the things that were sent down to me by the chairman was a report written by a very prominent seed expert connected with a well-known seed house, and that report is interesting reading. Just last night I copied one paragraph which is especially interesting in the light of present-day information. That report is dated September 30. I will read one paragraph of it. This is a kind of summary:

"However, to get the full benefit of this seeding, the greens should be prepared and seeded down within two weeks' time, and it is quite possible to get the young grass up strong enough to allow you to come right back in November with the winter seeding and another dressing. This will give you a good start early in the spring."

That meant 100 pounds of seed to a green—the first 50 pounds the middle of September and another nice generous dose about the middle of November. I can easily see how, acting upon such recommendations, that they could spend \$4,000 for seed very readily in the course of a year.

Time for the spring seeding was coming on, and I was as green then as the grass out there. It was suggested that we should prepare for this seeding. I asked where we had been buying our seed, and was told that it was from a reputable house. I was advised that we ought to have 50 or 60 pounds to a green. We had 27 greens, and it was not hard to figure that out. We cut it down to the very low figure of 50 pounds to a green; and *not having any more information than I had at that time, I bought it.* No one could tell me the kind of seed we had been using on our fairways or greens. They were simply mixtures prepared by the seed house. Then I hied myself to the office of the manager of the seed house from which we had been buying, and asked him what seed he had been selling us, what formula they were giving us for our fairways and our greens. He started looking through some archives but could not find it; no doubt it was there, but he could not put his finger on it. I asked him to get it for me. He said, "I will phone up to the foreman of the warehouse, who makes up the orders." He did that, and I finally found out, after a very tedious hunt, what we were paying that \$4,000 or \$4,500 a year for—I am ashamed to tell you what it was; I am not going to (laughter). I have learned some things since then, and there is a limit to credulity, and I don't propose to test yours.

While talking to this seedsman and asking him questions (I was after all the information I could get), I noticed that he would reach up to a shelf and pull out a volume he had up there; and he did this so often that I made up my mind that this must be a very valuable book—kind of a bible. I finally got up my nerve and said, "Will you let me look at that book?" And he handed it to me, and it was a book by Flint on grasses, written in 1857. He considered it most valuable, and thought it reliable. But he could not tell me where I could get a copy, it was too long out of print. Finally I managed to get one at Leary's Old Book Store. And I found that the way they distinguished the grasses in that book was by the flowers (laughter). They had to wait until a grass grew long enough to

blossom (laughter). I could not see where that was going to do me much good on our golf course.

I remember that just about that time I bumped into a book written by Piper and Oakley. I got a copy of that in Wanamaker's. As I was passing through the store I met a prominent golf man in our locality, and said, "I have here a book by Piper and Oakley on grasses." He shook his head and said, "Well, you want to go a little slowly." He was an older man than I, and had a fatherly interest, I imagine, in my early struggles. He said, "You know, there is a lot of experimental stuff being pulled off these days; but you don't want to get far off the old well-beaten path that has been tried out and is known to be sound. That book is all right, but I would not put too much credence in it." I went home with the book and used it religiously up to the time the BULLETINS came out, and I have been using them ever since.

About that time I heard that there was such a thing as a Green Section in Philadelphia. There was a local section there, and our course was not a member, and I immediately took steps to see that we got into it.

There was a meeting held shortly after that and Dr. Oakley was the speaker of the evening, and I remember that that was the first time the term "vegetatively planted greens" ever tickled my ear. I was sitting by a man who I knew had been chairman of the green committee of a prominent club for many years, and I listened as long as I could without showing any undue disrespect, and then I asked this man alongside of me, "What the devil is he talking about?" And he answered, "I am damned if I know."

Now that is about the situation, I imagine, in which a great many of us have been. This is new stuff, and I think a great many people are somewhat timid about going ahead and trying it out. We tried very hard to get Dr. Oakley to come down and look over our course. He asked me to write him about our troubles, and said that they would give us what help they could. We told him that this was no case for absent treatment. We said, "We are in real trouble here, and we want some real help." After plugging him with a good many letters, Prof. Carrier finally made us a visit.

At that time we promised Prof. Carrier that whatever recommendations he would make to our club, or the Green Section would make to our club, would be carried out 100 per cent. If he told us a certain thing was desirable to do, or if the Green Section told us so, we would not fiddle about it or monkey with it, but would do it absolutely, as far as we were able; and I believe that is a very important thing, gentlemen. I think that if you are tied up, as you ought to be, with the Green Section, you should take advantage of the data which they have prepared and the published results of their researches. I do not think you should take it in any half-hearted fashion. If you intend to go along with them, you want to go the whole route; and you will not be very far wrong if you do.

After Prof. Carrier had been there, we started a bent nursery, and after that we put in another one and we have had them going since May of 1922; and we ourselves have put down eight vegetatively planted bent greens. We had 13 greens, built a few years ago, which were not very good; but now we have vegetative turf on eight of those greens. Gentlemen, we are sold on the vegetative green; there is nothing in the world to compare with it. Some of those greens that we put in are the prettiest pieces of turf, I think, that any one could possibly get—absolute uniformity of color, texture, and growth. You have just one kind of grass; and after

you have a vegetative green of creeping bent, and have had the pleasure of working with it and developing it, I do not think you would be satisfied with anything else. These greens, if properly planted and taken over the initial stages, require less work and upkeep than any other piece of turf you could have. We will never put any other kind of grass on our greens but bent, and by the vegetative method. We grow all our own grasses; all the strains that we have, we have gotten from our own turf. We grew three strains in the nursery beds, and we put down every one. We singled out one as the most desirable, and all our future work will be confined to the use of that one grass.

Now I want to tell you something about that. We found that grass in front of a tee which had been tramped over for goodness knows how many years. Still it looked good, was bushy and close-jointed, and had all the earmarks of a good bent. We started to take it up—Prof. Carrier was there that day, and we got a spade to get a little sod. We started to dig with that spade, but we could not make any impression on it. Then the groundman finally got in with his No. 10, and kicked on it; and finally, gentlemen, that spade buckled up and bent. The only way we could get that sod started was by edging in with another spade down at the corner of it, and in that way we got through that turf of bent. I have never seen such tough, resistant stuff in all my life. There was a mass of runners that were at least $1\frac{1}{4}$ or $1\frac{1}{2}$ inches thick—just one solid mass. You could take a two-inch strip at the top and tear it down the whole length, just the same as you would tear a strip of linen, and it would keep its width absolutely uniform all the way down. You could shake the dirt away from that two-inch strip, and with the runners that were left you could tie it into a double knot like a piece of string, and then untie it, and it remained the same. I do not believe there is a man in this room who could have taken that two-inch strip and have broken it with his hands.

Now, that is what bent can do. That is what bent did do in this particular instance. I wish we had that all over our fairways.

When we took the tops off the old greens to replace them with this vegetative bent, some very interesting things developed. We came to our old friend, Brother Humus. These greens had been treated according to instructions, and they had been given liberal doses of humus, and when we took the sod off you could hold it up and count the applications of humus that turf had received. There it was, in its original form—that pasty, putty-like layer, which never had amalgamated or lost its identity; it had not worked into the soil at all. You could read the history of the applications of humus by the layer-cake lines. If you tore the sod apart, you would find that the roots of the grass would go down to the first layer of humus, and then curl up like a sick chicken. We have never bought a pound of humus since then; we do not believe in it—certainly not put on in that way, at any rate.

Now, just a word or two about vegetative planting. I do not want to repeat something that has been said, but in planting our greens vegetatively I made up my mind that one of the essential things was keeping the stolons moist, and I thought that if water was good on top of the stolons, it was good underneath. Before we plant the stolons on top of the greens, we always water the greens. In other words, we get a moist bed to put them on, and then water them immediately after the top-dressing is put on. We are on sandy soil, although the top soil of our greens is from our own compost, which is pretty good stuff. No. 4 green on our regular course we planted late last spring. We had things ready in the late afternoon, so

we planted about one-quarter of that green late in the day. Then we stopped. It was right near the bent bed, and we simply took the bent up as we needed it. We finished our planting on that green the following morning. There was only a difference of 12 to 15 hours in the planting time between the first quarter and the last three quarters; but it looked to me as if there were almost ten days or two weeks difference in the growth of those two sections of that green. In other words, the quarter that was planted in the late afternoon, when no sun hit it, showed a tremendous difference, and made a much earlier start than the grass that was planted the following morning, which was a hot, sunshiny day, and where, even in spite of frequent waterings during the day, there must have been considerable evaporation and consequently more or less drying-out of the stolons. The quarter of the green planted the latter part of the day so far outstripped the balance of it that there is no real comparison; it was the same grass, planted by the same men, the same machinery used, and the same methods employed, the only difference being in the time of planting.

Now, *composting*. We do not lose anything in the way of material for composting. We save all our green clippings, all the leaves raked out of our somewhat scanty woods, pine needles, and so forth; and nearly everything that we have goes into the compost pile. We have used a tremendous amount of top-dressing. There was a tract of land opened up alongside of us for building lots, which had been a good farm, and we made a contract with the men who were doing the street grading for the use of the top soil. I think we got about 4,000 cubic yards of pretty good top soil off of that farm. I am such a firm believer in top-dressing and compost that we do not lose any opportunity at any time to get hold of material of that character. On top of that we spread 80 tons of manure that we had bought at a farm sale. We have used in the last two years 35 carloads of mushroom soil on our fairways; but with all that soil, with the thousands of cubic yards of compost which we have acquired, with all the work that we have done in building new greens, with the multiplication of tees, and with the enlargement of old ones, we have spent less money than we spent before.

The biggest part of our saving probably was in seed. They used to spend \$4,000 or \$4,500 for seed; but if they sell me \$500 worth now, I feel that I have been stuck. The only seed we use is bluegrass with a little redtop for the fairways and tees. We have not put a grain of seed on our greens for a year and a half. I kept that a secret for a while, because I was afraid I would be ordered shot at sunrise, by the members of the club; but our greens have never been in such fine condition before. The bents have come in fast; the clover has largely disappeared. Of course, we use ammonium sulfate; we believe in that as a fertilizer; and the greens have had four doses during the season. The ammonium sulfate surely did wonders for those greens. Where before you had to look for the bents, now you can not look anywhere without finding them. Beside the 35 carloads of mushroom soil, we have used about 75 tons of clay. We got that from a brickyard near the club. They have a stratum of soil which they get into before they reach the brick clay, and for us it is fine for composting and top-dressing; it is a kind of sandy clay; it is not pasty or thick, and we do not hesitate to put it right onto the fairway just as it comes.

In putting on mushroom soil, we use a chain harrow. We could not live without this tool. We chain-harrow our fairways; we put the mushroom soil on, and chain-harrow it thoroughly. We put in our seed, and chain-harrow it again. Then we roll it in two directions. We find you can dress a fairway in that way, with a generous application, and there is not

much objection from the members. There is really little inconvenience, if you do it that way.

We never handle material twice; we always haul it directly from the car at the railroad siding to the fairway on which we are going to use it.

The Country Club at Atlantic City has become famous for several things, but for nothing, perhaps, any more than the multiplicity of its artificial bunkers and mounds, all of which mean hand work. We had literally hundreds and hundreds of those abrupt mounds on our course—sharp little pockets and cops; and I suppose all of you have some of them. We had one cluster of 64 cops. You put a man in there working on Monday, and he is still there on Friday. Now, that is all nonsense. We wonder why we have to spend so much on upkeep; but we are right now getting rid of all that, and you will not know our course when you come down there again. We have simply gone in there and ripped all that junk out from stem to stern; removed all of those abrupt mounds and all the old cross-bunkers, and we are now rid of all that crazy stuff. We had 145 of those things on one hole. That is a fact. We will not build a single mound anywhere which you can not drive a team of horses over with a mower or chain-harrow. In other words, we are through with hand-labor, so far as we can eliminate it. There is where your big item of upkeep comes in, as I see it.

We are doing something else that may interest you. At the present time we are going in between the fairways of parallel holes, and turning it all into a rolling sandy waste, with no grass, no upkeep. That is what the Green Section has been pleading for; and we can do that down in our sandy country. It is really beautiful, and it is easily kept up; and when we want to shake it up a little, we can drive a chain harrow over it. There is nothing that we are building at the present time on which we can not use a horse or power machinery. We are building four new greens and abandoning four others, and everything we are doing is always with an eye to cost of upkeep.

I have taken up too much time already, I am sure. I have simply been rambling along. There is just one passing thought that I want to leave with you, and that is that the Green Section deserves full credit for whatever we have been able to accomplish at the Country Club of Atlantic City. When I started in I didn't know any more about turf than a child knows. Information on the subject was practically nil; and I never found any really reliable information until I found the Green Section; and when I did find it, I tied right up to it 100 per cent, and the results down there that we have been able to bring about through this connection have been so satisfactory to the club that the Board of Governors are generously supporting us at the present time in all these new improvements. Without the Green Section these results could not have been accomplished.

New Offices of the United States Golf Association in New York City

The executive offices of the United States Golf Association have been moved from 55 John Street to Room 712, Bowery Savings Bank Building, 110 East 42d St., New York. Mr. T. J. McMahon, the efficient Executive Secretary of the Association, will be in charge at the new location. A cordial invitation is extended to all persons interested in golf in any of its features to visit and inspect the new offices.