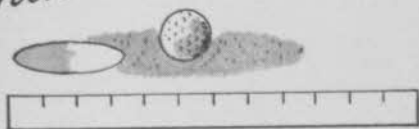




...sometimes just an inch short of victory



Uncontrolled winding tension can produce a ball that is just a little *out of round*—a mite slow on the carry—an inch short on what might have been a winning "birdie." The Haig high compression winding is *controlled* for "custom-built" uniformity—a precision job for a real professionals' ball.



A better golf ball than the Haig has never been produced. It's a ball you can play with complete satisfaction and sell to your most particular players with absolute confidence. Like all Hagen golf balls and golf clubs, the Haig is sold through professionals only.



If it bears my name
it's sold through
Professionals only
Walter Hagen



Texas Bent Trials May Aid Small Town Greens

By LENY CALDERWOOD

Professional, St. Joseph (Mo.) Country Club

"The best way to get rid of 'em is to shoot 'em."

I visited the Texas Turf Conference January 13-14-15 held at Texas A. & M. at College Station, because I was going to visit Col. Clifford C. Whitney, the Daddy of G.I. golf in Texas during the war years, and because I am just as much interested in the grasses for greens grown down that way as I am interested in our own types of grasses.

It was after the middle of the day when I arrived there, and the "Old Colonel," being even more than a golf fiend than he was two years ago when I left him, was already out at the Conference to absorb every bit of information that he could on the growing of turf.

Although he was more or less looking for a visit from me, he didn't know that I was any where near that part of the country. When I opened the door of the conference room, I immediately spotted him sitting in the back row with but one empty chair beside him. I walked in, but he was so wrapped up in the lecture on the extermination of rodents that I was able to step past him and into the empty seat without getting his attention.

After about ten minutes of the poisoning of gophers, moles, ants, and the like, I shoved him a bit on the shoulder, but he only scooted over. A few minutes passed before the subject of the ridding of the armadillo came up, and I nudged him again, but still he wouldn't give his undivided attention to anyone but the speaker.

"We have been able to kill the armadillo with poison," said the lecturer. I knew what was running through the Colonel's mind. He was dreaming back on the nights during his operation of an army club at Camp Bowie, Tex., with myself as his army pro and general man. We would catch a good dark night to run over the golf course in a jeep and knock the armored pests over with a carbine.

Carbine As Pest Cure

This time, I pushed him on the shoulder a bit harder and whispered in his ear, "The

best thing to do with 'em is shoot 'em." For the first time, he noticed that I was sitting beside him, and we had to hold ourselves in to keep from breaking up the meeting. A few seconds later, the lecturer made the remark that after all the most successful means was to shoot the armadillo.

In its second year of existence, the Texas Turf Assn. is well organized and on the road to being a big asset to turf growers of the state, not only for golf courses, but for such other purposes as lawns, airfields, and even pastures.

The agriculture department of Texas A. & M., where the Conference has been held its first two years, is working in cooperation with the Association which has raised enough money to carry on experiments. Tests will be made during the coming year by college personnel and exhibits of turf and soils will be on display for the meeting next year.

At a banquet and business meeting held in conjunction with the conference, Pres. Gibb Gilchrist, of the college, said that it was an open secret that the school would start before long on the project of constructing an 18-hole golf course along with the remodeling of a horse barn now on the site for a club house. The facilities would be for the use of the students and townspeople from the nearby communities of College Station and Bryan.

Many very good points on the building of greens and the care of turf were brought up by well known turf men, including Dr. Fred Grau, director of the Green section of the USGA. And, no doubt, many of these ideas will be carried back to respective golf courses by visiting greenkeepers and pros to bring about even better putting surfaces.

Texas Going to Bent Greens

Being from a bent grass green section, it was quite interesting to me to sit in on the discussion of bent grass for greens in Texas. Although its not a new thing for them, and they already know that it can be grown down that way, a big majority still have the Bermuda grass for the sum-



POWER-BILTS

PUT THE GO IN GOLF SALES

Because Power-Bilt clubs are sold exclusively by golf professionals and backed by advertising that tells the nation's golfers to "GO TO YOUR PRO" for golf clubs, you can depend on the POWER-BILT line for consistently good golf club sales.



Power-Bilt advertising in 1948 is beamed at more than 13 million readers through the pages of these important magazines.

HILLERICH & BRADSBY CO., INC.

LOUISVILLE 2, KENTUCKY

Also makers of famous LOUISVILLE SLUGGER BATS

mer season and change over to Italian winter rye for the winter months. The Colonial CC at Fort Worth where the National Open was held in 1941 was the first club down there to have bent for greens. Colonial not only proved that the grass could be grown, but the club's greens were very good. Since that time several other clubs have changed over, a few being Brook Hollow in Dallas, Dallas Athletic CC, a good many in West Texas, and I understand that the Lakewood CC in Dallas is at this time making the change over to bent.

Graham Ross, pro at the Dallas Athletic CC, was a speaker at the conference on how his club changed from Bermuda grass to bent. "After our greens had been so lousy for some time, the club handed me a nominal sum of money and told me to do something about them. One of my first thoughts was to put in bent, but that seemed so risky, especially with the sum allotted for their betterment. My next thought was that the Bermuda had been so bad that I couldn't any more than get kicked out of a job by trying bent, and I was looking for a job when I got this one. So I immediately started some snooping around and within a matter of weeks the new bent greens were under construction. At present they are by far better greens than we ever had with Bermuda grass."

Ross was asked to compare the cost of upkeep of the two types of grasses. He answered that he couldn't give them figures as to the actual difference in cost, but in his own case it wasn't great because he didn't have much financial leeway. Play due to better greens had not only picked up but was much more enjoyable for the golfer. But most likely the best answer to this question was given by one of the other speakers on turf when he made the remark that the average Bermuda green could be grown easy enough, but to have a Bermuda green at its best, almost as much work, knowledge, and care had to be given to the grass as that given to bent.

Plea for Smaller Clubs

One member suggested that possibly the Turf Association was putting too much emphasis on the larger club instead of considering the smaller club in the construction and caring for greens. Most of us know the cost of tearing up and reconstructing a green with the proper base in order to grow healthy grass. And we also know that many of the smaller clubs go on from year to year with bad putting surfaces because they just don't see how they can dig up enough money to dig up their greens and revamp them to the accepted methods.

Many of these smaller clubs built their greens years ago by mounding up a pile of dirt from close area and planting grass.

It was either this way or else stay with the old sand or cotton-hull green, because of the lack of funds to do better. Those same clubs still lack those funds to do much about making a change.

And as we have since learned there are no short cuts in the reconstruction or the building of a good healthy green. That was even brought out in the conference.

Yet I am still wondering if we can't do something to provide information to these clubs with small funds in every section of the country to show them they can have better greens than they have now without spending a heap of money.

I am wondering this, because just after the meeting I visited back in Brownwood, Tex., where the U. S. government took over the golf club because it was amid the maneuvering area. I had been detailed out there to take charge. We had the greens then in gretty good shape, but they were Bermuda. I knew just about every blade of grass then and had a lot of those blades named, not from playing golf on them—I didn't have time to play golf—but from trying to take particular attention to each green and tee in their care.

I knew what was under those greens—a heap of Texas soil dragged from the areas around and contoured to make a putting surface without even the help of any under drainage or a hypodermic needle.

Bent Good at Brownwood

When I played these same greens recently they were in bent grass, and I would say that they were pretty close to being as smooth and as fine a putting surface as any green on which I have ever pampered a ball into a hole. The bent that had been sown over the top of Bermuda grass without re-doing the base or even molesting the old type grass was lying dormant at this season of the year, but they putted true, and it was very easy to see how very well they must have putted before the grass went to rest for their winter season.

I know that the greenkeeper there had very little knowledge of bent grass. I am sure that the man in charge of the greens, E. J. Weatherby, learned only about the characteristics of bent grass from articles that he had read along with the many very good suggestions published in *GOLFDOM*. Yet he had good greens that cost only the price of the seed with the addition of the labor that it took to topdress and scatter the seed.

How long these greens will remain to be extra good remains to be seen. But the old base without even underground drainage has mothered a very healthy putting surface in its first year, and a small club has good greens right now along with a healthy financial statement.

Simple Methods Solve Course Maintenance Problems

By MILTON E. CONNELLY



M. L. FRANCIS

A diet of topdressing without high pressure fertilizing and plus a big dash of common sense is the reason lush, velvety greens at the Haverhill (Mass.) CC escape the serious epidemic of yellowing or chlorosis which raises havoc with stricken greens in other New England areas during the hot,

humid weather of late July and August.

The formula was developed three years ago by Manuel L. Francis, greenkeeper at Haverhill. In the season of 1944, Manuel had his own headache from the chlorosis affliction to the velvet bent on his greens. He had tried all kinds of remedies. But none worked until he hit upon his own cure.

First, you have to understand a little about Manuel and his reputation for knowing about soil. He got his reputation in the olive and orange orchards of his native Portugal. He expanded it after he came to this country and waited for the opportunity to apply it. It came later when he was made a greenkeeper at the South Portland (Me.) CC, afterwards at the Amesbury (Mass.) CC and for the past five years at the Haverhill club.

And so, in 1944 after everything recommended had been tried to halt the yellowing of the velvet bent on his greens, Manuel went back to a basic principle.

He knew his velvet bent was sick. He knew from his own experience that when he was sick he didn't want to eat and he figured that trying to feed chlorosis wasn't going to cure the patient.

Topdressing Greens

"I finally decided," he explained, "to topdress my greens, topdress them without adding fertilizer. In a week I noticed improvement. I repeated the process in eight days and in 30 days my greens were back to their natural color and my golfers were happy."

Twice a year Manuel gives his greens a light application of soot. They are watered

in the spring and fall but very little during the summer months.

"It's hard to give an exact formula to follow," Manuel said. "I feed according to the needs of the plant. Common sense will tell you when there's been enough feeding. Part of July and all during August no fertilizer is used on our greens."

Experience is the teacher and the condition of the Haverhill club greens this year are evidence of Manuel's theory. They are the talk of New England.

There are other lessons, too, for those who want to learn, from the experience which Manuel Francis has gained and applied in his enthusiastic work at Haverhill.

For example, he is convinced that any country club must recognize the value of complete cooperation with the individual responsible for caring for greens. Club officials or green committees should appreciate the fact that well turfed and trimmed tees, soft and velvety greens, good fairways and traps are the best assets for a club, building up membership. If they cooperate with the greenkeeper and his crew toward reaching such objectives it is then possible for the proper foundation to be laid and later possible to get a course working on good schedule, saving time and labor which can be turned toward other developments.

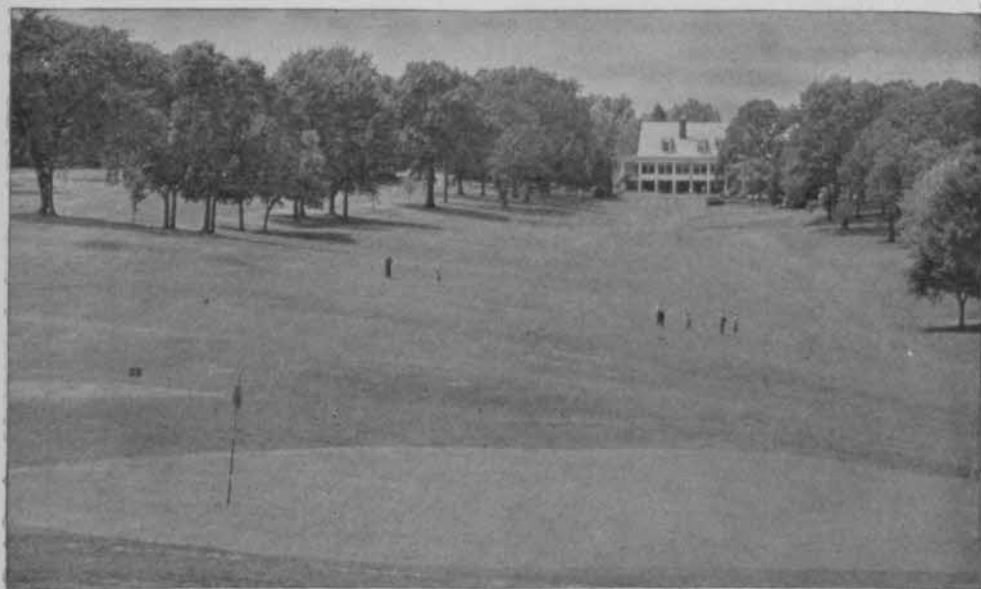
"Every one in my small crew at Haverhill," Manuel said, "is trained to do every single operation on the course. We decided this policy was necessary if we were going to advance at Haverhill and I was given permission to proceed to train my crew of six men and three schoolboys, hired during the vacation period. They were interested and they learned quickly."

Cleaning Greens of Crabgrass

When Manuel took the greens job at Haverhill, he found most of the greens were hard and loaded with crabgrass and other weeds. He decided the way to eradicate them was with the aid of chemicals. Sodium arsenate was applied at the rate of one and one-half ounce per 1000 square feet in three gallons of water with a fog spray. The first application was done at the three-leaf stage. The greens were well watered the day before so there would be

ALGONQUIN protects

Oscar Bowman, greenkeeper at the Algonquin Golf Club, St. Louis, Missouri, says: "Tersan' is the most effective fungicide I have ever used. There is no danger of it 'burning' the greens as some mixtures do. And with good grass hard to grow in this area, 'Tersan' provides the necessary stimulant for growing fine greens."



NO DANGER of dollar spot or brown patch getting in here. Mr. Bowman prevents these turf diseases, which can damage greens in a matter of hours, by applying "Tersan" to the Algonquin greens regularly . . . once every four days during humid periods, and every eight days in dry weather. Many greenkeepers apply "Tersan" double-strength during the early spring so that strong roots develop and there is good growth to hold during summer.

its greens with **TERSAN***



EASY TO APPLY. Mr. Bowman finds that this three-section spray apparatus of his own invention gets the job done quickly and efficiently. "Tersan" mixes readily with water—and it has a wide margin of safety so that even inexperienced help can use it. It will not shock, discolor, or retard grass growth—even in hot weather.



TOP PLAYING CONDITION of the greens at all times is assured at the Algonquin Golf Club by regular applications of "Tersan." Du Pont Semesan* and *Special Semesan** are available, if you prefer mercurial fungicides.

*Reg. U. S. Pat. Off.



DU PONT *Turf Fungicides*

**BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY**

Listen to Du Pont "Cavalcade of America" Every Monday Night—NBC Network



plenty of moisture for the cell walls of the bent grass to prevent them from being destroyed. Two or three days afterwards, the greens were watered again and seven days later were fertilized with two pounds of sodium nitrate per 1000 square feet.

Three weeks later a little crabgrass showed up and he sprayed again at the rate of one ounce of sodium arsenate per 1000 square feet, following the same procedure as he did the first time.

At the end of the season, Manuel had nice greens except for the hardness, which was more or less another headache. But here again some common sense went into his planning. He knew spiking would bring the results he was seeking so he hit upon one of his own formulae. He developed a loose topdressing with 50% of it loam, 25% of it sharp sand and the other 25% sawdust.

Develops Loose Topdressing

Some greenkeepers may be amazed at the sawdust in the formula. Manuel figured it would guarantee moisture for the greens and for holding that moisture. He has been using this mixture on his greens with top results.

Since Manuel can remember, all the loam he uses in topdressing for putting surfaces is taken out of the woods. And this for a good reason too because it is better and more suitable loam.

In the 1947 season, Manuel used 75 yards of loam on putting surfaces. He used up 20 hours of labor cleaning the woods of small trees and three hours with his bulldozer. The loam is piled up in big heaps one year and used the following.

In his first year, Manuel eradicated weeds with sodium arsenate and since that time not a single hour has been spent hand weeding or using chemicals.

Here's Manuel's program for putting greens:

1. Water greens lightly in early spring if necessary, watch velvet bent carefully.
2. Fertilize the greens as early in the spring as possible.
3. Topdress greens in the early spring. Raise mower a little after topdressing so it won't pick the grit and dressing. After 7 or 8 days, set the mower back to suit the golfers.
4. Use the following fertilizer materials for putting greens: milorganite, fish meal, bone meal and tankage, 8-6-4, 8-6-2. Use according to needs.

Uses Modern Equipment

"I believe in up-to-date equipment," Manuel said, "because it is a labor saver and gives more time for the complex duties

of a greenkeeper. As we couldn't purchase any machinery during the war we had to do a lot of hand sickle and scythe work. The work this season, however, was done with a power sickle and believe me we saved a lot of time, time that was used in building up our nurseries and in construction.

"Most of our traps are small and deep. Power rakes would not be useful to us. I had, however, had a lot of complaints of hard traps. The workers tried hard but they couldn't get the texture the golfers wanted. I rigged up a 26-inch rake, made of a one by four, with 12 inch spikes. The only thing our workers have to do now is drag the rake around the traps after a rainstorm. There have been no more complaints.

"When I first looked at my fairways I was discouraged. They were hard, mostly gravel, and no more than two or three inches of loam. The chairman of our greens committee told me, when I had asked him for chicken manure, that he could get some and we used it to advantage. I used a regular spreader to put the manure over our fairways and let it dry for a week. Then I went over it with a home-made drag, made of one-inch mesh screen with a gang of three. The drags measured eight by four and were pulled by a tractor. As they worked the material in the drags also broke the big lumps and picked up objects I didn't want on the fairways. The fertilization I was seeking came as a result of this process.

"We have no fairway watering system but three years ago I put in a few water lines to most of the 18 fairways. I was able to keep them in good condition all season. I use the same method I do on the greens. A good soaking once a week is better than soaking often. It will make strong grass."

Manuel gives high credit to his own green committee at the Haverhill club and to the cooperation it has given him. He doesn't say, however, what the green committee and the enthusiasts of the fairways think of their greenkeeper. That is reflected in the rising membership, now in excess of 250, all active golfers, persons who have been attracted to Haverhill because of the fine condition of the course, the many improvements Manuel has made, the velvety greens, the fine tees, the good fairways, the new miniature ponds and drainage system.

That's the tribute to an individual who sticks to the basic principles of caring for turf. It's the tribute to a 16-year-old boy who, on his own, came to this country looking for what the kids back home had told him was "gold on the streets". He didn't find the gold on the streets but he found that America was willing to open its arms to any newcomer willing to work.

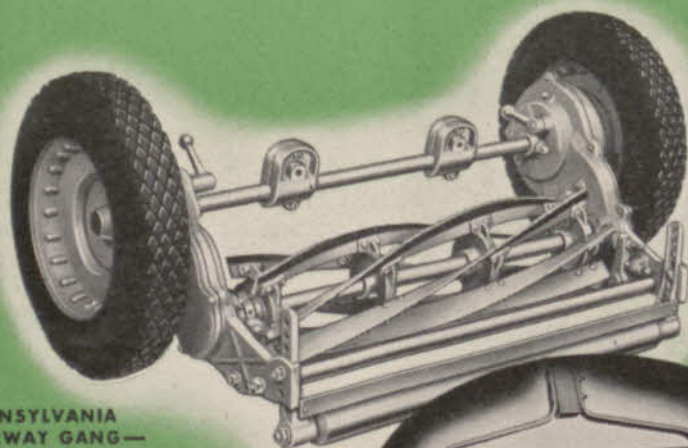


PENNSYLVANIA

QUALITY LAWNMOWERS SINCE 1877

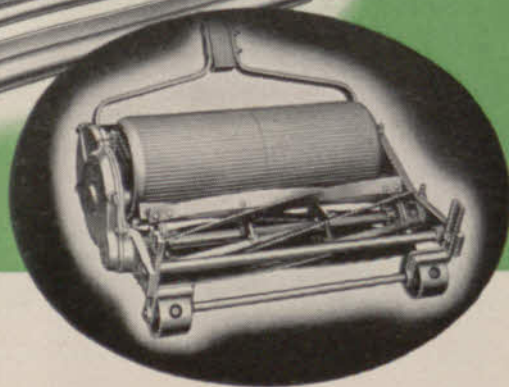
"Pennsylvania Quality" means better turf
on Fairways and Greens

● Good turf depends largely on proper mowing. And good grass cutting demands good mowers to do the job. "PENNSYLVANIA QUALITY" means good grass cutting—easy operation—long life—low maintenance cost. Both the FAIRWAY GANG, with unbreakable malleable iron construction and the aluminum-and-steel SUPER-ROLLER Greens Mower are typical of "PENNSYLVANIA QUALITY."



**PENNSYLVANIA
FAIRWAY GANG—**
3, 5, or 7, 30-inch units
—with pneumatic tires
optional

SUPER-ROLLER GREENS MOWER—
8 blades—18-inch swath
—geared for high speed



Other Pennsylvania Quality Mowers

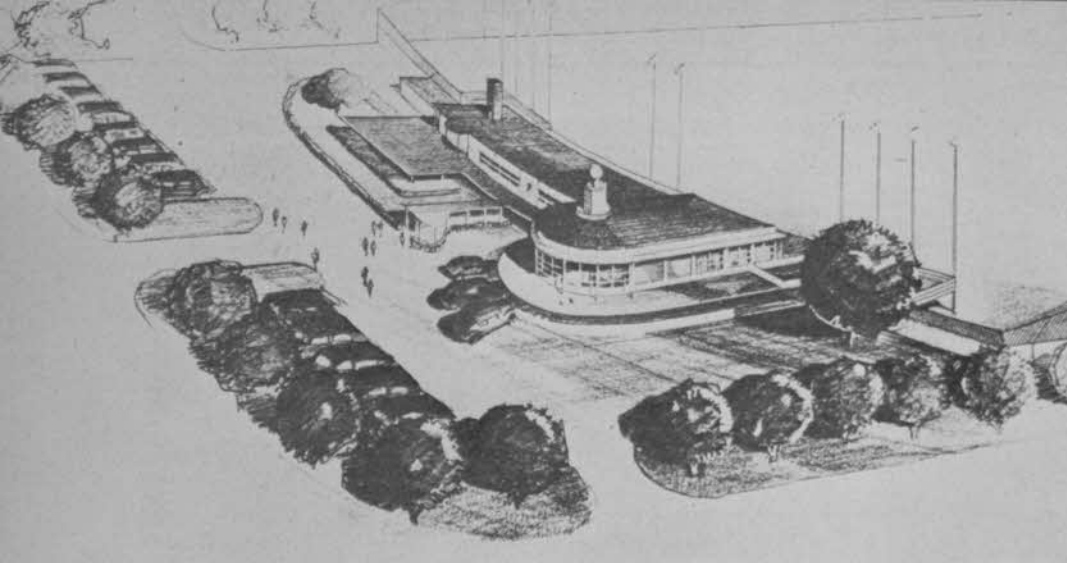
**PENNSYLVANIA JR.
GREAT AMERICAN
METEOR**

ACCO



PENNSYLVANIA LAWNMOWER DIVISION

AMERICAN CHAIN & CABLE • Bridgeport, Conn. • Camden, N. J.



Architect's drawing which incorporates the modern ideas of a successful and progressive golf range operator for the clubhouse of a contemplated golf range project. Plans provide space for 24 automatic tee units located on a sheltered porch facing the fairway. Important feature of the building is single entrance through which all traffic must pass to reach the practice range.

What Is the Future of Golf Driving Range Operation?

By JOE MOZEL

Editor's Note: — By most people in the business, Joe Mozel is looked upon as a dean of golf range planners and operators. Starting as an assistant caddy (he was too little to tote a full bag), Joe has gone the route from full-fledged caddy to professional to operator of golf courses and ranges. Since 1936 Joe has operated the Lloyd Golf Course and Sheltered Range in Portland, Oregon, one of the most successful ventures of its kind in the nation. He is also inventor, manufacturer and marketer of an electric tee and other golf devices.

It would take a contortionist to keep his ear to the ground, his eye on the future, and his finger on the public pulse all at the same time. Nevertheless, any pro who is operating an old-fashioned "stop and sock" type of driving range had better practice up on all those wise habits and buy a first class crystal ball because the chances are he'll find his driving range days definitely numbered.

Even an old second hand, cut, cloudy,

out-of-round crystal ball will tell the most casual observer that there's gold in golf balls but it'll take first class equipment and management to get it. Pick and shovel prospectors had better save their time.

Just look around. Where are those dozens of shacks on the edges of overgrown vacant lots with their once-bright "driving range" signs? A lot of them have gone already and a lot more are doomed to follow if they don't spruce up a bit and learn that golf is big business and deserves a big business approach.

Smart operators don't even call them "driving ranges" any more. The few pioneers in golf's "new look" correctly call their establishments "golf ranges" and they mean every word of it. Take our operation in Portland, for instance. At the Lloyd Golf Course and Sheltered Range a golfer may drive golf balls, to be sure. But that's not all. He may drive them in all kinds of weather, winter or summer, day or night and enjoy every single drive from one of our 14 automatic tees that serve up a golf ball every $4\frac{1}{2}$ seconds.