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### EQUIPMENT

March, 1949

of the finest tests in the country, moved into Lakeville, which carried a reasonable price tag of \$650,000. Today, the land alone would bring more than twice that amount in the real estate mart.

### Over \$3,000,000 Invested

The differential between the amount received from New York Life and the price paid Prudence, plus many more thousands, have been invested in the beautifying and improving of the former Lakeville layout. In round figures, Al Ciuci, the home pro who is beginning his 25th year with Fresh



Portion of Al Ciuci's modernized pro shop at Fresh Meadow, one of the largest in the country. Left to right are Al, Floyd, Henry and Lester Rice, golf oracle and golfer.

Meadow, estimates that the Great Neck course and appurtenances represent investments of between \$3,000,000 and \$5,-000.000.

"Our aim, since moving up from Flushing, has been to transform Lakeville into something better than our old Fresh Meadow course, if such a thing is possible," Ciuci said the other day in revealing the club's intention of becoming a mecca of championships. "We'll have a stiff 7,000 yd. course of championship specifications before we're through here and we hope to have big tournaments every season."

"At Flushing, as you know," continued Al, "Fresh Meadow became known throughout the world for the big tournaments. We'll probably be host again to the Goodall, which Elmer Ward used to run at Flushing every spring. Then, we hope to bring in an annual invitation with the 50 outstanding pros and amateurs of the country. Of course, the national open and amateur will be received, in the event the USGA wants us to be host to them. We, too, would like to put on some of the major women's tournaments."

Fresh Meadow, principally because of its

major facelifting job, supervised by Ciuci and his boss of a quarter-century, Al Arenson, current president, has been reluctant to sponsor any major tournaments. A few sectional affairs, such as the Rehabilitation Fund matches, promoted jointly by the LIPGA, the LIGA and WLIGA which raised \$3,500 last autumn, were held.

Arenson and Ciuci have been closely associated through the years, the former, a printing house owner, having been chairing for 23 seasons before ascending to the presidential chair. He yielded the green job to Phil Leff after being named head of the club, but Al continues to work with Al and Phil. "How can he get along with the guy with so much experience," Leff said shrugging his shoulders the other day.

Fresh Meadow, today's product, that is, is the complete realization of Arenson's dream of a beautiful country club. In addition to a rolling paradise of 18 golf holes. Fresh Meadow has one of the largest clubhouses in the country, completely renovated and refurbished at great expense; an outdoor natatorium with cabanas and other trimmings; tennis courts, bridle paths and other features not usually incorporated in clubs. The kitchen was outmoded, so Fresh Meadow decided to completely make over the facilities in stainless steel at a cost in six figures.

### 600 Active Members

Fresh Meadow has a waiting list and has an active roster of 600 members, including women and juniors. Lakeville was designed for a membership of 300, which meant that additional lockers had to be provided in both men's and women's quarters.

"One of our major changes here is in the greens," said Ciuci. "Lakeville was always known for the different type of its greens. The top players were unable to solve them, at all. They were of the Washington stolon type and in cutting them the course crew used to mow the same way for years.

"I got an idea while down at Normandy Isle in Florida, where the greenkeeper used to work against the grain of the greens in cutting them. Why not try it on the Fresh Meadow greens, I thought. Well, it was a risky experiment, but it worked out well and now we have greens, after two years of trying to emulate the Normandy Isle expert, that won't prove enigmas to the experts. They are smooth as a Chinese rug. Gene Carazen, who used to be pro

(continued on page 89)

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March, 1949

# How BROOK HOLLOW

WILLIAM R. BUSH, greenskeeper at the Brook Hollow Golf Club, Dallas, Texas, takes great pride in the excellent condition of his greens. Since brown patch is especially destructive to greens during the hot, humid summers in Dallas, Mr. Bush considers fungous control one of the most important parts of his greens management schedule.



**Mr. Bush prevents fungous diseases** by spraying his greens regularly with "Tersan"—rather than waiting until the disease has started. "Regular applications of 'Tersan' make the difference between excellent bent grass greens and no greens at all," he says. "We have tried several products on our course, and 'Tersan' has given perfect results."

## controls diseases on its greens



"'Tersan' is as essential as water, we think, for the care of fine bent grass greens," says Mr. Bush. "We have never lost a green since we started using 'Tersan.' In fact, it seems to aid the growing quality and deep green color of the grass—as well as to give 100 % control of brown patch."



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# Fifty Years of Progress in Aerating Established Turf

### By CHET MENDENHALL

Greenkeeper, Mission Hills CC, Kansas City, Mo.

In the case of areas used for sports, the fields are mowed and rolled at regular intervals, and games are played regardless of how wet the ground may be. The same is true of pastures; cattle are grazed regardless of the condition of the soil. This all tends to pack the soil and allows for less penetration of air and moisture.

As air and moisture are retarded in their movement in the soil, the root growth is also retarded. This means the turf becomes less productive: the stand of grass becomes thinner and thinner, allowing the turf to become infested with all kinds of weeds which have a more sturdy root growth and can withstand these conditions better than turf grasses.

For years attempts have been made to restore turf to its normal production by the use of fertilizers, but in most cases fertilizers alone were not enough. Some means of loosening the soil for more vigorous root development was needed before the plants could digest the food offered through fertilization.

To develop a good turf plant there must be a good root system. To develop a good root system there must be a free movement of air and moisture in the soil, so we are immediately confronted with the problem of aerating soil under established turf.

### **Background of Acration**

On athletic fields and golf courses it becomes important that such work be done with very little evidence showing on the surface. I am going to review some of the tools that have been developed during the past 50 years in attempting to aerate the soil under established turf.

My earliest recollection of a machine of this type was a machine developed for renovating alfalfa fields. Farmers had discovered that after a few years their alfalfa fields became less productive each year until finally they had to be plowed up and reseeded. This was expensive so some one got the idea that is some means of cultivating the soil around the roots could be devised, the fields could be kept in constant alfalfa production.

The alfalfa renovator was developed. This machine was very similar to the disc harrow except that instead of having discs, it was equipped with a series of hubs with spokes protruding as spikes. These spikes were flattened slightly at the end and had a slight curve which allowed them to come out of the ground without too much injury to the plant. At that time, I don't think anyone had thought grass of turfed areas needed cultivation.

In 1917, Drs. Piper and Oakley, agronomists for the United States Department of Agriculture published a book, "Turf for Golf Courses". In this book, one will find pictured some of the early day tools developed for turf aerification. One of these tools was called a toothed roller and was used for scarifying when applying seed or fertilizer. It shows that even at this early date they saw the need of getting fertilizer down around the roots of the plant rather than leaving it on the surface of the ground. This tool was constructed of a series of narrow rollers all on one shaft and had teeth or spikes protruding at intervals along the surface of each section of the roller. It was a rather large roller and was horse-drawn so we presume it was for fairway work.

One of the earliest machines developed for aerifying greens and small areas was a discer consisting of ten small discs mounted on a frame with a handle for pulling by hand. Weight could be added to force the discs into the ground. The discs were straight and did not turn up the sod like a disc harrow would. It made straight cuts through the turf which would allow air and moisture to penetrate to the root zone. The discs were set about two inches apart so by cutting the area both ways, one had the turf cut into blocks about two inches square.

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During the next few years, most attention seems to have been turned toward the pin type roller spiker and there were a number of different types made and put on the market. The rigid spike in this type spiker made a much larger hole at the surface than it did at the end of the spike, so a roller spiker was developed with the spikes mounted on bars running lengthwise with the roller. The bars were loose at the ends allowing them to turn so the spikes would come straight out of the ground without tearing the holes larger at the surface. Light springs would pull the bars back in place as soon as the spikes came out of the ground.

### Hard Work by Hand

The potato fork or the manure fork was introduced as a means of opening the soil to a greater depth to allow for good root penetration. A fork of this type can be forced into the ground to a depth of six to eight inches and by working the handle back and forth the soil can be broken between the fork holes.

This was the first type of cultivation used that worked the soil enough under heavy turf to allow air and moisture to penetrate deep into the root zone and really benefit the grass.

The next development along this line was the hollow tine fork. Briefly, this fork consisted of six hollow tines, 7/8 inches in diameter and 4½ inches long, tapered at the end and with a slot in the side of the tubing to eliminate plugging. The end of the tine is a solid band. The tines are spaced at 4 inch intervals. This type of fork cuts clean holes in the soil which will stay open indefinitely. They also allow for changing the structure of the soil by adding new material.

All forking work has one drawback: it is a slow process, hard work and rather expensive.

As we move along into the mechanical age, some one developed a machine known as the turferator. This machine consisted of two rows of drills spaced so they drilled 7/8 inch holes about four inches apart. It was operated by a motor. The drills were set with an automatic trip so they all went down at once. When they reached a depth of five inches, the trip released and the bits all came up at once and the whole machine moved forward four inches and the bits went down. This was a great labor saver; one man could do the work of six men with hand forks.

One of the more recent machines developed is the turf "Aerifier". The principle of this machine is the sub-surface tearing action produced by a series of spoon-shaped spikes mounted on individual discs and bent at a 30 degree angle for proper soil penetration. Depth of penetration of the spoons can be adjusted up to five inches by raising or lowering the supporting side wheels. The adjusting wheels can be set to raise the spoons clear of the ground for transporting the machine. Since each disc operates independently on the center shaft, there is very little tearing of the surface turf as spoons enter and emerge from the soil. As each spoon emerges from the soil, it removes a small core that is left on the surface. These cores can be broken up and distributed over the surface by dragging the area with a wire drag mat.

The most recent development is the Turf Saw. This machine has been developed in Kansas City by one of the local greenkeepers. It consists of a series of 10-inch saw blades mounted on a shaft spaced four inches apart. The saws are pushed in front of the machine which is propelled by a 20 horse-power gasoline motor. The saws can be raised out of the ground by means of a lever for turning the machine around, and by means of an adjusting lever, the saws can be adjusted to a depth of up to 5 inches. The notch cut by each saw blade is about ½ inch in width.

Primary purpose of this machine is for use on putting greens with the idea in mind that the saw notches would serve two functions: first, allow for the penetration of air and moisture, and second, that by cutting the notches from the higher to the lower parts of the greens it will also allow for a certain amount of drainage, in times of excess rain. The dirt removed from the trenches cut in the soil can be worked down and serve as a top dressing.

### U of Mass Turf Conference March 10-12, Amherst

Annual turf conference at University of Massachusetts, Amherst will be held March 10, 11,, 12, with Agronomy dept. of University and Mass. section, New England Turf conference, cooperating in presenting a practical program. Emphasized will be discussion of hidden costs in course maintenance for which increased demands of players are responsible.

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# Making Members Partners in the Pro's Business

### By WILLIAM C. GORDON

#### Professional, Tam O' Shanter Country Club, Niles, Ill.

The successful businessman of today is the man who some years ago envisioned an idea he was determined to convert into reality. He studied persistently, he kept growing, he applied enthusiasm to his work, made contacts with people who could help him, and had a definite program that involved hard work and a constant influx of new ideas.

These are the men who made good and who now have the money and time allowing them to be members of golf clubs. They rate other businessmen by the factors they employed in their own progress. If their professional isn't as good in his business as they are in theirs they consciously, or subconsciously, don't think the man is qualified to be in their employ.

To such men the wise professional should turn for advice and other help in improving the operating of pro golf business.

Rgardless of what kind of a club you're at, the officials of that club are as eager as the pro - maybe more so - to have more members, livelier and more pleasant general golf atmosphere, more activities and, naturally, more revenue. They've got ideas of how these ends can be achieved. They may not know much about the specific problems of the golf professional's business but they do know sound business principles.

It's been my experience that every club official with whom I've ever talked about problems that mean ultimately the improvement of the club situation by betterment of my own operations and increase of my profits, has been understanding, encouraging and very helpful. But it's also been my observation that not enough understanding and cooperation has been secured by pros from such men.

Basically the pro's situation is that the more money he makes, the better the general financial and operating picture is for the club. The pro isn't operating wisely when he is lucky enough to get signed up by a flourishing club and just collects on his luck. He must contribute to the stability and development of the club so increase of his own profits are justified. I have yet to see a case in which the unselfish pro who was thinking of the club first, didn't make a good income and hold his job securely, if he made it plain to his club officials that he realized his own situation was primarily dependent upon a strong, progressing status of the club.

### "Free Enterprise" in Golf

I've seen, as you have, plenty of instances in which the pro lost out by appearing to be too "hungry," even though the fellow was just getting by with what he was able to make out of the job. Such cases are the result of not having the successful businessmen of the club understanding the pro's unique business problems.

Most successful businessmen are vigorous advocates of the free enterprise system and are examples of "rugged individualism." They know plenty about the importance of the profit incentive. Yet at golf clubs you hear casual or severe criticism about the pro making too much. When you do hear that it's an indication of two things. One is that the critics haven't the slightest idea of the pro's expense of operating and they think the pro is making a high income in a limited market over a comparatively short season. I haven't seen many such cases myself in many years in pro golf but those I have seen have been warranted by the pro doing a fine job to make his own type of work as successful as that of his members in their respective professions or businessess.

#### Pro Protecting the Club

It's a pro job to educate pros and club officials to understanding that usually the more the pro makes at a club, the better the club does. If the pro—as far as his departmental operations permit—doesn't show more of a cash return to the club than the cost of his services to the club and members, then the man is a liability instead of an asset. The pro must think of himself and his operations in terms of dollars to the club, otherwise his thinking about his job is foggy.