He watched some layouts under actual construction.

The next step, along with getting down to actual work, was to learn playing the game. Once again, this time with daughter Estelle, he set out for the larger golf courses in the state whenever there was a tournament going on. There they would watch the professionals and take copious notes on their styles. They also read every book on golf that they could find.

Then back home to practice. They would go out on one of the hills, where no one could watch them, and practice hitting balls for hours at a time. It was only after much practice that he and Mrs. Page ventured out on a course to play where they could be watched. But since both were natural athletes, it wasn't long until they were quite adept at the game.

The slow process of improving and enlarging the course had now begun. The fairways of the original holes were put in shape. The first hole was a considerable distance from the clubhouse, so a new tee was built near the clubhouse and the ground cleared to make No. 1 a long dog-leg, and leaving the first half of the original first fairway for a new par 3 hole.

Slowly but surely the work progressed. Obstacle after obstacle was surmounted by Dr. Lawson and his one-man staff. Trees had to be cut, stumps and huge rocks just under the surface of the ground had to be blasted out. The road between classrooms and golf course was being kept hot by the energetic little man. The ground had to be smoothed and the grass planted. Tees and greens slowly began to take shape. The erstwhile gymastics coach was being patted on the back from a safe distance.

With the amount of land available very limited, all possible ground was pressed into use. Plans called for the No. 8 fairway to be laid out along a valley running parallel to the highway at the lower side of the clubhouse. But right down the middle of this valley ran a large gulley that measured five feet deep and twenty feet wide. Armed only with a wheel barrow, a shovel, and a strong back, Dr. Lawson's man Friday rolled one load of rocks and dirt after another and dumped them into the gulley. This slow process took a year, and when the place was finally filled up, top soil was laid down and grass planted. Soon there was a well-covered fairway, and the large rocks underneath formed a perfect drain.

**Makeshift Drainage**

However, the gulley remained across five other fairways, and was in a position that tile would have to be put in so that the water could drain properly. The ditch in front of No. 1 green needed attention first. Dr. Lawson went in search of tile and discovered that tile he needed would cost $300. The money wasn't available, and he tried to figure what could be done.

At the time there were several highways in the vicinity being paved with asphalt, and one day he noticed that the barrels that the asphalt had been shipped in were being thrown away beside the road. He rushed to the officials and gained permission to take the barrels for his own use. A large truck was obtained and sent out on the highways to gather up all of them that could be found. Then the ends were knocked out and they were laid end to end the length of the gulley and were then covered with dirt and grass planted. The immediate problem was solved and the only expense was for the rent of the truck and the workers' time. They have now been in use 15 years, and are still holding up.

One more problem came up. After building eight holes Dr. Lawson suddenly ran out of land, and there was no ninth hole. After considerable figuring he came up with a plan. A tee was built at a far side of No. 8 green, and the ninth hole doubled back for 87 yards along the upper side of the seventh fairway, making a short but difficult hole.

After four years of hard work the course was finally completed and there was cause for celebration. Dr. Lawson had finished his assignment, and someone else could take over the management. But who could (continued on page 71)
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February, 1949
Change Basis of Pro Teaching to Strengthen Club Position

By WALTER KELLER

The American public is fundamentally sports-minded. Americans like to play, to go places and watch sports events, and to read about them. There's more attention paid to spectator sports because of the ease of sitting but the most intense interest in any spectator or participant sport is shown by those who are proficient at the sport.

Interest in a sport increases in direct proportion to proficiency. The pro sees in noticing that his lower handicap players play more than the high handicap golfers. The golf clubs certainly learned in the years closely following the 1929 depression that golf interest and proficiency were closely related. The low handicap golfers, despite their financial set-backs, found some way to retain club membership. The higher handicap golfers quit the clubs and gave up the game.

Although this basic fact of the direct relationship between golfing proficiency and financial soundness of the golf club is constantly in evidence nothing of consequence has been done to apply the fact. The average of all golfer's scores is higher than 95 and it is certain that the 95 golfer can't be considered to be getting full advantage of his golf club regardless of his enjoyment of the bar, the restaurant and companionship.

Lesson Basis Is Obsolete

It isn't the pro's fault that the average scoring is so high. The pro, when he gets a chance, takes athletically inept older people and when an instruction program is kept, brings them down into the mid-80's. This is an amazing achievement considering the awkwardness of most of his adult students.

The fundamental reason for lack of proficiency of golf club members is an obsolete basis of pro-member instruction relations. The same old system of lesson booking and payment by individuals which was in effect when professional golf started still prevails. That is the fault of directors of golf clubs. They haven't thought about making their clubs sounder by increasing the golfing proficiency of the club's members.

There is an urgent need of stimulating interest in the membership of country clubs with ideas to get more members interested in golf and the other related activities and facilities of the club.

Prospective golfers have been accustomed for many years to sign up for either a series of lessons or to take lessons singly, but, all in all, most golfers spend very little for golf instruction. However, when a member is inspired to take lessons, there is every probability that he will not only purchase golf clubs and other golfing accessories, but, also, because he is spending more time at the club, he will make use of the dining room facilities. All of this builds up his house account much more than the member who is not as active.

Directors can easily determine which club members are active - those who take lessons and play golf - and strike an average of their monthly accounts; then compare it with the average account of the inactive members. This will show the Board how many thousands of dollars the club has lost in revenue due to the lack of a good golf instruction program for the entire membership.

A "Club" with 8000 Members

In the practice fairway business, my plan was to get the golfers to use and enjoy our facilities by giving them personalized attention, and by using a simple, understandable method of instruction. The result was that my fairways grew in size and in volume of business, until it necessitated employing six other golf professionals to assist me to serve some 8,000 golfers who were listed with us. If this can be accomplished at a practice fairway, surely it can be more easily done at a country club where there is a closer relationship between the club members and the golf pro.

A golf pro who can arouse enthusiasm among the members is worth real money to his club, and some of the best jobs
in this country are held by golf pros who rarely have time to play competitive golf, but who do outstanding promotional jobs at their clubs.

**Lessons for Every Member**

My suggestion is this: If a nominal fee was added to each member's bill for golf instruction, entitling him to a given number of lessons for the season, it would mean that the golf pro would receive a minimum fee from golf instruction alone, and require him to employ a better staff than he usually has been able to afford in the past. At the same time this would increase the percentage of active golfers, and would result in a more active use of the club by more members. Is it not, therefore, reasonable to assume that the monthly accounts would increase?

There are very few clubs who at first would be willing to operate in this manner, because in most cases the clubs are trying to get by as cheaply as possible. But as George May advertises: "You've got to spend money to make money." You would not, in this case, be spending the club's money, but would be giving the member something for which he joined the club in the first place, and encourage him to take advantage of golf instruction for which he has already paid. Also, you as the Board of Directors will be making every effort to see that the members get their money's worth, besides creating a situation for your help whereby they will work from the heart and pocket-book and not from the clock.

George May has done an outstanding job at the Tam O'Shanter CC, and gives his members as much per dollar spent as at any club I know of. This is particularly noteworthy when it is remembered that he took over the club when it was practically bankrupt, and built it up to where, among other things, it stages the largest tournaments held anywhere. This was all done by careful planning, and by spending money to make money. But even George at his club with an outstanding pro instructor, Bill Gordon, has a multitude of high handicap golfers who can't be considered fixed assets.

No doubt most of you read the financial pages of the newspapers from day to day, and have learned that competition is again here in the business world. Don't think for one moment that your club won't have stiff competition with other restaurants and places of entertainment, and with other sports. While one sport will advertise for your member to be a spectator, another will appeal to him to participate, and they will spend thousands of dollars in an effort to get him to patronize them. The golf industry must be right in the middle of this group, getting more people to play and to use its facilities, if it is to meet the tough competition offered by other sports and amusements.

Golf as a business depends on teaching people to acquire a skill that is natural to comparatively few young men and women. In no other sport is the element of instruction as important to the business phase of the sport as it is in golf. And as long as golf clubs continue to allow the lesson situation to be handled in an out-grown manner the clubs will be exposed to abrupt changes of membership and financial condition.

I learned that in switching from club pro jobs to successful operation of golf ranges where I quickly saw that I'd have to develop steady and increasing patronage through instruction or go broke. I didn't go broke by a long way, simply because I applied the same principles of business promotion and increasing customer interest and proficiency that golf clubs should have applied long ago.

**Iowa Short Course Scheduled at Ames, March 14-16**

The Fifteenth annual Iowa Short Course and Conference for greenkeepers is scheduled to meet at Iowa State College at Ames, March 14-16. Speakers for the program will include noted educators including Drs. Fred Grau, Dir., USGA Green Section and O. J. Noer, Milwaukee. A feature of the conference will be a question box at the beginning of each session. A printed list of questions will be compiled in advance from those sent in by greenkeepers prior to the meeting.

Sessions will start at 1:00 pm. Topics will include discussion of the following: fertilizers for fairways, greens and other turf areas; the latest information on fungicide experiments; watering; aeration; machinery; and DDT and other insecticide developments.

H. L. Lantz, Head of Pomology Subsection at State College, handling arrangements for the conference, anticipates an attendance of more than 150 from six states. Inquiries concerning meeting and sessions should be forwarded to him.
COLIN SMITH, Greenskeeper at the Shaker Heights Country Club, Cleveland, Ohio, is noted for his good greens management. In order to keep his greens in top playing condition at all times, Mr. Smith follows a meticulous maintenance schedule. An important part of his schedule is close attention to the control of brown patch and other fungous diseases which can destroy the finest greens in a matter of hours.

TO PREVENT FUNGOUS DISEASES, Mr. Smith sprays all Shaker Heights greens with "Tersan" every seven days—rather than treat the greens after the disease has started. By rigidly following this schedule, he has achieved practically 100% control of brown patch, which used to be a big problem on the Shaker Heights course. "'Tersan' does the best job of any turf fungicide I have ever used," he says. "And also, there is no danger of it burning the grass."
"IT'S SAFE AND EASY TO HANDLE! For that reason, my staff also prefers to work with 'Tersan,'” says Mr. Smith. It will not shock, yellow, or retard grass growth. John Kastan, an assistant greens-keeper, is shown here mixing a “Tersan” solution in the club's specially built spray truck.

"'Tersan' saves time and labor on our course because it requires no watering in," Mr. Smith says. For applying “Tersan” during damp weather, Mr. Smith has developed his own method of spreading it with a dry fertilizer applicator.

For dollar spot—use Du Pont F-531, a highly effective cadmium fungicide. Also controls snow mold, green scum (Algae), pink patch. Safe, economical, easy to use.

SEMESAN and Special SEMESAN are also available for those who prefer mercurial fungicides.
Learn the Hard Way to Make Greenkeeper's Work Easier

We Learned from War-Time Maintenance Conditions

BY ROBERT S. GREENFIELD
Wilshire CC, Los Angeles, Calif.

The lack of help during the war years was an education that has been paying dividends ever since. For example: early morning irrigation of the greens has paid off in a third less fungus attacks, lower water bills, and better conditioned turf. The regular section men watering the greens now know they are responsible for this important job and, of course, can see what they are doing, which wasn't the case with the night watering crew.

The new equipment since the war has been of great help in getting the work done well, and economically. I have been greatly impressed with the new power mowers, and the ease in which they can be taken down for repairs. One wonders why this streamlining had to wait for a war.

We at Wilshire have our share of weeds; mostly plantains and dandelions. The use of 2, 4-D has been very successful, and most of our fairways are practically clear of weeds. We are also working on a promising preparation for crabgrass.

The most important lesson I've learned, due to war-time labor shortages, is the tendency to question our maintenance practices. One that seems to deserve serious consideration is whether we have gone too far with routine top-dressing of the greens without really knowing if the turf needed this help. The greens at Wilshire have had no regular top-dressings such as prepared compost since 1941, yet our greens have a better than average rating in this section.

When one considers that our greens have been regularly top-dressed two and three times a year for 20 years, isn't it reasonable to ask "Why not give the grass a chance to digest all that good soil and compost that has been built up through the years?"

We find the roots are down deeper as (Continued on page 69)

Reduce Work to Improve Course Maintenance

BY WILLIAM STEWART
Hillcrest CC, Los Angeles, Calif.

One of the most obvious things about efficiency at a golf club hasn't caught up with the greenkeeper yet. The course is being played by successful businessmen who have learned how to reduce the time and labor required to handle their jobs properly. If they hadn't learned that they wouldn't be able to get out on the course.

Yet the greenkeeper continues to have long hours and is available day and night for emergencies that arise in a manufacturing plant that is dependent on the unpredictable performances of nature. Costs of labor and of everything used in course maintenance have risen. So has the golfers' demands in fine turf standards.

The only answer the greenkeeper seems to know in meeting the new conditions is to work harder and longer himself and to put to use, as far as his budget and other factors will permit, the advances science has contributed to turf growing. He hasn't had time to study how to save time.

He's beginning to get into that phase of his work and right at the start he discovers that revising the architecture of many golf courses is not only a time-saver for the greenkeepers but a money-saver for the club and assurance of greater enjoyment to its members.

Traps that catch the shots of duffers already adequately penalized by inability to hit the ball fairly far and straight account for a lot of wasted time in course operations. Many greenkeepers would be surprised at how much supervisory time they are compelled to give to the maintenance of such traps.

Labor, Greenkeeper Problem

Often when there is work requiring the greenkeeper's expert attention he has to take time away from it to make certain that inadequate tees on short holes are patched or otherwise repaired properly.

(Continued on page 69)
Even better for '49

Here is the improved Jacobsen Power Greens Mower for 1949. Refinements that provide for faster handling, longer life and even more precise cutting add to its outstanding reputation on America's finest golf courses.

Jacobsen Power Greens Mowers are noted for superb performance and low upkeep cost — the Greenskeepers' choice where only the best is acceptable. Get the full story on this preferred Greens Mower. See your dealer now.

New Transport Features

New "quick-on," "quick-off" transport wheels make for easier, quicker movement of the mower from green to green.

For transporting the mower you simply place the built-in jack in position on the ground, pull back on the handle slightly and the mower is in position for easy attachment of the transport wheels. After attaching the wheels a spring automatically returns the jack to its out-of-the-way position. No tools are required to attach or detach the transport wheels which are held in place by a simple clip on the outside of each wheel. There is nothing to become detached or lost.

Another important feature is the full differential action of the transport wheels which is accomplished by the use of two spring-loaded ratchet pins in each wheel. There is no "dragging" when making turns.

New bed knife adjustment requires no tools. Simply by turning the adjusting screws to the left brings the bottom blade up to the reel and turning them to the right backs the blade away. This quick, easy adjustment is a time-saving feature. It automatically holds its adjustment.
Construction Changes Give Texas Good Bent Greens

By RALPH PLUMMER

Editors Note: Ralph Plummer is a golf course architect who has been doing golf construction work since 1927. For a number of years he was superintendent for the late John Bredemus who built a number of fine courses in the Southwest. In recent years Plummer has built several courses in Oklahoma, Texas and New Mexico. Today he is specializing in the construction of Bent greens. He maintains that for those who can afford the proper construction, Bent greens in the Southwest can and will be a success.

Bent greens were tried for the first time on an 18-hole course in Texas in 1936 with the completion of the Colonial CC lay-out in Fort Worth. This course was then owned by J. Marvin Leonard, who since has sold it to the members.

These greens were very good for ten months of the year, suffering only during the period between July and mid-September. It was, and still is, a problem to hold them over each summer. They require extra spiking, watering, fighting algae, spraying for brownpatch, dollar spot, webworms and the menace of Bermuda and crabgrass encroachment during the hot months when the bent is thin and weak.

Of course, these operations increased the maintenance cost so much over Bermuda greens that other clubs would not attempt the change to bent.

Only Brookhollow CC in Dallas changed over and, with better soil and sub-drainage the results were slightly better than those achieved at Colonial.

In 1945, the Dallas Athletic Club's country club in Dallas decided to revamp its course and install bent greens. Graham Ross, the club professional, and I conferred with Dr. O. J. Neer and Dr. Fred Grau in regard to the materials to be used in the new greens. The change was radical.

Where the other courses had used the native soil, mixed with blow sand, sheep manure, peanut hay and some peat moss, we tried sharp, coarse sand, mixed with peat and loamy top soil.

The sub-drainage was done in the herringbone pattern, using four-inch perforated Orangeburg fibre pipe. We didn't have enough peat, but nevertheless the bent has done well. It has stood up under extreme heat, drying hot winds, humid nights, and heavy play the year 'round. The maintenance cost hasn't been too high, either.

In the past two years I have put in bent greens for the River Crest CC in Fort Worth, and the Dallas, CC, Lakewood CC and the new Northwood Club; the latter three, in Dallas, having been seeded with Seaside bent during February and the first part of March, 1948.

The Fort Worth-Dallas area is less than 700 ft. elevation and the clubs are in residential sections. This combination of conditions prevents proper air circulation. It is better to thin out shrubbery and trees on the side of the prevailing wind. Where there are large trees close to the green lateral roots must be kept from growing under the green.

The clubs for which I installed bent greens late last Winter and in the early