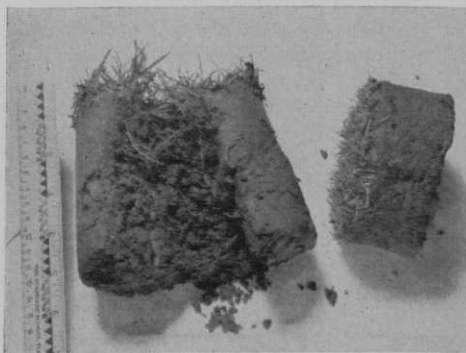


Here is the record:

Nine holes of our course were built in 1927. That date itself might not sound especially "ancient", but I recall that we used horse-drawn equipment to establish the nine-hole course. Of the 100 charter members, eight are still with us. Our membership is now several hundred, and the course is open year-round. In July of this year, on our 27th anniversary, we'll open a second nine-hole course. It is one of the last architectural jobs completed by the late Billy Bell.

Average daily traffic on the course, during our peak season, is 300-400 players. Our physical facilities consist of a large dining-room with stone fireplace, bar-room, two large locker rooms, coffee shop, and kitchen. The plant is carefully landscaped and has an attractive pool.

Because the performance of a chemical conditioner can be influenced by soil type, climate, and other environmental conditions, basic information of this kind is important. Our elevation averages 125 ft. Rolling hills go to a maximum of about 1000 ft. Our diversification of trees adds measurably to the beauty of the course. We have plenty of pine, fir and hemlock trees—some walnut and filbert—and every tree is surrounded by a different specie of tree. Our general climate is moderate,



The plug on the left, showing excellent root growth to a depth of 6 in., was taken from a green treated with chemical soil conditioner. The plug on the right shows a scant 3 in. root growth, the result of compaction and soil "layering" in an untreated green. Both greens received the same amounts of fertilizer and water.

with an average yearly temperature of 53.1°. Warmest January average is 39.4°; coolest August average is 55.9°. Winds are mild.

Year Around Maintenance

Our growing and cutting seasons extend through the full year. Our soil is princi-

pally a Hillsboro loam, 20 to 30 per cent clay. We have a moderate amount of brown patch and dollar spot, and we also have trouble with the perennial "problem child" of course superintendents; *poa annua*.

Our chief difficulty, however, comes from a source which many superintendents located in drought belts or rain-sparse areas, might call a friend rather than an enemy: rainfall. Our average annual rainfall is 40 to 45 in. Last year—the year in which we used a large amount of chemical soil conditioner—our annual rainfall was a whopping 57 inches.

Rainfall plus heavy player traffic led, through the years, to the inevitable problem: soil compaction. And on our steeper slopes—some of which are 30 degrees or more—our erosion problem was constant.

Battle Compaction

Compaction and poor drainage, of course, go hand in hand. They are somewhat like the "chicken and the egg." Compacted soil invariably leads to standing water—and dissatisfied club members. Without going into great detail, I can say that—to combat the drainage problem—we had used almost every traditional method of turf improvement, including aerification, rolling, careful seeding, top-dressing with soil as well as sand and peat, and other methods.

Improvement was always short-lived, and since the course is open all year, our battle against compaction and inferior playing conditions has been constant.

Experience has shown that in our case a 16-20-0 fertilizer is most effective, and—naturally—we fertilized on a carefully established schedule.

Tip from Turf Scientists

When we decided to add another nine holes last summer we were faced with the fact that our previous turf improvement methods had, all in all, been both costly and relatively unsatisfactory. We knew, too, that the effect of chemical soil conditioners in alleviating soil compaction in soils with a clay fraction, such as ours, with its 20-to-30 per cent clay content, was pretty well established. And we knew that turf authorities at Washington State College, at Pullman, Wash., had proved that any layer-type approach to turf improvement was doomed to failure. Soil, sand and peat simply must not be handled so that distinct layers eventually are established. A slow transition between soil types is essential, yet daily traffic of 300-400 players makes creation of compacted layers almost inevitable.

On hard-played public

“Disease is no match heavy traffic,

say these



George Dalman,

*Superintendent, Cog-Hill Golf Club,
Lemont, Illinois*

“The reason I use ‘Tersan’ is because it does the job . . . and that’s what we want. Something that will settle the problems of the superintendents and do it thoroughly.

“I have an especially tough problem here because the course is open all winter. By using ‘Tersan’ through the winter we haven’t seen a sign of snow mold.

“Because we use our greens the year round and just can’t afford disease, we use ‘Tersan’ at regular intervals as a preventative. Our troubles are held to an absolute minimum.”



Norman Kramer,

*Superintendent, Silver Lake Golf Club,
Orland Park, Ill.*

“We know ‘Tersan’ is best for control of dollar spot and brown spot . . . that’s one reason we are going into the fourth consecutive season of exclusive use of ‘Tersan.’

“I remember a bad attack of dollar spot. We sprayed all night with ‘Tersan’ and there has never been any doubt in my mind but that it saved the green.

“When anybody asks my advice on ‘Tersan,’ I say, ‘Don’t be afraid to experiment with it . . . it’s almost impossible to burn a green with ‘Tersan.’”

courses around Chicago...

for Tersan[®]... despite muggy weather,"

superintendents

Amos Lapp,

*Superintendent, St. Andrews Golf Club,
West Chicago, Ill.*

"With experienced help so difficult to obtain, the fact that 'Tersan' can be handled by a person with a minimum of greenskeeping knowledge is very reassuring. It's a relief to know there's no danger of 'burning out a green.'

"I've been using 'Tersan' for nine years. I know nothing more effective for control of dollar spot and brown spot. When first signs appear, we get on the job with 'Tersan' and the trouble is over, then and there. What's more, snow mold is no longer a problem... nothing controls it as well as 'Tersan.'"



"Tersan" not only controls diseases, but keeps the color in your greens. No yellowing or burning. Give "Tersan" the toughest test you can find on your course. It will soon become a stand-by, the most valuable chemical aid to greenskeeping you can buy. Get the handy three-lb. package, right now. If you prefer a combination of "Tersan" and a mercurial fungicide, add Special "Semesan" to your sprays. And, Du Pont Soluble Plant Food can also be added to feed grass at the same time. It's packed in 50-lb. bags, especially for golf courses.

On all chemicals always follow directions for application. Where warning or caution statements are given, read them carefully.



Order **Tersan[®]** Turf Fungicide
from your golf supply dealer

BETTER THINGS FOR BETTER LIVING... THROUGH CHEMISTRY

In reviewing our problem, we found that Dr. Walter H. Gardner, of the Department of Agronomy, at Washington State College, had reported that "infiltration of water into turf may be materially restricted by soil compaction—so much so that under conditions of severe compaction most of the water added by normal sprinkling runs off or collects in low spots. Unless water is applied for very long periods of time, such compacted soils are not wet deep enough for the maintenance of turf grasses. For adequate infiltration the surface soil must be maintained in a porous condition. Some of the polyelectrolyte (or chemical) soil conditioners, when properly applied, have been found to stabilize soil aggregates against the puddling and slaking action of water and against disruptive mechanical forces. By so doing, the porosity of the treated soil and hence the capability for water intake are maintained high."

Among other scientists who have reported on water penetration of soil as influenced by chemical soil conditioners are Dr. Robert M. Hagan, of the Department of Irrigation and Soils, University of California, Davis, Calif., and Dr. L. E. Allison, of the U. S. Department of Agriculture Salinity Laboratory at Riverside, Calif.

On the basis of available information from qualified sources, plus an analysis of the economic factors involved, we decided to go ahead with the use of a chemical conditioner.

Analyze, Compare Costs

On first analysis, it might seem that this is a costly approach to turf improvement, but it is well to define just what is meant by "expensive" or "costly."

In the first place, we knew what our costs had been for sand, peat moss and the other materials that go into green construction and improvement. We knew, too, the use of these materials had been a continuous process. And we further felt that "cost" is a relative term, based on what improvement is deemed essential and what materials and labor are required to achieve it. On this basis, and assuming good performance by Krilium soil conditioner, we decided that use of the latter material would be less, not more, expensive than previous methods.

When we decided to put in a second nine-hole course, we found that four holes of our old nine would have to be relocated and re-built. So we were faced, in all, with construction of 13 new holes.

Incidentally, when we purchased the

land for the Forest Hills G&CC, in 1927 and laid out the original nine-hole course, we had an eye toward future expansion. It is wise for club-owners who start with a nine-hole course to purchase land and lay out the course with expansion in mind; nothing is more frustrating than the need for expansion and no room for it. And real estate prices have a way, in our times, of going up.

Tested Conditioner First

Before definitely deciding to use a soil conditioner on all 13 to-be-built holes we gave it a rigorous test on the No. 2 green of our old course, a severely-compacted



Badly eroded areas such as this existed in several areas of the Forest Hills G&CC where a chemical soil conditioner was not applied. Rains which caused this erosion had no effect on treated areas. Bill Martin, left, owner and superintendent of the course, points out the damage to Byron Reed, pres., Oregon-Washington Greenkeepers' Assn. This area was at the lip of a tiled drain which, theoretically, should have prevented erosion.

hole where standing water was often a hazard and nuisance.

We took soil tube samples, to a 12-in. depth, which showed severely compacted layers from the surface to a 3-in. depth. Grass roots could not penetrate this 3-in. layer of compacted soil, although soil below this upper layer was in good shape. So we knew that our problem area was the upper 3 inches.

Put Conditioner in Topdressing

Into some "spare" turf, in a plot from which we ordinarily take our topdressing soil, we roto-tilled conditioner at the rate of one pound per cubic yard of soil, when the soil had optimum moisture for good workability. (This figures out to a 50 sq. ft. plot, with conditioner worked in to a 6-in. depth.) This soil was then allowed to stand for 24 hours, while the conditioner's "bonds" were formed and the

(Continued on Page 62)

Apply Calocure or Calo-Clor regularly . . .
you will be ready for brown patch weather!

EFFECTIVENESS PROVED . . . by superior ratings in the National Turf Fungicide Trials every year they were tested . . . by constant use on hundreds of golf courses.

CALO-CLOR—extra potent—widely used for 25 years—provides positive prevention . . . quick control when vigorous brown patch fungi attack.

CALOCURE—designed to provide effective protection and control with maximum safety. Consistently maintains or improves the color of your grass.

Write for detailed information on **CALOCURE**
and **CALO-CLOR** today!

get low-cost prevention
with effective

CALOCURE® or CALO-CLOR®

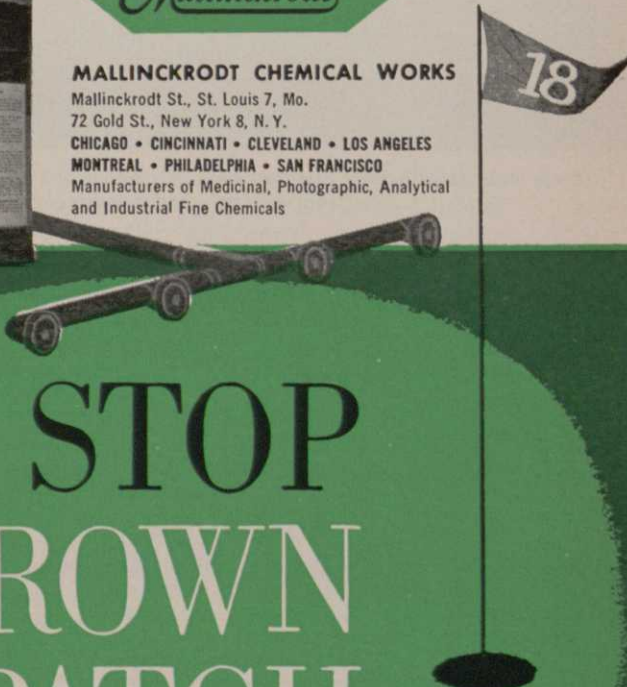


Mallinckrodt®

MALLINCKRODT CHEMICAL WORKS

Mallinckrodt St., St. Louis 7, Mo.
72 Gold St., New York 8, N. Y.

CHICAGO • CINCINNATI • CLEVELAND • LOS ANGELES
MONTREAL • PHILADELPHIA • SAN FRANCISCO
Manufacturers of Medicinal, Photographic, Analytical
and Industrial Fine Chemicals



**STOP
BROWN
PATCH** before it starts



Druid Hills' new "Golfers' Pavilion" presents a delightful and welcoming sight as the weary golfers come off the 18th — and it's perfectly appointed inside.

New Golfers' Pavilion Is "Club of Progress" Feature

DRUID HILLS GC, Atlanta, Ga., recently has opened its "golfers' pavilion", the latest feature of an improvement and modernizing program which started in 1949. The pavilion which is virtually a golfers' clubhouse completed a rebuilding schedule that has given Druid Hills one of the finest country club plants in the nation and which has set a pattern worthy of inspection and study by other excellent clubs that have found their facilities inadequate for today's demands and usage.

The story of the first stage of the Druid Hills clubhouse modernization plan which was completed in 1949 has been told in various magazine articles by Armand C. Chapeau, Druid Hills gen. mgr., and was instrumental in crystallizing improvement

programs of other fine country clubs.

The favorable effect of the first stage of the program, on the membership and operating situations, was so emphatic the plan was made comprehensive under a "Club of Progress" policy.

Each phase of the club's operations has benefited on a sound business basis. Charlie Miller's new pro shop in the golfers' pavilion is an outstanding example of how highly attractive and practical pro shop facilities score with members.

Steps of "Club of Progress" Plan

After the initial program the next step was taken in 1952.

With the guidance of Pres. W. J. Cordes and other officers of the Club an addition

NEW **ELECTRI-CAR**

BY VICTOR



Victor, makers of precision adding machines for over a third of a century, now offers you a completely new golf vehicle. Electri-Cars are course proven — over thousands of yards of golf courses — with full loads, on all types of terrain, under actual playing conditions.

DESIGNED BY PROS

- Drives from either side
- 4 speeds forward—4 reverse
- Smooth controlled speeds
- Easy-riding, pneumatic tires
- Sturdy, steel construction
- Simple, easy to operate
- Ball or roller bearings on all revolving parts
- Choice of five color combinations
- Will not harm turf
- Battery charger included

**WRITE FOR INFORMATION ON
DEALERSHIP AVAILABILITIES**

To Pros & Club Managers:

Ask us how you can increase your profits by selling and renting the Victor Electri-Car.

To Golf Course Superintendents:

Victor also makes a light but sturdy 500 lb. capacity Scooter for transporting tools, seeds, supplies, etc.

MAIL THIS COUPON TODAY!

VICTOR ADDING MACHINE CO.
ELECTRI-CAR DIVISION, Dept. GM-42
CHICAGO 18, ILLINOIS

Please send me your brochure on Electri-Car
I am interested in purchasing an Electri-Car.
I am interested in a rental plan for my course.

Name

Address

City State

was provided on the swimming pool side of the main clubhouse.

This addition, planned by Bodin & Lamberon, Architects, provided an adequate and attractive powder room with the entrance off the Main Lobby, Ladies Locker-Room for swimmers only, and a Boy's Locker and Shower Room for the same activity. This addition was completed in May 1952 at an approximate cost of \$35,000.

The officers, knowing the club is a family type, realized that most housewives are not content to live in a home very long without a change of decorations. In line with this thinking a program of renovation of the interior was approved by the Directors.

Under this program during 1952 and 1953, at an approximate cost of \$15,000 the lounge, lobby, dining room, main ball-room and men's grill underwent a face-lifting. Walls and woodwork in all areas except the dining room were repainted in attractive colors with contrasting draperies. An attractive design in wall paper to blend with a mural was used in the dining room and appointed by wrought iron

sconce holding long tapered candles. New carpeting was laid in the Main Lobby and Lounge and new furniture was provided for the Men's Grill.

The delicious meals prepared under Chapeau's supervision were further enhanced by the installation of air conditioning units in the terrace dining room and two private dining rooms.

The year 1953 gave the club another well qualified, well liked and progressive president in Clyde C. Fowler ably assisted by other officers and directors.

The officers and manager realized that any club should provide equal facilities for all activities in order to maintain harmony within the club. This line of thought prompted them to turn their attention to the golfing and dancing enthusiast. A Building Committee composed of Chmn. Herman Dixon, Frank D. Nichols, Dene Christopher, and the late Dr. T. R. Staton was appointed to investigate the possibilities of expanding the open dance terrace adjoining the terrace dining room and overlooking the golf course; also the construction of a golfers pavilion.

This Committee selected David S. Cut-

Druid Hills' new pro shop is pronounced by experts to be the top job of lighting, and in every other respect it is designed and built for merchandising appeal and service as well as for operating efficiency.



36 HOLES



EDDIE TRAUBE, Pro.
Stockton Golf and
Country Club

Our Westcoasters go
"all the way" in
convenience, comfort
and durability.

WITHOUT RE-CHARGING!

"We depend on Westcoasters for 36 holes on our moderately hilly course . . . without recharging," says Eddie Traube, Golf Pro. You'll like its responsive power control, too . . . its rugged construction

. . . the Westcoaster's many comfort-with-safety features. Write for details, today.

WESTCOAST MACHINERY, INC.,
1802 E. Charter Way, Stockton, Calif.

18
MAKE GOLF PLAY . . . RIDE ALL THE WAY

Westcoaster
ELECTRIC GOLF CAR

PROS and CLUB MANAGERS

Check the income advantages of selling or renting

WESTCOASTERS





YANK PROS WIN HOPKINS TROPHY THIRD CONSECUTIVE YEAR

After being held to a tie in first day singles U. S. PGA team beats Canadian PGA, 42 1/2 to 20 1/2. Canadians had Bobby Locke as added member. Jerry Barber beat Bobby for 3 points in singles. Barber was U. S. leading pro scorer with 10 1/2 points. The U. S. PGA team, L to R: Ted Kroll, Jerry Barber, Walter Burkemo (capt.), John Jay Hopkins (donor of the trophy and pres., International Golf Assn.), Marty Furgol, Chandler Harper, Dave Douglas and Ed Oliver.

tino, Jr., Architect and member of the Club to work with them in formulating plans for this particular expansion.

On with the Dance

A decision was reached to proceed immediately with the enlargement of the open dance terrace in order to complete it for the forthcoming summer months. The plans provided for an increase of three times the original area of the dance floor, exclusive of dining areas around two sides of a rectangle, and an elevated orchestra stand. The original pattern of terrazzo was continued on the dancing area only.

The elevated orchestra stand was surrounded by planting areas of field stone. Provisions were made for a removable canvas roof and three sides for the stand so that the view of the golf course from the terrace dining room would not be obstructed during the winter months. This phase of the program was completed in August, 1953 at a cost of approximately \$24,600.

New Quarters for Golfers

As soon as plans for the terrace were completed by the architect, he was authorized to proceed with plans for the "Golfers Pavilion." This building has to primarily serve those members interested in golf. An overall plan was made pro-

viding a two story structure of typical field stone and redwood exterior with a most unusual cantilevered, exterior stair of reinforced concrete.

The building was located on a terrain which permitted both first and second floors to be at different ground levels.

The lower floor consists of a Men's Locker-Room and with shower and toilet facilities, a shoe cleaning and storage room and a heater room. A deep pile Wilton carpet by Alexander Holmes of Philadelphia and benches were provided in the aisles between approximately 340 lockers.

All showers with adjoining dressing compartments and toilet areas have light buff ceramic tile, trimmed in medium brown with metal toilet partitions. Walls and ceiling of the Locker Room proper are plastered. Ceilings are painted off white and walls pastel green. The two entrances to this locker-room open on a craborchard flagstone terrace facing the eighteenth green.

The upper floor consists of a cocktail lounge complete with Bar, Kitchen, and Restrooms; Pro Shop complete with display, Office, Club cleaning, repair and storage.

One will find the cocktail lounge and pro
(Continued on Page 76)