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THE golf-course tractor is generally held to be only a power-plant for mowing. "Caterpillar" track-type Tractors are more. The wide tracks do not slip and tear the softest fairway. They ride the surface with a feather tread—"Caterpillar" tracks make no divots. Fairways can be rolled earlier in spring days—holes can be changed at no extra cost for power—roads can be built—hedges or stumps pulled—sand or dressing hauled. A "Caterpillar" Tractor is a *complete* power-plant for the golf course!

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PEORIA, ILLINOIS, U. S. A.
 Track-type Tractors Combines
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T R A C T O R



How storm waters destroy in California. Newly eroded banks on the course of the Hillcrest C. C. of Los Angeles.

Some Details California Is Learning About Watering

By ARTHUR LANGTON

FIVE hundred thousand gallons a day for over 150 days without a break is but the usual figure for most southern California eighteen-hole golf courses in regard to irrigation output during the dry spell of the summer months in the necessary effort to keep the grass alive. It must be said, however, that this necessity has given no hint of its existence during the past few weeks in which an almost unprecedented period of "unusual weather" saw at least local showers falling almost every day. Nevertheless, this is the season when the wise greenkeeper is checking over his equipment and plans for the coming year in order to withstand the dry siege until about November. Any breakdown in the irrigation system will mean so much lost grass.

Had the economic depression stayed away from the Golden State, this year might have seen the installation of many more hoseless irrigation systems on the local golf courses. But unfortunately most clubs which do not already have them feel in no condition to withstand the consequent financial outlay. Regardless of the fact that the principle of the hoseless system has been accepted throughout the whole of this region as being the most efficient.

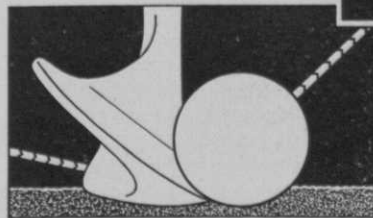
The statement of conditions made by one local greenkeeper will serve as a sample reason for the enthusiasm manifested in the Pacific southwest in regard to complete irrigation systems. With his hose system during the season of 1930 he found it necessary to employ three men for

Announcing the SCOOPER

As you know so well, a few years ago golfers began demanding more and more sand traps. Now, just as insistent a demand has sprung up for a club with which to get out of these same traps.

MACGREGOR meets this demand with the "Scooper," a new club which follows MACGREGOR traditions of craftsmanship. It is particularly adapted for the new standard size ball.

The head is made of forged mild steel with dull finish chrome plating. The steel shaft has a Parkerized finish. It is a high grade club in every respect.



Cash in on the demand for this club by stocking it immediately. Display it prominently and you'll find it will create a great deal of interest among your club members.

THE CRAWFORD, MCGREGOR & CANBY CO.
Established 1829 Dayton, Ohio

MACGREGOR
COURSE-TESTED  GOLF CLUBS

We predict this club will be
the biggest seller of 1931!

The *Spalding* steel-shafted
“Dynamiter” Niblic

*It is new! It conforms to the ruling
of the U. S. G. A.
It retails for \$7.50!*

THE SPALDING "DYNAMITER" niblic is designed to help golfers get out of sand traps. It has a heavy broad flange, which prevents the club-head from digging too deeply into the sand — and saves many a wasted shot.

The "DYNAMITER" has other advantages. For instance:

1. In addition to being the ideal club for getting out of traps, it can also be played for any kind of shot one would customarily use a niblic for.
2. The steel shaft has purposely been shortened to insure greater accuracy.
3. And the retail price of \$7.50 just about eliminates competition. At that price, you ought to put a "DYNAMITER" in every member's bag!

Send in your order now — Spalding is all set to fill it immediately.

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twelve hours a day to put the hose and sprinklers on the fairways, move them periodically, and take them all off again ready for the day's play. His bill for irrigation amounted to about \$10,000 of which \$4,600 was for labor alone. He estimates that with the installation of a hoseless system one man working ten hours a day could cover the same amount of ground as the three men last year.

Need for Hand Watering.

But efficient as the hoseless water system undoubtedly is it must not be regarded as an absolute panacea for all irrigation ills; this out of justice to the manufacturers. There are certain conditions under which the hose and nozzle method must be used to obtain the best results. One of these situations is illustrated by the set of conditions which exist at the old San Gabriel Valley C. C. which is not at all exceptional. Constant wear has packed the soil tightly around some of the traps with the result that unless care is used in irrigating this section of ground, the water runs down off the fairways into the traps washing away their banks. The only way to obviate this difficulty is to either hand sprinkle the trap area or carefully place an ordinary sprinkler and allow it to run very slowly. Even with the latter alternative someone must exercise constant surveillance or dirt will be washed into the sand of the bunker.

A similar situation exists in regard to fairways built along the sides of steep hills. In order to keep the banks from drying out it is necessary that they receive large quantities of water, most of which will run down into hollows and collect in large pools. Incidentally, if a course is so poorly planned that a green is the focal point for run-off water, it is too bad for the green for it will become a breeding ground for crabgrass and a host of other pestilences. Unless these steep places can be watered a little very frequently they will either dry out or the low places will suffer from too much water. It is of course unfortunate that golf courses in California must have grass on banks at all, because the uniformity of turf texture has to suffer. Most local greenkeepers try to compromise by keeping their banks a little dry and their hollows as damp as is consistent with good golf.

Water Consumption Uniform.

It is surprising to note that despite wide variance in soil texture throughout south-

ern California the amount of water required by courses of approximately the same grassed area varies very little. In the courses near the mountains the soil is gravelly and rocky, consequently the ground absorbs water rapidly and allows for little or no run off. Constant watering is necessary. The moisture is carried beyond the reach of the roots because there is little to retain it. Down in the lowlands away from the mountains quantities of water are required for another reason. The soil in this latter district is extremely fine, sometimes it is adobe. Moisture penetrates very slowly and the grass roots are very shallow. The ground must be kept in an almost soggy condition to keep the roots supplied. If not, the hot summer sun beating down all day long without benefit of clouds bakes the soil into the consistency of concrete and withers the grass.

Charcoal Instead of Sand.

It can be seen readily that the greenkeeper on a course in California which has adobe soil is in for a merry time, not only from nature but also from the members. The latter do not like a soggy course but they insist that the greens be sufficiently soft to stop almost any ball that hits them, which two conditions are almost impossible to provide coincidentally. One local greenkeeper on such a course in the attempt to provide his players with perfection works large amounts of sand and charcoal into his topdressing material. This man, David T. Coull of the Potero C. C. of Los Angeles, says in this regard, "The fine sand which is ordinarily used for traps and tees is useless for this kind of topdressing because it packs and makes layers. The sand to use is that coarse material used by plasterers which has been properly washed beforehand to take out any traces of alkali. Coarse sand will work its way downwards cutting through the top inch or two of soil, thus making the greens more porous and consequently healthier. The sand and charcoal, by opening up the soil and allowing air to get at the roots may also be a means of lessening the danger of brown-patch. I do not guarantee this last statement, however."

Most of the local greenkeepers when beset with too-fine soil rely upon another method to remedy this condition. They inject lime, which seems to have the property of making small grains adhere to make larger ones.

Great Scot!...a

CONSISTENCY TESTER

for GOLF BALLS!

● Remember that time your star pupil played for a hook...and sliced into a trap? The Consistency Tester would have labelled that ball an "erratic." And when he stroked what you thought was a perfect putt and it lagged a foot short? That ball was probably a "sulker." And that drive that sounded

(and felt) like a two-fifty smack...but died at one-ninety? Another "sulker."

Then where is the one "untemperamental" ball that goes where it's sent...every time? The Consistency Tester says that ball is the new and improved Silver King.

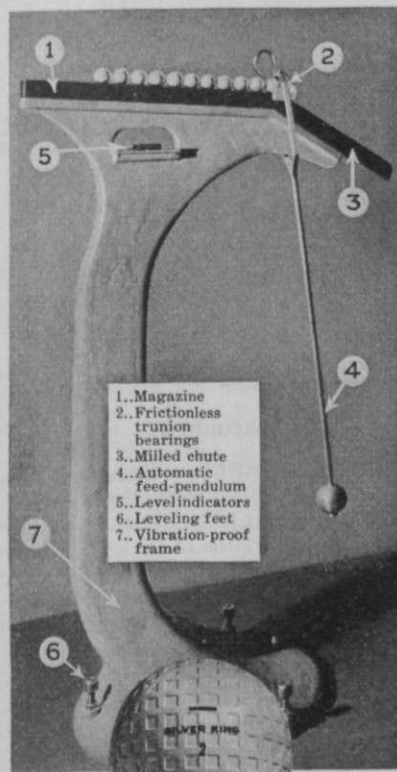
It proves the new Silver King the most consistent, in point of accuracy plus distance. Silver King actually registered 292 more "hits" than its nearest rival...and this

nearest rival got accuracy only at the expense of distance.

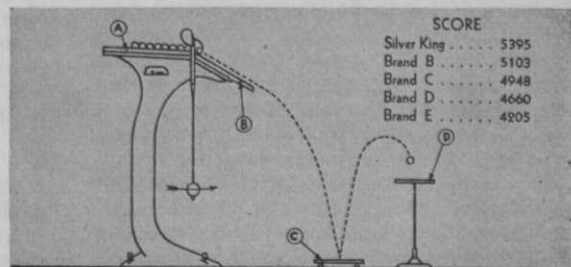
This is because of Silver King's uniform high compression...always the same, wherever it's bought or played. (Uniformity=consistency; high compression=distance.)

Silver King eliminates one of the variables in the score. A blister on the thumb, maybe, or a "birdie" on the mind—but you can always count on the consistency of Silver King...the one invariable in the game.

SILVER KING DISTRIBUTED IN U. S. SOLELY BY JOHN WANAMAKER



- 1..Magazine
- 2..Frictionless trunion bearings
- 3..Milled chute
- 4..Automatic feed-pendulum
- 5..Leveling feet
- 6..Leveling feet
- 7..Vibration-proof frame



THIS IS THE GOLF BALL CONSISTENCY TESTER

Tests balls for uniformity of compression, consistency of behavior, and distance.

Balls are released from magazine at A; roll down track at B; strike on steel bounceplate at C; automatically record their alighting places at D. Each "target" thus made is composed of 100 "shots." A 6-inch scoring circle registers greatest average number of "hits."

5 dozen new Silver Kings were

tested against 5 new dozen of each of the 4 next most popular brands selling from 75c up. All balls taken from retail stock. All tests made by an accredited Testing Laboratory (name on request). Official scores, on basis of 6000 "shots" for each brand: Silver King 5395; Brand B 5103; Brand C 4948; Brand D 4660; Brand E 4205. (John Wanamaker, Wholesale Golf Department, New York City.)

85^c EACH

PLAY

SILVER KING

... it's more Consistent!

One difficulty that confronts local golf courses in connection with drilling a well for irrigation purposes is that there is always some doubt as to what kind of water will be struck, and for this reason many clubs still buy their water from municipalities, fearing they know not what underground. That these fears are not without foundation is indicated by the experience of a number of courses which have drilled and found to their dismay that the resulting water supply was not conducive to the growth of grass. This may be understood when one realizes the volcanic condition of the state. In some parts of California sulphur water, iron water, and lithia water may be obtained within a mile of each other. Several deep wells on the coast produce nothing but salt water. At one club the water contains a minute portion of oil with the result that the soil is covered with a barely perceptible film which makes it extremely difficult for water to penetrate to the plant roots.

Time to Water Is Problem.

But whatever kind of water, sprinkling system, or soil is present on a southern California course the period during the year in which turf must be watered depends upon the grass itself. Bermuda grass needs only to be watered during six months of the year, from May until October; any other time would be a waste of effort. Bluegrass needs water for nearly ten months in the year, while bents need even more.

A schedule of irrigation for dry weather which approaches very close to a standard in this area is as follows: greens, every day; tees, twice a week; Bermuda fairways, once a week; bent fairways, at least four times a week; and other grass fairways, two or three times a week depending upon the heat.

Before closing, one word should be said in favor of the old time, hit-or-miss method of watering with a complicated hose system. It developed initiative and ability on the part of members of the night irrigation gangs to effect repairs under any and all conditions assisted only by a piece of wire.

ACCORDING to present plans the 1933 convention of the National Association of Greenkeepers will be held in Chicago and the 1934 convention in Toronto. The 1932 meeting is to be held in New York City.

P. G. A.-Jones Instruction Pictures Are Showing

ARRANGEMENTS made with Bob Jones now permit the showing of the P. G. A.-Jones slow motion pictures at the sectional meetings of the P. G. A. The pictures will be released, for pro instruction purposes generally, on May 15.

Vardon and Wethered pictures are being employed with great interest and success by pros in speeding instruction results and the Jones pictures have been in lively demand. General release of the Jones pictures has been delayed in order to avoid conflict with the pictures Jones is making for Warner Brothers for showing in theaters.

Presentation of these P. G. A.-Jones pictures at the sectional meetings which will open the season in the northern and central states is certain to draw a large attendance to these meetings and give the P. G. A. sectional bodies an opportunity to increase their membership among desirable professionals.

With the extensive publicity given to Jones' debut in the movies, the P. G. A. members are all set for a big profit in instruction sales by employment of the films, according to those who have given the pro instruction prospects close study.

Farber Heads New Greens Group of Carolinas

WILLIAM C. FARBER, Columbia, S. C., was elected president of the Carolina Greens association at its organization meeting held at the Charlotte (N. C.) C. C. The body was formed as the outcome of work instituted by Walter Cartier of the Charlotte Park and Recreation commission.

Other officers elected: Frank Maples, Pinehurst, First V. P.; R. V. Stout, Greensboro, Second V. P.; Walter Cartier, Charlotte, Sec.-Treas.; Ramsey Dulin, Corresponding Sec., Myers Park club, Charlotte.

Program of association work includes establishment of test plots at various courses in Carolinas and interchange of data on tests conducted uniformly at these places.

Donald Ross, O. J. Noer and E. S. Draper were featured speakers at the initial meeting.



Incorporating Every Fine VULCAN Feature—AND HOW THEY'LL SELL!



HERE is a VULCAN Wood Club that possesses all the "it" your members can demand in a Driver, Brassie and Spoon. It's the V-44, one of the most popular woods in the new VULCAN line . . . It has a fancy face with four Fiberloid pins

and a tough head of the best seasoned persimmon—finished in mahogany with a natural stripe. The special whippy True Temper steel shaft is finished in rich cream cellulose and topped with a long bell-topped grip of calf leather.

The V-44 will sell readily because it has good looks, a wonderful "feel" and is

such an unusual value at \$7.50 each. The SET O' THREE, matched Driver, Brassie and Spoon, is priced to sell at \$22.50.

The new VULCAN line this Spring will command your admiration. There's a full range of woods to retail at from \$5.00 to \$15.00 each, and four sets of irons at from \$4.00 to \$10.00 each, and in sets of 5, 6, 8 or 9 at corresponding prices. And there are plenty of models in the medium price class—like this V-44, for instance. The VULCAN Bags and the three balls, Thunderbolt, V. G. C. and Spark, complete a remarkably salable line. A letter will bring descriptive literature and hasten the VULCAN salesman your way.

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Pro Shop and Its Service Rate the Club

By GEORGE AULBACH
Pro., Spring Lake C. C., Waco, Tex.



EVEN though the boys may be singing "Sweet Adeline" at the 19th hole, some of them still find time to voice bitter criticism of the club service, club personnel or committees. Whether justified or not this locker-room broadcasting invariably leads to the beginning of dissatisfaction.

Of course it is impossible to please all the members all the time. No club management or committee can do it. But when ninety per cent are satisfied the others will remain in the silent minority. As long as the human element in club management exists, and it always will, there will be a few members who kick about everything that is done. Unless something is done right at the start of such propaganda it eventually will lead to a general shake-up of the directors, the operating departments and frequently the club personnel. The only way to prevent such an uprising is to put the right man in the right place with the complete power to observe and manage as good judgment dictates. Such positions should be filled only by men of years of experience in dealing with the human side of club life and service.

The success of any golf institution depends mainly on management, to which there are three distinct parts. House management, golf course maintenance and pro shop service. Each is a highly important factor in the operation of the club and the best available men should be in charge of the respective departments. Clubhouse and course upkeep are more matters of accepted standards that the members have sharply defined.

Therefore, I am convinced that pro shop service is invariably an essential distinction highly responsible for the success of any golf club. The members get more per-

sonal service from the pro than any other department head in the club. When he fails the failure is quickly discovered and he gets fired. This is proved by the fact that nearly every club changes its professional far more often than the greenkeeper or club manager.

Pro Must Produce

In this age of higher efficiency the pro is called upon to be a diplomat, business man and golf instructor. And above all he must produce results. The successful operation of the golf shop is more and more requiring the service of a real business man rather than primarily, high golfing ability. The pro is no longer paid for his playing ability but for the service he renders in making everything a pleasure for the playing members. Many pros fail to realize that service is what they are getting paid for and what members expect of them. After all, the member joined the club for pleasure. And he gets his pleasure from playing and the service he receives in the pro shop at the beginning or finish of a round.

A club can only be as successful as its pro shop department. A number of clubs have failed to recognize this factor and have not been very particular in the selection of their professionals.

A high grade club, representing an investment of thousands of dollars and a membership of successful business men, certainly should be very particular about the professional they select to show the standard of their club by the service he renders. A man who knows the pro service from every angle, can operate a shop efficiently and can please the members, is a very valuable man. He is justified in receiving a good compensation. There has