Top-notch players everywhere welcome the exclusive performance of the Sweet Shot. Its performance wins player preference and loyalty and builds profit for your shop.

It is exclusively yours to sell. No other class of outlets are supplied with this grand ball. Is your stock complete and well displayed?

THE WORHTHINGTON BALL COMPANY
45th Year, Specializing in Golf Ball Manufacture
Elyria, Ohio, U.S.A.
a small amount of potash in solution, they recovered.

It is a very serious situation on some of our golf courses where waterlogged soils exist.

It is, therefore, quite clear that there are many difficulties associated with poor aeration, which makes it difficult for the greenkeeper to maintain high quality turf. The poor aeration may be due to the use of heavy clay soils on the surface, which are easily compacted or leveled, making them impervious to water.

Such a condition has been found to prevail on some courses on the West Coast, even under high rainfall conditions. Such a compacted zone on the surface may prevent the absorption of water below the surface inch or two of soil; this means that you have a saturated surface layer of soil quickly drying out after watering or a rain, with a reserve of water at greater depths.

This is a condition that frequently prevails on greens where you have those so-called dry spots. They are dry in spite of the heavy watering or rainfall.

Another condition resulting in poor aeration is a layer of very porous material close to the surface of the soil. This is one of the things that all of the soil scientists do not agree on, but I think it is one which is very serious on many of our courses, is very serious on some athletic fields, and exists under other turf conditions.

We had the idea a few years ago that the way to maintain a good putting surface or a good turf area was to put a layer of sand, gravel, or some other material under our top soil. In many cases that top soil was put on only a few inches thick above the sand or gravel layer.

The thing that actually happens under those conditions, and is particularly serious on putting greens, where you are watering every day or every few days, or where you are dealing with a high rainfall region, is that the only water which will drain out of that surface soil layer is the free water. We have to get beyond the water holding capacity of that surface soil before the water will drain out of it. That simply means that the lower layer of that surface soil area is almost continuously saturated with water, particularly under putting green conditions.

In some cases where you have a layer only two or three inches deep, it means that you are going to have to water more frequently and you are going to have to keep that water supply just in that surface two inches. Grass will probably not be able to draw appreciably on the water which is in the lower soil depths, because

**NEW EXPERIMENTAL PUTTING GREEN AT UNIV. OF MASS.**

On May 23, an experimental practice putting green with nine holes was opened for play by Homer C. Darling of Juniper Hill Golf Course, President of the Mass. Section of the New England Turf Association, and Dr. Dale Sieling, Head of the Department of Agronomy. As part of a comprehensive turf research project now being conducted at the University of Massachusetts, the putting green is designed for experiments with bent grasses under playing conditions. Over 1000 rounds were played on the green by faculty and students on the week-end following opening. (L to R) L. S. Dickinson, director of the project; L. R. Parkinson, pres., Amherst GC; Homer C. Darling, pres., Mass. section, New England Turf Assn.; and Geoffrey Cornish, ass't to Prof. Dickinson.
"Split-second" action!

It's the "split-second" getaway action that gives the Haig ball its extra yardage. And that "split-second" action is custom-built into every ball. In addition to exclusive Hagen features, the Haig ball has all the advantages of revolutionary Isotropic construction. Dynamic balance gives the Haig true flight and roll. Its livelier liquid center and extra high tension winding give it amazing new distance. You can recommend the Haig to your members with the assurance that no ball made can out-perform it.

This card appears in all Hagen National ads.

July, 1949
you have broken the water column in that soil by putting in a layer of sand or a layer of gravel, close to the surface.

A layer of sand or gravel put at sufficient depth, of course, may be very valuable to keep soils drained. The inner face between the surface layer and the gravel underneath will be continually saturated in your putting green conditions if that layer is only five or six inches deep on the surface, then the water holding capacity of that soil, or the amount of water which is in the soil in that surface layer, is always above the maximum porosity limit of that particular soil. You have to keep that surface layer wet in order to keep the grasses from drying out, but very seldom do you reach a point where you have enough oxygen in the soil to keep the grasses healthy. This is a situation, I think, that very frequently prevails on some of our putting greens.

Tile Drainage Function

Tile drainage is considered essential under most conditions in turf areas. That is particularly true on putting greens. It serves to remove the free water from the soil, which is in excess of the water holding capacity of the soil.

I don’t think we ever need to get the idea that our drainage tiles are doing any more than just draining the free water, the water which is beyond the capacity of that soil to hold. We have had the idea in a good many cases that our tiles tended to suck the water out of the soil. I think that is a misconception. The only water which will enter the tile is the water which is beyond the water holding capacity of the soil. That is a very important fact to keep in mind.

Tile properly spaced and installed can be very effective in providing for proper aeration of the surface soil. If, on the other hand, an impervious layer has been allowed to develop in a turf soil, then water may never reach the tile.

It doesn’t make much difference just how good that surface soil may be. If you have a condition where that water column is broken, and do not give the free water in that surface soil an opportunity to go down to the drainage tile, then your tile may be almost useless. In one case I was on a course in Indiana where we had had almost continuous rain for a period of a week, and the greenkeeper said, “I just can’t understand why my greens are so wet.” They were just as waterlogged as anything possibly could be. I said, “Where are your tile outlets?” We went over and examined about a half dozen of those outlets on his green, and there was not a drop of water coming out of a single one of them. That was after about a week of very rainy weather. Unless we have a soil condition which will permit water to go down to the tile, then tiles are almost useless.

How to obtain aeration of some of these areas is sometimes a very difficult problem. The use of the spiker, and other similar tools have been used in the past, with varying degrees of success. A more recent piece of equipment is the aerifier which will remove plugs of soil from a depth of five or six inches, and at a very rapid rate. That is one of the main advantages, I think, of this new tool, that you can get over a large area in a very short time. The removal of these plugs permits air to enter the soil, and frequently permits more rapid absorption of water. On putting greens a top dressing with a high sand content should be used so as to permit continued access of air into the soil.

Another thing done by the aerifier or any method that we may use, such as the hollow tine fork, is that if you have some of these layers that have developed in your greens over a period of years the aerifier or a similar tool will tend to break through those layers and prevent this water from accumulating in a saturated layer about five or six inches below the surface, or wherever those layers occur. —Address before 1949 NGSA Convention, Los Angeles.

Greenkeeper Should Have His "Day" Says Manager Burke.

Pat Burke, mgr., Smethport (Pa.) CC, writes GOLFDOM:

“The GOLFDOM article in May on “Modern Greenkeeping Sets Stage for Golf’s Future” gave me a real bang. I hope that in some way the article is responsible for a better deal for the men who give us today’s marvelous greens and well trimmed courses.

“Golf’s ‘forgotten man’ is truly the average greenkeeper. He is shoved in the background and seldom receives the credit due him.

“At most clubs we have Pro’s Day, Caddy Day, and other ‘days’ and I wonder why clubs of fine and appreciative sportsmen don’t have days for greenkeepers.”

Putting Green for Caddies

An all-star putting clinic featuring Johnny Palmer, Horton Smith, Jimmy Thomson, and local professional Errie Ball was the highlight of recent ceremonies surrounding the dedication of a special putting green for caddies only at the Oak Park (Ill.) CC.

The new putting clock for the caddies is an added feature of the complete caddy program at Oak Park being carried out in conjunction with the Western Golf Assn. and its national program for the betterment of caddy facilities at all member clubs.
with a real HILL-CLIMBING TRACTOR

ALL MOWING IS EASIER

WORTHINGTON model F
CHIEF TRACTOR

Steep hills, rough ground, tight quarters, wide open spaces — the revolutionary Worthington Model F Chief Tractor is at home in any kind of terrain.

With traction wheels in front under the engine, 75 percent of the Model F's weight is on the drive wheels. That's why this new Chief handles big gang mower loads on steep grades.

Front mounted gang mowers on the new Model F cut grass before the tractor wheels touch it — no more streaking due to compacted grass. Driver sees what he's doing without turning around. He gauges distance better, can cut down size of overlap.

For the full story on this smooth-working, cost-cutting tractor, write us or see your dealer today.

WORTHINGTON MOWER COMPANY
Stroudsburg, Pennsylvania

Subsidiary of JACOBSEN MANUFACTURING COMPANY • RACINE, WISCONSIN
Pros and Clubs Profit from
NY-Pa. League Schedule

By R. W. CORRIGAN

Probably the most beneficial shot in the arm which any sport could absorb has been administered to golf in the western New York-Pennsylvania area in the last two years. It has made money for the pros, which is their business, and has provided extra interest, practical instruction and more masterful golf for the amateurs. In addition, it has brought valuable publicity, many more members and good business to the clubs in the area.

Pro Johnny Trish of the Pennhills Club in Bradford, Pa., who introduced the idea, does not claim it as his own invention. The setup is similar to one he saw being operated in San Antonio, Texas,—but he says there is nothing like it anywhere else in the country.

Briefly, the system pulls in players and pros across an area a hundred miles wide to compete with each other for awards in a series of bi-weekly contests throughout the season. For that to work in Texas, where a hundred miles is nothing to speak of, is one thing; but to demonstrate that it will draw just as strongly over as wide a sector back East, where the idea of distances is different, is to prove that the method is sound and valuable.

Some of the clubs around Bradford were slow to lend themselves to the scheme at the start, although no cost was involved. Reluctance to try a new thing seems to come naturally to all of us, particularly in smaller communities.

Nevertheless, the first meet, held at Smethport Country Club in June, 1947, had 78 contestants registered, at least 60 per cent of them amateurs; and 90 per cent of those were players who had never before competed in any tournament.

As set up by Trish and Pat Burke of Smethport, Pa., the organization of the Bi-State League, built to carry out Trish's plan, is very simple. It has a President, Burke; a Golf Chairman for arrangements (originally Toby Lyons of Warren, Pa., C. C.); a Publicity Director, Trish (who later absorbed also the golf chairmanship); and a Secretary-Treasurer, Armand Burke of Wellsville, N. Y. These are all unsalaried posts, and the League collects no dues from either clubs or individual members.

The activity has been financed entirely out of 50-cent drags from the registration fees at the meets, and by means of these the organization has been able to pay all expenses and have a few dollars left in the treasury to start the next year's schedule. In 1948 this fund was sufficient to add a nice round sum to the prize money at the last tournament of the season, holding over only $25 towards the office expenses of 1949.

Bi-weekly Events

Last year there were 14 clubs in the association, which allowed for one date each at two-weeks' intervals across a 28-week season. There might, of course, be more clubs in the League with some skipped in a given year's schedule of meetings, or fewer clubs, with some taking more than one date annually. It is a perfectly flexible system.

The schedule having been made up, with courses known to dry out early, having early dates, and late assignments given to those which are physically better for them, the pros of member clubs get busy. The routine is usually a matter of each pro's getting together a group of his players to go along for the competition at each course in turn, every second Friday afternoon.

There have been up to 80 entrants, pro and amateur, at most of these events, and in the two years of operation no tournament has seen fewer than 40 registered.
Again the choicest, properly seasoned stock of SOLID Persimmon is available from C. F. Work & Sons, Inc., world-famed experts in the selection and preparation of the perfect wood for golf use.

Manufacturers of highest quality golf clubs, and the bench artists on custom clubs, prefer Work Persimmon blocks and heads for every desirable quality—quality that is strikingly apparent in the finish, the sales appeal and the performance.

Sell woods of PERSIMMON
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C. F. WORK & SONS, INC.
Manufacturers of Hardwood Specialties
Memphis, Tennessee
America's Most Beautiful...

TAM O'SHANTER COUNTRY CLUB

Tam O' Shanter, America's most modern and progressive country club, invites you to compete in these world-famous golf championships.. for a share of the largest prize purse ever offered in competitive golf. Cash prizes in the men's professional events will exceed $55,000.00 this year.. the women's professional prize total is bigger and the list of merchandise prizes for men and women amateur contestants is long and excellent. No qualifying is necessary.. all events will be 72 hole, medal play. All entries must be in by July 31, 1949. Send for your entry blank without delay: George S. May Company, Tournament Division, Engineering Building, Chicago 6, Illinois.

Tam O'Shanter Country Club is located at Howard Street and Caldwell Road, Chicago, Illinois
Tam O'Shanter was the first country club to play host every year to golf events of such outstanding national prominence. Year after year top men and women amateurs and professionals compete in Tam O'Shanter's golf classics. Here at Tam O'Shanter you'll play over one of the nation's finest courses...you'll enjoy thrilling medal play competition with the game's sweetest swingers...with every convenience and comfort awaiting you in Tam's clubhouse, noted throughout all golfdom for its beauty, functional planning, unsurpassed service and model operating efficiency. Tam O'Shanter, you'll remember, was the first club to install a minimum spending plan requiring all members to spend a minimum amount each month for club facilities...and the first to abolish all committees in favor of the Board of Directors and centralized, streamlined club management in operating club affairs. Remember the dates...get your entry in early. Write today—for folder giving detailed information and entry blank.

This advertisement paid for by the George S. May Company.
Any golfer who wishes to pay the $3.00 entry fee, regardless of whether his club is in the League, or whether he belongs to any, is welcome to play the 18-hole competition round,—and this fact in itself helps to get publicity. Sports editors just as much as other newspaper men like to have a broad base for what they write up; and nothing fits that much better than a story of golf for everybody, in which Johnny-Come-Lately may top the pros and oldtimers.

Here is another special feature: the amateurs being rated Class A, B and C according to handicap, they are seeded one of each class plus one pro to every foursome as far as possible. This makes a great difference to the high-handicap man, breaking up any habitual groupings in the clubs, so that players get the practice of working out with inexperienced competitors. They also get the advantage of going around with a pro, for what points they may pick up by looking and listening,—or by asking.

Incidentally, the pros get the advantage of being able to recommend equipment for obvious needs, and of "making hay by chopping grass" with their own members as well as strangers. It is very practical, and entirely different from the effects resulting from regional PGA meets. Those are good fun, and probably a professional necessity,—but they are no such direct producers of good business as these little open affairs.

Scores having been tabulated for one of these meets, the pot of two or three hundred dollars is split 50-50, half going in cash to the pro winners, and the other half in equipment from the pro shop to the amateurs. (Note that all have paid the same registration fee.) The furnishing of these golf goods, of course, means more business for the pro out of whose shop they come.

The club acting as host for the occasion gets numerous direct benefits from the activity, including dining room, bar, new membership and publicity over the whole area. Established custom provides for lunch before the play and a banquet after, with toasts and treats and local twists. As to advertising, many a club such as

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**PLAY HERE FOR USGA JUNIOR CHAMPIONSHIP**

Youngsters aspiring for a niche among golfdom's great will play for the USGA Junior Championship at the beautiful Congressional CC located in Maryland just six and one-half miles out of Washington, D. C., July 25-30. Shown below is a birds-eye view of part of the layout that will greet the boys who will be out battling par (in this case, a 71 over a trek of 6,618 yds.). The number "25" on the hill between No. 18 and No. 10 fairways appearing in the lower left hand corner has been placed there in celebration of the Club's 25th anniversary being observed this year.

*Washington Aerial Survey photo*