

M... in 1934 you will find MACHINERY...

is first with the developments demanded by progressive course maintenance authorities.

Worthington's productions have been — and continue to be — responsible for the evolution in golf course maintenance essential to the growth of the game.

If you still had to mow courses with horse-drawn single-unit mowers, would golf be as popular as it is now?

Then do you think that you can maintain and extend golf's popularity and the stability of your club by hopeless efforts to handle maintenance work with equipment that is as obsolete and unsatisfactory as sheep mowing was after machine mowing was introduced?

Consider the Worthington record of epochal inventions that helped to make golf a popular pleasure and golf course maintenance a sound science:

1914—The first horse-drawn gang mower . . .

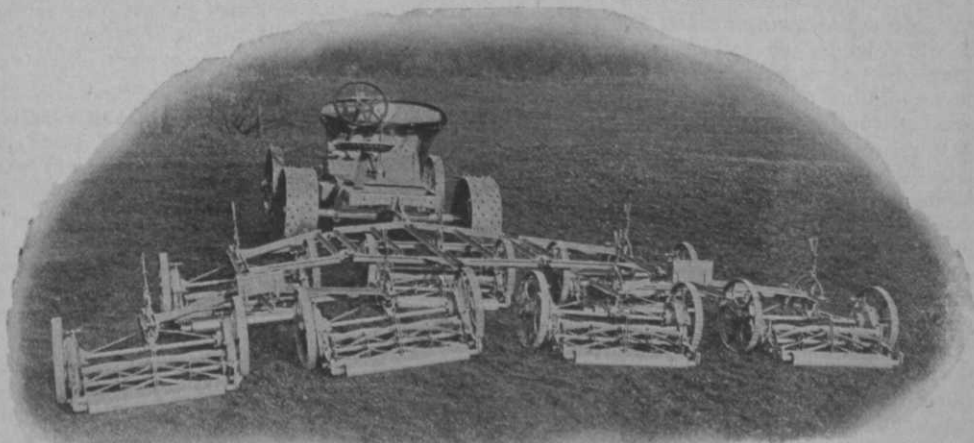
1917—The first all-steel indestructible frame horse-drawn gang mower . . . 1919—The first

lawn tractor, in combination with the triple and quintuplex gang mower (many of these Worthington tractors still in use) . . . 1927—The first power putting green three-section gang mower . . . 1931—The Worthington Multi-gang—a 7-unit gang mower that brought a new era in thrifty, speedy fairway mowing.

Radical improvements, constant betterments of basic design, maintain the Worthington leadership apace with your budget demands for excellence in course conditioning and thrift in maintenance expense.

Check your requirements for Worthington equipment now, while you are preparing your 1934 budget.

FAIRWAY GANG MOWERS



THE NEW LAWN TRACTOR AND CONVERTIBLE MULTIGANG CUTS A 16-FT. SWATH

This mower may be converted into a Quintuplex with five units or a Triple with three units, having cutting swaths of eleven and seven feet respectively. All Worthington units are interchangeable and frames convertible.

THE Worthington Multigang, cutting an acre every four minutes, will show you decided savings in your 1934 maintenance budget. The cutting units have finger adjustments of the bed knife steel—no tools of any kind required. Patented indestructible "V" fly knife reel prolongs the life of Worthington units. Riveted demount-

able steel rims with ground wheel calks give Worthington units perfect traction for fairway and rough mowing. Roller construction including brackets with high-grade ball-bearings; also dust, grass and water seals.

All units are guaranteed to operate at all service speeds.

STROUDSBURG, PENNA.

SALES AGENCIES IN ALL PRINCIPAL CITIES OF UNITED STATES

WE SUGGEST IMMEDIATE CONSIDERATION OF THESE MACHINES DUE TO EXPECTED INCREASE IN PRICES

When you mention GOLFDOM, the advertiser knows you mean business.

Needs of Soil Determine Plan Of Fairway Fertilizing

By O. J. NOER

BESIDES the architectural features of the course, playability of turf on fairway and greens govern player approval. At present competition for members is so severe that only those clubs with a favorable lay-out and good turf are able to maintain reasonably satisfactory membership. Obviously these will be the first to restore full quotas and will be the ones to survive should there be too many courses in a given district.

During the past several years dwindling revenues have forced curtailment in maintenance budgets. Each succeeding year pressure is exerted to force a further reduction in the budget. There is danger of the pendulum swinging too far, for some officials ignore or fail to appreciate the fact that there is a limit below which it is impossible to maintain even the standard of turf demanded by the average golfer. When the rude awakening comes, it will be too late, for restoration of turf is also a slow process and expenditures far in excess of those saved during the regime of mounting economy will be inevitable. Then some of those now being praised for their zeal in reducing expenditures will be rightly censured. This is not a plea for unreasonable or unjustified maintenance expenditures. It is the duty of those charged with course maintenance to cooperate by dispensing with unnecessary frills and emphasize only those practices which are essential for the maintenance of good turf.

At one time fairways received scant attention aside from mowing, and golfers were content so long as greens were good. But when a few enterprising clubs demonstrated that fairways could be developed to a point where uniformly good lies could be assured, golfers began to insist upon fairway improvement.

Some clubs faced the problem by instituting sensible programs of improvement extending over several years and were rewarded with desirable fairway turf. Others, failing to appreciate the underlying fundamentals followed haphazard methods, or blindly followed the proce-

cedure of some neighboring successful club without considering necessary modifications because of differences in turf, or soil. They were either disappointed or may have effected improvement at needless expense.

Good Fairways for All

Occasionally the statement is made that only the more affluent clubs can afford turf improvement on fairways. The fallacy of this has been demonstrated by many of the smaller clubs. Where funds prevent treatment of entire fairways, the first 100 to 150 yards in front of tees were ignored, or efforts were first concentrated on the more important landing areas and approaches, and when these proved satisfactory, improvement was extended to the intervening areas.

Method and procedure are the controlling factors once the decision is made to improve fairways. It is an established fact that the desirable grasses spread to form dense sod if climate, moisture, and soil are favorable. Failure to spread in spring and fall when temperatures and moisture are favorable for growth is indisputable evidence that soil deficiencies in plant food are the underlying cause of poor fairway turf. Obviously the correct and economical remedy is systematic feeding with materials which supply soil deficiencies whatever they may be.

Where turf is uniform but thin, reseeding need not accompany fertilization, except in very rare cases where varieties of grass unsuited to local soil and climate were used originally. If the established grass fails to spread for want of sufficient plant food, it is folly to expect the tender young seedling to compete successfully with the existing grass for the limited supply of soil nutrients. Under these conditions the cost of seeding is useless expense because fertilization will effect desired improvement. Where large bare spots exist reseeding is warranted and in such cases fertilization should precede seeding.

Some few turn to irrigation as the sole means of fairway improvement. Water

YOUR GREENS BUDGET



... how much do you expect it to do?

REGARDLESS of its size, one thing is certain and that is, your players expect that budget you are planning to keep the course in the pink of condition next year. And, their feelings are to be respected for it is their dues and fees that bring the budget "out of the nowhere into the here."

From the cost records of many seasons passed you can get a clear picture of how much **more** the wisely spent budgets are doing. For instance, the greens maintenance—carefully checked tests between hand mowers and Jacobsen Power Putting

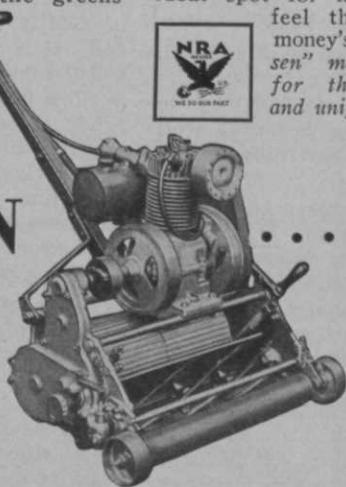
Green mowers, reveal savings that range all the way from \$675 up to \$1,890 a season on this one item of greens mowing. Such is the performance that makes the wisely-spent budget deliver far more for the money.

In planning your 1934 budget remember that Jacobsen Power Mowers are not only one of the greatest budget-saving investments you can make but, equally important, the putting green is the ideal spot for making your members feel they are getting their money's worth—and "Jacobsen" mowed greens are noted for their unusually smooth and uniform surfaces.



JACOBSEN

Send for valuable booklet "Putting Green Maintenance by Modern Methods." We will be glad to send, free upon request, complete details of the Jacobsen Power Putting Green mower and information on their economical performance. Your request will obligate you in no way. We are more than willing that greenkeepers and greens officials judge "Jacobsens" entirely on their record of thrifty, efficient performance on the greens of the best kept courses in America and abroad.



... POWER PUTTING GREEN MOWER

JACOBSEN MANUFACTURING COMPANY
734 Washington Avenue, Racine, Wisconsin

When you mention GOLFDOM, the advertiser knows you mean business.

eliminates moisture as a growth retarding factor, but unless fertilization accompanies its use, poor fairways will become badly infested with clover, and in some districts crab grass and other weeds will become serious problems. Feeding to produce dense turf, with sufficient nitrogen to suppress clover must accompany irrigation or disappointment will be the inevitable result. By reducing the total quantity of water required during the season, fertilization will effect a partial saving in the season's cost for water. On unwatered courses fertilization tends to lengthen the growing season so effects of drought are not so extended or so severe.

The huge expense of topdressing fairways eliminates this as an economical method of supplying needed plant food. Besides there is the grave danger of introducing crab grass and other objectionable weeds which will more than overcome any benefits of topdressing. Even where small cuppy depressions are numerous, topdressing is unnecessary for they will disappear as the grass spreads under the urge of feeding. Manure, besides being difficult to obtain, is costly when the expense of hauling and spreading is considered. Fairways are unplayable in the late fall and early spring, and there is the further damage of introducing clover and weeds. More rapid improvement at less cost can be obtained with more concentrated materials. The truth of this statement has been demonstrated on many golf courses where well conceived systematic programs have been followed.

Determining Fertilizing Plan

Turf condition, variety of grass and soil properties, such as reaction, texture, and content of available plant food determine frequency of fertilizer application as well as kind of fertilizer and best rates of application.

Thin turf infested with moss and weeds requires heavier initial rates of application and at more frequent intervals than dense turf. After desirable turf is obtained, both rate and frequency of application can be reduced for then it becomes a matter of supplying just sufficient plant food to maintain growth and turf density.

Where dandelions are numerous, their control by spraying with iron sulphate need not precede fertilization. It is more economical to proceed with the fertilizer program and stimulate existing grass to spread, for there are notable instances where the decrease in dandelions has been

sufficient to eliminate the necessity of spraying to effect their control.

There is reason to support the belief that fescue and bent require less plant food, especially phosphoric acid, than Kentucky bluegrass, and that they will also grow satisfactorily in soils too acid to support blue grass. So where phosphoric acid and lime are required, lighter rates of application will suffice for fescue and bent than are needed for Kentucky bluegrass.

On a few courses *poa annua* is the predominating fairway grass. In the mid-summer months of July and August it is prone to kill out badly, as the result of either too little or too much water. On such fairways it may be wise to apply most of the nitrogen in the fall with the hope that the grass will go into the following summer with sturdier leaves than if heavy nitrogen feeding is done in the late spring. When nitrogen is used on this grass in the spring, rates should be lighter than for the other grasses so major effects will be dissipated before hot weather sets in.

Limestone Application

On fairways the effects of soil acidity are most pronounced in midsummer. The effects of drought first appear and are most pronounced where soils are too acid. All evidence points to the fact that the judicious use of lime is warranted on fairways and that rates can be selected which will produce beneficial effect without unduly increasing clover provided fertilizers containing sufficient nitrogen are also used. Rates of application depend upon degree of acidity, kind of grass, and texture of soil. It is obvious that the more acid the soil the larger the quantity of lime needed, but few realize that less lime is needed on sandy soils than on heavier soils of the same acidity to produce the same change in reaction. For all practical purposes, more lime should be used on lime-loving bluegrass than on fescue and bent which tolerate more acidity.

Ground limestone of reasonable fineness is the safest and best form of lime to use. The use of a dolomitic limestone containing some magnesium may be advisable to eliminate any possibility of magnesium deficiency. Yearly application of lime is hardly necessary, and at present it is believed an application every two to four years is ample.

The figures in Table I can be used as a rough guide in determining rates of application. It is supposed that the use of

EQUIP EVERY TEE WITH A LEWIS WASHER

There are More Lewis Washers in use than all other makes combined

Lewis Bag Rack •

Just the right size for every tee—and absolutely indispensable now that sand boxes are gone. Supports six bags. It consists of a scalloped aluminum casting set screwed to a galvanized pipe and it wears for years.

Price \$4.95



There is really no need to look elsewhere as Lewis Tee Equipment is standard the world over. Economical—yes—not only is the initial cost low, but the upkeep is negligible and Lewis Tee Equipment lasts for years. See your golf equipment dealer NOW—and specify "Lewis."

Lewis Tee Ensemble

Illustrated at right—Lewis Washer, Tee Stake, Waste Container, Tee Data Plate, Towel and Towel Ring. Each item may be purchased separately.

| | |
|-------------------------------|---------|
| Tee Ensemble complete—lots of | |
| 1 to 10..... | \$10.50 |
| Tee Ensemble complete—lots of | |
| 11 or more..... | 10.00 |
| Washers—1 to 10..... | 6.00 |
| " 11 to 20..... | 5.50 |
| Tee Stake..... | 1.25 |
| Towel..... | .15 |
| Towel Ring..... | .10 |



G. B. LEWIS COMPANY

Dept. GD-1033

Watertown, Wis.

Lewis Tee Data Plate •

—on a Lewis Washer or attached to Lewis Tee Stake—provides hole number, yardage, and par.
—It is non-rusting. Leading clubs, daily fee and public courses are specifying Lewis Tee Data Plates at

Price \$1.50 ea.



TABLE I.
SUGGESTED AMOUNTS OF LIMESTONE IN POUNDS PER ACRE, FOR SOIL TEXTURES AND GRASSES INDICATED

| Texture of Soil | Degree Soil Acidity | Pounds Lime Per Acre | |
|---|---------------------|---------------------------|------------------------|
| | | <i>Kentucky Bluegrass</i> | <i>Fescue and Bent</i> |
| Sandy, and Sandy Loams..... | Slight Acidity | 1000 | None |
| | Medium Acidity | 2000 | 1000 |
| | Strong Acidity | 3000 | 2000 |
| Loams, Silt Loams, Clay Loams and Clays.. | Slight Acidity | 2000 | None |
| | Medium Acidity | 3000 | 2000 |
| | Strong Acidity | 4000 | 3000 |

a high grade limestone of reasonable fineness is contemplated.

For all practical purposes, soil deficiencies in plant food are confined to one or more of the plant nutrients, nitrogen, phosphoric acid, and potash.

With the possible exception of poor sands, mucks, and peats, the soil supply of potassium is adequate on fairways. The surface soil contains from 20,000 to 40,000 pounds of actual potash, and the supply of available potash is constantly augmented by the decay of clippings. Its generous use should be avoided because of the danger of stimulating clover.

Phosphorus Need

Some soils are low in available phosphorus. This is more apt to occur in the eastern states than in the middle west. Fortunately, there are fairly trustworthy tests for determining available soil phosphorus, which can be used provided lead arsenate has not been applied to control grubs and worms.

One reason for the fact that marked response from phosphate applications are not obtained, is due to the fact that soluble phosphates are fixed in the soil close to the surface. Then too, the soil supply of available phosphorus is constantly augmented by the decay of clippings. In cases where responses are obtained, the effects resemble those of lime, in that the grass withstands midsummer heat better.

Grasses differ either in their need for phosphoric acid or in their feeding power for this element. Fescues and bent thrive in soil too low in available phosphorus to support bluegrass, and Bermuda in the south appears to require but little phosphoric acid. This means that where phosphates are needed, lower rates suffice for fescue, bent, and Bermuda than are required for Kentucky bluegrass.

Soil texture, supply of available soil phosphorus, and kind of grass should be considered in determining rate at which

phosphates should be used. Sandy soils require less phosphate than heavy soils, and lighter rates are warranted in fescue and bent than for Kentucky bluegrass. These factors are all taken into account in Table II, which may be used as a rough guide in determining amount of phosphate to use. The amounts indicated are for 20% superphosphate, and if other materials are substituted, they should be applied in amounts to supply the approximate amount of phosphoric acid contained in 20% superphosphate.

It is suggested that the heavier rates be used where available soil phosphorus approaches the lower limit, and the lower rates where the available phosphorus approaches the upper limit.

In making the test for available soil phosphorus, samples should be collected to a depth of 3 inches, but supplementary determinations on the surface inch are warranted, especially if phosphates have been used in the past, because most of the applied phosphorus remains in this soil layer.

Annual applications of phosphate are seldom needed. The rates suggested above should suffice for 2 to 4 years, and interim feeding can be confined to nitrogen.

Need for nitrogen can be determined most readily by inspection of the turf. It produces green color, and active growth, besides being the element which encourages the grass to spread, and is responsible for control of clover and weeds. If the turf is not growing vigorously, and where poor color and clover is prevalent, the evidence points to need for nitrogen.

How Much Fertilizer

Until good turf is formed, spring and fall applications of nitrogen are warranted in amounts sufficient to encourage active growth. Where soluble materials are used, not more than 200 lbs. per acre should be applied at one time because of

TABLE II.
SUGGESTED RATES FOR APPLYING 20 PER CENT SUPERPHOSPHATE

| Texture of Soil | Pounds Available Phosphorus Truog Method | Pounds Per Acre 20% Super- phosphate | |
|---|--|---|----------------------------|
| | | <i>Kentucky Bluegrass</i> | <i>Fescue and bent</i> |
| Sands and Sandy Loams..... | 0-25 | 200-300 | 100-200 |
| | 25-50 | 100-200 | 0-100 |
| | 50-75 | 0-100 | None |
| | 75 + | None | None |
| Loams, Silt Loams, Clay Loams, and Clays. | 0-25 | 300-400 | 200-300 |
| | 25-50 | 200-300 | 100-200 |
| | 50-75 | 100-200 | None |
| | 75 + | None | None |

the danger of burning the turf. Organics can be used at rates of 1,000 to 1,500 lbs. per acre. Where quick results are desired, a combination of 1,000 to 1,200 lbs. organic with 75 to 150 lbs. of sulphate of ammonia or ammonium phosphate can be used. After the effects of the soluble nitrogen disappear, the organic will continue to supply available nitrogen and thus promote a more uniform and continuous growth. The ammonium phosphate is advised only where phosphoric acid is needed in addition to nitrogen.

From a practical aspect, before proceeding with a program, a survey should be made to determine kind of predominating grass, texture of soil, together with degree of acidity, and content of available soil phosphorus. If the soil is too acid, steps should be taken to apply the required lime. The application of fertilizers containing sulphate of ammonia or ammonium phosphate should not immediately follow the use of lime because of the danger of releasing free ammonia. Besides burning the turf, it may result in loss of nitrogen by volatilization of the gaseous ammonia.

When tests show the soil supply of available phosphorus to be low, phosphates should be used at the approximate rates suggested in Table II. This will suffice for 2 to 4 years, and in the interim nitrogen feeding can be relied upon to produce desired results. Spring and fall applications should be made at reasonably heavy rates until turf of desired quality is obtained, then annual applications at reduced rates will suffice to maintain good fairways.

Figuring Your Costs

It is a simple matter to calculate the amounts of fertilizer required and their cost. Where fairways average 50 yds. wide, there is roughly an acre for each 100

yds. length, and when fairways average 60 yds. wide, each 80 yds. of length include an acre. So to figure approximate acreage simply deduct yardage of short holes, and length in front of each tee to be omitted, from the total course yardage; divide by 100 or 80 depending upon average width of fairways. Then knowing the kind of fertilizer to use and rates of application, it is a simple matter to arrive at the amount needed and the cost.

With a good spreader four men can complete fertilizer applications in from two to four days. Two of these are actually engaged in making the applications, and the other two in hauling the material from the barn onto the fairways.

Because fertilizers do not move laterally in the soil, uniform application is important. Careless methods leave tell-tale marks of disappointing turf in unfertilized strips or skipped areas, or may result in injury on localized areas where fertilizer was applied too heavy.

The two wheeled type fertilizer and lime spreader is best. A machine which will cover a strip 8 to 9 ft. wide, with a hopper capacity of 500 lbs. should be selected. Outlet spouts should be spaced close together, or fertilizer will fall in ribbon-like strips. This can be avoided by attaching grain seeder chains to the outside edge of the spreader board, directly below each outlet spout. Another effective method is to remove the spreader board and substitute a steel mat. It should be the same width as the hopper, and sufficiently long to drag on the ground for several feet behind the spreader. Both methods tend to overcome burning when soluble fertilizers are used, for they prevent fertilizer from adhering to the blades of grass.

Operators should be cautioned to overlap on each round, or unfertilized strips

several feet in width will result. Likewise the outlet spouts should be closed promptly by a man riding the hopper, whenever the machine is stopped so fertilizer will not continue to flow thru the spouts. Burned spots will result from the localized fertilizer dropped on these areas. Care should be exercised in filling the hopper for spilled fertilizer may produce an ugly and permanent burn. When soluble fertilizers are used, applications should not be made when the grass is wet or the ground very damp. Burns are sure to follow. It is also unwise to apply these materials during the hot spells of weather.

Factory calibration of fertilizer distributors is only approximately correct, and rates will vary with different materials. As a consequence, machines should be checked by applying a given amount on a definite area.

BIG PROFITS FOR 1934

Popular amusement tables, finest in America, coin operated, 30x60 inches, stands 42 inches high. Ideal for locker rooms, first tee, pro shop, grill or lounge. Average income \$90.00 per month if Club property. (Tables may be leased.) Full particulars.

PACIFIC AMUSEMENT MFG. CO.

1525 W. 7th St.

Los Angeles, California

Domestic Peat HUMUS

Pure organic material, ideal for soil improvement purposes. Complies with U. S. Govt. Specifications—available in finely fibrous or coarse form. Tell us your requirements. Shipment by bag, truck or carlot units.

HYPER-HUMUS CO. of Newton, N. J.
Main Office, Morris Bldg., Philadelphia, Pa.

TWO COMPLETE SYSTEMS OF

GREENS FORMS

Westchester System for Weekly Payroll
Murray System for Semi-Monthly Payroll

Eliminate Guesswork on Maintenance Costs

They follow a simple, logical process and require an average of 20 minutes' clerical work daily. Only by knowing your costs can you budget accurately.

Samples gladly furnished your club.

JOHN H. VESTAL COMPANY

Specializing in Golf Printing

703 South La Salle Street

CHICAGO

NEW STUFF

Manufacturers to Spur
1934 Sales With
Improvements

THE WORD "new" has proved itself the jimmy to pry open purses of golfers during the last two years. "Cut price" has been a flop as a sales-maker.

With surplus stocks cleared out and lower end-of-season inventories than in the last 10 years of golf history, leading manufacturers are making the most of their opportunity to work this "new" selling point to the limit in 1934. The pro who doesn't build up his sales volume and standing by being the first to show the approved new stuff to his members is on his way out.

Here are some tips on 1934 lines, although considerable new development is being held under cover by manufacturers.

On balls, the 75c price will be back for top-grade American leaders. There probably will be three \$1 imported balls on the American market. Exchange has a lot to do with it. One of the leading U. S. ball makers has a new feature of much interest preparing for the 1934 market. Worthington plans to follow up the introduction of its Tommy Armour 50c ball to the pro market with a 75c ball, sales of which will be confined to pros.

Restriction of top lines of clubs to pros, plus in some cases a limited number of price-maintaining stores, will be noted in the policies of most of the leading manufacturers. Other outlets will howl to beat hell. Pros who don't press this exclusive point will be sappy.

Spalding announces the top grades of both Bob Jones clubs with True-Temper semi-whippy shafts for 1934. Fellows who have tried them out babble with glee about selling and performance points.



PHOENIX
RED TIP
TRACTOR
SPUDS

Extra Long Service

Made of a special analysis steel, hardened by the latest scientific heat treating methods. Sizes from 3/8 in. to 1/2 in. Also Mower Spuds. Inquiries invited.

PHOENIX MANUFACTURING COMPANY
Joliet, Ill. Cafasaquua, Pa.

Let Us Bid on Your Tower Tanks.

Spalding has a couple of other new features in the bag, keeping them secret until dawn of the 1934 season.

Wilson-Western is putting some more stuff on the Hol-Hi thin cover ball, planning to go places with it after the swell start the ball got this year. On the Ogg clubs, there will be exclusive pro lines. Wilson is doing a lot of test work on shafts. One shaft stunt they have been sweating with looks like it has possibilities in a new field, but that's another one of the items on which our pans must be locked tight. Possibly before the start of the 1934 season Wilson may be able to announce a sensational deal concerning a vast and lively section of the market.

Hagen has had some of its 1934 irons out for test. The Hagen line for 1934 has a Two-Taper shaft that gives more feel and zing to the shots. Blades of the irons have slight but important playing alterations. A new item in the line is the "Lucky Len" putter; something that L. A. Young himself doped out and collected on privately in his play before it came into the line. Hagen and Young, since Walter's return from Europe, have been working on a couple of stunts that they intend to pull out of the hat for the 1934 campaign.

Horton Mfg. Co. has ready for the big push the Pyramid Bristol irons. The weight of the club is centered behind the point of impact. These clubs also have a flanged sole. The basis of design has been given firm approval by the pros who have used these new Pyramids. Bristol also has a Whip-it shaft for its 1934 woods and irons. This shaft, a happy medium between the old shafts and the spaghetti shafts, is easy to control. Bristol has a "Cadet" line for kids, retailing at \$3.50 for woods and \$3.25 for irons. Expert pro design has been put into these clubs and they have good construction and material for the price. Bristol hopes that these clubs will open up the kid market which is over 5,000,000 sales units. The stab at this big business deserves a husky effort from the pros to make it land. New putters and approach clubs also are in the Bristol 1934 line.

Burke Golf Co. opens its 1934 show with 2 conventional types, 1 flanged type and the Smithirons, with shafts ranging from stiff to medium whippy. There are new refinements in design, materials and finish in all woods and irons of the Burke line. Pros who have examined the next year's Burke line pronounce the clubs as being gems for "feel." The Burke bag line has been restyled. Prices will be higher on all bags of any line in 1934, but Burke has made a point of being able to match dime for dime in values. Burke was gratified at the reception given their balls in 1933 and plans to

push this part of the line next year.

Vulcan has bought the Beckley-Ralston Stroke-Saver line and plans to give these clubs more pro push than they ever had before. Some pros and other good players used these clubs but the general sale was killed because the sales fever was put on at department stores, giving the public the idea the line was freak stuff instead of having pro approval on its design. Vulcan's operations ought to correct this and put new life into these sales possibilities. Vulcan's own designed line is easily the best they ever have had for heads, balance, finish and all-around construction. The line's top numbers are the Ridgemoat and Flexwood woods and the Whippy and Flex-Flanger irons. Pro models are featured.

Crawford, McGregor and Canby are doing something unusual in the 1934 pro line by dropping irons. Some new pro model woods will appear. Details of the McGregor line for 1934 will be released later.

Kroydon has made no general announcement of its 1934 line but there are interesting reports about a flanged sole iron with a fatter toe than is on the conventional iron head.

Penfold's LL for 1934 will have greater compression, the LT will be practically the LL but with a tougher cover. The Penfold-Stockbridge will be hiked a dime in price as will the Penfold LHS. Penfold has slightly changed the construction of this ball to add distance. The Penfold-Fifty will be the same in price and construction.

There's plenty doing in revised steel shaft construction for 1934 lines. American Fork and Hoe is making special types of new shafts for Young, Spalding, Wilson-Western, Burke, Vulcan and McGregor. Some of the manufacturers are having their special and exclusive ideas built into the shafts and in the opinion of those closely in touch with the situation these differences will center more attention on shafts than there has been in years past. The True-Temper Limbershaft is due for a lively play by several manufacturers. Other manufacturers have smaller diameter grips of various design, with the idea of throwing the "feel" up under the hands. Graduations in points of whip will stir up debate about the 1934 lines. Jansky special shafts for woods and the English Master Type irons' shafts which have been well received in England will be used on Vulcan and Hillerich & Bradsby clubs.

With the many different designs of steel shafts True-Temper are making for 1934 lines, it's sure that the old gag about a steel shaft not showing distinctive differences is out, and knowing all about steel shafts will be one of the pro jobs of home study this winter if he wants to show the public he knows what it's all about in 1934.

PRO profits protected — never sold through stores! Kenneth Smith clubs are individually hand-made to your order. Fit your members perfectly at prices of factory clubs. Write for catalogue and Pro Fitting Chart FREE.

Kenneth Smith
 ← **GOLF CLUBS** →
Hand Made to Order

3045 Gillham Road Kansas City, Mo.

Down in Old Kentucky

... noted for its Beautiful Women, Fast Horses and Fine Whiskey.

— also —

B-B PRO-FINISHED HICKORY SHAFTS

which you Pros know to be the finest in hickory. The return of which in 1934 will be as popular as Whiskey.

BUSH BROTHERS & CO.
LOUISVILLE - - - KENTUCKY

The Butchart-Nicholls Company

Golf Craftsmen

Golf Clubs, Bags and Balls

Main Office and Factory

NEWARK, OHIO, U. S. A.

DR. ALISTER MACKENZIE

**GOLF COURSE
ARCHITECT**

**PASATIEMPO
SANTA CRUZ
CALIFORNIA**

North British Rubber will put chief pressure behind its new "SS" ball next season. The ball will sell for \$1.00 and is said to be very durable in spite of thin cover and high tension windings.

Collector Wants Back Numbers of Magazines for Library

ONE OF THE most complete golf libraries in the world is owned by R. Otto Probst whose address is 334 N. Hill St., South Bend, Indiana. Mr. Probst has almost a thousand different books devoted to golf in all its phases and is also collecting complete files of golf magazines from all over the world.

Any readers of GOLFDOM who own back numbers of golf periodicals, particularly issues more than five years old, are invited to get in touch with Mr. Probst who will willingly pay a fair price for desirable items.

GEORGE A. DAVIS, INC., IS TORO CHICAGO DISTRIBUTOR

Chicago, Ill.—George A. Davis, Inc., 5440 Northwest Highway, has been appointed Chicago District distributor for the Toro Mfg. Co. of Minneapolis, makers of fairway and greens mowers, tractors and other course maintenance machinery.

Complete stocks of Toro equipment and parts have been put in by Davis. Servicing of the equipment will be in charge of Marius Brazeau.

HORTON-BRISTOL SALES CORP. PUSHING THREE LINES

Bristol, Conn.—Horton-Bristol Sales Corp. now is handling the sales of Bristol steel shafted golf clubs, Tufhorse bags and Colonel balls. The basis of the new organization is most of the personnel formerly with the St. Mungo Sales Corp.

The country is to be covered from six division offices in strategic location and by men working the outlying districts.

GOLF'S GALLERY OF CHAMPS

Exclusive photographs of U. S. professional and amateur champions, handsomely finished and ready for framing so they'll be interesting features of the club lounge, grille room, locker-room or pro shop.

I have the largest collection of photographic portraits of golf's notables, including all but two of the American Open and amateur champions.

All prints are finished in royal sepia.

5x8.....\$1 11x14.....\$ 5
8x10..... 3 16x20..... 10

Special prices on complete sets of the champions or on other quantity orders.

GEORGE PIETZCKER
5464 Clemens Ave. ST. LOUIS, MO.