

undergo extreme damage and loss of turf. Weeds increase in great numbers and the result is constant reseeding. Therefore when the cost and value of an irrigation system are weighed together usually the former will seem insignificant.

The cost of irrigation is trivial when compared with the total expenses of the average established club but a great many clubs today, while admitting the desirability of fairway irrigation, refuse to consider it seriously because of the cost. Such a viewpoint usually comes from unfamiliarity with the workings of irrigation and its problems or from misinformation.

The questions that should guide every golf club considering irrigation are: "What is the source of water and the amount available; i. e., river, lake, well or city mains; location of electrical transmission lines, reservoirs or existent pumps; and city water rates."

Preliminary Survey Vital.

No one can arrive at any comprehensive understanding or attempt to estimate the cost of a fairway system without the above information. In watering turf the object is to imitate nature as closely as possible. Temperature, humidity and length of time since the last rainfall are all influencing factors.

The amount of water necessary to irrigate a golf course depends upon both general and local conditions. Naturally the requirements of different courses vary greatly. These conditions should be studied thoroughly by a competent irrigation engineer and not a sprinkler salesman before any plans are considered by the interested club.

The engineer should report on the entire water project and state specifically what to do and what not to do. This report should also contain the local data necessary to determine the efficiency of the system planned. The climate of the locality is important. Accurate information should be obtained on the maximum and minimum temperatures, maximum and minimum amounts of rainfall and on the mean amount of rainfall for each month for several previous years. Special attention should be paid to the average period of time between rain during the summer and average precipitation during such storms. Local peculiarities such as the existence of wet and dry seasons should be recorded for complete specifications.

The topography of a course is of paramount importance. In considering irriga-

tion, the slopes and valleys of the land may be such that rain and irrigation water flow off without percolating into the soil. In such cases a minimum of benefit can be expected from rains and a similar condition will prevail with the irrigation system. This brings us to the problem of the soil. It is vital that the club know what type of soil it has, whether sand, slit loam, clay, shale rock or adobe, the latter being very common in arid sections of the country. All require study when considering fairway irrigation to determine water holding capacity, and the maximum efficiency expected from the application of water.

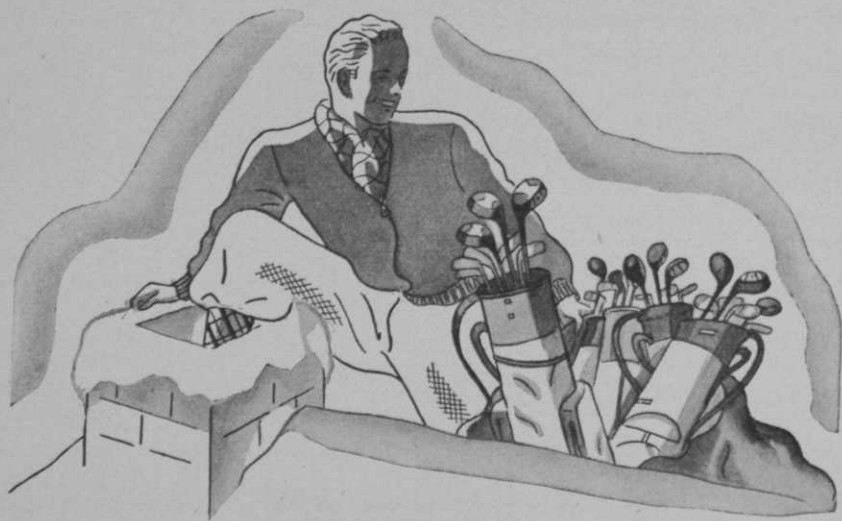
Have Expert Make Survey.

All this preliminary study requires a man of long experience. I cannot lay too much stress on the economy of getting the best advice on fairway irrigation engineering and yet this economy is one which is most frequently disregarded when the club is considering the installation of a water system. Like all other golf course work of importance invariably some member of the club is an engineer and is delegated to solve the watering problem and what is best for the club. It is a disturbing, weighty responsibility. This involves the risk of the job becoming just another experiment and frequently the work has to be done over again. The excuse most clubs make for not getting the best advice is that they cannot afford it. The poorer the club the more important it is that it should not waste its small funds and time on impracticable information. Secure the best irrigation engineers possible after a complete survey of their work in that field and hold them responsible for the results. This is an irrigation engineer's problem and not one for a greenkeeper or member.

Appoint an irrigation committee to handle this problem and let them decide on the engineers they want and discuss the situation at length with them.

The most important of all the foregoing suggestions is the ultimate economy in getting the best advice in the first instance and making it as reasonably certain as possible that work is of a permanent character and has not to be done over again.

It requires no effort of the imagination to picture the future of fairway irrigation. It will no doubt be a fixed and definite plan in the future construction of golf clubs and an accepted fact by the architect and designers of golf courses. These



Big Christmas Benefit

with you playing Santa Claus

GET out the whiskers . . . slip into the red, fur-trimmed suit . . . and start to work on the big Christmas Benefit. Benefit — with *you* on the receiving end.

Here's what we're getting at: Most of your members will be looking for help on gifts to give to golfing friends. All right — you play Santa Claus and *give* them that help!

Write, phone or call on them to suggest appropriate gifts. Help make selections. Have the gifts all wrapped, sealed, and delivered on Christmas morning.

And when it comes to appropriate gifts for golfers, the new Spalding Robt. T. Jones, Jr.,* Clubs stand right at the head of the list. If the wife of any member is looking for the perfect gift for her husband . . . or if a member wants a gift for a particular friend . . . suggest a full set of these magnificent clubs. There's a juicy Christmas plum in them for you.

Then, there are Spalding Caddy Bags. And, of course, the Top-Flite Ball and the Kro-Flite Ball in dozen and half-dozen Christmas boxes.

Yes, Christmas offers you a great opportunity—and your last big one till Spring. So get to it. If there's any way we can help you (we can supply you with reminder cards to send your members) just let us know. Write to 105 Nassau Street, New York City, 211 South State Street, Chicago, or 156 Geary Street, San Francisco.

** Robert T. Jones, Jr., a Spalding director, collaborated with Spalding experts in working out his ideas of perfect clubs.*

© 1932, A. G. S. & BROS.

A. G. Spalding & Bros.

installations will be highly mechanical in their design and efficient in the application of water through various types of sprinkler distribution requiring little or no labor to operate.

In conclusion, let me leave you with one thought that if you doubt the value of irrigation, experiment with one fairway. If possible lay temporary water lines on the surface of the ground. Fertilize and water and observe the results.

At the present time irrigation is in very rapid process of development. Experience coupled with scientific study has provided some interesting facts in the effort to determine the most practical installation. There is no longer a mere smattering of detached experiences but fairway irrigation rests upon a substantial scientific foundation of well established facts.

Cutting, USGA President-Elect, Dies at Chicago

ROBERT M. CUTTING, nominee for 1933 presidency of the USGA, which is equivalent to election, died suddenly of heart disease November 20, at Hubbard Woods, Chicago suburb.

He had been secretary, vice-president and president of the Western Golf association and in 1929 first appeared as a committeeman on the USGA official roster. In 1930, 1931 and 1932 he was vice-president of the ruling body. Cutting's home club was Hinsdale.

Cutting was 50 years old at the time of his death. His father, Judge Charles S. Cutting, is one of the prominent figures in midwestern golf. The Judge and Bob were a great team and frequently appeared at the father and son events in the Chicago district.

Bob, according to the unanimous verdict of the thousands of golfers who knew him, was one of the grandest fellows whoever drew a breath. He was an authority on the rules and on several occasions during championships settled heated disputes with a precision, detachment and justice that endeared him even to the fellows against whom he was compelled to rule.

During his student days at the University of Michigan Cutting was a star on the varsity baseball team.

Bob Cutting's death on the eve of his elevation to the highest elective honor in American golf takes one of the finest characters in the game at a particularly untimely moment as the 1933 National Open

and Women's National championships both are to be held in Cutting's territory—the Open at North Shore and the Women's at Exmoor.

The PGA convention, when news of Cutting's death was announced, passed a resolution of condolence. Convention proceedings paused while a silent tribute was paid to the memory of one fine gentleman and sportsman.

Big Pro, Amateur Entry Expected for Agua Caliente Open

QUALIFYING round for the fourth annual Agua Caliente open tournament—January 11 to 14, which carries a \$7,500 prize value, will be played at the Agua Caliente G and C C, December 20 and 21. The dates sandwich in between the Pasadena medal play tournaments, December 16 to 18, and the Santa Monica pro-amateur affair, December 30 to January 1.

Over seventy pros will be exempt from qualifying for the Agua Caliente event and also, for the first time in the history of the tournament, all amateurs with handicaps under 12 will be allowed to play without qualifying. Exemptions are: The 32 qualifiers in the PGA championship, the 30 low scores in the National open, prize winners in all previous Agua Caliente opens, and all foreigners. By "foreigners" is meant players who do not reside in the United States.

GLYNN IS WINTER PROMOTER FOR HAGEN LINE

Detroit, Mich.—Jerry Glynn, pro at Olympia Fields C. C., world's largest private golf club, starts out December 1st for winter work of a sales service character for the L. A. Young Golf Co., makers of the Walter Hagen products.

Jerry will begin the jaunt at St. Louis, then swing through Missouri, Kansas, Oklahoma, Texas, the Gulf coast, Florida and wind up at Pinehurst during the North and South Open.

Glynn is an outstanding pro merchandiser with a successful background at small and large clubs. His Young Co. job will be to sit in with the fellows he visits and go over the local sales problems in the light of the combined experiences of the host and himself.

The Young organization figures that one with such a close-up timely slant on pro problems coming out from their headquarters will be of considerable assistance to the fellows who want to plan right now for a prosperous New Year.



MEMO

Don't forget your date
on Dec. 10th with
Mrs. McWhinnie

NOBLE woman, she's decided to give that good old duffer husband of hers a grand new set of Wilson Matched Clubs for Christmas. (Or maybe it's a Sarazen Sand Iron or Trainer Club, or a season's supply of the one and only Hol-Hi Ball.)

Does she need your help? She most certainly does. Nobody but you can tell her just exactly which set is precisely right for the old boy. And when you tell her, you

yourself, in person, get the order.

All the Mrs. McWhinnies in your territory are in the mood, now that they've read the Wilson Christmas ads in November and December golfing magazines. So don't forget your date. It's the payoff in what used to be a vurra, vurra dull month. And—if you act fast, there's still time to get the help of special Christmas mailings Wilson sends out for you PDQ.

Wilson

... NO ...



Santa Claus won't put 1933 profit in our stocking.

A lot of business men seem to take the attitude that some mythical Santa Claus is going to fill their Christmas stocking with a nice 1933 profit. It's peculiar how many different types of business men have adopted this idea.

Manufacturers, merchants, professional men, salesmen—they all seem to think that some act of magic will suddenly end this depression—and business will be dropped into their laps like bread from the sky. But you know and we likewise know that nothing of this kind is going to happen.

The golf business, of which you and we are definite parts alike, is no different than any other industry. The wolf is going to remain on anybody's front door step until that person goes out with a shotgun and makes it very unhealthy for the wolf.

At the end of this month we write "finish" to 1932 and at the same time start in another new year. Let's take this golf business

by the horns and really make it pay us all a handsome profit in 1933.

We've taken the first step in designing the 1933 line of Hagen Products. Instead of visualizing the dollars rolling in without effort, we looked facts squarely in the face. We analyzed the market which is your market and the demands of your customers. Then we built the finest Hagen line with the most complete price range that it has ever been our privilege to offer to professionals. Frankly, we think the 1933 line has everything—excellent design, quality, price, prestige and the Hagen sales policy.

Now let's take that second step. Let's decide right now that we are all going to make money out of the golf business in 1933. We'll do our part and you do yours. Go after your rightful share of the 1933 business and profit. Concentrate your sales effort on the best line—Hagen Products.

The L · A · YOUNG GOLF CO.
DETROIT, MICHIGAN
HAGEN PRODUCTS

Program for NAGA Meeting Keyed to Thrift Plus Science

PLANS FOR the annual convention and exhibition of the National Association of Greenkeepers of America, which will be held at Hotel Sherman, Chicago, January 31 to Feb. 3 inclusive, are making full use of depression lessons.

The program announced by President John MacGregor is considered by greenkeepers and club officials the timeliest, best balanced schedule of practical addresses ever presented at one of the greenkeepers' affairs. Assignments of subjects have been made early, allowing plenty of time for research in the preparation of addresses.

"Scientific Thrift" is the keynote of the convention program. Course executives have learned a lot during the past two years but none of their recently acquired knowledge has been of more vital interest to the clubs and to golfers than how to maintain the course for less money without sacrificing the high standard of condition which undoubtedly has contributed greatly to growth of the game. To just what extent the enforced thrift of the last two years' course maintenance has been real thrift is something that the practical greenkeepers and the research men on the

program are attempting to determine at the Chicago conference.

There is an admirable spirit pervading the preliminaries of the convention. The men are determined to make this one of the best attended, most definitely helpful conventions in greenkeeping history instead of wilting because times are tough. Greenkeepers' salaries have been cut and they never were at the point where the boys were keeping yachts or love nests. Most of them considered themselves lucky to send the kids decently through school as the result of labors starting before sun-up and ending long after dark. Despite that, they are so hungry for any tip that will enable them to keep their courses outshining those of their neighbors, they turn out in full force at any of these educational sessions. The short courses in greenkeeping testify, by attendance and interest, to the enthusiasm and ambition the greenkeepers have in their work.

Any club official considering the following program for the conference will see that it's greatly to the advantage of the club to have its greenkeeper attend the Chicago annual meeting. In a number of instances the clubs pay the convention expenses of their greenkeepers as a very logical part of the budget. The usual convention transportation arrangement will prevail; that of asking for a convention certificate when buying a railroad ticket and having this certificate validated at the convention for half-fare on the return trip. Room rates at the Sherman are from \$3 up. The greenkeepers are not too proud to eat at the one-arm white-tiled beaneries, so the total sum invested in the greenkeepers' convention attendance never runs anyway near the amount usually involved in attendance at a business convention.

The conference program:

WEDNESDAY, FEB. 1

Dr. C. M. Harrison, U. of Chicago, *Effect of Cutting on Root Growth.*

Grange Alves, Acacia C. C., *Rehabilitating Old Courses.*

Prof. H. B. Musser, U. of Pennsylvania, *Hunting for the Perfect Grass.*

NOTE TO CLUB OFFICIALS

In these days of required maintenance economies, your club can make no better move toward savings than to arrange to send your greenkeeper to attend the NAGA convention at Chicago next January. He will become posted on the latest developments in scientific turf culture; will have a chance to discuss details of his job with authorities; will return to your club better able to cope with the maintenance problems of the coming season.

The cost of sending your greenkeeper will be repaid many times over in economies he will learn about and put in practice on his return.

IT'S IN THE BAG!



Your Profits and Reputation as a pro who "knows his stuff" are "in the bag"—if that bag contains Kroydon Hy-Power Woods and Irons!

Players who discover how they can cut down their scores with Kroydon's become mighty enthusiastic followers of the pro who recommends them—and mighty loyal customers of the pro who sells them.

The secret is in the reverse tapering principle of construction used in Kroydon's Hy-Power Steel Shaft which gives greater distance and accuracy whether in the hands of the expert or the novice.

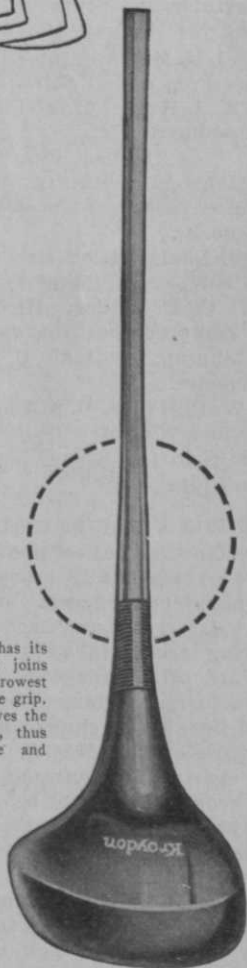
Kroydon Clubs are PROFITABLE to sell, too, because Kroydon protects the pro against price cutting and unfair competition. See your local Kroydon representative or write The Kroydon Company, Maplewood, N. J.

PROFESSIONAL BY

Kroydon

The Hy-Power Steel Shaft has its greatest diameter where it joins the club head, with its narrowest diameter well up toward the grip. This principle of design moves the whip up nearer the hands, thus permitting greater distance and accuracy.

CLUBS



Prof. V. Stoutmeyer, U. of Iowa, *Bettering Maintenance at Small Town Golf Courses.*

Harold Stodola, Keller Golf Course, *Municipal Course Maintenance.*

O. J. Noer, Milwaukee, Wis, *Maintenance Practices of 1932.*

THURSDAY, FEB. 2

Ganson Depew, Buffalo, N. Y., *Greenkeeper's Vital Importance to Golf.*

R. E. Farmer, Brynwood C. C., *Budgeting from Greenkeeper's Viewpoint.*

C. W. Johnson, Sunset Ridge C. C., *Budgeting from Club Members' Viewpoint.*

Ed. B. Dearie, Jr., Ridgemoor C. C., *Possible Effect of Extension of Fairway Watering on Present Maintenance Practices, From Greenkeeper's Viewpoint*; Paul E. Green, Chicago, Ill., *From Player's Viewpoint*; E. H. Worthington, Stroudsburg, Pa., *From Mower Mfgs.' Viewpoint.*

Prof. J. G. Moore, U. of Wisconsin, *Greenkeeper's Program of Self Education.*

Dr. E. J. Kraus, U. of Chicago (subject not announced).

FRIDAY, FEB. 3

Dr. John Monteith, Jr., Washington, D. C., *Recent Technical Developments in Turf Maintenance.*

D. W. Danley, Glen Oak C. C., *Greenkeeper's Work in Broad Perspective.*

Prof. C. E. Miller, Mich. State Col., *Soils, Their Composition and Fertility.*

R. Johnson, Medinah C. C., *Machinery Maintenance.*

Dr. W. P. Hayes, U. of Ill., *Insects, Their Habits and Control.*

Alex Pirie, Old Elm C. C., *Departmental Co-operation.*

Exhibits a Feature

Reluctance to buy equipment during the last two years finally brought about such high maintenance costs on course machinery last year, and such expensive, aggravating delays in work, that the prospects are bright for 1933 being a lively year in course equipment buying.

Fred Burkhardt, chairman of the exhibit committee of the NAGA, has sent out space charts and contracts calling for a sharp reduction in rate below that of previous years. President MacGregor, Burkhardt and their associated executives have budgeted the convention on a basis to just break even. In this respect they have shown results of the practice obtained in thrifty budgeting at golf courses during 1931 and 1932.

The lower rates for space, prospects of

a very lively market and the official ban on "entertaining" has attracted a number of the leading equipment and supply houses. Present indications point to a comprehensive showing of items used in course maintenance.

Details of exhibit space, transportation, etc., may be obtained from Fred Burkhardt, sec.-treas., National Association Greenkeepers of America, Box A, Rocky River, O.

FERGUSON AND MURRAY JOIN WORTHINGTON MOWER

Chicago, Ill.—L. A. Ferguson and Leo Murray have joined the midwestern sales force of the Worthington Mower Co., which is under the management of J. B. Hurlock at 517 S. Laflin St.

Ferguson, who will work in Indiana, Michigan and Wisconsin, is one of the best known maintenance equipment salesmen, having been connected with the business for 16 years. He was sales manager for Ideal Power Lawn Mower Co. for 10 years and manager of its branch at Chicago for the last 4½ years.

Murray, who came into the equipment business from the progressive ranks, was for 5 years a member of the J. Oliver Johnson, Inc., sales force prior to making his new connection with Worthington.

These appointments, says Hurlock, are in keeping with the Worthington confidence that the maintenance equipment business is decidedly on the upgrade. Golf club buying, which has been light for two years, now is showing substantial evidence of a pick-up made necessary by replacement of outworn devices.



L. A. Ferguson

Pros Welcomed by Frank Kennett to Melbourne (Fla.)

FRANK KENNETT, who in summer is pro at Kalamazoo (Mich.) C. C., is located in winter at Melbourne, Fla. Frank advises GOLFDOM that pros in good standing who are sojourning in the south are cordially invited to avail themselves of pro guest privileges at the Melbourne course.