ment station. Connors' address was illustrated by slides. It is presented in somewhat shortened form in this issue of **GOLFDOM** and it is recommended that greenkeepers and chairmen check up the landscaping of their own properties with the Connors paper.

J. K. Hanes, superintendent of Yeaman's Hall club, Charleston, S.C., presented a paper on “Maintaining Turf in the South” which was illustrated by slides of the beautiful and superbly groomed Yeaman's Hall grounds. Hanes gave expert treatment to maintenance work in a section of the country that has been only casually treated in national programs. His paper appears on another page of this issue. An address by Dr. N. R. Smith of the government's Bureau of Plant Industry, “Soil Organisms in Relation to Golf Turf,” gave to the greenkeepers a close practical picture of the growing background of growing grass. Micro-organism activity is a complex department of turf culture but one to which greenkeepers are devoting considerable study. The Smith paper will appear in an early issue of **GOLFDOM**.

**Talks on Road Surfaces**

Another government expert, Dr. C. N. Connor, of the Department of Public Roads, gave greenkeepers a hand with his talk on “Road Surfaces for Club Grounds.” Unless grading and drainage are properly done in road building the best of surfacing may fail as a result of freezing, thawing and traffic, Smith said. He gave greenkeepers construction details, among them the advice to see that stump holes are substantially filled when making roads. Various types of road surfaces are approved by the Bureau, according to service requirements and availability of materials, but there are comparatively sharp limitations to the recommendations of road width. For club ground traffic where speed is relatively low, Dr. Connor endorsed a minimum width of 22 feet. Sharp curves need widening and super-elevation, even for low speed roads on club grounds.

Bituminous road types on flexible bases are “probably most economical and satisfactory for roads in club grounds.” He told of methods of preventing dust on gravel roads by sprinkling with calcium chloride, common salt, a lignin binder, or thin asphaltic oils or tars. Connor went into various types of road construction almost in working detail and his paper in full should be obtained by greenkeepers or chairmen having road-building to do on the club grounds. Its value to the operating men at any club having a road-building problem will greatly exceed the cost of sending the club's greenkeeper to the convention and in addition the cost of several years' association dues.

**Jap Beetle Now Controllable on Courses**

Prof. C. H. Hadley, Bureau of Entomology, Department of Agriculture, reviewed the work of controlling Japanese and Asiatic beetles in turf and assured greenkeepers that routine proper treatment with lead arsenate had the peril under control. He advised his hearers to write the Department of Agriculture bulletin office at Washington for USDA circular 403 for procedure of treatment. You can't expect lead arsenate to stop beetle damage right away because it's a slow-acting poison, said Hadley, so if you discover that failure to protect with lead arsenate leaves you with your grass destroyed and the beetles on the rampage, you may as well forget the grass (which won't come through anyway) and treat with a quick-acting poison such as carbon disulphide emulsion. Hadley advised in areas where infestation was possible, light

*John Quaill, Highland CC, Pittsburgh, is the new president of the NAGA.*

*(Please turn to page 77)*
The high maintenance standards of Yeamans Hall is evidenced by the meticulous grooming of the entrance gate and its surroundings.

SOUTHERN LUXURY

J. K. Hanes, superintendent of Yeamans Hall Club, tells how he meets high play-standards his members demand

Yeamans Hall Club is located ten miles north of the city of Charleston, S. C. The 900 acres of property, including the ruins of an old mansion, were purchased in 1924 by a group of wealthy northerners and has been developed into an exclusive winter resort and golf club. The property was covered with a growth of heavy timber which had not been disturbed since colonial days.

Development of roads, homesites, parks, grounds and an area set aside for an eighteen-hole golf course has been carried out under the direction of Olmsted Brothers, landscape architects of Brookline, Mass. The soil for the most part consists of a very deep sandy loam and the surface is undulating, affording perfect drainage, so that no serious damage results from excessive rainfall.

Up to date the corporation has expended about $1,000,000 in the general development. Winter homes have been erected by thirty-three of the members of the club at a cost of another million. The 18-hole course was designed and constructed in 1924-25 in accordance with the plans and under the personal direction of Seth J. Raynor.

The course is open for play from mid-November until mid-April. In this locality no grass has been developed which will provide a satisfactory turf throughout the year. The temperature ranges from an extreme of 95 degrees to 100 degrees in the summer months and falls to as low as 18 degrees during cold spells. Northern grasses such as the bents, fescues, and Kentucky bluegrass do well during the winter months but are killed by the hot sun during the summer. Bermuda grass, almost universally used as a turf through the Southern states, turns brown during the winter months in this locality and does not stand up well under play. This grass is not killed, however, as its deep rooted rhizomes and stolons came back in the spring and afford a wonderful turf on our fairways during all of the summer months. The application of domestic rye grass on all of the fairways affords an attractive green color, protects the underlying Bermuda and improves the "lie."

Course Played
Only 5 Months of Year

Yeamans Hall Club is primarily a golf club. It is, therefore, of paramount importance that the golf course be kept in perfect condition during the five winter months. In order that a clear conception may be had of the problems by which we are confronted, it will, perhaps, be well to give a brief outline of the work which is done throughout the year in the maintenance of the course.

All fairways are mowed once or twice a week during the summer months, even though no one plays the course for the seven months between the middle of April and the middle of November. They are mowed once a week or every other week during the winter months. The mowing
Although the course is played over but five months in the year, greens are mowed daily.

is done with a five unit gang fairway mower drawn by a special fairway tractor.

About the end of April when the Bermuda begins to come back 50 lbs. per acre of sulphate of ammonia is applied on all the fairways. This application is repeated during the third week in May and again in the first week in July. The sulphate of ammonia used is in granular form so that it is readily applied with our wheelbarrow seeders.

Those who know or have heard of Bermuda grass as a stubborn farm weed think of it as a tough and aggressive grass quite capable of holding its own against any weeds. However, under our conditions it has as hard a time struggling against crab grass as do the less aggressive northern turf grasses in regions where crab grass thrives.

**Crab Grass Removed by Hand Weeding**

During the summer months a large force of negro women, numbering from 30 to 60, is employed in weeding crab grass on the course. Crab grass is an annual and is reproduced only from seed so that it becomes necessary each year to weed the course as the seeds germinate. Interesting experiments are being conducted in the eradication of crab grass by the use of sodium arsenite, lead arsenate and sulphate of ammonia. The last chemical, in powdered form and applied at the rate of one ton per acre, has proved quite effective in killing the crab grass and ultimately stimulating the growth of Bermuda. Experiments are also being made in applying sulphate of ammonia in solution at the same rate, using a spraying apparatus. We have found, however, that best results have been obtained by hand weeding. During the coming year we expect to carry these experiments further.

Early in August, when the effect of the last application of sulphate of ammonia dies away, an application on all fairways of 500 lbs. per acre of a complete fertilizer is made and a similar application follows about mid-September. This complete fertilizer yields in analysis: 6% nitrogen, 7% available phosphoric acid and 5% potash. The ammonia content in this fertilizer consists of 60% organic nitrogen and 40% mineral nitrogen.

During the first week in October domestic rye seed is sowed on the turf on all fairways at the rate of 125 lbs. per acre. In sowing this seed we use wheelbarrow seeders. During next season we expect to increase this application of rye seed to 200 lbs. per acre.

For all purposes at the Hall we use annually 16 tons of domestic rye seed. We have obtained this seed through local agents, directly from the growers in Oregon, and it comes to us by steamer through the Canal.

The greens and tees on the course are mowed every morning throughout the year with hand mowers and water is supplied as needed through rotary sprinklers, the watering during the summer being done at night.

**Allow Rye to Die of Thirst**

When the club closes on April 15th, the greens are mowed very close and no water is applied, in order that the rye grass may die out as quickly as possible. As soon as the underlying Bermuda begins to show up well an application of complete fertilizer at the rate of approximately 100 lbs. per green is applied with a hand fertilizer machine. After applying this fertilizer, greens and tees are topdressed with a sandy loam, properly screened, at the rate of 2 to 4 yds. per green. Throughout the year both greens and tees are carefully
hand weeded. In mowing the greens all clippings are caught and removed.

About the middle of October the greens, ranging in size from 7,600 to 11,000 sq. ft., are closely mowed and seeded in domestic rye grass at the rate of 45 lbs. per 1,000 sq. ft. A hand fertilizer distributor is used in sowing this seed. The greens are then topdressed with screened soil in which has been mixed complete fertilizer at the rate of 200 lbs. per average green. It takes approximately 3 to 4 yds. of this topdressing to cover a green. The topdressing is applied by hand labor, using broad wheeled wheelbarrows and scoop shovels. The topdressing is leveled off and distributed with scrapers and wire mats and the greens are then thoroughly watered. As the rye grass germinates the greens are kept mowed and about once a month an application of 30 lbs. of sulphate of ammonia is made on each green and watered into the sod. During the winter months water is applied to the greens through rotary sprinklers during the daytime whenever needed.

In January the greens are again topdressed very lightly with the topdressing prepared as stated above at the rate of about 1 yd. to the green. This last application is made by hand from buckets. The tees receive the same treatment as the greens in respect to mowing, weeding, fertilizing and seeding, except that the application of domestic rye seed in October is at the rate of 25 lbs. per 1,000 sq. ft.

In addition to crab grass referred to before, we have had a great deal of trouble with pennywort, but this weed is readily eradicated by several applications of sodium arsenite.

**Grubs Damage**

**Fairway Turf**

During the past season we suffered from an unprecedented infestation of the large southern green June bug. The grubs of these bugs have infested our fairways and killed most of the first planting of rye grass and seriously damaged the Bermuda. The infestation was not discovered in time to poison the course with arsenate of lead. During the coming season we intend to apply arsenate of lead at the rate of 5 lbs. per 1,000 sq. ft. It will take approximately 5 tons of this chemical to cover our fairways. We are very hopeful that the application of arsenate of lead will also discourage the growth of crab grass. All of the greens and tees have been treated with arsenate of lead heretofore and we have had no trouble on these with grubs.

In order to repair to some extent the damage by the grubs on our fairways, we are now re-seeding the course with rye grass seed. The fairways on the course are in very bad condition this year from the above causes but our greens and tees are as fine as could be desired.

A satisfactory sand for use in the traps is found on the property, lying a foot or two below the surface. This sand is white, rather fine in texture and does not "bond" or pack. The "rough" is kept closely mowed during the summer months, using a horse-drawn mower and a similar mower attached to the fairway tractor.

The course was laid out for the most part through heavily timbered lands and from year to year most of the deciduous trees have been removed and replaced with evergreen trees indigenous in this locality, so that practically all of the visible forest growth is green throughout the winter. Most characteristic of the wooded areas are stately pines and ancient live oaks, draped in Spanish moss. The forest margins along the fairways are kept free from weeds and undesirable undergrowth and all trees in the open spaces are pruned and fertilized where necessary. The property is bounded on three sides by the waters of "Goose Creek," a tributary of the Cooper River, and in many places along the course vistas have been cut giving interesting views across the salt marshes.

Yeamans Hall is a member of the United States Golf Association and we have had the assistance of Dr. John Montith, Jr., in all matters connected with the maintenance of the course. He has been especially helpful in the matter of fertilization and weed eradication. He has found it possible in recent years to make two trips to the Hall, one in the spring and again in the fall, and much of our success in solving our problems has been due to his interest and advice.

**Badminton Booms** — Badminton continues to gain ground as a country club sport. The Camargo club (Cincinnati district) recently has installed two courts in a separate building. The building is a Truson steel structure.

**No greens course at Wisconsin**—James G. Moore, Chairman of the Department of Horticulture, College of Agriculture, University of Wisconsin, announces that there will be no greenkeepers' short course at Wisconsin this year.
This Hose gives "DISTANCE" to your maintenance dollars

Good hose is like a good golf ball. It may cost a bit more to buy—but will pay its slight extra cost many times over in terms of longer and more satisfactory service.

Goodyear Emerald Cord Hose is the best your maintenance dollars can buy. And—in the long run—the cheapest because it will outlast ordinary hose by many seasons.

It has a tough, thick cover made of a specially compounded rubber that can take the "cooking" effect of long hours under the hot sun—without checking and cracking. Its wide flat ribs give sturdy protection against abrasion from trees, rocks, walks, etc. And it is built with a double carcass of heavy, double-braided cotton cords that resist the strains of yanking, kinking and dragging.

Your regular supply house undoubtedly has Goodyear Emerald Cord Hose. If not, write Goodyear, Akron, Ohio—or Los Angeles, California.
SHOP-DRESSING TIME AT HAND

HAT am I going to do to dress up my shop this year?" Many pros ask themselves that question early in March, for there's a happy medium between having the shop look so monotonously the same that members pay no attention to it, and having the place so bright that it blatantly screams "spend," "buy now," "bargains, bargains, bargains" and reeks with a commercial atmosphere all out of keeping with the country club keynote and the pro policy of quiet, efficient service.

Many of the fellows shift the cases around a little bit, paint the place white and let it go at that. Several years ago at a pro business conference an expert from one of the display fixture manufacturers spoke and counseled the pros against use of white paint. He said that it made the cold merchandise, clubs, look too dead. He advised what he then called "World's Fair colors"—the light yellows, light blues and light greens. He said those backgrounds put warmth and sales attractiveness in pro-shop merchandise.

Several pros who heard him tried out his suggestion and it seemed to work. They noted that more people came to their club racks and snooped about. You might try the idea yourself but be careful that you don't get color contrasts that nauseate a bilious man. Better have your wife O.K. the color scheme. Women generally are much better judges of pleasant color combinations than are men.

Good Lighting Is Sales Help

Get featured merchandise where it will show in daylight, if you possibly can. Many pro-shops are architectural afterthoughts and the pro tries to do a business that is concerned with pleasure from a shop that looks like the Black Hole of Calcutta. If you haven't enough daylight, get more electric light in your place. Take up your problem with your local electric lighting company. That company's experts ought to be able to suggest some inexpensive and effective solution of your lighting problem.

You might look into the matter of putting a display case in the locker-rooms, both men's and women's, with signs advising that the merchandise displayed is on sale at the pro-shop. Sales of such convenience items as underwear, shirts and socks might be handled from the locker-room case by arrangement with the head locker man. But be sure and keep watch on your inventory, for if the head man leaves the case unlocked, there's going to be merchandise removed from it by other club employees or by members who "forget to sign."

Experiment with shifts in the locations of your showcases. The downtown stores have spent millions of dollars studying just where to locate their various departments and how to lay out the displays so the maximum of business will be attracted and served conveniently.

Where to Put Ball Case?

In some shops it's advisable to have the ball case right near the door where its sight will bring in members as they hasten by on the path to the first tee. In other shops pros have found by having the ball case to the rear of the shop they expose these ball-buyers to handling new clubs to the extent that club sales have been increased.

What location of the ball case will be best for your shop? Seldom can anyone tell without making actual tests. Usually the pro-shop is cramped. You have to spot your displays compactly and not try to show too much, but at the same time let your members know that the merchandise on display is but part of a large stock. You can do that by changing displays frequently and so conspicuously that they realize there has been a change around the place.

Look to your floor coverings. It is amazing how many otherwise neat pro-shops have worn rugs that look like they had been salvaged from the city dump. Not infrequently you will see putting carpets
Kroydon's new Rhythmic Hy-Power Shaft—made in the HEAD-ACTION models for the "hitter" and in GRIP-ACTION models for the "swinger"—actually improves the timing of both types of players. That's why this sensational new club is, in itself, the best sales argument the golfing world has seen since the introduction of the Hy-Power drawn steel shaft with the shape and feel of hickory. Our sales today are breaking all records. And this new Hy-Power Rhythmic Kroydon will do the same for YOU!

For details of our proposition to pros, write:

THE KROYDON COMPANY, Maplewood, N. J.

for the HITTER

This type of player, with his terrific speed, needs a club with the feel or action down near the head to assure accurate timing. This is achieved by placing the grooves just above the hosel.

with the New HY-POWER RHYTHMIC SHAFT

for the SWINGER

By placing the grooves up near the handle Kroydon increases the leverage and action below the grip and improves the timing of the player with an easy rhythmic swing so that he's yards longer!

* Use QUICKMAIL coupon No. 9 to answer this ad *
Here are the clubs that will

BOBBY JONES IRONS

BOBBY JONES WOODS
You welcomed Cushion Neck construction—for reducing shock, vibration and finger fatigue in the Bobby Jones Irons. You cheered the Jones "Form Grip" on the Bobby Jones Irons and Woods—for promoting freer grip, better control and shots that fly straighter to the pin.

And now Spalding experts, working in conjunction with Bobby Jones, have given these world-famous ready-selling clubs another big PLUS—with refinements that still further improve their playing quality and appearance, and make them even more profitable for you to stock.

The added weight, usually found in the back of the woods, has been shifted to the sole, thus lowering the center of gravity and increasing leverage. Every golfer who has ever played the Spalding Bobby Jones flange sole irons, with their lower center of gravity, will recognize what a tremendous advantage this factor can offer in woods, too—in distance and in sweeter feel.

For 1937 the Jones Irons have deeper, more compact blades. They’re more graceful ... easier playing, too. The top of the blade has been brought down to the hosel in a more gradual taper, giving the appearance of added depth and a slightly opened face. The stream-lined contour between blade and hosel creates more room at the heel and removes fear of shanking.

Be sure to see the new Spalding Bobby Jones Irons and Woods for 1937, and remember: the ready acceptance they enjoy goes hand in hand with readier profits for you. Get in touch with your Spalding representative ... today!

**TIP TO PROS:** Golfers who are looking for a complete set of clubs conforming to the 1938 U. S. G. A. 14-club limitation ruling will find a perfect selection in the present arrangement of Jones Iron and Wood Club sets.
A well-planned shop makes members feel like buying. This is a corner of George Aulbach's shop at the Dallas CC. Notice the easy-to-handle club display, the prominence given to haberdashery, and especially the immaculateness of the whole layout.

in pro-shops so frayed and filthy looking a fastidious woman would hesitate to handle a ball putted over that surface.

Try to reflect the atmosphere of your club in your shop, and at any rate don't ever let the shop fall behind other departments of the club in appearance and neatness. It should advertise you as an operator of a golf service station thoroughly qualified to serve ladies and gentlemen, expertly.

Tosh Has Smart Layout

One of the unique and productive shops of the country is that of Dave Tosh, pro at Sunset Ridge CC (Chicago district.) The Tosh shop is called the "pro lounge." It has paneled pine walls. The counter is painted to resemble knotty pine on the outside and is sky-blue inside. At first the lounge idea was carried too far. Balls were sold from a cabinet that looked like a liquor cabinet. Members weren't reminded to buy balls with them out of sight, so Tosh corrected that. Dave's place has comfortable up-to-date furniture, not the repaired or battered castaways seen in many shops. He keeps it immaculate. The place invites men and women to loaf awaiting the rest of their foursomes. The radio is kept on softly when there is some important news or sporting event being broadcast but it doesn't blare away just because some one neglects to twist it off.

Men and women's handicap racks are kept in the shop. Smart business, that. When members cut their handicaps they often feel encouraged to buy some golf equipment, take a few lessons, and go out to lift Manero's crown. There's one danger always to the pro about women's handicaps. They get arguing and if the pro can't help getting drawn into the affair, it's generally his tough luck. The canny Tosh, like other smart pros, takes the air when those sprightly debates begin to arise.

Drapes Add Color to Shop

One generally neglected item in shop decoration that Tosh points out gives a lot of color and life to a shop is that of window drapes. He sees to it that his tastefully chosen drapes are kept as clean as they would be kept in a home.

The whole spirit of the place promotes a sporting geniality. It's an inviting place for the new members. They come in and get acquainted with the professional. The members can loaf there, in pleasant surroundings, and as they're killing time waiting for someone or hoping the rain will stop, they look at the shop's merchandise and begin to ask questions. Dave answers them. If it's what they want—and what they need—the sale is made on the most satisfactory basis; the member buys instead of having Tosh sell him. And that's the function of the properly appointed pro-shop; getting the members to feel like buying instead of having to go out and put a pistol to their ears so they'll come in and give the pro a chance to make a living.