formance. The trusty Ring-Tite® Coupling prevents water-wasting leaks. Transite's indestructible asbestos-cement structure lasts forever. No wonder I've never received a complaint from the more than 100 golf courses where I've recommended Transite Pipe.”

For full details on Transite® Pipe for golf course irrigation systems, write Johns-Manville, Box 14, G-1, New York 16, New York. In Canada: Port Credit, Ontario. Cable address: Johnmanvil.
for the small sum of $145.

This material is easily installed. Should a carpenter be necessary, it can be installed in less than two days.

How it is installed is most important. Nine out of 10 installations are done improperly. Don't make this mistake.

A carpenter doesn't know how to install this material — especially for golf display use. It will be up to you to instruct him if you want a truly satisfactory installation. Complete instructions are given in this article.

The pegboard installation should be made so that all holes are available so fixtures can be placed wherever desired. The use of 3/4 in. x 3/4 in. soft pine or spruce strips make this possible. Careful measurement and layout is then important.

Care in Measuring

Remove any protrusions from the old wall. Strip the walls every 16" vertically with the wood strips. This is the most important part of the job. Care must be used in measuring. Strips should be placed so that they fall between the holes of the pegboard. If not they will be blocked and your pattern arrangement for many attractive displays will be disrupted.

Correct placing of strips is easily done with a little patience. Start at one corner of the room and install the first 3/4" x 3/4" strip. Use a level to be sure the strip is absolutely vertical to compensate for any wall irregularities. Do not worry if the strip is not tight against the corner. Most rooms have some irregularities. Corner moulding strip will cover this gap.

From the corner strip measure placements for the other vertical strips so that they will fall between the holes in the pegboard panels.

Where the panels join, the strip will be used half for one panel and half for the next panel. Thus each panel will overlap only half of the 3/4 in. x 3/4 in. strip, thus not blocking any holes.

Insist on This Alignment

A carpenter probably will not install pegboard this way unless you insist upon it and furnish him with exact specifications.

The panels should be at the site of installation at least 24 hours before they are to be nailed in place.

Dampen the backs of each panel and stack flat one on top of the other. Allow the panels to absorb moisture for 24 hours so that they will expand as much as possible. Then, when they are nailed in place, the panels will tighten and insure a smooth, tight installation.

The type of walls upon which the pegboard is placed will make a difference in the ease of installation. Wooden walls, of course, are the easiest and all strips need merely to be nailed in place.

If installation is in a new building with 2 in. x 4 in. partition uprights, the partitions usually are spaced 16 ins. on centers and present no problem, as this is the width at which strips should be placed.

Concrete or concrete block walls present the biggest problem. In the case of concrete, the strips should be pre-drilled with a 3/16 in. bit every 16 ins. so that they can be nailed to the concrete walls with masonry nails. Here the pegboard should be screwed to the strips with 3/4 in. countersunk screws.

Start at the Middle

It is better to fasten the panels to the strips by starting in the middle and working to the top and bottom.

Masonite pegboard is available with one coat of paint already applied. This is called "pre-coated" and will save in cost of paint and labor on the final job. Finishing the installation with moulding strips at the floor and ceiling as well as in the corners and around window frames adds to the appearance of the shop.

Painting is easily done with a roller. Soft, light pastel colors are recommended. But remember that you are selling clubs and equipment, not gaudy walls.

With a good pegboard installation most of your merchandise can be displayed on the walls. The number of showcases can be kept to a minimum, leaving floor space uncluttered and allowing room for the important lounge area.

Special golf display fixtures are available from Miller Golf Printing and Supply, Dunedin, Fla. A 15 x 30 ft. shop can be well equipped with fixtures costing about $50.

This rags to riches transformation will cost $300 including labor.

Don't Neglect Good Lighting

Your shop, of course, should be well lighted. Flood lights accentuate feature displays. A colored lens on the floodlights will be attractive in some cases.

Compare the uncluttered appearance of the pictures included with this article with some of the shops you've seen. Ask yourself these questions: Which looks better? Which would make it easier for the customer to buy?
20 minutes ago, this green was completely reconditioned the CHIA way!

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Choose from five International power sizes to match your job requirements and your budget more closely than ever before!

From the 13.4-hp* Cub Lo-Boy® to the husky 61-hp* International® 460, there's a job-matched International to boost efficiency on golf course maintenance and operations. If Diesel is your preferred fuel, no less than three Internationals are available, 35, 47, and 61 hp*. Whatever model you select, balanced International power-weight ratio assures superior pull-power and stability to tread lightly on turf.

Special tractor options speed operations. A 47 hp* International 340 with Torque Amplifier drive, for example, is ideal for hilly courses. The operator can boost pull-power for steep grades, on-the-go, without shifting, thus protecting turf against scuffing from spinning wheels.

*Maximum engine hp corrected to standard conditions.

Big Cash Bonus for Early Traders!—See your International Tractor Dealer NOW and save. For a limited time you can get interest at the rate of 6% on any trade-in and/or cash payment you make on any purchase of $500 or more. Cash bonus paid immediately. ...See your IH Dealer NOW and save!

Three-point hitch lets you shift rear-mounted equipment in a jiffy...such as the turf aerator (below) or the roller-blade (below, right) which grades, levels, seeds, and applies fertilizer.

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PARTS and SERVICE EVERYWHERE

IH Parts Depots
Dot represents 10 dealers
5,000 dealers backed by 12 parts depots
Sand! Sand! Sand!

(Continued from page 38)

with Jimmy Hines and Dawson in Palm Springs, will be mgr. The head pro, already on the scene, is tall Bob Frainey, a former winter PGA circuit rider out of Glen Oaks Club, Great Neck, Long Island. J. D. Kilpatrick, formerly of Thunderbird, is supt.

As for the course proper, it’s a beauty.

For grooming, it’s matched in San Diego County only by De Anza Desert CC at Borrego Springs. The Pauma Valley greens right now are said to be as good as De Anza’s, but the fairways, planted only seven months ago, have yet to equal De Anza fairways.

Designed by famed course architect Robert Trent Jones, the course is dotted with trees and the aforementioned 157 traps, 87 near the greens. The course plays 7,000 yards from the back markets, 6,367 regular and 5,755 for women. Tees are as long as 100 yards.

Course rating hasn’t been established but may be 72 regular to a whopping 75 for the championship layout. Par is 36-35-71.

Grau’s Roundup

(Continued from page 48)

Light summer applications of liquid feeding are mentioned in several reports from supts., especially where the principal fertilization is done in spring and fall. Many of them speak of “controlled feeding” which can be interpreted in two ways; 1) frequent light applications of readily-available materials, or, 2) feeding two to four times a year with slowly-available materials which give controlled feeding through bacterial action.

Seedbed Feeding

Since DeFrance published results of high rates of fertilization in seedbeds before planting, there has been a gradual swing in that direction. The practice has not yet found full favor with architects and builders for the reason that any improvement in pre-planting practices tends to raise the initial cost. Supts. who have made tests endorse the practice.

At some new courses the supt. is hired by the club to supervise construction and then remain to maintain the course. This assures the club of having a course with low-cost maintenance built in, rather than a course with expensive built-in headaches. Some new courses, often without proper supervision, are being built without drain tile simply to keep initial costs down with no thought being given to the spiralling costs of maintenance and future reconstruction.

Rebuilding is not unusual all across the country. Improper construction must be corrected before more good money is thrown after the bad already wasted in vain attempts to maintain turf under impossible soil and drainage conditions.

The Wage Situation

Salaries and wages still are too low but at least are trending upward. As much as they deserve a raise, most supts. do not complain about their own pay scale as much as they do about that of the working crew. Here is a sample from the east coast: “... wages are too low — we lose too many good men over the winter and new help has to be trained.” In the West we hear: “Employee relations will never improve until the trend is to higher wages.”

From the Southwest: “…the faithful employees of the summer months deserve a year-around job and a chance to make a living so they don’t have to starve during the winter.” Another supt. in the Northeast says, “Shortage of qualified, competent supts. is resulting in a trend toward higher wages but too many incompetents are obtaining jobs because of the shortage.”

There will be more golf cars, more rebuilding to accommodate them, more storage space needed, more prepared paths where cars may travel.

Course maintenance becomes more scientific and more predictable and dependable as the soil testing services of experiment stations, private laboratories and industrial concerns are utilized. Soil tests without proper interpretation are useless. Thus a premium is placed on recommendations that follow interpretations of tests.

Meetings Enlarged

There seems to be a swing toward inviting more professionals, mgrs. and green chmn. to be key speakers at supts’ meetings. Not only is it good for public relations but it could be a welcome relief from technical subjects. The trend is warmly applauded and we hope it is expanded.

Woehrle Heads Midwest GCSA

Ted Woehrle, supt. of Beverly CC in Chicago, is the new pres. of the Midwest GCSA. Vps are Marvin Grueing and Ed Burke and sec.-treas. is Donald Gerber. Directors are Paul Voykin, Joe Canale, Bill Saielli, Don Stewart, John Ebel and Emil Cassier.
USGA Reverts to Old Lost Ball Rules

After a year's trial, the USGA has abandoned the more liberal provisions of the Rules of Golf that were tested in 1960. The organization's rules committee is reverting to the old regulations because it says there were serious weaknesses in the 1960 lost ball rule. As of Jan. 1, these rules are effective:

1. Stroke and distance for balls lost, out of bounds, unplayable and in water hazards;

2. Option of dropping a ball, under penalty of one stroke, in a prescribed area where the original ball became unplayable or went into a water hazard or went out of bounds if the club adopts a local rule.

The USGA says the 1960 "soft" penalty of loss of distance only for a lost ball tended to discouraged diligent search. Under the new rules, the player may declare his ball lost without searching for it the required five minutes.

If a club committee considers the penalty for a ball out of bounds unduly severe on its courses, it may adopt a local rule for the entire course to emeliorate the situa-

tion. If this is done, the committee should seek a change in its course rating from its district golf assn.

Royer Again WGA President

James M. Royer, Knollwood CC, Lake Forest, Ill., was re-elected pres. of the Western Golf Assn. He is the 26th man to hold the presidency of WGA which was founded in 1899. Other officers for 1961 are: William P. Cagney, Jr., Norman G. Copland, Fredric H. Corrigan, Cameron Eddy and George H. Webb, vps; William F. Souder, Jr., treas.; Ralph A. L. Bogan, Jr., sec.; and Adelor J. Petit, Jr., counsel. WGA has 440 former caddies attending 24 colleges on Evans Scholarships. More than 33,000 golfers contributed $350,000 to the Evans fund in 1960.

Golf Day Distribution

Members of the National Golf Fund, Inc., will meet in Clearwater, Fla., Feb. 20, to distribute net proceeds of about $60,000 from 1960 National Golf Day. This will bring to approximately $800,000 the total distributed by NGF in nine years.
Golfingest County
(Continued from page 52)
took care of Pompano Beach CC, another nine holes at Orange Brook, the Par 3 course and a second 18 at Ft. Lauderdale CC.

The last half of the decade produced the Margate GC, Coral Ridge and the American Golfers Club, Lauderdale Lakes, Sunrise and Cooper Colony CC, Dania CC and the 18-hole Diplomat Country Club in Hollywood.

The year 1960 brought 18-holes at Rolling Hills CC, Tamarac G & CC, and Palm Aire CC, the fourth nine at Orange Brook and a new Par 3 installation at the Diplomat.

More to Come?
There's no indication that 22 courses mark the end of the building line . . . not when talk continues about sites in Deerfield Beach, Margate, West Hollywood, Davie and Hollywood.

Convenience is the keynote when one discusses Broward's offerings. From Pompano Beach CC a person can drive to the southernmost club, Hollywood's Diplomat, in 40 minutes. Others are even more easily accessible — both in time and distance.

Golfers from miles around have come to Hollywood to enjoy 27 holes in past years and another nine holes should serve only to heighten the enthusiasm. Designed by Miami architect, Mark Mahannah, the addition has been incorporated perfectly into the tropical locale that characterizes Orange Brook as probably being a notch ahead of its rivals.

Wilson and Kroll Team Up
Tamarac brings together the talent of veteran architect, Dick Wilson, of Delray Beach and the professional ability of Ted Kroll, the current Florida PGA champion and the former all-time money winner on the PGA circuit. Wilson and Kroll were a "daily double" team at Sarasota three years ago when the DeSoto Lakes CC was opened. Ted has lived in Ft. Lauderdale for five years as have fellow pros Julius Boros and Lew Worsham, the wintertime director of activities at Coral Ridge.

Rolling Hills and Palm Aire are the products of Designer William F. Mitchell who recently purchased a home in Lighthouse Point, near Pompano Beach. In Rolling Hills, construction experts found one of the most scenic plots of ground in all Florida — studded with oaks, brimming over with water and boasting some of the hilliest terrain the state has to offer.

A onetime thoroughbred breeding farm, Rolling Hills is located in Davie, just a short drive from downtown Ft. Lauderdale and a short hop on the Sunshine State Parkway from Miami.

One of the Sportiest
Palm Aire could become the sportiest course in the county if Mitchell's preliminary work is continued. More than 500 various types of trees were moved into the course with additions anticipated throughout 1961. Waterways wind between fairways and around greens in a way that's bound to make even seasoned golfers cautious.

The Palm Aire layout is located just a tee shot away from Pompano Park, a harness race track owners hope will be rebuilt for legalized pari mutuel activity by 1963 if next year's state legislature approves current plans.

Broward County annually plays host to some of the biggest amateur tournaments in America. The Helen Lee Doherty Challenge Cup championship is contested at Coral Ridge in January while Orange Brook entertains contestants from the Women's and Men's International Four-Ball Championships each January and March, respectively. The Hollywood Beach Hotel also conducts an affair for country club champions from the northern states every winter.

There's Rivalry Here
County golf backers take particular delight in lording it over adjacent Dade County, in which Miami and Miami Beach are located. Broward's many links and overall availability, as opposed to Dade's large number of private clubs and less than half the public or resort courses Broward presents, makes an interesting conversation topic for gatherings of sportsmen.

What lies ahead in Broward County's golf plans?
A gradual slackening of construction — probably ending with nearly 30 country clubs by 1970 — is what the experts predict. This will be in line with the expected population surge to 700,000 in the next 10 years.

Southern Cal GCSA Officers
Southern Calif. GCSA has elected Zeke Avila, Hacienda CC, La Harbra, pres. for 1961. Other officers are: Harold Stelling, vp; Frederick Bove, secy.; Joe B. Williams, treas. Directors are Jack Baker, John Garcia, Jr., George Lanphear, Joe Martinez and Charles Friday.
Noer's Roundup

(Continued from page 62)

195% even at 1½ lbs. per acre. Temperatures were moderate at treatment time but weatier changed abruptly from cool to hot.

Comptox at the minimum rate controlled chickweed on several new greens in Toronto and helped save a Penncross nursery there. It can cause injury to close-cut creeping bent. Test plot damage was severe at double and quadruple the recommended amount. Weather stayed cool in the range of 65 to 75 degs. F. In extreme heat, results might be different at the suggested rate.

Bluegrass seems to be damaged least by the phenoxy type herbicides. Then come Merion Kentucky blue, fescue, coloniial and creeping bent in that order. Bermuda resembles bluegrass in ability to resist damage.

Study Needed

A study of the conditions under which turfgrasses are injured by herbicides would be most helpful. Until then the safe procedure is to use them in May or June when the temperature range is 65 to 75 degs, and at minimum amounts to produce satisfactory weed control without damage to desirable grasses.

Calcium arsenate has been eminently successful in some cases but also a dismal failure. One supplier is faced with the possibility of a major lawsuit to repay a club for fairway turf loss. In cases of injury, heavy applications of phosphate have been advocated to overcome the evil effects of calcium arsenate. This is based on findings at Purdue and is justified where damage is a physiological function. A soil factor may be involved. Calcium arsenate is less stable chemically than lead arsenate. When used on an acid soil with a low calcium saturation in the exchange complex, the calcium of calcium arsenate becomes a part of the unsaturated insoluble soil exchange complex. Then insoluble calcium arsenate becomes completely water soluble arsenic acid. This is extremely toxic. Lime would seem like a better antidote than superphosphate in these instances.

Good Effect Counteracted

In January, 1942, U.S.D.A. Technical Bulletin 788 by W. E. Fleming reported on the effectiveness of various arsenicals and their toxicity to plants. Calcium arsenate gave better grub control than acid lead arsenate but growth of rye grass was re-

January, 1961
tarded markedly by all concentrations of it. Seedling plants were more susceptible than mature ones. Arsenious oxide gave best control but was highly toxic to rye, grasses, and nursery plants at larvicide levels.

In areas where soil acidity prevails and bent or fescue are dominant grasses, prudence suggests that the effect of calcium arsenate be tested in a limited way before embarking on large scale applications.

**Effective in the South**

The newer disodium methyl arsonates have been especially useful in the South because of their ability to control some weeds that have resisted other herbicide types. Control of crabgrass has been good but no better than with sodium arsenite. The combination of disodium methyl arsenate and 2, 4-D has eliminated nutgrass, bullgrass, dallis grass, goosegrass, lemongrass, pennywort and dichondra.

Where infestation is only crabgrass, control can be obtained at less cost with sodium arsenite. There will be discoloration but that will occur with any effective herbicide where the infestation of crabgrass is heavy.

Fairway spraying with phenyl mercury and ferrous sulphate started in the Chicago area in the poor 1959 season. Their use was continued in 1960 even though the summer was not bad weatherwise. Rates were in the range of 1/2 to 4/5 ozs. of 10 per cent phenyl mercury and 2 to 3 pounds of ferrous sulphate per acre. Indications are that more clubs will spray in 1961. Poa survival has been better both years as a result of the spray program.

**Change in Fertilization**

Fertilization of watered, cool season fairways on Northern courses is undergoing change. With the new type wide-throw spreaders, an 18 hole course can be fertilized in a day or less. Best results are obtained with granular fertilizer. Drift loss is excessive with dusty fertilizers. Scorched or burn is less likely with fertilizer of low solubility but moderate activity. Fairways are fertilized generously in late fall. Need for phosphate or potash is satisfied at that time. No more fertilizer is used until June because spring is the best season for growth. During June, July, and Aug. fertilization is at the rate of 250 to 400 lbs. per acre, or 15 to 24 lbs. actual N each time.

Fairway watering continues to gain favor. On high pressure systems the trend is to closer spacing of snap valves at about 80 ft. instead of 90 to 100.

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**Swinging Around Golf**

*(Continued from page 16)*

Al Tull is architect of 27-hole layout for Whitney G&CC, to be built on former estate of Cornelius Vanderbilt Whitney at Old Westbury, L. I., N. Y., near Roosevelt Raceway.

Pros coming to PGA’s Dunedin, Fla., course have a chance to see a short course of a type that probably will become popular and profitable as adjuncts to a motel... Bob Sutherland built the 6-hole course on 7 1/4 acres 2 1/2 miles east of Dunedin on highway 580 at Sun-ni-land motel owned by Mr. and Mrs. C. G. Overcash... Par for the 6 holes is 22... No charge for motel guest to play for 18 holes... General public charge is $1 for 18; after 4:30 p.m., 50 cents.

Lost Tree Club 18 designed by Mark Mahannah and with Joe Belfore, CC of Detroit pro as its winter pro, opening soon... It has two miles of Atlantic coastline and some frontage on Lake Worth, south of Seminole... Combination course and very deluxe real estate project headed by Lloyd Eccleston, Detroit financier.

Harry A. Meusel, Yale university course supt., elected pres., Connecticut Assn. of Golf Course Supts. ... Maurice S. Ryan, Race Brook, is vp and Charles Traverse, Mill River, sec-Treas. ... Andrew F. Lentine, Tumble Brook, was elected asst. sec.-treas., and Robert W. Snelly, Wampanoag was made a director... Roland Wingate, Fort Myers (Fla.) CC pro, during trip he and Mrs. Wingate took to Britain this summer, visited grave of Young Tom Morris at Kirkaldy and found that vines had overgrown the stone and plaque... Wingate took out his pocket-knife and cleaned up the place.