ably see him hop a tractor and pitch in.

Admitting to 30 years in the hospitality business, Burt Hams is actually one of the newest additions to the Medinah staff. When the Open rolls around, Hams will be in his ninth month at the club.

Soft-spoken, but with an air of authority, Hams is a Chicago native with plenty of credentials in the business. He was manager at two other local clubs before coming to Medinah and served as a consultant for clubs preparing for tournies like the Open for eight years.

Hams shuttles you into a medium-sized office with plenty of paper lists on the walls, showing the plan for the Open activities. He fondly dubs this cubicle his "War Room". Surrounded by menus of brunches, cocktail parties and other gatherings at the club Open week, Hams gives his philosophy of club management. "I'm a food man. I guess, I pride myself on that. To me, nothing is more critical to the club than the food you serve. I want things done right and if it means I have to wait tables, I can do that too," Hams says.

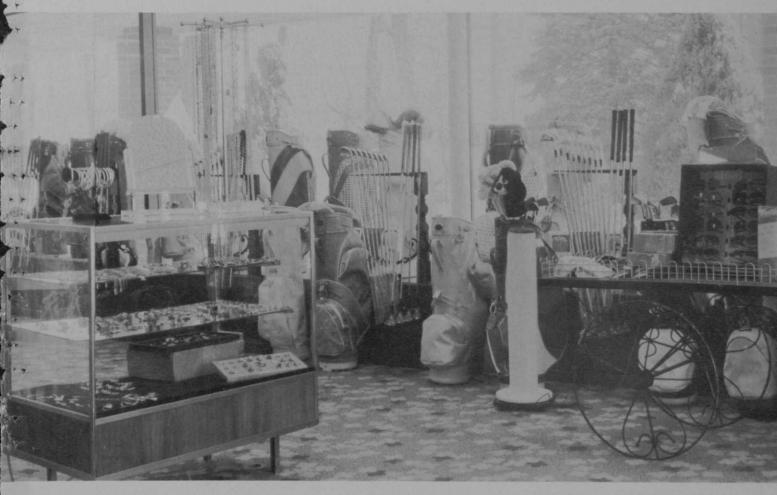
Overseeing a staff of 40 waitresses, 20 kitchen workers, 15 maintenance personnel and a dozen bartenders, Hams is meticulous in his preparation for all of Medinah's affairs. For instance, the day GOLFDOM interviewed him, Hams was getting ready for a "Ship to Shore" dinner, featuring fish. The menu highlighted more than 40 kinds of seafood.

Pointing to the fact he's been down the line before in getting ready for tournaments like the Open, Hams doesn't worry about the string of continental breakfasts, luncheons and other events tied to the event. Just in Medinah's regular winter program, Hams estimates over 25,000 meals were served during the off-season.

In just his short time at the reins, Hams has made a lot of changes in the procedures of the club in general and food preparation, specifically. "I don't believe in frozen foods. Everything is fresh. I don't think that anyone can prove me wrong on this," Hams remarked. Although, Medinah handles major meals every evening, storage area for fruits, vegetables and meats are rather limited, adding more credence to Hams' philosophy of freshness.

Quality and price are the two watchwords of the Medinah kitchen and Hams prides himself on these. All purchasing is fully computerized through the club's staff comptroller. All products are bought at competitive prices.

In spite of all the positive approaches of Hams' clubhouse, he admits the food service does not



Medirak continued

make any additional income for the club and generally operates at a loss. "We try to stay competitive with local restaurants, but at the same time we're particular about what we serve the members."

There are countless examples of the effort Hams puts into making sure Medinah's membership has the best. Hams insists on a special kind of sweet, pickled ham along with other items that can only be bought at the wholesale level.

Catering to his members' taste is what Hams is all about. He insists on all beef to be aged three to four weeks before preparation, demands two types of liver sausage from his supplier to fulfill customer wants and serves only a distinct bourbon and scotch.

Even though Medinah offers a lot of challenges, Hams admits he can't do the job alone. He gets plenty of aid from Clubhouse Manager Bob Nelson. A Washington State University graduate, Nelson got his first job at the Seattle Tennis Club, went into the Navy for a couple of years and is now enjoying his fourth season at Medin'ah.

Nelson is the 18th clubhouse trainee that has worked under Hams

Dining at Medinah: The club's main dining room plays host to a variety of functions every day. During the winter months alone, general manager Burt Hams estimates over 25,000 meals are served. and like his predecessors, gets all the responsibility he can handle. "My job is to help coordinate things around here," Nelson said, "Communication between departments is essential and I attempt to bridge any gaps that develop."

Working closely with Hams, Nelson controls staffing, service situations, the kitchen and the regular day-to-day problems. "We try to be thorough here. From ordering to having regular training sessions for the help," Nelson noted.

Image is another asset Hams is continually concerned about. "We have an image to worry about here. Our club must remain attractive and retain its beauty for the membership."

A complete library of service manuals are kept for the kitchen staff and Hams expects a dish pictured in the book to look the same when it is served. He says quite seriously "a plate should taste as well as it looks."

There are a lot of demands on the kitchen at Medinah, but under the guidance of 22-year-old head chef Kenneth Haase, Medinah's cooks manufacture an endless array of salads, main courses, entrees and desserts. Everything works in a cycle at Medinah. For instance, the preparation of prime rib seems like a major project. The meat is roasted in rock salt, horse radish is added along with Yorkshire pudding and a lettuce leaf.

Logistical and calendar prob-



lems are common at the club, but everything seems to get ironed out. Every little detail is taken care of. With a lot of the members bringing their children to the club, Hams makes sure there is always candy or other assorted treats for the kids.

On any night of the year, between 100 and 200 people will dine at the club and most partake in the ample salad and sundae bars, where each person can create their own masterpiece.

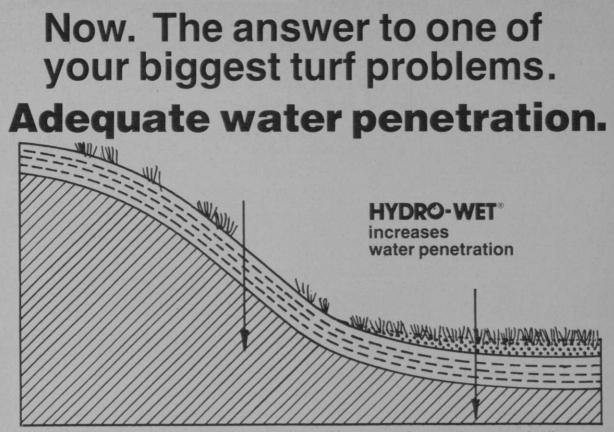
Of course, this is not an average year for Medinah's clubhouse. A countless number of parties and receptions are on tab for the Open and its Hams' responsibility to handle them all. Last year's Open champ Hale Irwin will be honored at a casual "Night" for him with corn beef and cabbage the main dish. The added amount of work that Hams and his staff have carried has amounted to about 1,200 hours. That's tacked on to a regular work week that can often stretch to well over 50 hours.

"We try to be well prepared for every occasion at the club. That is the only way to take the risk out of this business. You have to work ahead and plan to be on top of all the eventualities," Hams said.

Situated in the rustic Illinois countryside, Medinah's clubhouse with its architecture of the Far East, houses one large main dining room, the popular porch grill and a number of attractive and comfortable lounges. Along with the dining and kitchen facilities, the club's locker rooms are also included within the clubhouse. With wide locker spaces and modern shower units, the locker room is spacious. A barber shop, steam room and service bar are also included in the arrangement.

Golf is not the only sport at Medinah. A large swimming pool, tennis courts and a trap and skeet shooting range are also on the grounds. There are always a number of activities available to the member.

All of Medinah's staff know the demands that will be made on the contestants this month, tangling with one of the toughest golf courses in the world. What the players probably won't realize is not much has changed around Medinah because of them. Good service for all is the way of life at Medinah.



This illustration indicates water penetration problem areas: slopes and compacted soils.

Problems with compacted, hydrophobic or sloping soils can work either separately or in combination to make water penetration one of your biggest headaches. If you can overcome these obstacles, you'll have come a long way towards solving soil and turf problems. That's why you need a good wetting agent.

Puddles of water can be a sign of soil compaction or tight soil. HYDRO-WET soil and turf wetting agent is designed to release compaction layers, allowing turf to better absorb water and nutrients and giving roots a better chance to penetrate deeper into the soil.

Slopes provide another major problem. You need good growth to fight erosion, but water run-off accelerates erosion and inhibits good growth. HYDRO-WET makes slopes wettable, keeping water where you need it instead of having it flow into low areas.

Then there's the theory on "fungal hyphae" which says they are water repellent, preventing needed moisture from getting to the feeding grass roots. With HYDRO-WET soil and turf wetting agent, water gets through. The benefit is healthier growth.

An important feature of HYDRO-WET is that it's designed to be used with liquid fertilizers and pesticides. With HYDRO-WET you can get these compounds directly to the roots where it is needed.

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14 GOLFDOM MAGAZINE 6/75



Indiana Golf Course Superintendents Association meeting, Terre Haute Country Club, June 10.

Iowa Golf Course Superintendents Association Field Day, Cedar Rapids Country Club, June 10.

Northern Michigan Turfgrass Managers Association meeting, Leland Country Club, June 12.

National Restaurant Association/New York State Restaurant Association "Controlling Food Costs" seminar, Marriott Motor Inn, Saddlebrook, N.J., June 16.

National Golf Foundation teacher seminar, Longwood College, Farmville, Va., June 22-27.

Michigan Turfgrass Field Day, Crop Science Field Lab, Michigan State University, East Lansing, Mich., June 24.

Indiana Golf Course Superintendents Association meeting, Meshingomesia Country Club, Marion, Ind., July 8.

Iowa Golf Course Superintendents Association meeting, Fort Dodge Country Club, July 8.

Northern Michigan Turfgrass Managers Association meeting, Valley View Golf Club, Shepard, July 10.

American Sod Producers Association, summer convention and demonstrations, Crown Center, Kansas City, Mo., July 17-18.

American Association of Nurserymen Annual Convention, The Palmer House, Chicago, July 19-23.

National Golf Foundation teacher seminar, Pine Needles Lodge and Country Club, Southern Pines, N.C., July 20-25.

Florida PGA Section annual meeting, Sheraton Twin Towers, Orlando, Fla., July 28.

Southern Nurserymen's Association, annual convention, Atlanta, Aug. 3-5.

Tennis Industry's National Buying Show, Town & Country Hotel, San Diego, Calif., Aug. 3-5. Council on Hotel, Restaurant and Institutional Education, 30th Annual Conference, Doral Club and Hotel, Miami, Aug. 3-6.

CMAA Workshop, "Carnegie in Club Management," Cornell University, Aug. 4-6.

Rutgers University Turfgrass Research Field Day, New Brunswick, N.J., Aug. 5.

Golf Course Superintendents Association of New England meeting, Mount Pleasant Country Club, Lowell, Mass., Aug. 6.

Penn State Turfgrass Field Day, Valentine Turfgrass Research Center, University Park, Pa., Aug. 6-7.

International Shade Tree Conference, annual meeting, Heritage Hotel, Detroit, Mich., Aug. 10-14.

National Golf Foundation teacher seminar, Stephens College, Columbia, Mo., Aug. 10-15.

Louisiana Chapter of Gulf States PGA Section, merchandise show in conjunction with golf tournament, Oakburne Country Club, Lafayette, La., Aug. 11.

Indiana Golf Course Superintendents Association meeting, Hickory Hills Golf Club, Parker, Ind., Aug. 12.

Iowa Golf Course Superintendents Association Field Day, Beaver Hills Country Club, Cedar Falls, Aug. 12.

CMAA Workshop, "Advanced Management Techniques," Portland, Ore., Aug. 18-20.

University of Rhode Island/Rhode Island Golf Course Superintendents Association, Turfgrass Field Day, University of Rhode Island Turf Research Station, Kingston, R.I., Aug. 20.

Northern Michigan Turfgrass Managers Associationn, meeting, Burning Oak Golf Club, Roscommon, Aug. 21.

Northern California Turfgrass Council Irrigation Seminar, Asilomar Conference Grounds, Pacific Grove, Calif., Sept. 5-7.

CMAA Workshop, "Coping with People Problems," Phoenix, Ariz., Sept. 8-10.

Illinois Turfgrass Foundation Field Day, University of Illinois, Urbana, Ill., Sept. 16. California Association of Nurserymen Convention, Town and Country Hotel, San Diego, Calif., Sept. 16-18.

CMAA Workshop, "Executive Development," Toledo, Ohio, Sept. 18-20.

Florida PGA Section championship and merchandise show, Innisbrook Resort and Golf Club, Tarpon Springs, Fla., Sept. 18-21.

PGA teaching seminar, Barton Hills Country Club, Ann Arbor, Mich., with Bob Toski and Paul Bertholy, Sept. 22-25.

Indiana Golf Course Superintendents Association meeting, Woodland Country Club, Indianapolis, Ind., Sept. 23.

Outdoor Pest Services Clinic, sponsored by National Pest Control Association, Kansas City, Kan., Sept. 26-27.

CMAA Workshop, "Advanced Beverage Management," New York, Sept. 29-Oct. 1.

Florida PGA Section annual educational and business seminar, Sheraton Twin Towers, Orlando, Fla., Oct. 6-7.

PGA teaching seminar, Torrey Pines Golf Course, La Jolla, Calif., with Eddie Merrins and Dr. Gary Wiren, Oct. 6-9.

CMAA Workshop, "Financial Management and Computers," Champaign, Ill., Oct. 7-9.

CMAA Symposium, Los Angeles, Calif., Oct. 13-15.

PGA teaching seminar, Westchester Country Club, Rye, N.Y., with Irv Schloss and Paul Runyan, Oct. 13-16.

Indiana Golf Course Superintendents Association meeting, Harrison Lake Country Club, Columbus, Ind., Oct. 14.

Iowa Golf Course Superintendents Association meeting, Hyperion Field Club, Grimes, Oct. 14.

Kentucky Turfgrass Council Conference and Field Day, Barren River State Resort Park, Lucas, Ky., Qct. 14-15.

National Sporting Goods Association 28th Annual Fall Market, Civic Center Plaza, Phoenix, Ariz., Oct. 17-19. PGA teaching seminar, Meadowbrook Country Club, St. Louis Mo., with James Flick and Harvey Penick, Oct. 20-23.

26th Central Plains Turfgrass Conference, Manhattan, Kan., Oct. 22-24.

CMAA Workshop, "Creative Food Management," Williamsburg, Va., Oct. 27-29.

Sixth Annual Georgia Golf Course Superintendents/University of Georgia Turfgrass Short Course, Center for Continuing Education, University of Georgia, Athens, Ga., Nov. 3-4.

National Institute on Park and Grounds Maintenance, Chase-Park Plaza Hotel, St. Louis, Mo., Nov. 3-6.

PGA club repair seminar, Denver, with Hubby Habjan, Nov. 10-13.

Indiana Golf Course Superintendents Association meeting, Tomahawk Golf Course, Jamestown, Ind., Nov. 11.

CMAA board of directors meeting, Kansas City, Mo., Nov. 16-18.

PGA club repair seminar, Los Angeles, with Irv Schloss, Nov. 17-20.

PGA Annual Meeting, Fairmont Hotel, New Orleans, Dec. 2-5.

Indiana Golf Course Superintendents Association meeting, Kokomo Country Club, Dec. 6.

16th Annual Illinois Turfgrass Foundation Conference, Ramada Inn, Champaign, Ill., Dec. 10-12.

12th Annual Northern California Turf & Environmental Landscape Exposition, Hall of Flowers, San Mateo County Fairgrounds, Jan. 29-30.

47th GCSAA International Turfgrass Conference and Show, Minneapolis Auditorium and Convention Hall, Minneapolis, Minn., Feb. 8-13.

Golf Course Builders of America Sixth Annual Meeting, Minneapolis, Minn., during GCSAA Conference Feb. 8-13.

CMAA Annual Meeting, Washington, D.C., Hilton Hotel, Feb. 11-14.

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Manufacturers claim their clubs are better because they are different. Nearly all of today's brands of irons are stainless investment castings with variations in weight placement, head shape and hosel design. Woods feature endless combinations of materials for face inserts, sole plates, head weights and shafts. Ask yourself: Are they really different from each other? Is one better than another?

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In the Movies: Merchandising made easy with audio-visual aids.

Manufacturers Make Merchandising Manageable

Every year, pros rack their brains for new ways to market their merchandise. More often than not, the pro is left with warmed-over ideas of seasons past, but it doesn't have to be that way.

Pro shop personnel can often turn to a product's manufacturer for tips on selling items and additional selling aids, and it usually doesn't cost a dime.

Just about every company in pro shop business has ideas on how to move products. They can vary all the way from simple promotional signs to complete marketing kits.

Probably the most extensive effort in the audio-visual field for the pro is currently being offered by Confidence Golf. The company has produced a 16 mm movie educating the consumer and club pro on the benefits of the investment cast process. Varied steps of the process are shown, as the club takes shape. Covering the entire scope of investment casting, the movie follows the process from its infancy in design through finished production and up to the final utilization of the club on the course. Two versions of the film are available in either six or 13 minute sessions.

To show the film, a counter-top projector is included in the loaned package. The machines allow the pro to run the film continuously or when desired. In essence, audiovisual aids such as these are added pluses for the pro shop sale. Many consumers have little or no idea of how equipment is manufactured and a film such as this can add a lot to consumer education, while at the same time give the pro additional credibility as an expert in their field.

There are also other visual aids available. Several equipment companies offer disassembled, unpolished versions of their clubs to assist the pro in illustrating to the consumer the unique qualities of the iron or wood, as opposed to its competitors.

Shamrock Golf currently offers such a marketing device. According to company president Jack Kirby, the merchandising attempt has been well-received. "This type of marketing aid can really help the pro on a sale. A club such as this, can graphically show the customer that which, if described in words, sometimes is not completely clear."

Kirby explains that with the club his firm markets, which is aimed for the middle and high handicapper, a sales aid such as the unfinished club demonstrates the advantages of the club and the results that can be expected for the buyer.

To compliment the marketing items, Shamrock also has worked on to page 38

CON-JOLE TITANIUM IRONS



The result of the marriage of exotic metals and advanced design ...

THE ULTIMATE IN TOE/HEEL WEIGHTING LARGEST SWEET-SPOT IN GOLF LOWEST CENTER OF GRAVITY

TITANIUM VS. STAINLESS STEEL

The CON-SOLE TITANIUM IRONS are the first set with investment cast heads of ultra-lightweight titanium.



This unique metal, principally used in the aerospace and aircraft industries, is about one half the weight of stainless steel but is stronger and more corrosion resistant. Now break-thrus in casting technology and innovative club head design have made it possible for CON-SOLE to introduce the club of tomorrow ... today!

CLUB HEAD DESIGN

CON-SOLE TITANIUM IRONS are the culmination of two years of research and testing that has taken the principle of toe/heel weighting to a new extreme. The lightweight titanium investment cast head is peripherally weighted with one of the heaviest materials on earth, tungsten, with one insert in the heel and two on a vertical axis in the toe thus expanding the effective hitting area over most of the club face.



The result is a club with an inertial advantage 307% greater than that of a leading stainless steel club with tungsten inserts advertised extensively as having the "Biggest Sweet Spot in Golf."

SWEET SPOT

The sweet spot on any CON-SOLE TITANIUM club head, regardless of swing weight, is always in the exact geometric center of the club face.



Because of the two weights in the toe and the one in the heel, the sweet spot widens into a triangular shaped effective hitting area on both the horizontal and the vertical axis. This also gives the CON-SOLE TITANIUMS the lowest center of gravity that gets the ball up fast.

SWING WEIGHT

The swing weight of the CON-SOLE TITANIUM IRONS is controlled by the tungsten inserts in the club head and never by pouring lead down the shafts. Obviously the CON-SOLE method puts the weight where it does the most good and not just where it will fool the swing weight machine. CON-SOLE TITANIUMS are the most perfectly balanced irons made.

LARGER FACED LONG IRONS

Another significant advantage to the use of titanium is CON-SOLE's ability to

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increase the size of the face of their long irons.



The face of the CON-SOLE #2 iron, for instance, is larger than the #5 iron in most sets. CON-SOLE TITANIUMS will restore confidence and use of the valuable long irons.

YOUR HANDICAP DOESN'T MATTER

A set of CON-SOLE TITANIUM IRONS will help your game. A shot hit on the sweet spot of a CON-SOLE TITANIUM head will not necessarily carry any further than a shot hit on the sweet spot of a steel investment cast or forged head. Unforfunately, it is extremely difficult to hit on the sweet spot – whether you're a fouring pro, club pro or a low handicapper . . and of course the problem becomes greater as you move up the range of handicaps. But, the CON-SOLE with the largest sweet spot is the most "forgiving" club in golf. A shot miss-hit with a CON-SOLE TITANIUM IRON will go further and follow a more desired line of flight than the same shot hit with any other club.



Boost Club's Winter Activities BRING TENNIS INDOORS

America's country clubs are big investments and in the colder climates of the country, most lie dormant during the off-season.

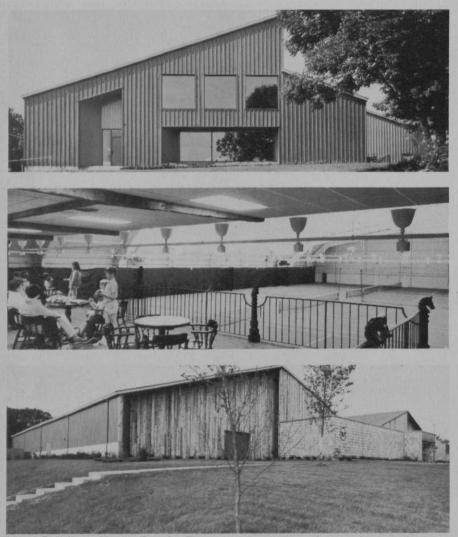
To get a year-round benefit from the club and at the same time, generate addition activities, indoor tennis facilities might be the answer. Before you say costs are too prohibitive for your club, review the facts and examine a couple of cases.

In Tewksberry, Mass., the Trullbrook Tennis Center stands on a golf course and is an intricate part of a development engineered by Bailey Trull, Jr. Although, not quite the same situation, the independent Austin Road Tennis Barn in suburban Dayton, Ohio, offers a unique arrangement between itself and the nearby Sycamore Country Club.

Owner/developer James Studzinski has an agreement with Sycamore Creek where members of both operations can use facilities on an exchange basis.

These are just two cases of the possibilities for such a project, but obviously the cost is the most important element. Depending on the size of the facility, the rough figures could project to \$16 a square foot. That price does not include court installation.

A variety of things must be taken into account when looking into the



Metal Buildings House Tennis: There are a number of attractive tennis structures currently on the market. At top, the facility at Trullbrook Tennis Center in Tewksberry, Mass. Center, a lounge at Dayton's Austin Road Tennis Barn and the third shot, its exterior. (Courtesy Butler Manufacturing Co., Buildings Div.)

feasibility of such an investment. Depending on the type of golf operation that compliments the tennis facility, it must be established whether there is sufficient population or membership to support such a project. Industry planners indicate that at least 100 people per court are needed to sustain the investment. Projected revenues from each member would be near \$200 each for the year and most in the industry feel start-up costs would be returned in four to six years.

Towns and cities as small as 12,-000 have been able to support a commercial facility. Location of a facility close to middle and upper income groups is essential. For the most part, the addition of an indoor court at a club would assure business, if the club had already established sizable interest in the outdoor version of the game. On the average, most of these indoor facilities will include three courts, although construction of six courts is usually recommended.

There is more to the indoor operation than just the courts, though. Showers, locker rooms, offices, a lounge area, pro shop and nursery are all standard parts of the indoor facility. There is usually no extensive food service. This is handled by an assortment of vending machines. Added to those factors are proper lighting, climate control, outside landscaping and playing surface.

Maintenance is the overriding factor in operations such as these, but surprisingly enough the majority of upkeep seems centered around the playing surface. Estimates of the United States Tennis Association are that annual maintenance on an indoor court could range around \$12,500 per court, per year. Figured into to the cost are replacements of backdrops, lights, nets and other such related expenses.

Tennis leaves little doubt in the nation's mind at this time, it has become a true rival with golf for the leisure-time dollar. Obviously though, there are club members at private, daily-fee and public courses, that play both or either sport.

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great classics of golf or a tee prize from a local member - guest tournament, its value lies in the fact that it proudly announces "I was there!".

All of the items shown in the photograph below are Miller creations prepared especially for Bobby Nichols, the PGA Professional at Firestone Country Club in Akron, Ohio. Each item has a specific purpose but all together they present a first class image of the club, its professional and its management.

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Irrigation To Fit The Course

by George W. Kerr Southwest Region Consultant National Golf Foundation

The irrigation system of a golf course is the means of transporting water from the source and dispensing the water in a given area at a given time in a given amount. Where it is pumped and how, the time lapse of pumping and delivering, flow rate, etc., are all familiar terms to an irrigation contractor, hydraulic engineer or a trained golf course superintendent.

But to a club member, golfer and paying customer, these terms are foreign. All the golfer cares about is the ability of the green to hold his pitch shot or to be able to take a lush divot in punching his iron shots. Without adequate water to propagate turf, problems develop.

At a private club the member will probably complain to the pro who in turn will amplify his report to the superintendent that all is not well on the course. The daily fee operator or municipal pro-manager may never receive a warning of this type. His customer may not return and in addition, may spread the word that the turf is mediocre and go elsewhere.

To remodel is to make over. I prefer the word renovation, which means to make new again, restore to good condition, make over in new or better form, invigorate and refresh. This is the exact result of an upgraded irrigation system. Occasionally, some actual remodeling or reshaping of greens, tees and traps is done in conjunction with the installation of the improved water system, depending upon the degree of renovation. Over a period of years our courses mature and change. In like manner, the design methods and new irrigation system concepts have evolved from the hose sprinkler to the sophisticated "wallto-wall" automatic systems of today.

Consider the course with the manual or quick coupler method of watering. Someone must place and replace those sprinklers each time they are used. This person or persons must be paid. Now that the minimum wage has increased again, and the fact that it is difficult to keep responsible people on the job, the fact of watering at night makes the economics of automation more desirable. According to Harris, Kerr, Forster & Company, golf course maintenance costs jumped 6.9 percent this past year. The cost of irrigation materials and supplies rose even higher. Thus even if your course does have manual irrigation, the basic determining factor leading to remodeling or renovation is the wealth or health of the individual course.

Renovation is generally done for one of two reasons. Either you have to upgrade and improve the system because of leaks, or it is desirable and the necessary capital is available. The older courses, which had fine watering systems when they were built, may now be relics of the "horse and buggy" era of golf course construction and maintenance.

Being mechanical, water systems are subject to wear and tear. Any number of things could and do happen underground, especially when pressure is applied from within the system and from elements outside the system. Mineral content of the water has a bearing on the buildup inside the pipe, as will sand or other impurities from the source passing through the valves and filters. The chemical composition of the surrounding soil will also have an effect on the life of the pipe. Thus you have rust, rot and mold on the outside and rust and mineral concentration on the inside. Some galvanized pipe deteriorates quite rapidly and may look as though it has been in the ground several years, when in fact it may have been installed only one season earlier.

The outside forces of stress can come from tree roots, burrowing rodents and in some areas of the West, earthquakes and tremors. And, if not buried deep enough, heavy equipment can smash or crush pipe. When a change is being considered for your irrigation system, there are many things to consider: Who is going to do the work? How much work is going to be done and over what areas? What will it cost? How long will it take? Will we have to close the course? Actually, the prime considerations in renovating the water system are: (1) what is the condition of the existing pipe? (2) is the existing pipe adequate for the system to be installed? When these factors are determined, then the length of time and cost can be determined by an experienced contractor.

Cost of the installation will vary with each contractor and the amount of work available at the time he is contacted. In any case, it would be wise to interview only those firms with prior experience in golf course installation. Some firms prefer to trench the job, thus creating scarred fairways until the grass takes over again. Unless sod is replaced over the trench. Some soil types necessitate trenching as the only means of laying pipe. Another method is to plow the pipe in and dig holes only where valves and fittings are necessary. This is generally a less expensive method of laying pipe, when soil type permits.

Use of old lines. The extent to which old lines will be utilized also has a direct bearing on the cost of renovation of the system. Sometimes it is cheaper, because of the contractor's time, to install an entire new system than to make do with the old pipe and fittings. Chances are that the pumping station will have to undergo some changes. Pumps wear out faster than any topage 39