siles was projected through the roof of a barn on a nearby farm, bringing the threat of a law suit. The affair, however, was settled amicably when the Maddox firm agreed to pay for the roof repair.

There was a kind of gypsy air about the compound in which workers lived while a course was being built. It was always located in a grove of trees, preferably near a stream. A rolling cook wagon sometimes was brought in. If not, a cookhouse was built before construction of a course was begun and along with it, a bunkhouse or two. A husband and wife team usually was hired to cook for the crew of 30 or 35 men. Food had to be good or it was impossible to keep help.

Most of the Maddox employees were muleskinners who were recruited in Missouri, Kentucky and Southern Illinois, and the majority weren't afraid of hard work. It was necessary to have specialists on the payroll in the 20's. Today, a course construction company can't get along without mechanics; the specialists then were blacksmiths and barmen.

The muleskinner began his exodus around 1925—unless he learned to drive a tractor. It was about this time that contractors of all kinds started using more and more tractors because they now were being turned out in mass quantities by automobile and farm equipment manufacturers. Until 1925 the only tractor Maddox Construction owned was a Holt, a relic of World War I. So far as Charlie Maddox is concerned, the muleskinner, or at least his trade, became extinct in 1929 when his company sold the last of its horses and mules.

The development of the Fresno scraper in the mid-20's, along with the increasing use of tractors, enabled course builders to move dirt faster and step up the building pace. The lever-operated Fresno, a steel cylinder open on one side and equipped with draw bars, was a considerable improvement over anything that had been used before for scraping and transporting topsoil. Maddox credits his father with improvising what may have been the first bulldozer used in the U. S.



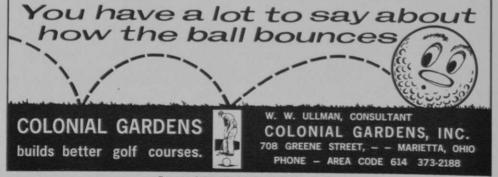
TROUBLE FREE! RENTAL CART SERVICE

We furnish you all you need on rental share basis. No investment for you! We deliver and service carts regularly and keep them in good repair — FREE. Clubs not held responsible for damages, theft or breakage.

CADDY-ROLL RENTAL SERVICE

Three Rivers, Michigan

For more information circle number 121 on card



THREE COURSES

Continued from previous page

He rigged a wooden scraper to the front end of a tractor so that dirt could be pushed ahead of it. That greatly improved the maneuverability and earth moving capacity of the machine.

Where Maddox Construction once confined its activity to three states, it now ranges over the entire country east of the Rockies, and will go beyond these boundaries if a building contract is waiting. In recent years it has built courses in such widely scattered places as Fargo, N. D., Delray Beach, Fla. and Tucson, Ariz. The company expects to have another course going in Florida this winter.

There are at least four reasons why the Maddox Company has been able to widen its range. Most important is that Chuck and Bill, having served their construction apprenticeship between 1946 and 1956, are as competent as their father in shaping a golf layout.

Great improvements in the capacities

and performance of construction equipment in the last decade have speeded up the building process and made it somewhat easier, although the Maddoxes aren't always convinced of this in the midst of a June-July heat wave.

Better transportation facilities have given the company much more mobility than it had 10 or 15 years ago. It can now pack up and move from 15 to 20 truckloads of equipment several thousand miles in only a few days where once it took perhaps a month to pull out of one job site and get relocated in another.

Finally, the three arms of the Maddox Company all have experienced and well-trained working crews. The nucleus of each is composed of about eight or 10 men, most of whom have been with the company for at least five years. It is because of the skill and competence of the men who work for them that the Maddoxes are able to pride themselves on two things: They are never late in completing a job, and they never have to go back and repair one that has been done.



For more information circle number 204 on eard

Happiness is.

"a sparkling clean ball on every tee"

Golf Ball WASHERS

Easiest to use ... Easiest to maintain... and does the very BEST JOB!

Precision built, they are backed with forty years of know-how but as up-to-date as tomorrow. Sizes and styles to suit every course, every budget - choices of bright colors and a host of accessories.

But, don't let price and appearance fool you...every Lewis Line washer is built to wash balls - cleaner, faster, with less fuss and no splash. Larger water capacities, easily accessible clean-out drains, and long-wearing brushes that can be replaced right on the tee...these are washers that assure year-in, year-out satisfaction with an absolute minimum of maintenance.

See your golf dealer or write for brochure and prices today. CONTAINER DEVELOPMENT CORP.





CHEMICAL BULLETIN





FOR SOD WEBWORMS, ARMYWORMS, ANTS:

CHLORDANE—America's leading turf insecticide kills practically all grass-killing soil insects, and most surface insects, too! One application keeps soil insect-free for 5 years or more. Chlordane's long residual action gives you better control. Chlordane is easy to work with, has no offensive odor. Ask for Velsicol Chlordane in either liquid or dry formulations.



FOR GRAY LEAFSPOT, FAIRY RING, PHYTHIUM: VELSICOL® MEMMI .8EC—

effective for warm and cool season grasses, this emulsifiable liquid concentrate gives long-lasting protection against many turf diseases. It mixes in minutes, needs no constant agitation, won't clog nozzles, and it leaves no sediment to clean out of the spray tank. Economical, too. Try it now.

Save turf—save time with the Velsicol complete line of quality turf chemicals: Velsicol® "2-1" and Velsicol® Memmi. 8EC for turf disease control; Bandane® for crabgrass control; Banvel® D 4S and Banvel® D+2, 4-D for weed control; Chlordane for insect and crabgrass control; and Velsicol Pestmaster® Soil Fumigant-1 for greens renovation. Ask your supplier for them.



STATE	ZIP
	OHIO ST., CHIC d me your Turf Ch

LEGAL PUTTER

Continued from page 48

toward the tip so that it cleared the

putting green."

Vic's next putter (No. 3), incorporated these improvements, but his friends still found the putter clumsy looking. Worse, the flat sole of putters 1 and 2 resulted in the toe or heel being off the ground on uneven lies.

"This problem," says Vic, "put me on the road to the final solution. I had had a lot of problems weighting putters 2 and 3. Getting the lead to stay in the aluminum was time consuming and in putter 3 the shorter tail gave me less surface into which to pour the lead."

Vic decided to reduce the size of the whole putter. This allowed him to go to bronze for the first time, and eliminated the weighting problem. He also curved the sole. (The wood model for this was No. 4, above.) "At this point I thought I had it made. I drilled the hole for

the shaft in the center (No. 5), inserted the shaft, and took it out to the course," Vic says, "I used this putter at a 10 oz. weight for quite some time and was well satisfied. But people I showed the putter to still thought it was wrong!

"Most putters are around 10 oz. and I had been using this as a guide to weight my putter. Then I realized that in my design, most of the weight is centered along the swing path and the weight is not felt as much as in a conventional putter. I decided to make the putter heavier—nearer to 12 oz.

"The other problem I also discovered by 'feel.' With the shaft entering the center of the head at about 75 degrees, I was taking weight out of the part between the center and the toe. This unbalanced the putter, causing the very 'twist' I was trying to avoid in the first

place!"

The solution was to have the shaft enter the head slightly toward the heel



INCREASE EARNINGS, SERVICE & SPACE WITH NEW VERTICAL BAG RACKS

Your members will like the extra convenience and care. Your pro shop profits from 40% more space these racks make available. Double unit shown holds 16 bags, size 2' x 4' x 6'-3" high, gives 12" x 12" space for bags. Single unit holds 8, size 1' x 4' x 6'-3" high. Sturdy steel. Bags set solid on tapered shelves.

- Wear and tear of golf bags is completely eliminated
- Damp bags dry faster—
 no mildew
- Provides a neat appearance
- Faster, easier storage
- Easy to install and add more as needed

Patented • SEND FOR FOLDER

THE A. G. STAFFORD CO.

For more information circle number 158 on card

2000 Allen Ave. S. E. Box 287 • Canton, Ohio A. C. 216 - 453-8431

Specialists in Golf Course Construction Since 1924!

GOLF COURSE CONSTRUCTION BY CONTRACT

For further information, write or call

WADDOX

CONSTRUCTION COMPANY

GOLF COURSE BUILDERS

Mailing address P.O. Box 66, St. Charles, III. • 584-0315 & 584-6641

BATAVIA, ILL. • 879-3843

DANVILLE, ILL. • 442-2411



For more information circle number 112 on card



"PURE TO STRAIN"
GROWN ON STERILIZED SOIL TO INSURE FREEDOM FROM POA ANNUA
AND OTHER FOREIGN GRASSES.

PENNCROSS BENT SOD



H & E Sod Nursery, Inc. 4301 W. Flossmoor Rd. Tinley Park, Illinois 312 798-2210

For more information circle number 151 on card

LEGAL PUTTER

Continued from previous page

of center. "This was the difference between having a putter and not having one," Vic says. "When I took this one (No. 5) to the course I got a lot of favorable remarks. Another plus was that it allowed me to put a line down the center of the putter, making a good sighting guide as the golfer lines up his putt."

But Vic's problems were not quite over. After about an hour or so, some of the golfers complained the rounded sole did not sit flat on the ground. They found they had to "float" the club off the green at address, which was uncomfortable, and tended to increase tension.

"I took out a file and flattened the sole a little in the center, and while I was at it, filed down the 'wings' of the putter, thus bringing out, in the mind's eye, the central 'hammer' portion. This improved its general appearance immeasurably."

The end result, which De Carlo has

William F. Gordon

and

David W. Gordon

Golf Course Architects

Doylestown, Pennsylvania
FIllmore 8-4243

American Society of Golf Course Architects

For more information circle number 147 on card

Clubs Scrubbed Clean in 2 Minutes 1966 IMPROVED

1966 IMPROVED CLUBSCRUB

ClubScrub cleans faster, better . . . is rugged, easy to operate, trouble-free . . . trade-in policy, replacement parts. Immediate delivery.



Distributors, Manufacturers Representatives inquiries invited, territories open.

BOX 300, SCHENECTADY, N. Y. 12301

For more information circle number 130 on eard

named the Bull-Head Putter, is shown as No. 6 and at bottom right (p. 48). This putter conforms to USGA rules.

"That's the story," says Vic. "If I had to do it all over again, I think I would have guit cold. Luckily for me, my wife Joan kept prodding me just enough to keep going. I also received a lot of help along the way from professionals to whom I showed the club, especially Fred Ferrara, our pro at Northwood."

GRAFFIS' SWING

Continued from page 9

of Recreation Park, Long Beach, and the cartographers went on from there . . . But now all is well; the mistake no longer is a mistake . . . At the suggestion of Long Beach citizens who've enjoyed Lake's 30 years of service, the Recreation Park casting pool has been named Lake George . . . George Lake, by the way, while sec. of the PGA Junior Golf Promotion Committee, organized pros nationwide into the kid golf program.

Continued on next page

FRANCIS J. DUANE

Golf Course Architect

921 Port Washington Boulevard Port Washington, L. I., N. Y.

516 - POrt Washington 7-7851

Member

American Society of Golf Course Architects

For more information circle number 138 on card

Robert A. Simmons **GOLF COURSE ARCHITECT** Kokomo . Indiana 40901 P. O. BOX 1023 PHONE: AREA 317 - 452-8449

For more information circle number 139 on card



For more information circle number 177 on card



Write TODAY for Brochure

KWIK-BILT, INC.

BOX 19834

DALLAS, TEXAS

For more information circle number 142 on card



For more information circle number 150 on eard



For more information circle number 149 on card

PRIME QUALITY CONDITION KEPT BAMBOO WHIPPING POLES FROM GROWER TO GOLF COURSE

The only Bamboo advertised, internationally sold with guaranteed quality specifications.

Available thru Golf Course Suppliers or sold direct where Dealers don't Care, Know or Bother about our Bamboo.



For more information circle number 181 on card

JAMES GILMORE HARRISON

Golf Course Architect

Member American Society of Golf Course Architects

266 Harrison Road
Turtle Creek, Pennsylvania 15145
Tel. 412-823-3444

For more information circle number 128 on card

CUSTOM MADE WOODS

CUSTOM MADE PUTTERS

Including Famous "WON-PUTT" & "PRO'S OWN"

Repairs-Any Make Club

Fast Service — Reasonable Prices Write for Catalogue & Price List

Bert Dargie GOLF CO., INC. 3030 SUMMER AVE. • MEMPHIS, TENN. 38112 PHONE 324-4688 AREA CODE 901

For more information circle number 127 on card

GOLF COURSE IRRIGATION CONTRACTORS • ENGINEERS

Irrigation doesn't cost . . . it Paysl

March Irrigation and Supply Co.

1854 Industrial Blvd.

Muskegon, Mich.

PH-3-3388

For more information circle number 178 on eard

GRAFFIS' SWING

Continued from preceding page

Joe Campbell is taking time off from the circuit to work with Sam Carmichael. who's taking a short leave from his job as asst. to Blackie Orsi at Bob o' Link GC (Chicago district) . . . They're running their second U.S. Junior Golf Camp at Lake Manitou, Rochester, Ind. . . It's for boys from 8 to 18 . . . Jay Kimbrough now pro-mgr. Durant (Okla.) CC . . . Pro football leagues getting together with prospect of television running the pro football show may make you ask what's happened to the Yankees and who cares? . . . Another round is coming up in the debate between sponsors and pros on TV money.

PGA played it very smart in promoting John Hubbard, its magazine editor and publicity man to become an asst. to Robert T. Creasy, the association's executive director . . . Creasy also gets William A. (Billy) Booe as an asst. on tournament bureau matters . . . Booe was supervisor of the Caribbean and Latin American tours . . . Glynn (Bud) Harvey joins the PGA in the new post of director of public relations . . . Harvey is an experienced newspaperman, was associate editor of Golf World with Bob Harlow, and helped Fred Corcoran write his book . . . He has been editing a trade association journal . . . Among his numerous cultural qualities is his talent as a Barber Shop Quartette canary . . . At this writing PGA is still looking for a man who will plan and conduct the PGA's business educational program

which is to be greatly enlarged. Douglas Kennedy and Phil Corrado have bought Villa Olivia CC in western suburban Chicago, one of the older daily fee courses which has been attractively rehabilitated . . . Next vear Villa Olivia will care for individual fee play as well as trade tournaments but in 1968 will receive trade tournaments only . . . Already much of the course's available time has been booked for trade affairs . . . Pro shop club sales so far this year are decidedly ahead of any previous year . . . Golf courses maintenance equipment sales, mowers and tractors especially, are highly satisfactory, too, in most areas.

Alvin (Butch) Krueger resigns after

40 years as pro at Beloit, Wis., municipal course . . . Poor health . . . He was a fine player in the 1930s . . . Howie Kluth now pro at Royal Oaks CC, Mequon, Wis., with winter job at Estate Carlton Hotel course, St. Croix, Virgin Islands . . . Billy Milward signed as pro at Bass Lake CC, Antigo, Wis. . . . George Ruffin new pro at Beaver Hills CC, Cedar Falls, Ia. . . . Johnny Bulla back in a pro job after a long time away . . . He now is pro at Century CC, Scottsdale, Ariz. . . . Bulla has won the Arizona Open 13 times.

Jim Barnes, 79, winner of the first PGA championship (in 1916) and of the PGA in 1919, the US Open in 1921 and the British Open in 1925, and the Western Open in 1914, 1917 and 1919, died of a heart attack in his apartment at East Orange, N.J., May 25 . . . He was born in Cornwall, England, and came to the U.S. in 1906 . . . He served as pro at Pelham CC, Crescent Athletic Club, Essex CC and North Hempstead Club, all in the New York Metropolitan district . . . He retired in 1930 but continued to give occasional lessons . . . He was at the National Open at Congressional in 1964 as a spectator . . . He said that he weighed five pounds more than when he won at Columbia CC in 1921 . . . He led Walter Hagen and Fred McLeod by nine strokes at the 1921 finish . . . Although tall he played with shafts shorter than normal . . . His wife died in 1964 . . . He is survived by two daughters, Mrs. Noel Thompson and Mrs. Joseph A. Manda.

John Lawrence Grimes, 75, formerly advertising director for Wheeling Steel Co. and writer of a golf column in Wheeling News Register, died recently in Wheeling . . . He was active in West Virginia golf and was early in seeing the potential of Sam Snead and forecasting that the boy from The Greenbrier was bound to be one of the greatest.

L. R. (Rusty) Wall, branch mgr., A.G. Spalding & Bros., Chicago, started with Spalding in April, 1926, when Spalding's Chicago office was at 211 S. State St. and Doug Tweedie, C.S. Lincoln, Johnny Miller, Jim Craig and other historical characters were around . . . Rusty still looks and acts as fresh Continued on next page

MANUAL & AUTOMATIC TURF IRRIGATION

Design—Installation
Complete Pumping Installation

SKINNER / BUCKNER / J-M PVC & TRANSITE

Alcoa Aluminum Portable Pipe—Pumps RENTAL & SALES

OLDFIELD EQUIPMENT CO.

430 W. Seymour Ave., Cincinnati, O. 45216 Phone: 821-5582

For more information circle number 148 on card

WILLIAM P. BELL & SON

GOLF COURSE ARCHITECTS

Member: American Society of Golf Course Architects

544 Sierra Vista Avenue

Pasadena, California

213-793-6944

714-675-2098

For more information circle number 113 on card



MILLER GREEN

Miller Sprinkling Systems

Division of A. J. Miller, Inc. 1320 North Campbell Road, Royal Oak, Michigan 313, 398-2233

40 years of experience in designing and installing sprinkling systems

For more information circle number 126 on card

SAVE LABOR AND TIME

THE PROVEN MECHANICAL STONEPICKER

Revolving arm and rake design picks all stone to 9 inch diameter — pulverizes, aerates and returns soil in ideal condition for seeding. Sod develops faster and sturdier — Contact



manufacturer for more details.

BRIDGEPORT IMPLEMENT WORKS, INC.

Box 286G Stratford, Conn. 06497 For more information circle number 119 on eard

GOLF

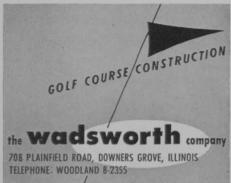
NATION-WIDE DISTRIBUTORS of PAR 3, GOLF DRIVING RANGE & MINIATURE GOLF COURSE EQUIPMENT.

Send for catalog of supplies

NORTHERN GOLF BALL CO.

2350 W. Roscoe St. . Chicago, Illinois, 60618

For more information circle number 180 on card



For more information circle number 125 on card

GOLF COURSE IRRIGATION

ENGINEERS & INSTALLERS Any Phase or Complete Turn-Key Job McCUNE IRRIGATION, INC. 3721 Mahoning Ave.,

Phone: 799-3231 Youngstown, Ohio 44509

For more information circle number 140 on card

GRAFFIS' SWING

Continued from preceding page

as a new guy on the job trying to make pros happy . . . Avery Harris, who handles Wittek Golf Range Supply Co. foreign business says Wittek's foreign business in range equipment is vastly larger than they ever thought possible . . . Sales of Wittek ball washers and pickers is large in Japan and Britain . . . Oil company employees on ranges in Saudi Arabia use a lot of Clem Wittek's equipment and supplies . . . Miniature courses are doing great wherever the locations are good, Harris reports . . . That new plant of Wittek's with 80,000 sq. ft. is a tremendous rise from Clem's start in range used ball sales.

That story on Doug Sanders a collection of short quotes Dan Fales wrote for *Life*, has some swell paragraphs: . . . "For every bucket of practice drives a golfer should hit two buckets of chip shots . . . That's where most of the money shots are" . . . "I just can't afford to miss these \$100,000 tournaments . . . Hell, a guy can kick the ball around the course and still make three or four thousand." . . . Some tournament sponsors are forecasting there will be a minor league golf tournament circuit sooner than expected if the TV revenue share from the bigger money tourneys is cut from the events that are financed by selling tickets . . . Golf tournament television ratings are not much to brag about but they are reputed to have a class audience and get rid of a lot of advertisers' money very quickly.

Robert Thomason is architect of Old Mill GC nine at Winton, N. C., built on an FHA-guaranteed loan at the site of Hare's Mill, which has been going since pre-revolutionary days . . . Thomason also has designed nine for Montecillo, Ky., with FHA OKing the loan.

It's a pleasant service to be able to put in a plug for William Sherman and Associates and Golf Realty Corp., 16 California St., San Francisco . . . They are selling, leasing, managing and developing golf course projects with housing development on the rim . . . A Fresno, Calif. attorney, Vernon E. Bjorklund is president and Gene Parris of Fres-