

LINDIG'S MANUFACTURING CO.
1875 W. Larpenteur Ave., St. Paul 8, Minn.

## SPECIAL EMPHASIS ON DRAINAGE FOR NEW GREENS IN TEXAS

 By Howard Goldthwaite, Texas Toro Co., Houston, TexasThe principles of proper drainage are being embodied in the construction of most of the new courses being built in Texas as a result of the many years of teaching by Agri. Exp. Stations and the USGA Green Section on the values to be received from both surface and internal drainage.

The drainage problem in the new construction is being solved in the following manner: First, especially on the heavier soils, four inch tile drains are placed at a twenty-four inch depth below the finished surface of the green. The tile is laid on a two inch bed of pea gravel and pea gravel is filled solid in the trench up to the level of the subgrade. The sub-grade is further prepared by drainage both ways from the middle point of the tile lines so that the water flows equally into each tile line. Then a four inch layer of pea gravel and soil is laid on the sub-grade and on top of this an eight to ten inch layer of a mixture of equal parts by volume of coarse concrete sand containing some pea gravel, native good loam soil, and peat. The peat is shipped in from Minnesota because as yet we have been unable to find satisfactory quality of peat in this state.

These plans and preparations are made primarily because we are interested in producing the finest bent greens it is possible to have. The golf clubs in this area are willing to go to the extra expense of building greens in this way because they want to avoid those periods in the summer when there is excessive rain and high humidity coupled with high temperatures. This type of construction also is necessary because of the heavy

JOHN BEAN POWER SPRAYERS
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## RAINBIRD SPRINKLERS

Heads only, No. 20 covers to $84 \mathrm{ft} . \$ 2.75$; No. 40 covers to $102 \mathrm{ft} . \$ 5.50$; No. 70 covers to 147 ft . $\$ 7.90$; No. 80 covers to 215 ft . $\$ 15.70 ; 18^{\prime \prime}$ roller bases $\$ 6.00$ each.
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PAULE. BURDETT<br>SEEDS - FERTILIZERS - GOLF COURSE SUPPLIES P. O. BOX 24I, LOMBARD, ILLINOIS

clay conditions we find in many parts of Texas which rather effectively prevent the free movement of water and air through the soil. Some of the courses which have had bent greens for a number of years are now rebuilding and installing drainage so that the troubles they have encountered in the past may be avoided in the future.

## CHEMICAL DISCOVERIES AID COURSE MAINTENANCE

By Woodworth Bradley, Pres.,

## Woodworth Bradley, Inc., Providence, R.I.

Two outstanding events of the past year were the discoveries by our Rhode Island State College scientists. One of the chemical formulas, made up of the initials PMAS, is for the control of Crab Grass, and marketed exclusively under the name of "C-Lect."

In the East we have a terrific infestation of Crab Grass and C-Lect is definitely killing it out, including the seeds.
The other chemical is "Chlordane," marketed under the names of "Synklor $50-\mathrm{W}$," by the U. S. Rubber Company and OCTA-KLOR by Julius Hyman \& Co., Denver, Colo., for the control of ants, grasshoppers, etc. It is so remarkable that in twelve hours it kills every ant in the area that has been sprayed, and one application seems to last a season.
An outstanding mechanical development, in my opinion, is the new Jacobsen Power Putting Green Mower with its $13 / 4$ H.P. engine which was developed for the Army Signal Corps during the war. Superior mowing qualities and its low maintenance upkeep is really a remarkable development.

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Made of the finest, kiln dried, second growth, tough White Ash. Tapered from approximately $1^{\prime \prime}$ at bottom to $3 / 4^{\prime \prime}$ at top, and fitted with flanged aluminum ferrules to fit standard $11 / \mathbf{s}^{\prime \prime}$ cup. Sanded finish with prime coat of lead and oil and finished coat of finest white enamel. Available in 2 or 3 color combinations. Immediate delivery.

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