NOTE

A CONTAINER FOR GROWING PLANTS FOR ROOT STUDIES

The container described here and illustrated in Fig. 1 was designed to obtain data on the relative depth to which certain grasses would root under similar conditions. Since it served this purpose very satisfactorily, a brief description is submitted for the use of others who may be interested in similar studies.

The can was made from 22 gauge galvanized iron unpainted. The upright portion of the container merely rests in the detachable bottom which is pierced to provide drainage. The upright portion is bent into shape and the detachable side is slipped inside the two flanges provided. The pressure of the soil within the container holds the fourth side in place after the can is filled. Metal screws are necessary to keep the container from spreading under the pressure developed by tamping, but need be set no closer than 6 inches. The detachable bottom holds the lower portion of the upright part, so no screws need be set in it.

The cans may be filled, set in the ground, and the crop grown for any designated period.

At the close of the growth period the cans may be dug loose, slipped up a plank, and laid on a plank or floor with the removable side up. The side may then be removed, as illustrated in Fig. 2. These operations expose the soil and the development of the roots may be observed easily, particularly at the bottom of the can, if the roots penetrate so deeply. The soil may then be marked off at definite intervals and various layers sliced off and the roots washed out. The fact that the side may be removed makes it possible to detach these layers quickly and accurately.

The containers illustrated were made 10x10 inches and 4 feet deep. They were small enough to be handled fairly easily and deep enough for this study. There was no indication of buckling, however, and the cans could be made larger if desired.

Each screw should be greased as it is set and a little grease applied to the inside of the detachable bottoms to make sure that they will