Whereas in his earlier work Mr. McLeod endeavoured to run the drainage from as great an area as possible to the one outlet, experience indicates the advisability of limiting the area discharging at any one outlet to from three to four acres. The pressure of water from larger areas is liable to cause scouring either in the outlet or on the slope below it.

Layout of Scheme

In laying out this scheme of mole drainage a study is made of the paddock or area to be mole drained, particularly when heavy rain has fallen, and in addition to the selection of suitable locations for outlets, which are marked, the run and line of the mole drains is roughly schemed out. The number and location of outlets is worked out in relation to the general lie of the land, keeping in mind the desirability of limiting the area discharging at each outlet to some 3-4 acres and also limiting the length of the mole drains as far as possible to a maximum of about 10 chains. These limits are recommended by Mr. McLeod as a result of his experience.

He has also found that mole drains are most effective when they run across the steepest slope and are less likely to scour, but he aims always at a definite fall throughout the length of each drain, with a more decided fall if possible near the outlet. A dumpy or other form of level is very useful in working out the amount and direction of the fall. The drainage of such country as that at Colyton, gently rolling for the most part, with steep slopes to watercourses round the edges of the paddocks, lends itself admirably to the methods developed, but it is surprising how the same system of collecting mole drains to discharge at selected outlets can be adapted to varying conditions in different types of country.

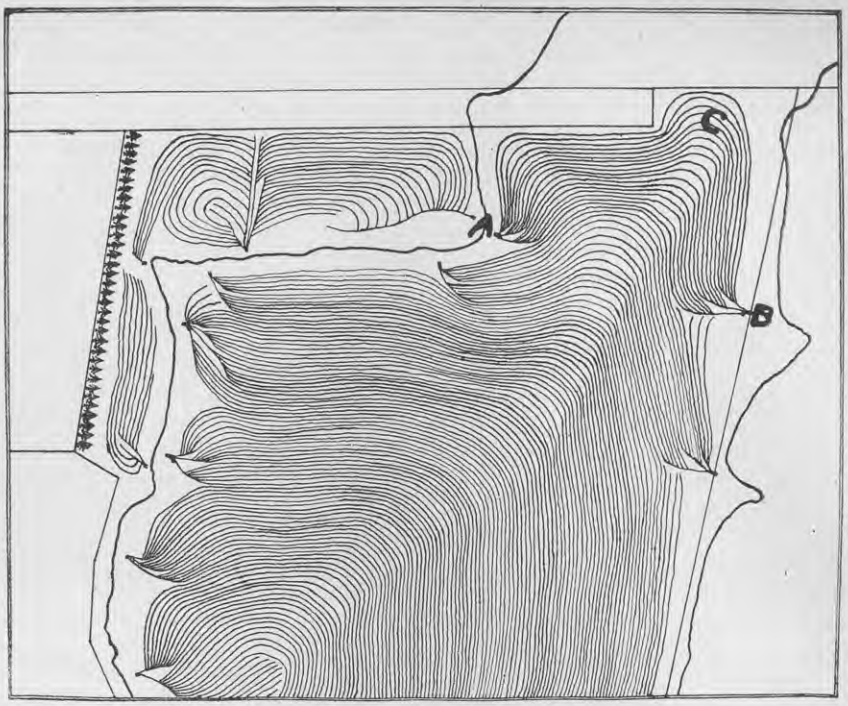

Fig. 4.—**Sketch plan of mole drain system on a 32-acre paddock showing the method of gathering mole drains to discharge at a few selected points.**

Fig. 4 illustrates the layout of a system of mole drainage on part of a 32-acre paddock, one of the first drained with the new system. The main portion of the drainage system crosses a low ridge running from the lower left hand corner up to the point marked "C" on the plan. The drains were drawn parallel as far as possible, about 6-9ft. apart and across the steepest slope from the ridge to the edge of the gulleys indicated by the winding streams. The mole plough worked away from an outlet as at "A" on one side of the ridge over to another outlet shown at "B," and so on down the paddock. The plough was continually in the ground except when pulled out for the turn at the outlets. Each group of subsidiary drains is cut near the outlet by an outlet mole drain which is directly connected to the tiles in the outlet trench and to each of the subsidiary drains by methods explained in detail later.

The flexibility of the system is shown by the way odd corners are dealt with, and the economy in tractor time effected by making full use of the fall to both sides in this field by running across the ridge to outlets on either side should be noted.

Drawing the Moles

Fig. 5, which is a sketch plan of a system of mole drains using the McLeod method in the drainage of some 3½ acres, part of a field at Bunnythorpe, will serve as a basis for the detailed description of the procedure in drawing the mole drains and con-