

and it is necessary to have the top wide enough to accommodate the handles. The bottom will not be as wide.

This operation should be repeated till the ditch is about 15 or 18 inches deep. In order that the horses may walk comfortably, one on each side of the ditch, the lines are opened up as wide as possible and a long doubletree used. To permit the plough to go deep enough in the ground, a chain about six or eight feet long is put in between the beam and the doubletree. This plough will not be found satisfactory after a depth of 15 or 18 inches is reached, as the drain gradually becomes narrower.

(3) Now using a *drainage plough* of some sort, a furrow is ploughed right down the centre of the drain and another in the same groove coming back. This forms a narrow ditch in the bottom, both sides of which are trimmed straight and perpendicular. With a narrow shovel this furrow may now be removed. This operation is repeated again and again until the drain is almost as deep as required.



Fig. 17. Ditching plough.

For this third operation a special plough is necessary—we want something to dig a narrower trench than heretofore. A home-made ditching plough may be made as follows: Take an ordinary plough and remove the mould-board. This of course removes the attachment for the lower end of the right handle, but bolt a narrow block between the handles and run a brace from it to the back bolt in the beam, and the handle is as steady and as firm as ever. Put on a new narrow point. If one has much draining to do, it is advised to make further and permanent alterations. The rod between the handles should be taken out, shortened, and replaced, thus bringing the handles closer together. The top section of the ditch need not now be so wide as before. It is also wise to shorten somewhat the braces that run from the head to the handles, thus raising the latter; the wide section of the ditch need not be so deep as before. An ordinary subsoil plough serves very nicely where the ground is not too hard. The "pick plough" manufactured by various plough companies