

(No Model.)

F. FUNK.
DITCHING PLOW.

No. 552,430.

Patented Dec. 31, 1895.

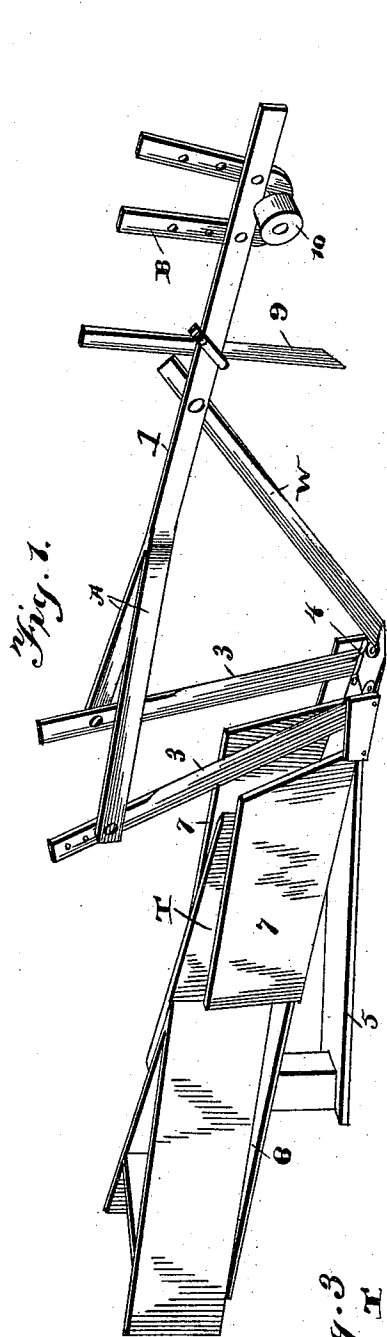


Fig. 1.

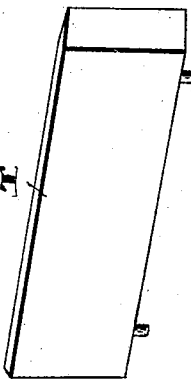


Fig. 3.

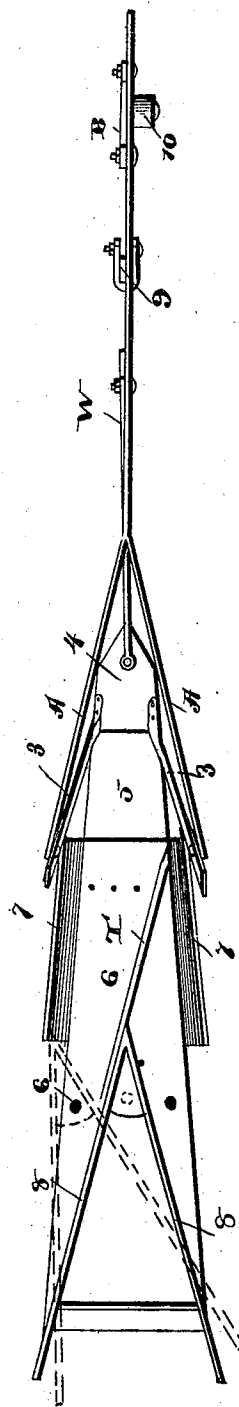


Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

FREDERIC FUNK, OF WARSAW, INDIANA.

DITCHING-PLOW.

SPECIFICATION forming part of Letters Patent No. 552,430, dated December 31, 1895.

Application filed August 3, 1895. Serial No. 558,112. (No model.)

To all whom it may concern:

Be it known that I, FREDERIC FUNK, of Warsaw, in the county of Kosciusko and State of Indiana, have invented certain new and useful Improvements in Ditching-Plows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in ditching-plows; and it consists in the peculiar construction and arrangement of parts which will be fully described hereinafter, and particularly pointed out in the claims.

The object of my invention is to construct a ditching-plov in such a manner that by the adjustment of a moldboard the dirt can be carried to either side of the ditch at any desired or convenient distance, and by the means of a removable division or tongue in the chute or scoop portion and the adjustment of the said moldboard the dirt can be carried to both sides of the ditch or to either side of the ditch, or a large portion to one side and a small portion to the other side as convenience may dictate.

In the accompanying drawings, Figure 1 is a perspective view of a ditching-plov embodying my invention. Fig. 2 is a top plan view of the same. Fig. 3 is a detached view of the removable tongue.

In the accompanying drawings, 1 represents the beam which is divided at its rear end into the two diverging arms or portions A, and supported at the front end of the beam is a roller 10 by means of an adjustable connection B, through the medium of which the depth of the plov may be regulated, as will be fully described farther on.

A rearwardly-extending inclined cutter W has its upper end connected to the beam at about the point where the front end of the diverging arms A meet, and its lower end connected to the front end of the horizontal shovel or cutter 4. This cutter is preferably formed of steel and has its front end sharpened and forms the lower portion or bottom of the ditch being constructed. Extending downward and inclined forward are the two steel cutters 3, having their upper ends con-

nected to the rear ends of the diverging arms A and their lower ends connected to opposite sides of the cutter 4 in rear of the front rearwardly-inclined cutter W.

It will be noted that the cutters W and the cutters 3 have an inclination in opposite directions, whereby they perform their function easier. The front cutter W cuts a seam or opening in the center of the ditch and partly divides the dirt, and the two rear cutters 3 form the sides of the ditch. The upper ends of these cutters 3 and thereby the rear ends of the diverging arms A are connected by means of a suitable adjustable connection C whereby they may be adjusted nearer to or farther from each other and thus regulating the angle of the wall of the ditch and thereby the width of the top thereof.

Extending rearward from the horizontal cutters 4 is a bottom piece 5, which forms a support for the bottom of the chute or scoop 6, the sides 7 of which are connected to opposite sides of this portion 6 and extend downward to the sides of the cutters 4 about to the point at which the lower ends of the rear cutters 3 are attached to the said horizontal cutters 4. This bottom 6 extends upward at an inclination and preferably at about the height equal to the height of the beam 1.

Connected to the rear portion of this bottom 6 is the adjustable moldboard 8, composed of two pieces, as shown, and these pieces are so connected to the bottom 6 that they are adjustably regulated in relation to each other to permit of the dirt being thrown to each side of the ditch any desired distance within the capacity of their adjustment; also, by means of this adjustment the dirt may be thrown farther to one side of the ditch than to the other, as convenience may dictate.

Extending forward from the front end of the diverging moldboard 8 is a removable tongue T. This tongue extends forward into and between the sides 7 of the chute any desired distance and has its forward end sharp, the purpose of which is to divide the dirt and feed it to opposite sides of the moldboard 8. By removing the tongue T the moldboard may be adjusted to have its front end rest against either side of the chute and thus direct all of the dirt to one side of the ditch,

or it can be adjusted to one side of the center of the chute so that a larger proportion of dirt is carried to one side than to the other as necessity and convenience may regulate.

5 It will be noticed that the sides of the mold-board are preferably above the beam whereby the dirt is always carried above the ditch and deposited at each side thereof.

10 From the above description it will be seen that I have produced a ditching-machine having adjustments and capabilities whereby any desired proportion of dirt may be directed to either side of the ditch being formed, or all of it directed to either side, and where-
15 by the inclination of the sides of the ditch may be varied and in consequence the width of its top also regulated.

Just in front of the upper end of the front central cutter W is the shallow depending
20 cutter 9, which precedes the cutter W and is for the purpose of removing rubbish and to clear away the terrace.

Having thus fully described my invention, what I claim, and desire to secure by Letters
25 Patent, is—

1. A ditching plow comprising a beam having diverging rear arms, a horizontal cutter, upwardly and rearwardly extending cutters having their upper ends connected to the rear
30 ends of the diverging arms, and their lower ends connected to opposite sides of the said horizontal cutter, and an adjustable connection for the upper ends of these cutters and the

rear ends of the said diverging arms, whereby the angle of the sides of the ditch and in consequence the width of the top of the ditch may
35 be varied at will.

2. A ditching plow comprising a beam, a horizontal cutter, an upwardly and rearwardly extending chute side boards at the
40 lower end of said chute, a diverging mold board at the rear end of the said chute with its pointed end in a line between said side boards, the rear end of the said mold board being adjustable for the purpose set forth. 45

3. A ditching plow comprising a beam, a horizontal cutter, a rearwardly and upwardly extending chute, a movable mold board at or near the rear end of the said chute, in combination with a removable central tongue, 50 all combined to operate as specified.

4. A ditching plow comprising a beam, a horizontal cutter, upwardly and rearwardly extending chutes, a V-shaped mold board with its apex approximately midway between the
55 rear ends of the sides of the chute, and a forwardly extending tongue having its rear end at the apex of the V-shaped mold board and its forward end between the sides of the chute, substantially as described. 60

In testimony whereof I affix my signature in presence of two witnesses.

FREDERIC FUNK.

Witnesses:

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