

E. Worth & C. A. Davis,

73560

Ditching Machine

Fig. 1.

PATENTED

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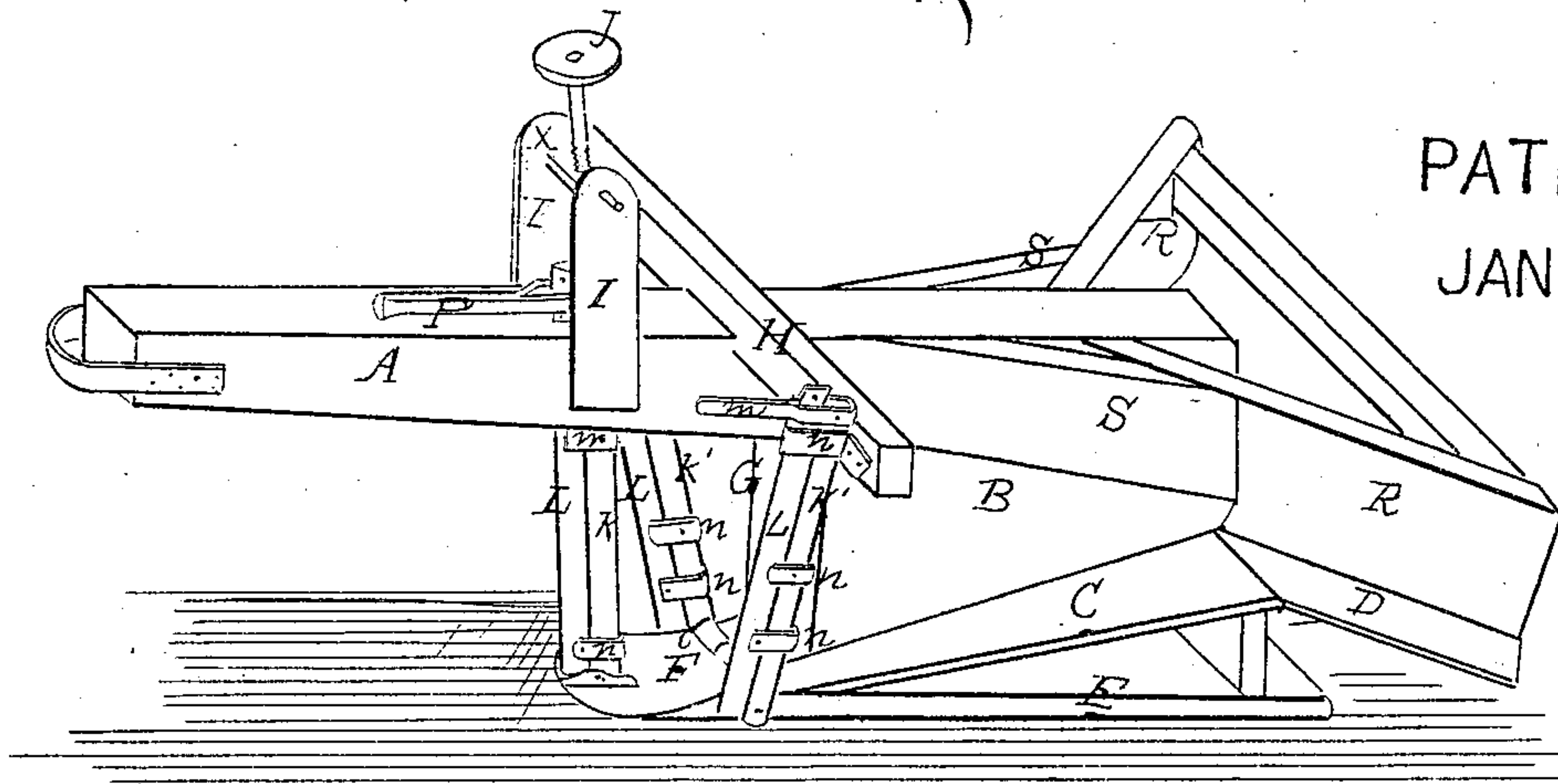


Fig. 2.



Witnesses

Wm. Wagner

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Inventors,

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By their attorney

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# United States Patent Office.

E. WORTH AND C. A. DAVIS, OF OSWEGO, ILLINOIS.

*Letters Patent No. 73,560, dated January 21, 1868.*

## IMPROVEMENT IN DITCHING-MACHINES.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that we, E. WORTH and C. A. DAVIS, of Oswego, in the county of Kendall, in the State of Illinois, have invented a new and useful Improvement in Ditching-Machines; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification, in which—

Figure 1 is a perspective representation of our machine.

Figure 2, a broken elevation of the clutch and screw which regulate the depth that the ditcher is to run in the ground.

This invention relates to novel means for regulating the depth of the ditcher in the ground, and in attaching knives to the cutter-bars for the purpose of severing bogs, and overcoming the resistance encountered by the stationary cutter; and further, in the use of an inclined flange, on both sides of the mould-board, attached to horizontal shears, both parts answering the purpose for elevating the earth and cutting so much of it as is to be taken out.

In order to give a correct understanding of our invention, we have marked corresponding parts with similar letters, and will now give a detailed description.

A represents the beam, E the shoe, and S R the framework of a common ditching-machine. C shows one of the inclined flanges rigidly attached to the mould-board B, the shoe E, and a horizontal shear D, the latter being sharp at its outer edge, so as to pass easily through the ground, and support the earth till the V-frame R throws it out at the side of the ditch, after it has passed up the incline C. A point, F, is hinged to the shoe E at o, and used to regulate the depth which the machine is to run in the ground, and is operated by means of the following device: A cutter-bar, K, is jointed to said shoe, and made to pass through the beam A and connect with a screw, J, by means of a clutch, M, fig. 2, two standards, I I, attached to beam A, being used to support a nut X, through which said screw J passes. By this arrangement it will be seen that, if the point F be raised up by screw J, the machine will be inclined to run more or less out of the ground, according to the angle given compared with the shoe E, and that the lower the point is set the deeper the ditch will be cut. K' K' represent the side cutter-bars attached to the shoe E and cross-bar H, and set at the same angle which the ditch is to have when finished, as seen at fig. 1. Knives L are made of cast steel, and to fit the front edges of the cutter-bars K' K', and with loops m attached near their back edges for the purpose of keeping them in position, and also permitting them to have a reciprocating motion on said cutter-bars, levers p m being pivoted to the tops of the latter and to the knives L, and used to give the said motion when worked up and down by hand. This latter arrangement we consider very important, for, when the machine is moved slowly through the ground, as by a capstan, the knives L can be readily operated, which will materially lessen the draught.

It will be seen that only one side of the machine is clearly shown at fig. 1, but as both sides are constructed alike, no difficulty will be experienced in comprehending the device. The principal part of the machine can be made of wood, and then ironed off similar to other ditchers now in use.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. The knives L, arranged to operate substantially as and for the purpose set forth.
2. The point F, jointed to the shoe E, in combination with the cutter-bar K, screw J, and standards I I, arranged to regulate the depth of the machine in the ground, substantially as set forth.
3. The combination of the horizontal shears D, inclined flanges C, with cutter-bars K' K', knives L, and mould-board B, substantially as set forth.

E. WORTH,  
C. A. DAVIS.

### Witnesses:

WM. WAGNER,  
W. NOBLE DAVIS,  
W. L. FOWLER.