(No Model.)

J. ROBERTSON.

DITCHING MACHINE.

No. 303,189. Patented Aug. 5, 1884.

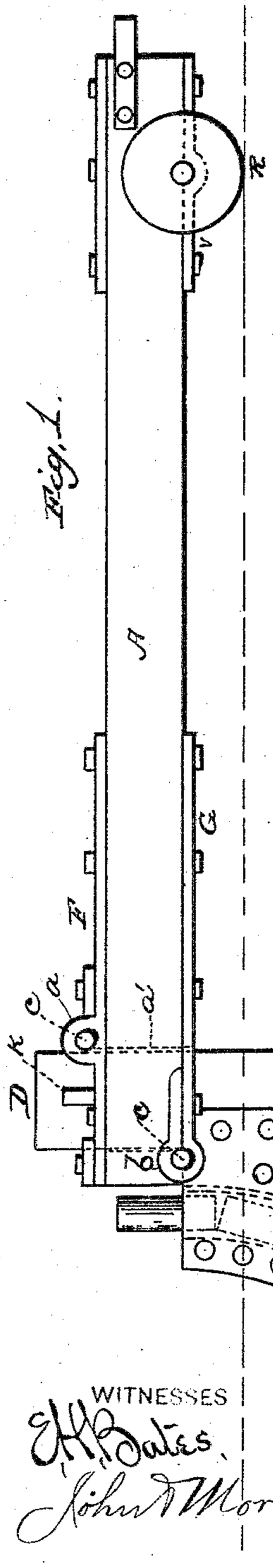

Fig. 1.

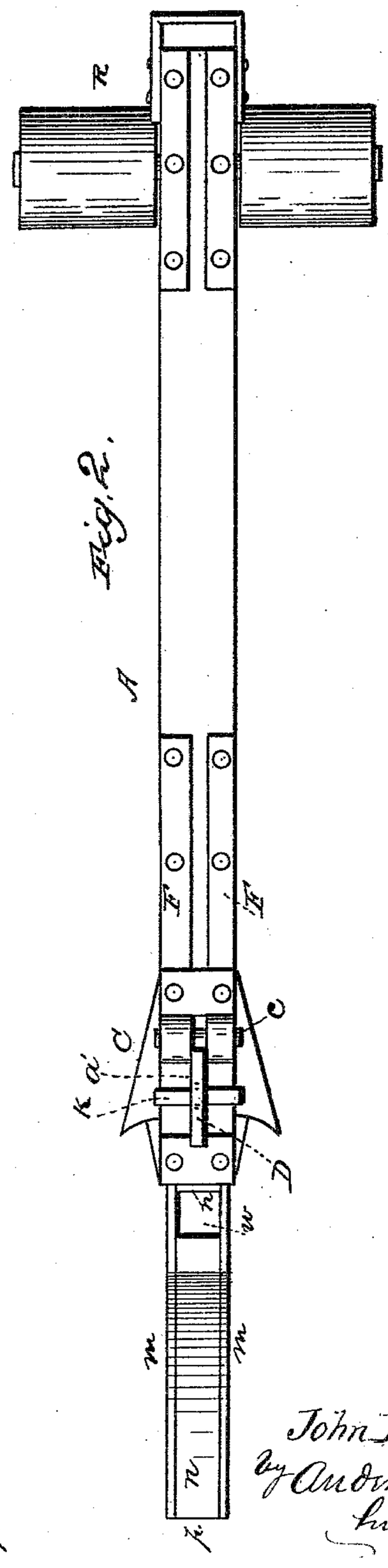

Fig. 2.

UNITED STATES PATENT OFFICE.

JOHN ROBERTSON, OF SIBLEY, IOWA.

DITCHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 303,189, dated August 5, 1884.

Application filed March 26, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN ROBERTSON, a citizen of the United States, residing at Sibley, in the county of Osceola and State of Iowa, have invented certain new and useful Improvements in Ditching-Machines; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specificatior.

Figure 1 of the drawings is a side view of my device, and Fig. 2 is a top view of the same.

This invention relates to an improvement in ditching-machines; and it consists in the novel construction and arrangement of devices, as hereinafter set forth, and pointed out in the appended claim.

In the accompanying drawings, the letter A represents the beam, B the cutter, and C the plow at the bottom of the cutter. At the cutter end of the beam, and on both the upper and lower surfaces thereof, there are strong iron plates F and G, securely bolted together and to the beam, as shown, thereby greatly strengthening this portion of the beam. At the points *a* and *b* in these plates are provided eyes, into which are inserted heavy iron wear-pins *c*. When the machine is in motion, the stress at these points is exerted upon these pins, which readily sustain it and prevent undue wear and rocking at the bearing-points. These wear-pins, being removable, may be replaced when necessary. The upper portion of the cutter is widened to form a tang, D, which is of such length that when inserted through a bearing-slot, *a'*, in the beam a small portion will protrude above the top of the beam. This protruding portion is provided with an opening, into which may be inserted the key *k*, which is designed to firmly hold the cutter in place. When the key is removed the cutter can be at any time separated from the beam, as circumstances may require. The key *k* rests upon the iron plate on the surface of the beam. At the forward end of the beam is seated in bearings *v* the transverse shaft of the double roller R, which, by contact with the ground, prevents the depression of this end of the beam which the operation of the plow tends to produce when the machine is in action. At the same time the roller offers no resistance to the progress of the machine. The cutter is provided with a broad attachment, which extends in rear thereof, and consists of lateral plates *m m*, which are secured to each side of the cutter, and between which are secured curved guides *n n*, extending along the rear portion thereof from top to bottom, and at a sufficient distance apart to provide a curved way, *w*, of proper size to receive the tiles *z* and allow them to pass downward, one after another, and out at the lower opening of said way, which is in rear of the plow, as shown at *p*. This opening is at the lower end of the passage *w*, which is in this part horizontal, the curvation being such that when the tiles enter in the way in the vertical direction they leave it in the horizontal position, the plow forming the opening in the soil to receive them as they are discharged.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The ditching-machine having the slotted beam eye-plates and wear-pins, the cutter having a tang at its upper end passing through the slot of the beam and engaging the wear-pins, the plow at the lower end of the cutter, and the lateral attachment plates extending in rear of the cutter, and having curved guides between said plates, forming a way adapted to receive the tiles and deliver them horizontally in the ditch formed by the plow, substantially as specified.

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

JOHN ROBERTSON.

Witnesses:

R. S. HALL,

J. S. DAVISSON.