

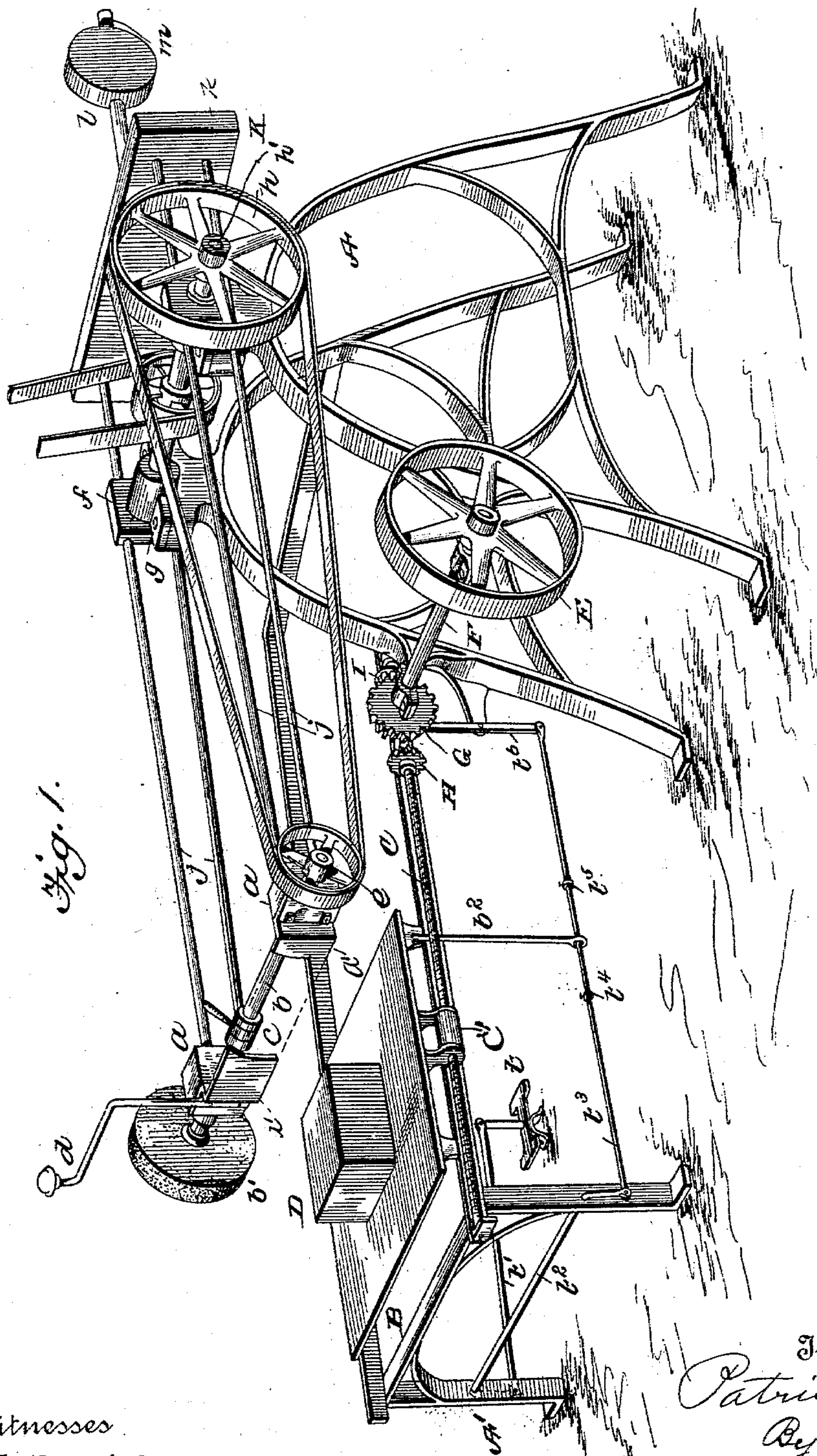
(No Model.)

2 Sheets—Sheet 1.

P. MAHER.
AX DIE MACHINE.

No. 551,392.

Patented Dec. 17, 1895.



Witnesses
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L. G. Harris

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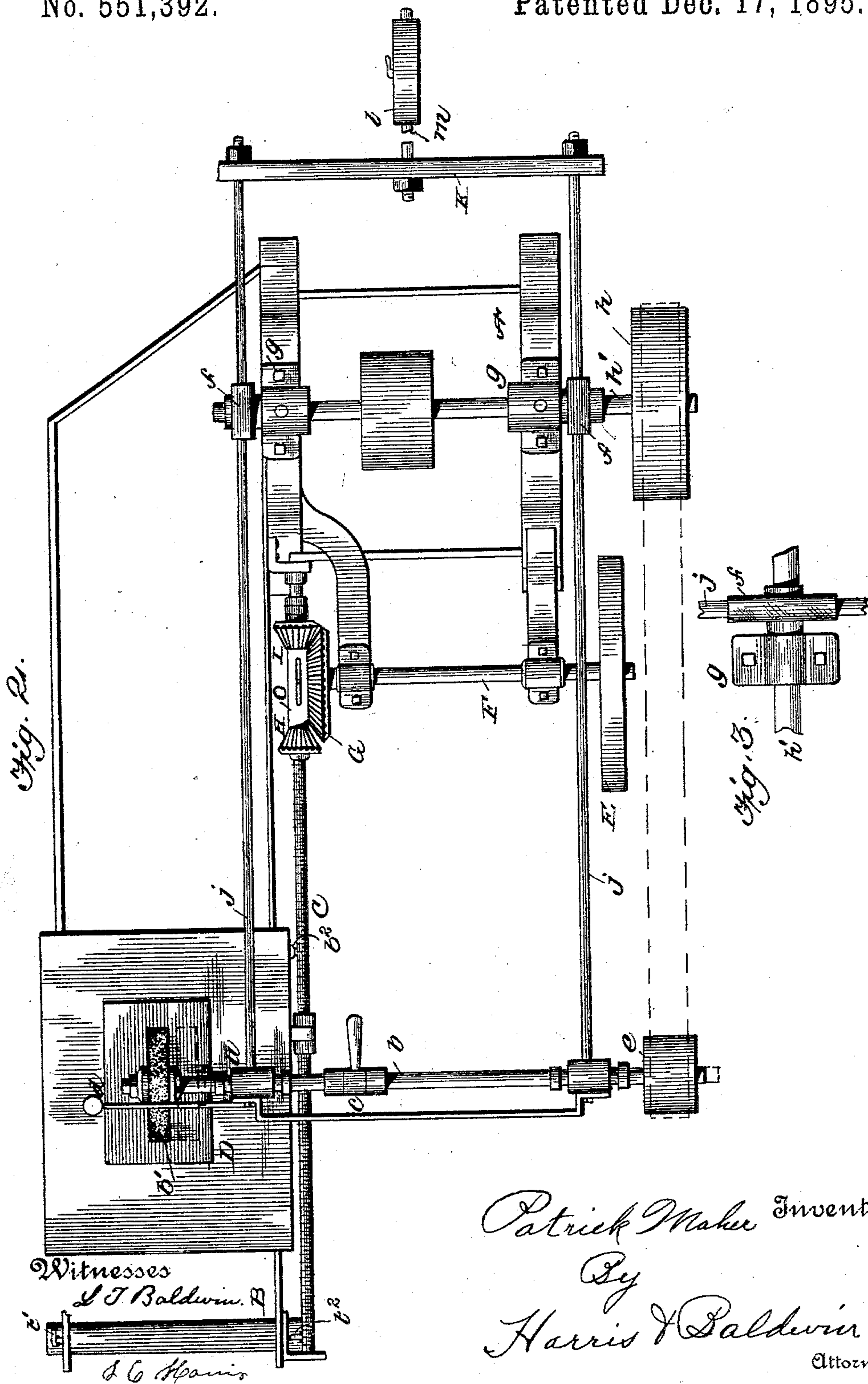
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

PATRICK MAHER, OF JAMESTOWN, NEW YORK.

AX-DIE MACHINE.

SPECIFICATION forming part of Letters Patent No. 551,392, dated December 17, 1895.

Application filed July 6, 1895. Serial No. 555,123. (No model.)

To all whom it may concern:

Be it known that I, PATRICK MAHER, a citizen of the United States, residing at Jamestown, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in Ax-Die 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 the letters of reference marked thereon, which form a part of this specification.

The object of my invention is to make a strong and efficient machine for sinking ax-dies, and one that will save the hand-labor of chipping them out with a chisel, as heretofore done.

In the drawings, Figure 1 is a side elevation of a machine containing my improvements. Fig. 2 is a plan view. Fig. 3 is a section showing box and arm hung on the same.

In the drawings, Fig 1, A is a heavy stationary frame, having a balanced swinging frame mounted on the top of same. It also sustains the rear of metal frame A', the front end of which has suitable legs for supporting the same. Mounted on ways on the top of frame A' is the movable metal table B.

D is a large block of steel into which the die for the ax is to be sunk to form the lower half of the die. A similar steel block is used for the upper die. This block D is heavy enough to stay on the table wherever placed, but might have stops or means for holding it secure in any desired place if necessary.

F is a metal shaft mounted on frame A, as shown, having pulley E at one end and bevel-gear G at the other.

C is a threaded rod mounted on the frame A' parallel to the top of the frame, having arms extending down from the table holding a rigid threaded tube C', which moves on the rod carrying the table back and forth on the ways of the frame.

b² is a rod rigidly attached to table-lug and has a hole at the lower end through which the shift-rod t³ passes, said shift-rod being provided with movable stops t⁴ t⁵ to throw the bevel-gears H and I, which are secured to the sleeve O, so as to reverse the motion.

t is a foot-treadle for operating connecting-rods t', t², t³, and t⁶, as shown in Fig 1.

t⁶ is secured to sleeve O to throw the gear H and I in and out of gear G.

h' is a shaft mounted on the frame A, carrying the balancing-frame K and suitable driving and connecting pulleys. The balancing-frame K has its support and turns on boxes f f, and therefore does not come in contact with the shaft h. This is done to prevent wear and also to keep the heft from bearing down on the shaft. j j are extension rods of this upper frame and at their rear end are secured to the cross-bar k, from the rear of which extends the metal arm l to carry the movable weight m for the purpose of balancing the emery-wheel b'. To the other end of these rods are secured the boxes a a, which are connected by a wide heavy metal bar a'.

b is an arbor journaled in the boxes a a and extending beyond the frame at one end to receive the driving-pulley e, and has secured at the other end the emery-wheel b'. This arbor can be moved endwise a certain distance by the handle c, which has a hole through it for the arbor, and collars on each side to hold it the desired distance from the frame's side.

d is an arm attached to the box a, and is bent at right angle to come over the top of the emery-wheel and is supplied with a suitable handle.

The operation is as follows: The operator stands on the opposite side of the table B, the machine is put in motion, operator places one hand on arm d and the other on handle c with foot on treadle t; with his hand on arm d he brings the emery-wheel down on the ax-die D, giving the desired pressure, and with the other hand on the handle c he can move the emery-wheel across the block D, and with the foot on the treadle he can start and stop the table at any desired point as it feeds on the threaded rod C, or, when desired, stops t⁴ t⁵ may be set and the table left to move back and forth automatically.

Emery-wheels should be used of different size and cutting-surfaces, according to the work to be done.

It is essential to good work that the table move true backward and forward.

With a little practice the operator is en-

abled to sink these heavy dies at less than one-fourth the cost of hand-labor.

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

In ax die machines, the frame A supporting the swinging frame K, mounted on stationary boxes *f, f*, said frame carrying the movable arbor *b*, having emery wheel *b'*
10 mounted thereon, in combination with frame A', carrying table B, and steel block D, said table carried backward and forward by

threaded rod C, and hollow sleeve C', the automatic movement being given by the gears H, I, G, and sleeve O, having suitable rod 15 and treadle connections to change the motion, substantially as shown and for the purpose set forth.

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

PATRICK MAHER.

Witnesses:

L. T. BALDWIN,
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