J. F. Sargent.

Upsetting Tires.

No. 76,822. Patented Apr. 14, 1868.

Fig 1.

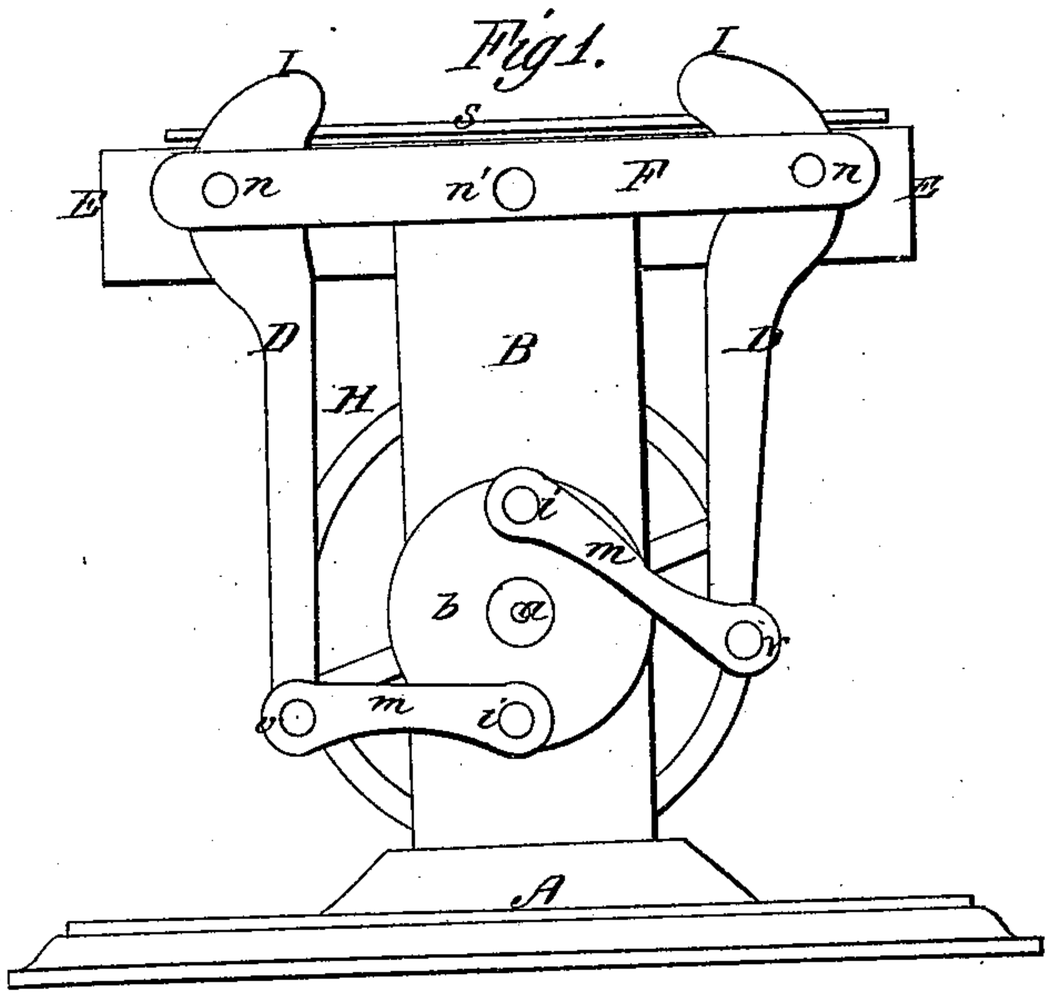


Fig. 2.

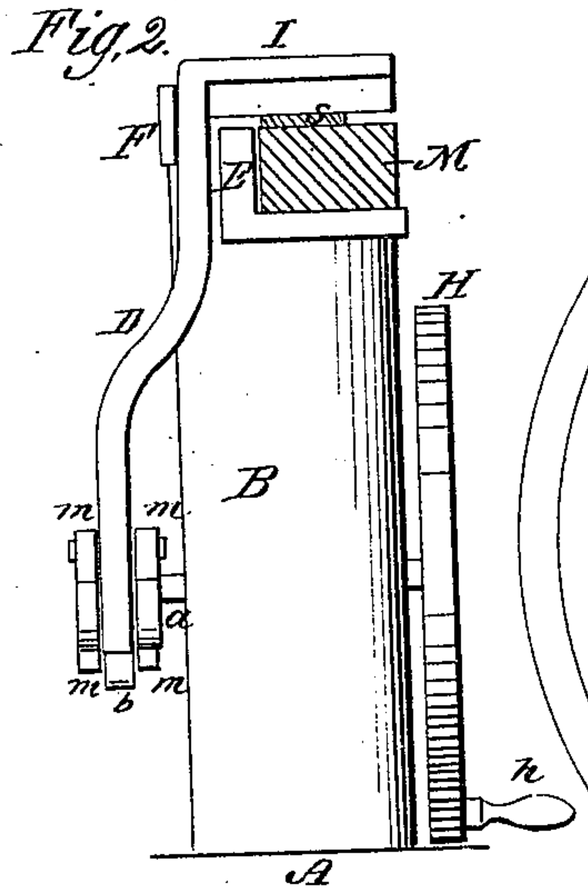
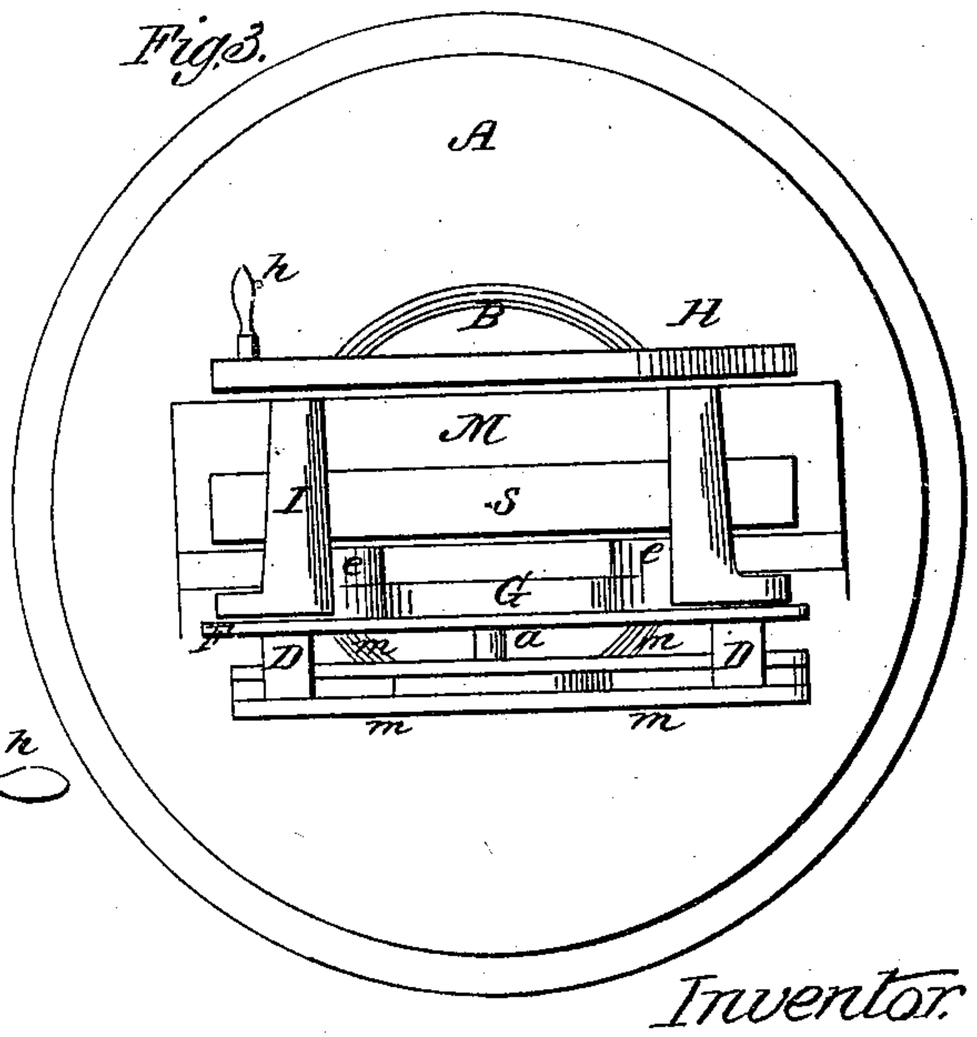


Fig. 3.



Witnesses.
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J. F. SARGENT, OF TUNBRIDGE, VERMONT.

Letters Patent No. 76,822, *dated April* 14, 1868.

IMPROVEMENT IN UPSETTING-MACHINE.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, J. F. SARGENT, of Tunbridge, in the county of Orange, and State of Vermont, have invented a new and improved Upsetting-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

Figure 1 is a side elevation of my machine.

Figure 2 is an end elevation of the same.

Figure 3 is a plan view of the machine.

Similar letters of reference indicate corresponding parts.

This invention relates to the compressing or upsetting, so called, of iron tires, bands, bars, rods, or other metallic bodies of longitudinal dimensions.

It consists of a pair of levers, operated by an oscillating-disk, to which they are connected by links, the said levers having projecting arms, which, when operated, bear down upon the iron bar or rod with the peculiar upsetting motion, as will, together with the other parts of the machine, be hereinafter more fully set forth.

From the base, A, arises a block, B, which supports the mechanism. On a shaft, *a*, passing through the block, as shown, is a disk, *b*, to which are eccentrically attached, by wrist-pins, *i*, the double links *m m*, which latter connect with the levers D, as shown at *v*. These levers are again pivoted at *n* to a bed-plate, E, set on the top of the block B, and held there by one or more countersunk screw-bolts, not shown.

To hold the bed-plate E more firmly, the block B is sawn not quite across at the top, and a portion of the wood left, as shown at G, projecting above the sawed end of the block upon which the bed-plate E rests. The vertical flange of the bed-plate rests against this part, *a*, and is held there by a bar, F, bolted at *n n* to the bed-plate, these bolts, by which the said bar is attached, serving as centres, on which the levers D operate. A central bolt, *n'*, may be added, if desired.

The shaft *a*, on which the disk *b* is mounted, passes through the block B, and on its opposite end is keyed a crank-disk, H, having a handle, *h*, as shown.

The levers D are bent horizontally across the top of the bed-plate E, as shown, thus forming arms I, which are the means of producing the clamping action on the iron bar, as will be shown.

The vertical flange of the bed-plate is notched, as shown at *e*, to permit the proper movement of these arms downward and toward each other, when in the act of clamping the bar, rod, or tire, which is shown at S resting upon a metallic die-block, M, which latter rests on the bed-plate, as shown, and is removable. There should be, in practice, several of these blocks, of different thicknesses, whereby the permutation of them would provide a number of different thicknesses requisite for upsetting light or heavy work.

In operating this machine, the tire, bar, or rod is placed under the arms, and the crank *h* turned. The arms I of the levers will descend upon the bar and hold it firmly. The metal should be previously bent up at the point to be upset, and, when thus bent, part is clamped between the two arms of the machine. A few blows with the hammer forces the bent part down straight again, and thus accomplishes the upsetting of the bar or rod, to be performed in less time than any other machine, which is an important feature.

The part of the arms I that impinges upon the metal to be compressed is angular, whereby it takes a firm hold upon all forms of rods or bars, and is thus suitable for light or heavy work.

I am aware of the existence of various machines for the purpose of upsetting iron, but their operation is slow, and attended with other objectionable features, which do not obtain in connection with the one above presented, as its compass is small, its action quick and perfect, and at a small outlay of power.

Being simple, durable, and cheap, it supplies a desideratum long felt by iron-smiths.

I claim as new, and desire to secure by Letters Patent—

1. The disk *b* and links *m*, or other equivalent devices, constructed and operated substantially as shown and described, in combination with the levers D and arms I, all as and for the purpose set forth.

2. The block B and base A, combined and forming a pedestal for supporting the mechanism, substantially as shown and described, in combination with the bed-plate E, and levers D and arms I, all as and for the purposes set forth.

3. The levers D, formed with arms I, in combination with the links *m*, disk *b*, and crank *h*, all constructed, arranged, and operating in the manner substantially as herein shown and described.

J. F. SARGENT.

Witnesses:

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