W. HOLDSWORTH.

Tire-Upsetting Machine.

No. 221,066. Patented Oct. 28, 1879.

Fig. 1.

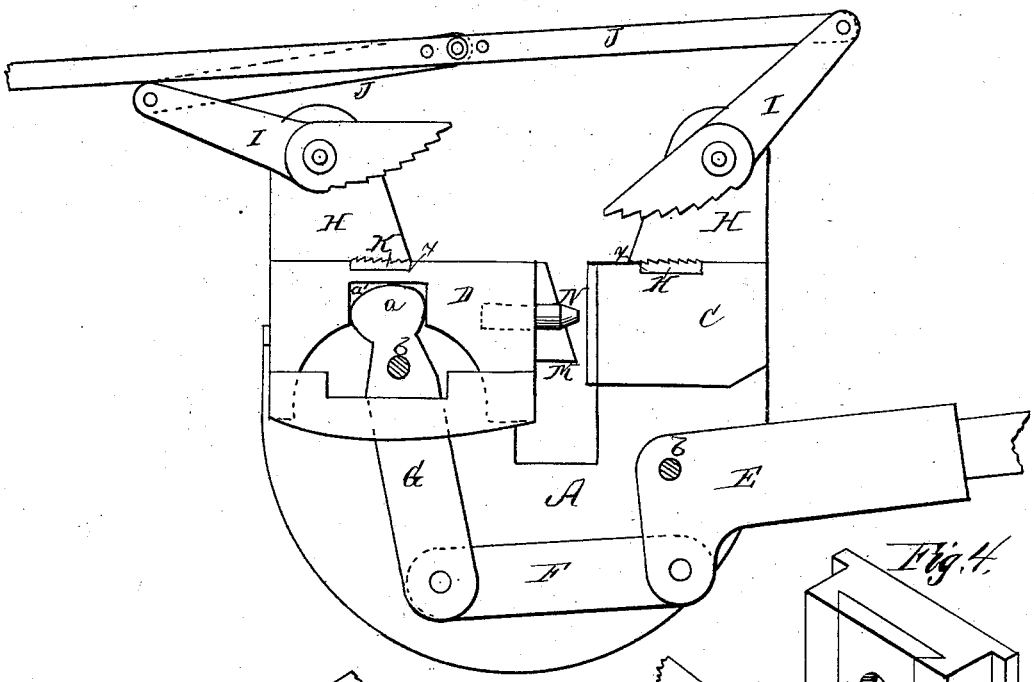


Fig. 4.

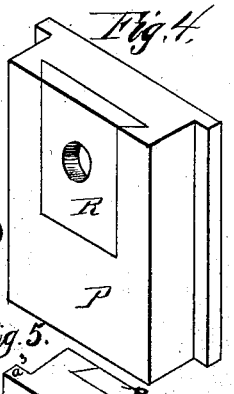


Fig. 2.

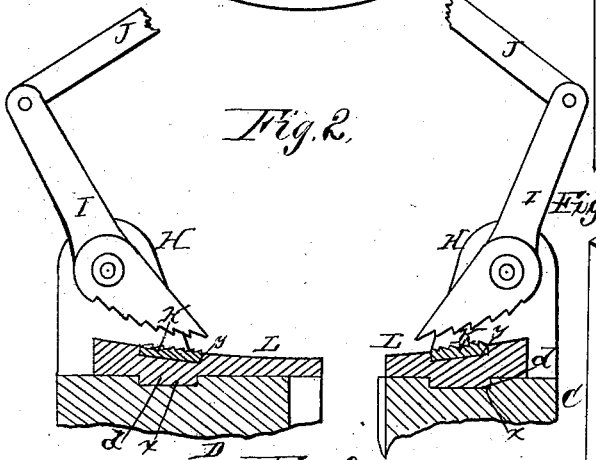


Fig. 5.

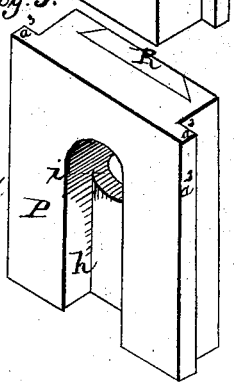
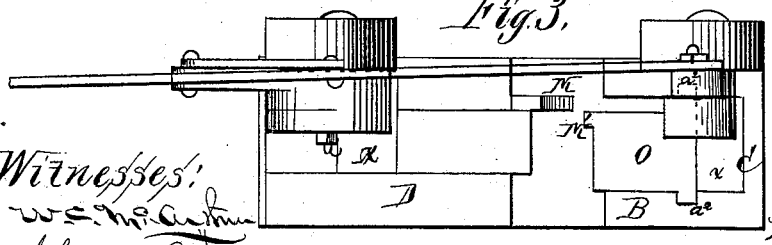


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM HOLDSWORTH, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN TIRE-UPSETTING MACHINES.

Specification forming part of Letters Patent No. **221,066**, dated October 28, 1879; application filed June 26, 1879.

To all whom it may concern:

Be it known that I, WILLIAM HOLDSWORTH, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Tire-Upsetting Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The nature of my invention relates to certain improvements upon the tire-upsetting machine for which Letters Patent No. 169,265 were granted to me October 26, 1875, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a side elevation of the machine with the side plate removed. Fig. 2 is a section of the upper part of the machine. Fig. 3 is a plan view of the same. Fig. 4 represents the die for the punch from the front. Fig. 5 represents the same from the back.

The box or case of my machine consists of two side plates, A B, between which the operating mechanism is located. Between these side plates is a stationary bed or jaw, C, and a movable bed or jaw, D.

Below the stationary bed C is pivoted an elbow-lever, E, the outer end of which is made in socket form to receive the operating-lever, and this latter lever may be of any desired length to obtain the required purchase.

The inner short arm of the elbow-lever E is, by a link, F, connected with a lever, G, pivoted between the side plates.

The upper end of the lever G forms a head, *a*, which works in a slot or mortise, *a'*, in the movable bed D, for moving the same to and from the stationary bed.

By this construction I obtain a direct and positive motion of the bed D without any lost motion, as is always more or less the case when links are used.

b b are the pivot-bolts of the levers E and G, which bolts also connect the side plates, as shown.

From the back plate, A, extends a standard, H, and a similar standard extends from the movable bed D. To these standards are pivoted the levers I I, which have their lower ends corrugated and their upper ends connected by bars J, in the same manner as described in my former patent above referred to.

In the upper surfaces of the beds C D are made recesses *x x* for a double purpose. These recesses may receive small corrugated plates K, to form a rough surface, against which the levers I will hold the iron to prevent slipping.

The upper surfaces of the beds are level and in the same plane, so that when the plates K are used only straight bars of iron can be upset.

When curved iron—such as tires, &c.—is to be upset, each bed is provided with an auxiliary bed, L, the upper surface of which is slightly concave. This auxiliary bed has on its under side a projection, *d*, to fit in the recess *x* in the main bed, and in its upper surface is a recess, *y*, to receive the corrugated plate K, as shown.

To the side of the movable bed D is attached a shear-blade, M, and in its end is a hole for the insertion of a punch, N, which may be held in place by a set-screw or other suitable or convenient means.

In the stationary bed C are made side grooves, a^2, to receive a flanged block, O, having the other shear-blade, M', attached thereto. This is of course to be used in connection with the blade M.

When the punch N is to be used the block O is removed and another block, P, inserted in its place. This block P has on its outer side a dovetailed recess to receive a die, R.

On the back of the block P is a vertical groove, *h*, and a large hole, *i*, is made from this groove into the front recess at such a point that when the die R is inserted the hole in said die will come opposite the hole *i*. The piece of metal punched out will pass through the hole *i* and fall down through the groove *h*.

Dies of different sizes—that is to say, with different-sized holes—may be used in the same block as required, and the punch changed to correspond.

I am aware that removable blocks with serrated faces have heretofore been provided with

pins which enter recesses in the beds of tire-upsetting machines, and consequently lay no claim thereto.

My improvement consists in providing the beds with recesses adapted to receive the lugs on the removable blocks, and also to receive the serrated plates used when operating on straight iron.

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

The beds C D, provided with recesses *x*, adapted to receive the lugs *d* of the removable blocks L, and also to receive the serrated plates K, substantially as described and shown.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WILLIAM HOLDSWORTH.

Witnesses:

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W. C. MCARTHUR.