W. Sleeper,

Tire Upsetter.

No. 107,415. Patented Sept. 13. 1870.

Fig. 1.

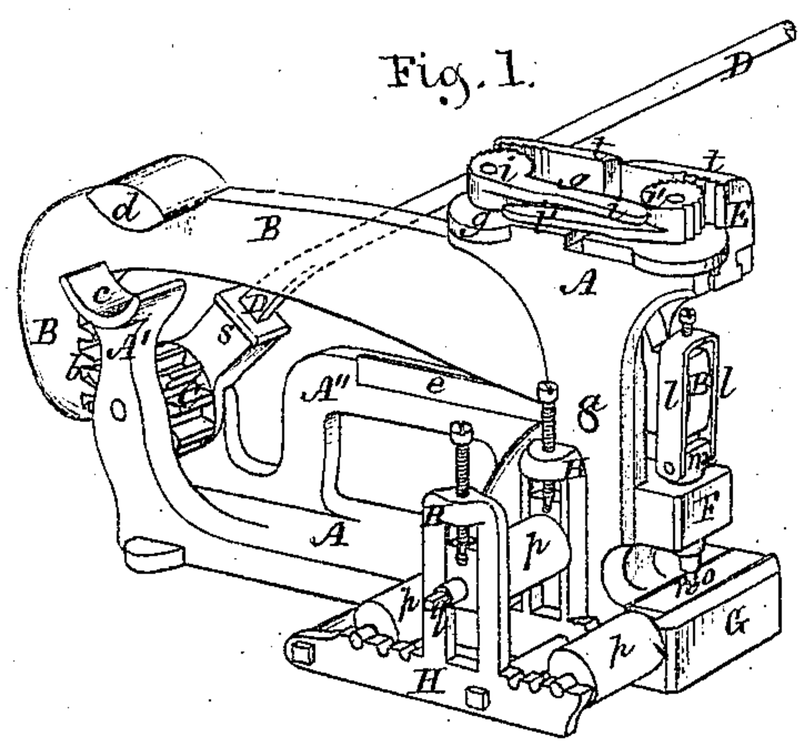


Fig. 2.

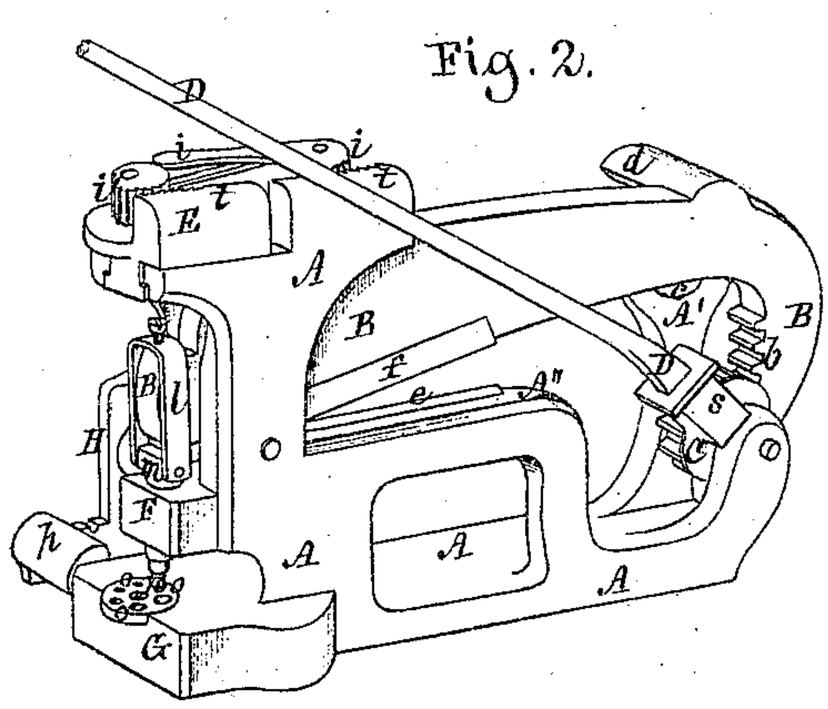
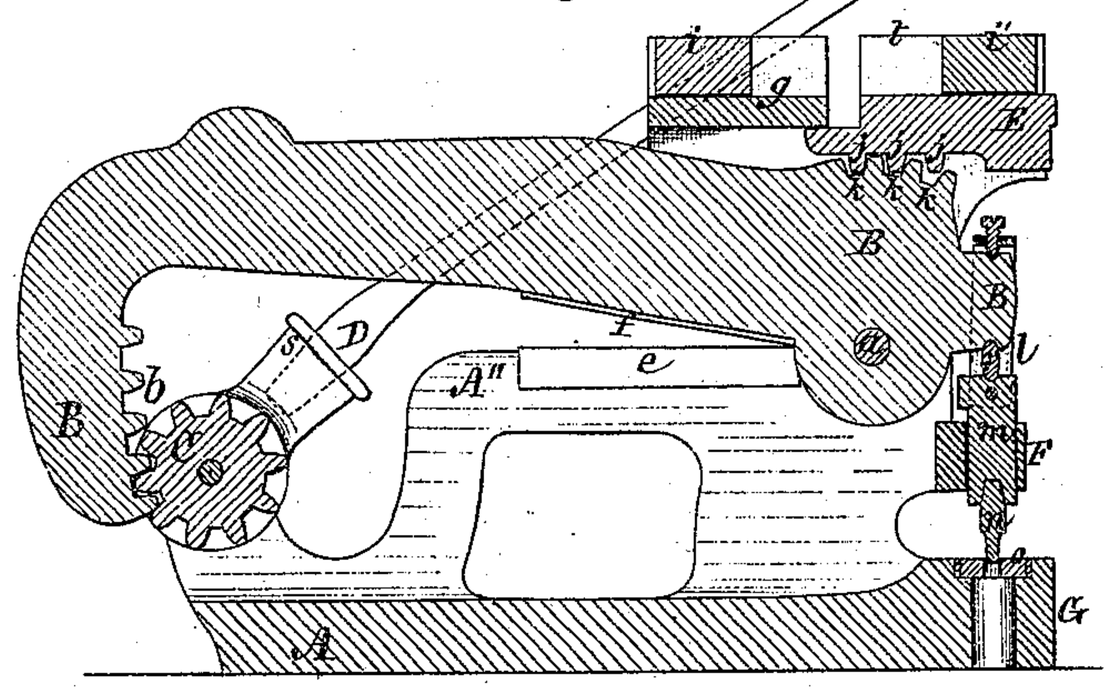


Fig. 3.



Witnesses.
Chas C. Wilson
Edmund Masson

Wright Sleeper.
By A.B. Stoughton Atty.

United States Patent Office.

WRIGHT SLEEPER, OF COATICOOKE, CANADA.

Letters Patent No. 107,415, *dated September* 13, 1870.

IMPROVEMENT IN COMPOUND MACHINES FOR SHEARING, PUNCHING, UPSETTING, AND BENDING METAL.

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, WRIGHT SLEEPER, of Coaticooke, in the province of Quebec and Dominion of Canada, have invented certain new and useful Improvements in Shop-Machines for Shearing, Punching, Upsetting, and Bending Metal; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1 represents a perspective view of the machine, looking toward one of its sides;

Figure 2 represents a perspective view of the machine, taken from its opposite side; and

Figure 3 represents a vertical longitudinal section through the machine.

Similar letters of reference, where they occur in the separate figures, denote like parts of the machine in all of the drawings.

This invention relates, mainly, to the manner of operating the main lever, and, through the main lever, the several devices connected with it, for shearing, punching, upsetting, and bending metals, so as to admit of its being readily and conveniently operated as a shop-machine, and by one person, if necessary.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same, with reference to the drawings.

The bed or frame A of the machine may be cast in one piece.

At the point *a* in the frame is hung the main lever B, the rear end of which is bent downward, and furnished with an internal rack, *b*, into which a pinion, C, operated by a lever, D, takes, for operating said lever.

On the main frame A there is cast an arm, A′, the upper end of which is rounded out, as at *c*, to form an anvil-die, into which a similarly-rounded projection, *d*, on the lever B, fits and presses, this being for the purpose of bending metal into a curved form.

On the portion A″ of the frame is fixed a shear-blade, *e*, and on the lever B is fixed a shear-blade, *f*, which two blades form a shears for shearing metal.

On top of the main frame is cast, or otherwise formed, a recess, *g*, and in it is hung a clamping-lever, *i*, and near this recess, so as to form a continuation of it, is a sliding-piece, E, which has also a clamping-lever, *i′*, hung in or on it, which sliding piece has in its under portion rack-teeth, *j*, into which similar teeth, *k*, on the main lever, take, so as to move the clamping-piece E.

This mechanism is for upsetting iron, shortening tire, &c.

To the front end of the lever B, where it projects through or beyond the main frame, is hung, by a stirrup, *l*, a die-stock, *m*, which carries a die, *n*, said die-stock being guided in its motions by passing through a projecting piece, F, cast on the frame.

The counter-die *o* is set and adjusted in a bed, G, which is also a part of the frame, and may be moved longitudinally to change the counter to conform to the punching-die, or turn around a center, that will always bring them under the punch.

Attached to the main frame, there may be a roll-frame, H, in which a series of rolls, *p p p*, may be set, adjusted, and operated by means of a crank on the shank *q*, these rolls being for the purpose of rolling tire.

The advantage of the internal gear *b* on the lever is that the operator may work the lever D, and, at the same time, stand by and hold the iron under the shears or punch, and said shears and punch be both under his close observation, which could not be the case if the rack *b* were on the outside of the curved tail-piece of the lever.

The lever D fits into a socket, *s*, which may be cast on and with the pinion C, and the lever is bent, as shown by the dotted lines, more particularly in fig. 3, so that by turning it in its socket it will adapt itself better to the location of the operator, who can both handle the iron he is working upon, and at the same time operate the lever to work the shears or the punch.

The upsetting mechanism will be readily understood.

The piece E, being moved out a suitable distance, the bar to be upset is rigidly clamped in the bed or recess, and against the vertical pieces *t*. The slide E is now run back, and the metal correspondingly upset or jammed up.

A small button or roller, *r*, of steel, is placed between the lever B and the die-stock *m*, to allow said die-stock to move truly through its guide F.

Having thus fully described my invention,

What I claim therein is—

1. The arrangement of the internal gear *b*, on the main lever B, and the pinion C, and hand-lever D, working therewith, so that the hand-lever shall extend forward and be used at the front of the machine by the operator standing there, as described.

2. In combination with the lever B, and with the slide E of the upsetting mechanism, the cogs or teeth *j* and *k*, for moving said slide, as set forth.

WRIGHT SLEEPER.

Witnesses:

W. P. BAXTER,

P. T. BALDWIN.