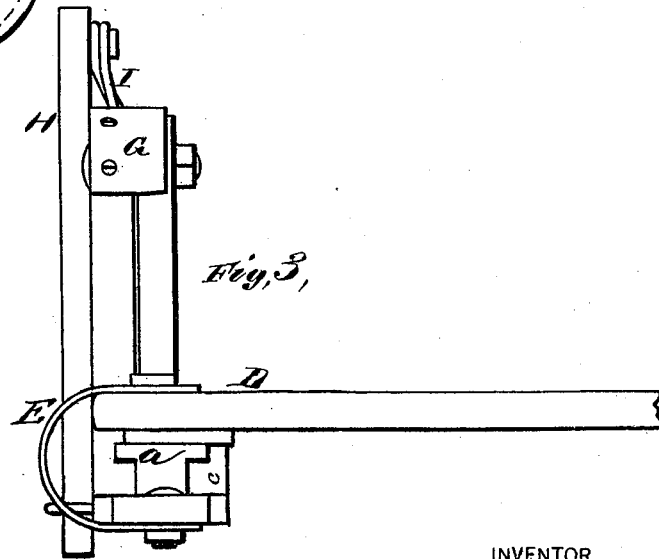
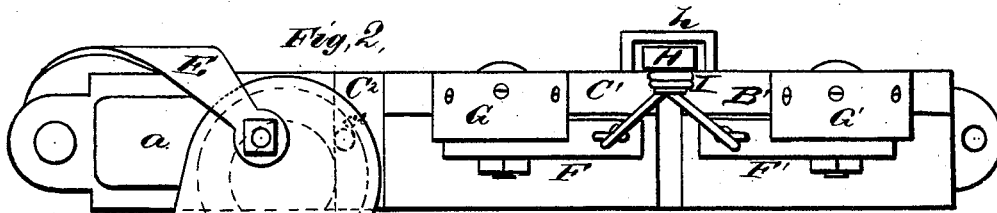
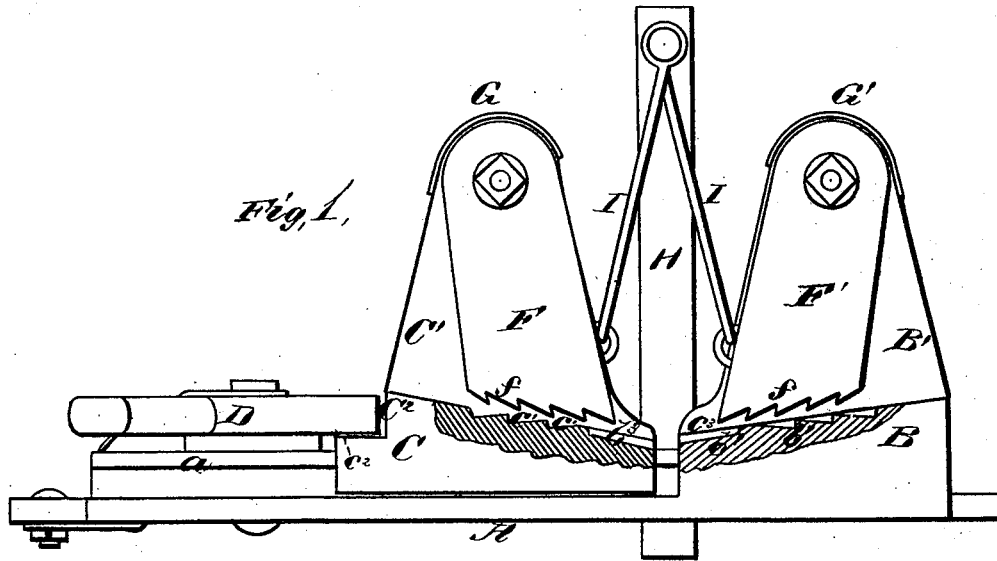


S. MAHARAY.

TIRE UPSETTING-MACHINE.

No. 185,340.

Patented Dec. 12, 1876.



WITNESSES  
*Chas. Bates*  
*George C. Upham.*

INVENTOR,  
*Samuel Maharay.*  
*Gilman, Smith & Co.*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

SAMUEL MAHARAY, OF NEWBURG, NEW YORK.

## IMPROVEMENT IN TIRE-UPSETTING MACHINES.

Specification forming part of Letters Patent No. 185,340, dated December 12, 1876; application filed September 30, 1876.

*To all whom it may concern:*

Be it known that I, SAMUEL MAHARAY, of Newburg, in the county of Orange and State of New York, have invented a new and valuable Improvement in Tire-Upsetting Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side elevation, part sectional, of my tire-tightening machine. Fig. 2 is a plan view of the same. Fig. 3 is an end view thereof.

This invention relates to tire-upsetters; and it consists in the construction and combination of the devices hereinafter described.

In the annexed drawings, A designates a bed-piece, on the upper side of which is secured a longitudinal guide rail or tongue, *a*. Said tongue is shaped somewhat like an ordinary T-shaped railroad-rail. At one end of said bed-piece, also on the upper side thereof, is secured a rectangular block, B, which is beveled on its upper side from the end of said bed-piece inward toward the middle thereof, and is provided at one side with a vertical standard, B'. Said block and standard may be made in one piece with said bed-piece. The beveled upper side of said block, near said standard and near the inner end of said block, is provided with a series of alternating transverse grooves and ridges, *b*<sup>1</sup> *b*<sup>1</sup>. C designates a sliding block, which is grooved on its under side at *c*, so as to move longitudinally upon guide tongue or rail *a*, as shown in Fig. 3, said groove *c* being shaped so as to correspond with said tongue or rail, and thereby to prevent said sliding block from separating from said bed-piece. Block C is shaped similarly to block B, and is provided with a standard, C', similar to standard B'. Said sliding block is also beveled toward said stationary block B, and is provided with transverse grooves and ridges *c*<sup>1</sup> *c*<sup>1</sup>, similar to *b*<sup>1</sup> *b*<sup>1</sup>. D designates a cam-lever, eccentrically pivoted to rail or tongue *a*, near that end of bed-piece A which is nearer to the rear end of sliding block C. The under side of the cam

part of said lever is provided with a circular, or nearly circular, groove, *d*. Sliding block C is provided with a rectangular recess, C<sup>2</sup>, at its rear end and upper side, and also at the bottom of said recess with a pin, *e*<sup>2</sup>, which sets into said groove *d*.

When said cam-lever is turned in one direction it draws upon said pin *e*<sup>2</sup>, and thereby separates block C from block B. When said cam-lever is turned in the opposite direction, it presses against sliding block C, and forces the same into contact with fixed block B.

E is a curved metal brace, which extends from the upper part of the pivot of lever D to the under side of bed-piece A. It serves to prevent said cam-lever from being forced out of its proper position. F F' are two pivoted clamping-arms, hung, respectively, from standards B' and C', and above blocks B and C. The lower ends of said arms are inclined, to correspond with the beveled upper sides of said blocks, and provided with transverse grooves and ridges *f f*. G G' are curved metal brace-plates, secured to the tops of standards B' and C', respectively, and extending forward over the rounded upper ends of arms F and F', so as to allow the pivotal vibration of said arms, but prevent them from being displaced. H is a rod or bar, which moves perpendicularly to bed-piece A, through a guide loop or staple, *h*, secured to said bed-piece, and which is connected at its upper end, by links or toggle-arms I I, to the lower parts of the inner sides of clamping-arms F F'.

When said rod or bar is forced or drawn upward, said toggle-arms or links are drawn toward one another, separating clamping-arms F F' from beveled blocks B C. When said rod or bar is forced or drawn downward, said clamping-bars are forced tightly against said blocks, and the corresponding ridges and grooves assist *f b*<sup>1</sup> *c*<sup>1</sup> in holding any interposed substance.

For crimping or upsetting tires, the cam-lever D is turned so as to draw the movable block C away from the fixed block B. The clamping-arms F F' are then raised, as described, from the said blocks B C. The tire, having been properly heated, is then inserted between said blocks and said clamping-arms. The said clamping-arms are then forced down

upon said tire, so as to clamp it firmly against said blocks, and the cam-lever D is turned so as to force said blocks together, thereby crimping and upsetting said tires. This operation takes place when the tire is separate from the felly.

Blocks B C are provided on their upper faces and at their proximate ends with recesses  $b^3 c^3$ , to allow for the thickening of the tire when crimped.

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

The combination of beveled blocks B C, having transverse ridges and grooves  $b^1 c^1$ , with

clamping-arms F F', having transverse ridges and grooves  $f f$ , said arms being attached, at their upper ends, to standards C<sup>1</sup> B', and at their lower ends to movable guide-bar H by links or toggle-arms I I, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

SAMUEL MAHARAY.

Witnesses:

HERBERT W. REVILL,  
JAMES R. MAHARAY.