

L. W. TYLER.

MACHINE FOR BENDING, UPSETTING AND CUTTING TIRES.

No. 191,201.

Patented May 22, 1877.

Fig 1

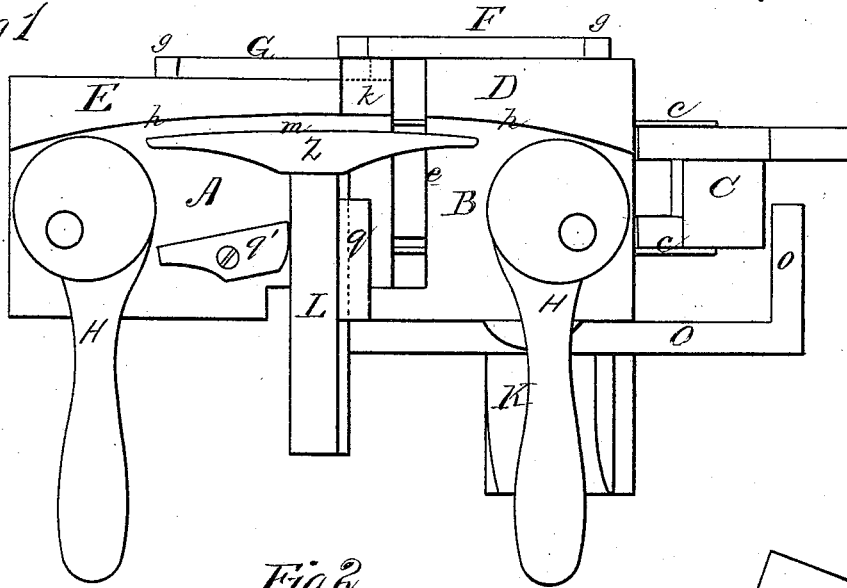


Fig 2

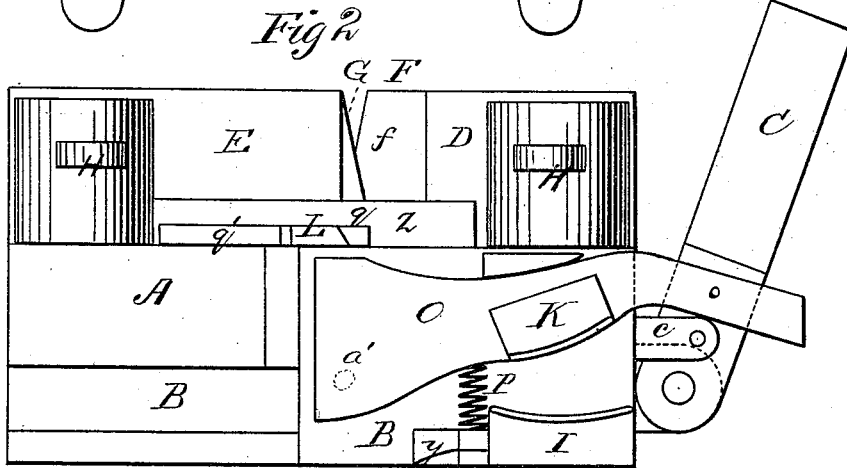
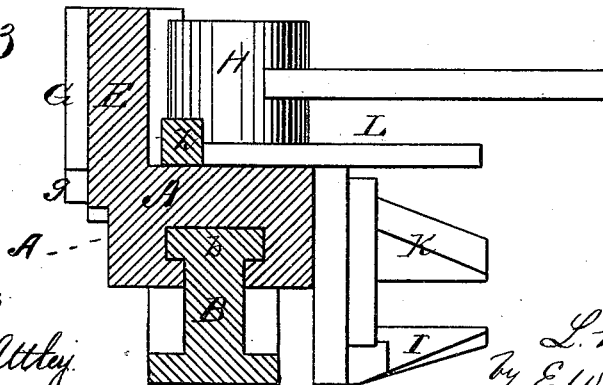


Fig 3



WITNESSES

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LEMAN W. TYLER, OF THERESA, NEW YORK.

IMPROVEMENT IN MACHINES FOR BENDING, UPSETTING, AND CUTTING TIRES.

Specification forming part of Letters Patent No. **191,201**, dated May 22, 1877; application filed April 7, 1877.

*To all whom it may concern:*

Be it known that I, LEMAN W. TYLER, of Theresa, in the county of Jefferson and State of New York, have invented a new and valuable Improvement in Tire-Bender, Shears, and Upsetter; 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 top view of my invention. Fig. 2 is a side view thereof, and Fig. 3 is a cross-sectional view of the same.

My invention has relation to improvements in machines for upsetting, bending, and cutting tires; and it consists in the construction and novel arrangement, in connection with the jaws having upsetting buttresses formed thereon, of a convex guard for preventing the tire from bulging upward during the upsetting operation, a guide-strip, and a cam, by means of which the guard aforesaid is jammed against the strip, and the strip secured to the body of the jaw. It also consists in certain other details of construction, all as hereinafter shown and described and claimed.

In the accompanying drawings, the letter A designates one of the jaw-sections, and B the other of the upset. Section A is made with a T-shaped groove in the bed underneath, to receive the T-shaped slideway of the other section B. This slideway is made sufficiently thick and deep to be able to sustain any strain upon it when the jaws are in operation. A lever, C, is pivoted to the end of the section B, and connected by pivoted arms *c* to the section A. By the operation of this lever, the jaw-sections are forced toward or withdrawn from each other, the tongue *b* playing in groove *a*.

The bed of each jaw is in the same plane with that of the other, and rising from these beds on the same side are the upsetting flanges or buttresses D E, of which the former extends to the edge *e* of its jaw-bed, while the latter stops a little short of the same, leaving a space, *f*, for the passage of a tire transversely when the same is to cut by the shear-jaws F G.

These are, respectively, secured to the backs or exterior surfaces of the flanges D E, abutting against shoulders *g* of the same, at their outer ends. The inner faces *h* of the upsetting-flanges are concave to correspond with the curve of a tire, and a chock, *k*, is provided to be fitted in the angular space *f* at the end of flange D, and in front of the projecting end of the shear F, when the upsetting-jaws are to be used. In order to keep this chock steady in its place, it is provided with a stud, *s*, at its lower end, to fit in a corresponding recess in the bed of the jaw-section. H indicates the eccentric levers or cams, which are pivoted upon strong pins in the beds of the jaw-sections, and are designed to hold the tire when adjusted for the upsetting operation.

I is the concave, and K the convex, bending-jaw of the machine, the former being rigidly secured to the side of the jaw-section B, and the latter to a vertically-vibrating lever, O, having its fulcrum at *a'*, and extending out beyond the said jaw-section, as shown in Fig. 1. The jaws I K are held apart by a spring, P, extending upward from a seat, *y*, on the side of the section, and bearing with its free end against the under side of the lever O. This lever is provided at its free end with a transverse arm, *o*, that extends across the line of vibration of lever C aforesaid. Consequently, when the said lever C is actuated, it will come in contact with arm *o*, depress lever O, and forcibly clamp the bending-jaws I K together.

*q* represents a beveled strip rigidly secured to the body of the jaw-section at right angles to and a suitable distance from the curved upper face of the buttress E, and *q'* is a cam-lever, between which and the strip *q* aforesaid the standard L of a convex upsetting-guard, Z, is adjustably and rigidly clamped, as shown in Fig. 2, the standard L being beveled upon one edge to conform to the bevel of the strip *q*. Consequently, the said standard will be very readily adjusted to suit tires of different thicknesses, and will yet be securely held in position when the cam is applied through the wedging of the standard into the strip.

The convexity *m* of the guard and the concavity *h* of the flanges D E closely correspond. The guard Z is designed to prevent light tires

from bulging inward when the upsetting-jaws are brought together. When the shears are to be used, the chock *k* and the guard *Z* are removed, leaving a clear space along the margin of the bed leading to the cutting-edges *v* thereof.

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

1. In a tire-upset, the combination, with the jaws *A B*, having the respective upsetting-buttresses *D E*, of the convex guard *Z*, beveled guide-strip *q*, and adjusting-cam *q'*, substantially as specified.

2. The combination, with the sliding upset-jaws *A B*, their operating-lever *C*, and pivoted connecting-rods *c*, of the fixed bending-

jaw *I*, the vibrating lever *O*, carrying the convex bending-jaw *K*, the transverse arm *o* engaging lever *C*, and a separating-spring, *P*, substantially as specified.

3. The combination, with the beds *A* and *B*, each carrying an upsetting and shearing jaw, of the removable guard *Z* and the chock *k*, substantially as specified.

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

LEMAN W. TYLER.

Witnesses:

J. F. WARNER,

M. A. TYLER.