

G. DANIELSON.
MACHINE FOR UPSETTING TIRES.

No. 36,509.

Patented Sept. 23, 1862.

Fig. 1.

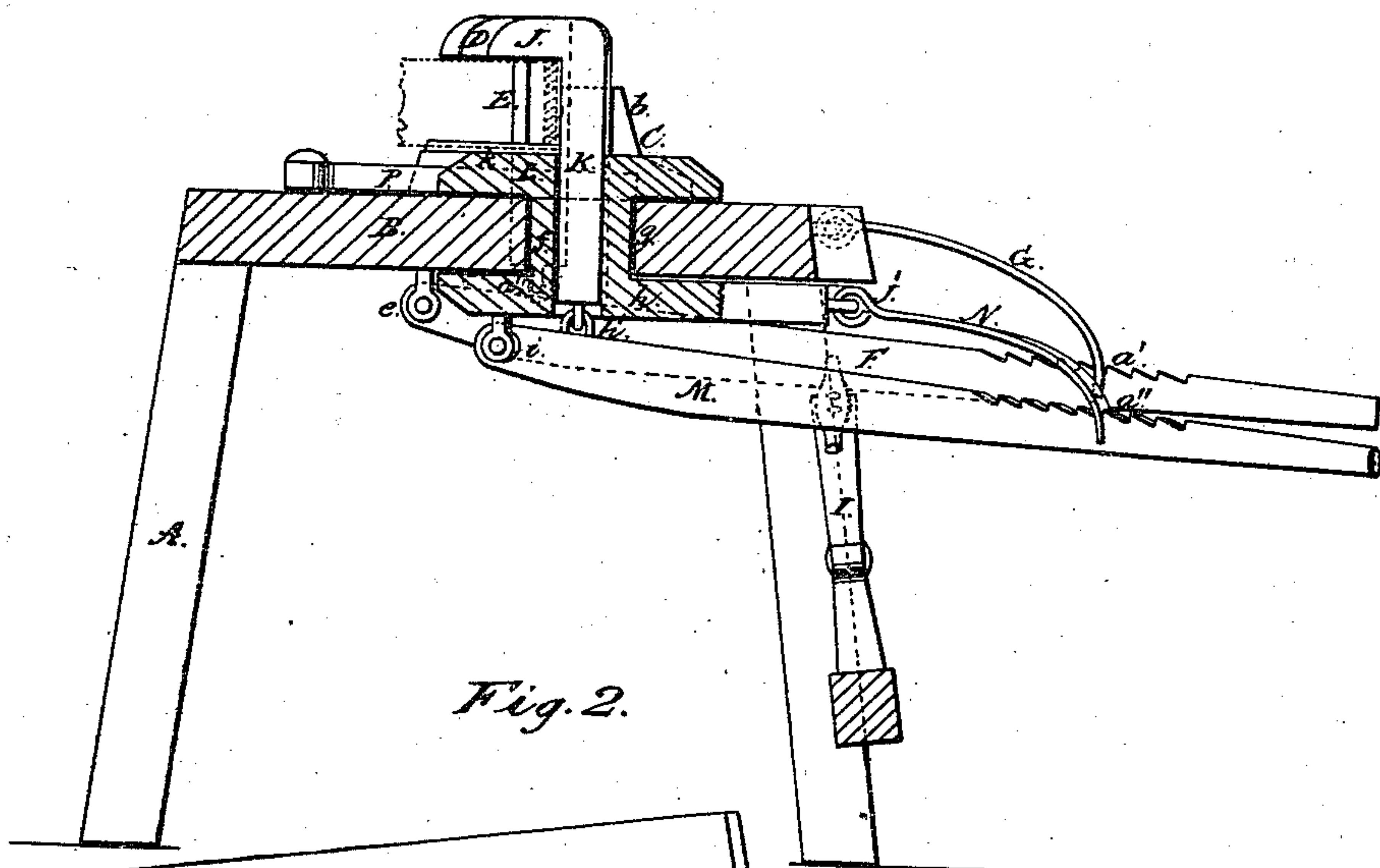
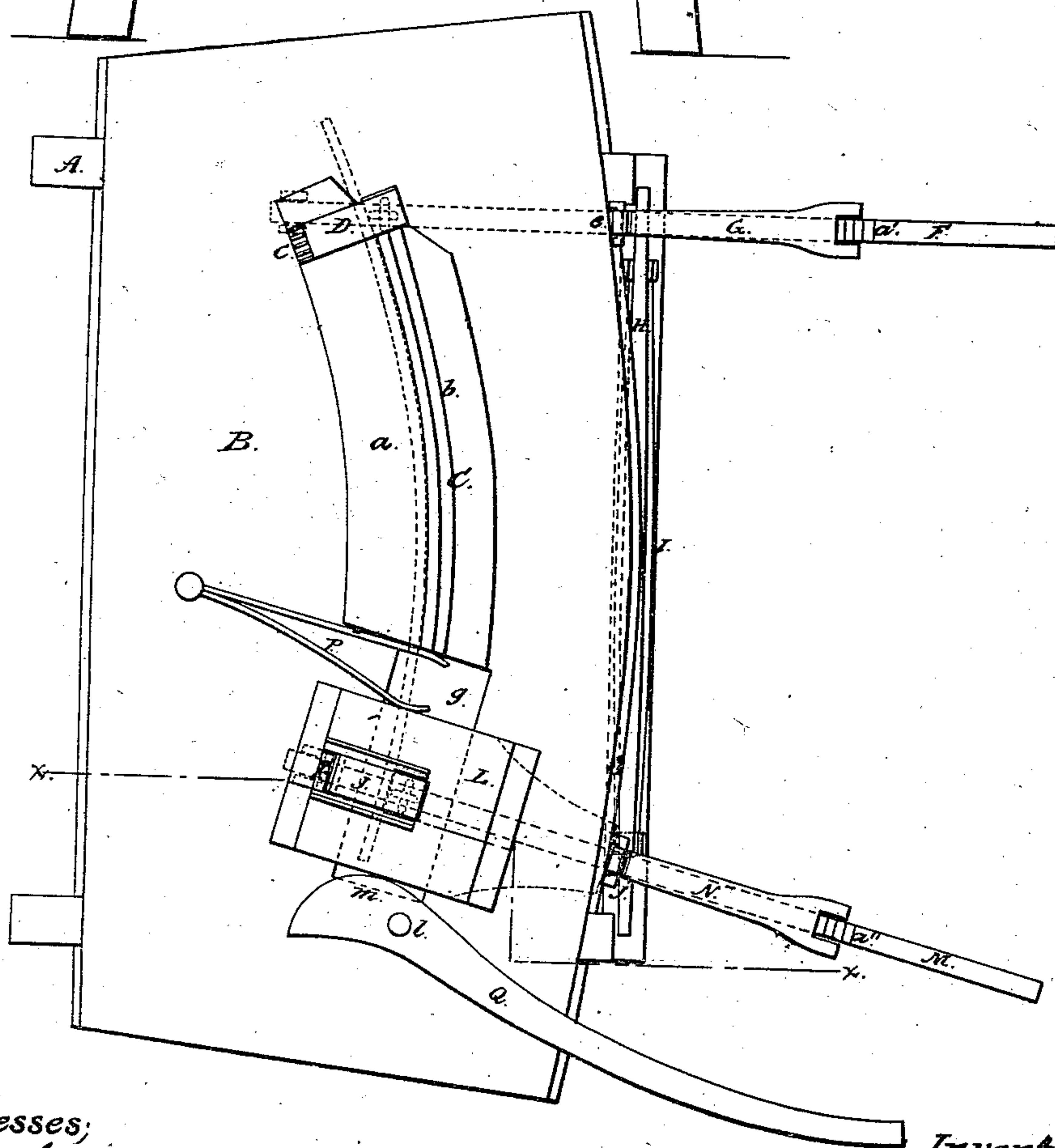


Fig. 2.



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UNITED STATES PATENT OFFICE.

GUSTAVE DANIELSON, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR UPSETTING TIRES.

Specification forming part of Letters Patent No. 36,509, dated September 23, 1862.

To all whom it may concern:

Be it known that I, GUSTAVE DANIELSON, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and Improved Machine for Shrinking or Upsetting Tires for Wheels; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical section of my invention, taken in the line *x x*, Fig. 2. Fig. 2 is a plan or top view of the same.

Similar letters of reference indicate corresponding parts in the two figures.

The object of this invention is to obtain a simple machine and one which may be very readily manipulated or operated for shrinking or upsetting tires for the wheels of vehicles, whereby the tires may, without being cut and rewelded, be adapted to suit the diameters of the wheels to which they are to be applied.

To this end the invention consists in a novel manner of clamping the tire, whereby the latter may be adjusted in or to the machine with the greatest facility and in such a manner as to preclude the possibility of slipping while being compressed, while at the same time one of the clamps is so arranged as to be capable of being moved under the action of a lever in order to contract the tire.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A represents a framing on which a platform, B, is placed and permanently secured, and C is a segment ledge or projection which is attached to the platform B, and is formed of a horizontal portion, *a*, and a vertical portion, *b*, the upper surface of the former at one end being provided with a corrugated plate, *c*. (Shown in Fig. 2.) The ledge or projection C is stationary, and at one end of it there is a jaw, D, which projects over the corrugated plate *c* of the part *a* of the ledge C, and is attached to or formed on the upper end of a vertical bar, E, which passes through the platform B and is connected at its lower end by a link or joint, *d*, to a lever, F, the fulcrum *e* of which is secured to the under side of the platform B. The lever F is notched at its upper side, as shown at *a'*, to receive the end of a pawl, G, which is connected to the edge

of the platform B by a joint or hinge, *e*, and the lever F rests on a bar, H, which is attached to an elliptic spring, I, in the framing A.

J is a jaw, which is formed at the upper end of a vertical bar, K, the latter passing through a sliding plate, L, on the platform B, and also through a pendent neck-piece, *f*, attached thereto, the neck-piece *f* being fitted in a slot, *g*, in the platform adjoining the end of the ledge C, as shown clearly in Fig. 2. To the bottom of the neck-piece *f* there is attached a plate, *h*, which fits against the under side of the platform B, as shown in Fig. 1. The neck-piece *f* is allowed to slide freely in the slot *g*, and the lower end of the bar K is connected by a link-joint, *h'*, with a lever, M, the fulcrum *i* of which is attached to the plate *h*. The lever M is also notched at its upper side, as shown at *a''* to receive the end of a pawl, N, which is connected to the edge of the platform B by a hinge or joint *j*.

In the upper surface of the plate L there is inserted a corrugated plate, K, which is directly under or in line with the jaw J, and the lever M rests on the bar H near the end opposite to that where the lever F rests.

P is a spring of V form, which is attached to the upper surface of the platform B, and has one end bearing against the end of the ledge C and the other end against the plate L, said spring having a tendency to keep the plate L out from the ledge, as will be understood by referring to Fig. 2.

To the upper surface of the platform B there is also attached by a fulcrum-pin, *l*, a lever, Q, the inner part, *m*, of which is of cam form, as shown clearly in Fig. 2.

The operation is as follows: The tire to be operated upon is heated at the desired part and the heated portion laid on the horizontal part *a* of the ledge C and against the upright or vertical part *b*, the tire being in a horizontal position, and the plate L being at the extent of its movement from the ledge C, and the jaws D J being elevated in consequence of the action of the spring I on the levers F M. When the tire is adjusted as described, the operator presses down the levers F M, and the jaws D J are forced down upon the tire at each side of the heated portion, the levers being held as they are forced down by the pawls G N catching into the notched surfaces of the levers. When the tire is properly

clamped, the plate L is forced toward the ledge C by actuating the lever Q, and the heated portion of the former between the two jaws is upset or contracted, so as to diminish the diameter of the tire, as required.

The advantage of this invention consists in the facility with which the machine may be manipulated. The tire may be very expeditiously and firmly clamped in the machine, as the levers F M admit of the jaws D J being forced down with considerable power. The arrangement also admits of the tire being adjusted on or to the machine with the greatest facility, and the labor of but one man is required to perform the necessary work.

I do not claim separately any of the parts herein described; but

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

1. The attaching of the jaws D J to vertical bars E K, one of which passes through the platform B and the other through the neck-piece *f* of the plates L *h*.

2. The arrangement of the jaws D J, bars E K, levers F M, spring I, and pawls G N, in combination with the stationary ledge C on the platform B, the spring P, lever Q, and the sliding neck-piece *f*, provided with the plates L *h*, through which the bar K passes and to which the lever M is connected, substantially as and for the purpose herein set forth.

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Witnesses:

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