S. ROE, Jr.

Upsetting Tires.

No. 108,634. Patented Oct. 25, 1870.

Fig 1

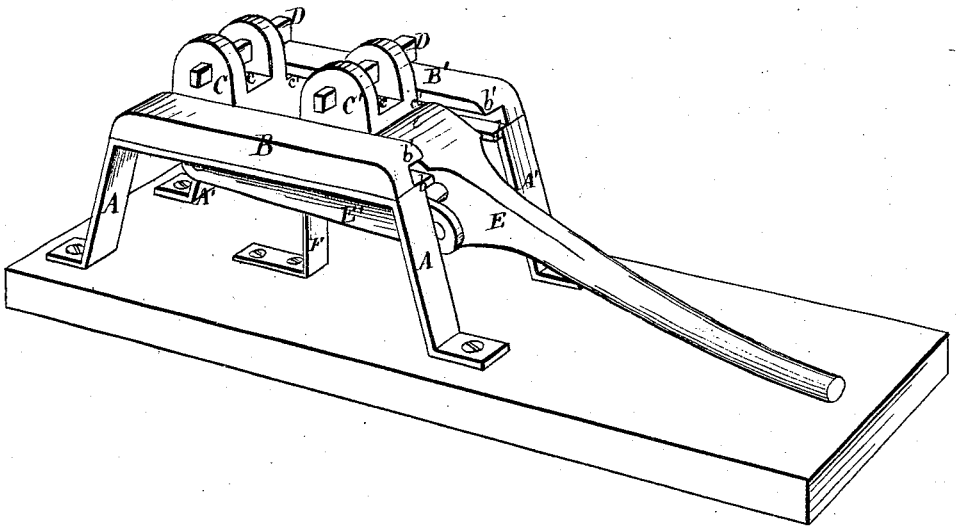

Fig 2

Witnesses:

Alex Mahon

H. H. Doubleday

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by his Attorney

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United States Patent Office.

SAMUEL ROE, JR., OF BOONVILLE, MISSOURI.

Letters Patent No. 108,634, dated October 25, 1870.

IMPROVEMENT IN TIRE-MACHINES.

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, SAMUEL ROE, Jr., of Boonville, county of Cooper, State of Missouri, have invented a new and useful Improvement in Tire-Shrinkers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a perspective view of my improved machine.

Figure 2 represents the operating-lever.

My invention relates to a novel construction of the operating-lever of a tire-shrinker, and a new arrangement of parts, whereby certain advantages are obtained, as will be fully explained.

In the drawing—

A A A′ A′ are the posts, of which each pair are connected, at their upper ends, by the girts B B′, substantially in the manner shown in the drawing.

Each of these girts is provided upon its inner vertical face with a longitudinal groove extending from end to end.

In the drawing these girts are represented as being composed of two parts, the lower one of which is formed in one piece with the legs or posts A A′, the upper one being rebated upon its lower inner edge, said rebate forming, in combination with the lower part, the groove or way above referred to.

The lower lips or flanges of these grooves are wider than the upper ones are, and project further in toward the center, thus making the space between the lower flanges at *b* narrower than the space between the upper ones at *b′*, (see fig. 1,) for a purpose which will hereinafter be explained.

C C′ are clamps, each provided with upright ears or lugs at such distance apart as will admit of a wagon-tire being readily placed between them.

c c are small blocks, made preferably of steel and hardened. The upper faces of these blocks are serrated.

D D are wedge-shaped keys, fitting perforations or sockets in the upright ears of clamps C C′.

The clamps C C′ are provided with wings or flanges, *c′*, adapted to fit closely and move freely in the grooves in the girts B B′.

The clamp C is rigidly secured in position at one end of girts B B′, while the clamp C′ is free to slide in the groove when actuated by devices which will be presently described.

E is a forked lever, the upper arm *e* being expanded to a width about equal to the width of clamp C′.

The lever E is connected with the stationary clamp C by means of a pivoted link or links, E′, substantially as shown in the drawing, the length of these links being such that when the parts are in working position, as shown in the drawing, the clamp C′ abuts against the broad end *e* of lever E.

F is a spring, the free end of which rests against the inner side of clamp C′.

The lever is confined to the body of the clamp by means of hooked ears *g*, instead of the slotted ones.

In operating my machine the tire, after being heated, is firmly secured in clamp C C′ by means of keys D. The end of the lever E is then elevated, and clamp C′ is forced inward toward clamp C, thereby upsetting the tire.

After the tire is released from the clamp, spring F forces clamp C′ back against the end of the lever, and the machine is ready to repeat the operation.

It will be seen that by my manner of arranging the lever and connecting-links the power is applied directly to the clamps and the frame-work relieved of all strain, and also that by making the upper arm of the forked lever of greater width than the space between the lower flanges of the girts B B′, these flanges are made to form a support, upon which the inner end of the lever rests in a convenient position for operating.

When preferred the girts B B′ may be made of one piece each, and grooved by machinery or otherwise.

It will be seen that as lever E is pivoted to the free ends of links E′ it (the lever) is movable vertically, and can be adjusted relative to the clamp C′, against which the end *e* bears, and hence can be so applied as to operate the clamp with but little or no friction upon the ways, or of the end *e* upon the face of the clamp, while at the same time the lever is practically adjustable relative to clamp C C′, as follows:

It sometimes happens that a single sweep of the lever will not shorten a tire quite as much as is desired, and in such a case I can withdraw the lever a little, and, by inserting a suitable block between the end *e* and the clamp, still further shrink it, the inserted block serving as a gauge to indicate the amount of this shrinkage.

The expanded end *e* serves not only to form a wide bearing upon the clamp, but also to support the inner end of the lever upon the flanges *b*, thus keeping it (the lever) always in a convenient position for working.

Having now described my invention,

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

The combination of the clamps C C′, links F′, lever E, ways B B′, and spring F, all constructed and operating as described.

In testimony whereof I have hereunto set my hand this 6th day of August, A. D. 1870.

SAMUEL ROE, JR.

Witnesses:

JOHN COSGROVE,

J. H. JOHNSTON.