

E. I. MOORE.
TIRE-TIGHTENER.

No. 170,583.

Patented Nov. 30, 1875.

Fig. 1

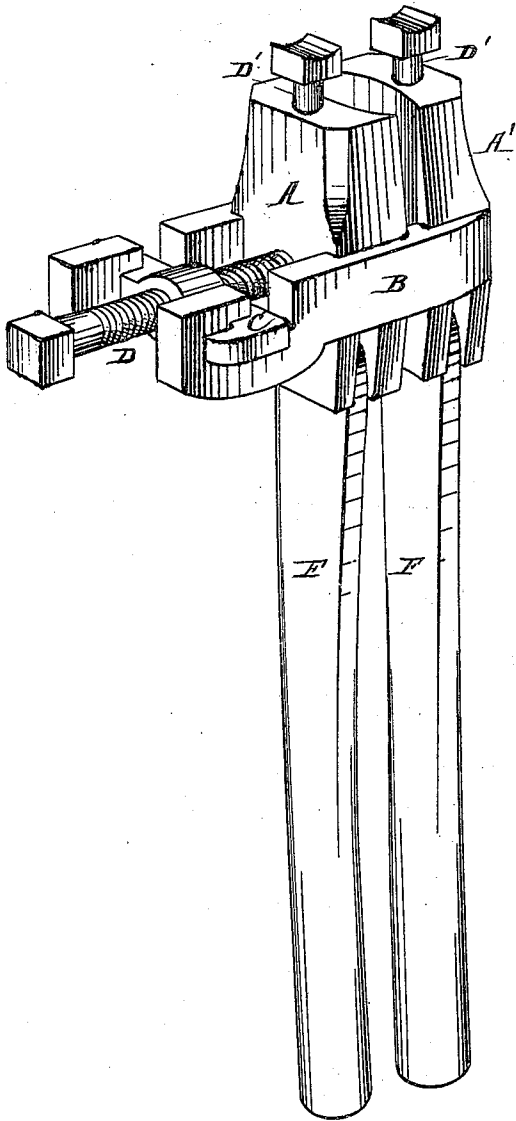
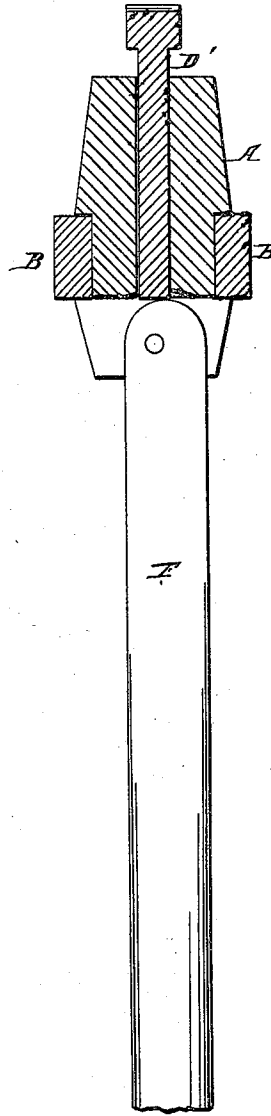


Fig. 2



Witnesses:

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Att'y

UNITED STATES PATENT OFFICE.

EDWARD I. MOORE, OF NILES, OHIO.

IMPROVEMENT IN TIRE-TIGHTENERS.

Specification forming part of Letters Patent No. **170,583**, dated November 30, 1875; application filed October 23, 1875.

To all whom it may concern:

Be it known that I, EDWARD I. MOORE, of Niles, in the county of Trumbull and State of Ohio, have invented certain new and useful Improvements in Tire-Tighteners, of which the following is a specification:

This invention relates to a new and improved device for tightening the tires and fellys on wheels; and it consists in two jaws capable of being set around and clamped to the upper end of the spokes of a wheel, each jaw carrying a small jack-pin operated by a cam formed on the end of a suitable lever, the heads of said jacks being adapted to set under the edges of the felly, and start or raise the felly from the end of the spoke in order that a leather or other equivalent washer may be placed around the end of said spoke, so that when the device is removed from the spoke the tire will bind the felly tightly down upon the washer and securely bind the parts of the wheel together, as hereinafter set forth.

In the drawings, Figure 1 represents a perspective view of the apparatus, and Fig. 2 a sectional view through one of the jaws.

The letters A A' represent two jaws or blocks of metal curved or made concave on their adjacent faces, so as to properly grasp the ordinary rounded ends of a carriage-wheel spoke. To one of said jaws are attached two metallic bars, B B, forming ways in which the other jaw is adapted to travel, said jaw being recessed on opposite sides, so as to set properly on the ways and be confined thereon. The bars B B are provided with open L-shaped slots at their ends in which a detachable cross-head, C, is adapted to fit, carrying a clamping-screw, D, the end of which bears against the movable jaw A, and by which the two jaws can be securely fastened or clamped around the end of the spoke, the sliding jaw and cross-head being capable of removal for the purpose. Each of the jaws is bored vertically and provided with a small but substantial jack-pin, D', the head of which is adapted to engage under the edge of the felly when the apparatus is in position. In order that the said heads may properly take hold of the felly they are curved on top so as to form biting-edges, either of which may be set under

said felly. The lower ends of the jaws are slotted, as shown, for the reception of the ends of the levers F F, which are pivoted therein, and formed with curved cam-shaped ends, which bear against the lower ends of the jack-pins.

The operation of my improved device is as follows: The cross-head and sliding jaw are removed and the apparatus placed around the upper end of the spoke between the ways B B. The sliding jaw and cross-head are then replaced and the jaws made firmly to clamp the spoke by means of the clamping-screw, the jack-pins being brought directly under the opposite edges of the felly. The jack-pins are then elevated by means of the levers lifting the felly and tire, when a leather or other suitable washer is passed around the end of the spoke, and on releasing the jack-pins to remove the apparatus the elasticity of the tire binds the felly firmly down on the end of the spoke, its washer securing the parts firmly together.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of the jaws A A', adapted to be clamped around the spoke of a wheel, with the jack-pins D' D', adapted to set under the edges of the felly, and cam-levers F F, for operating the same to raise the felly for the purpose of applying a washer to the spoke, substantially as described.

2. The combination of the stationary and movable jaws A A', the ways B B, the removable cross-head C, and screw D for the purpose of clamping the apparatus to the spokes, substantially as described.

3. The combination of the jaws A A', the ways B B, the cross-head C, and screw D, the jack-pins D' D', and the cam-levers F F, the whole constructed and arranged to operate substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of the subscribing witnesses.

EDWARD I. MOORE.

Witnesses:

M. A. CALHOUN,
CHARLES P. MOORE.