(No Model.)

M. W. COON.

COMBINED WAGON JACK AND TIRE TIGHTENER.

No. 303,811. Patented Aug. 19, 1884.

Fig. 1.

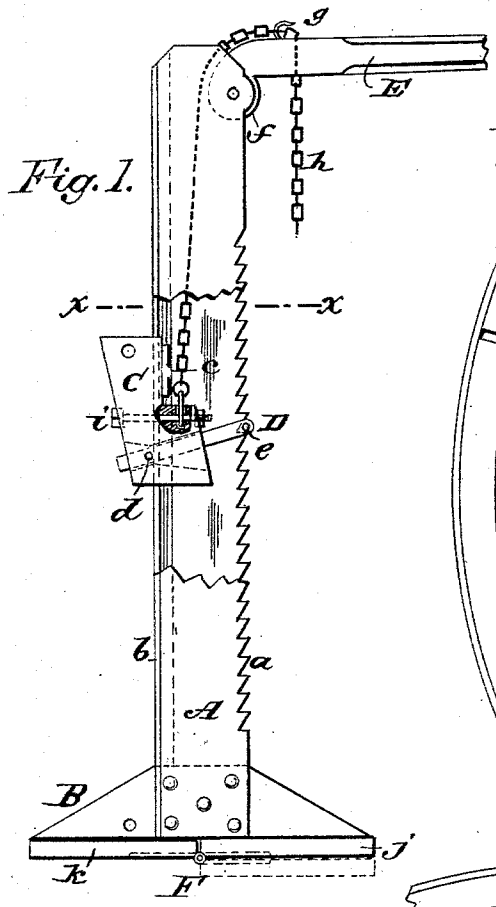


Fig. 3.

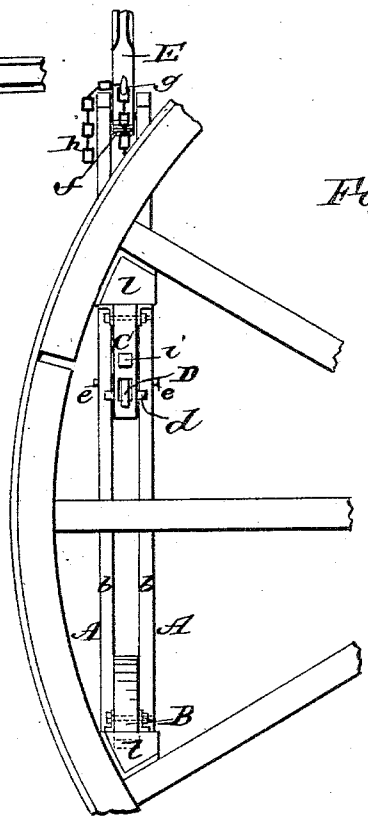


Fig. 2.

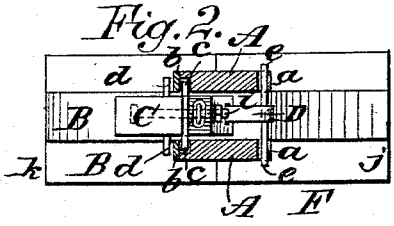
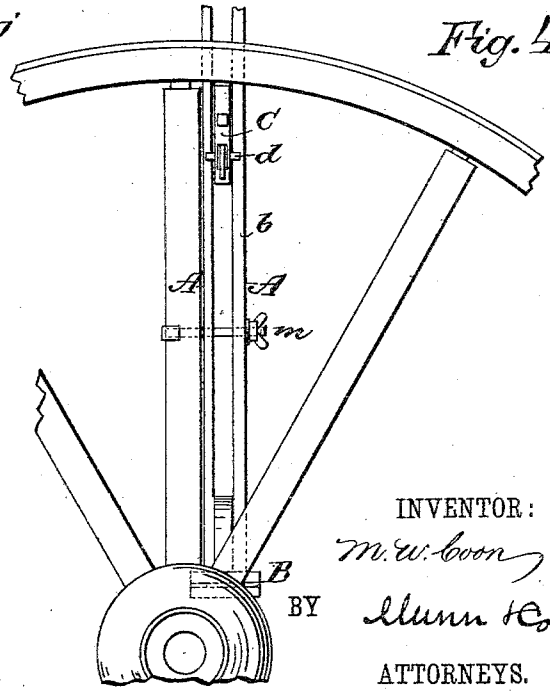


Fig. 4.



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MELZAR W. COON, OF WALLA WALLA, WASHINGTON TERRITORY.

COMBINED WAGON-JACK AND TIRE-TIGHTENER.

SPECIFICATION forming part of Letters Patent No. 303,811, dated August 19, 1884.

Application filed April 23, 1884. (No model.)

To all whom it may concern:

Be it known that I, MELZAR W. COON, of Walla Walla, in the county of Walla Walla and Territory of Washington, have invented a new and Improved Combined Wagon-Jack and Tire-Tightener, of which the following is a full, clear, and exact description.

The object of my invention is to provide a simple and powerful jack for lifting and for expanding the wheel in the tire to render the tire tight without the necessity of resetting it.

My improvement consists in a chain-lever mounted between two standards, and connected by a chain with a sliding block placed between the standards, and provided with a pawl capable of engaging ratchet-teeth formed on the back of the standards.

It also consists in a folding foot for the standards, which admits of applying the foot end of the jack to the hub of a wheel between the spokes; also, in its combination, with the jack, of blocks adapted to fit in the angle between the spokes and fellies.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of my improved wagon-jack, partly in section. Fig. 2 is a horizontal section taken on line *x x* in Fig. 1. Figs. 3 and 4 show the application of the jack to tire-tightening.

Two standards, A, are secured at right angles to a foot-bar, B, and provided with ratchet-teeth *a* on their rear edges. The front edges of the standards A are rabbeted on their adjacent sides, and provided with a facing, *b*, of band-iron, which forms a groove for guiding the sliding block C. The block C fits between the standards A, and is provided with an iron plate, *c*, which slides in the grooves behind the band-iron strips *b*, and with a pin, *d*, which slides along the outer surface of the band-iron strips *b*. A pawl, D, is pivoted on the pin *d* in a mortise in the sliding block C, and extends between the standards A to the rear side, where it is provided with a transverse pin, *e*, which engages the ratchet-teeth *a* on the side standards.

Between the upper ends of the standards A is fulcrumed a chain-lever, E, having a cylindrical end, *f*, and provided with a hook, *g*, for engaging the links of its lifting-chain *h*. The lower end of the lifting-chain *h* is secured in the sliding block C by the bolt *i*.

The foot-bar B is provided with a base-board, F, formed of two parts, *j k*, the part *j* being fastened to the foot-bar, the part *k* being hinged to the part *j* and capable of folding back upon it, as shown in dotted lines in Fig. 1.

In the ordinary working of the jack the depression of the chain-lever E raises the sliding block C, which is held by the pawl D, and if it is desired to raise the block farther than one depression of the lever E will raise it, the said lever is raised, and a new hitch is taken in the chain *h* and the lever is again depressed. When the jack is applied to the tire, tightening trapezoidal blocks *l*, adapted to the angles between the spokes and the felly, are applied to the foot-bar B and sliding block C, as shown in Fig. 3, and these blocks are furnished with a leather cover to prevent injury to the spokes or felly. By operating the jack the ends of the felly may separate so as to make it entirely fill the tire when the space between the ends may be filled to hold the felly in its expanded position.

Another method of expanding a wheel is shown in Fig. 4. In this case, the part *k* of its base-board F being folded back upon the part *j*, the foot-bar B is inserted between the spokes at the hub, and the sliding block C is brought to bear on the inner surface of the felly. The space thus made between the shoulder of the spoke and the felly is filled with some suitable material capable of retaining the felly in its expanded position. When used for expanding a wheel, as shown in Fig. 4, in case the spoke is loose in the hub, a clasp-bolt, *m*, may be used to prevent the spoke from drawing out of the hub.

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

1. In a wagon-jack, the combination, with the standards A, provided with ratchet-teeth

a, of the sliding block C, pawl D, lever E, and chain *h*, as described.

2. In a wagon-jack, the combination, with the standards A and foot-bar B, of a base-board, F, made in two parts, hinged together, one of the said parts being secured to the base-bar, as specified.

3. The combination, with the sliding-block C and foot-bar B, of trapezoidal block *l*, as specified.

MELZAR W. COON.

Witnesses:
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