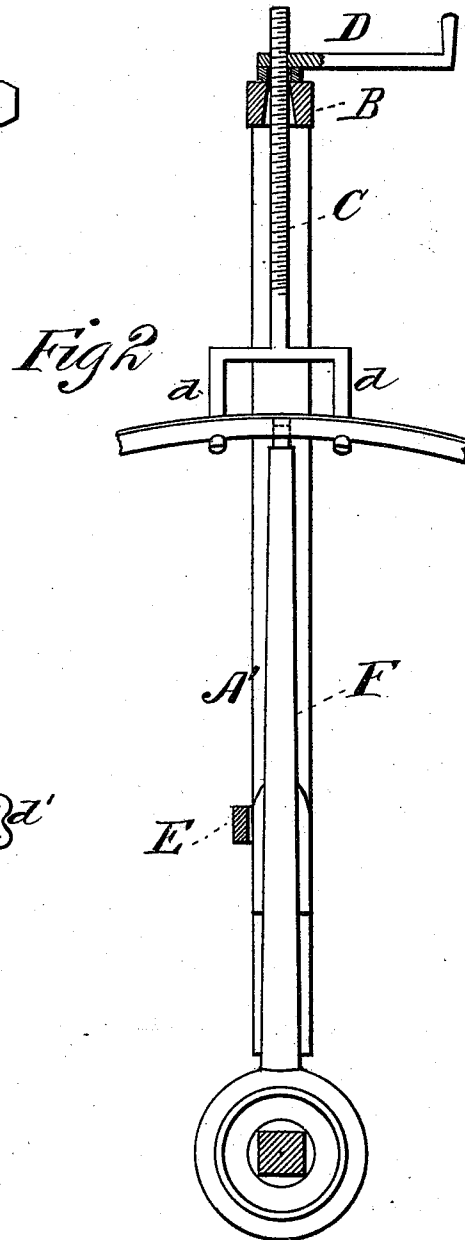
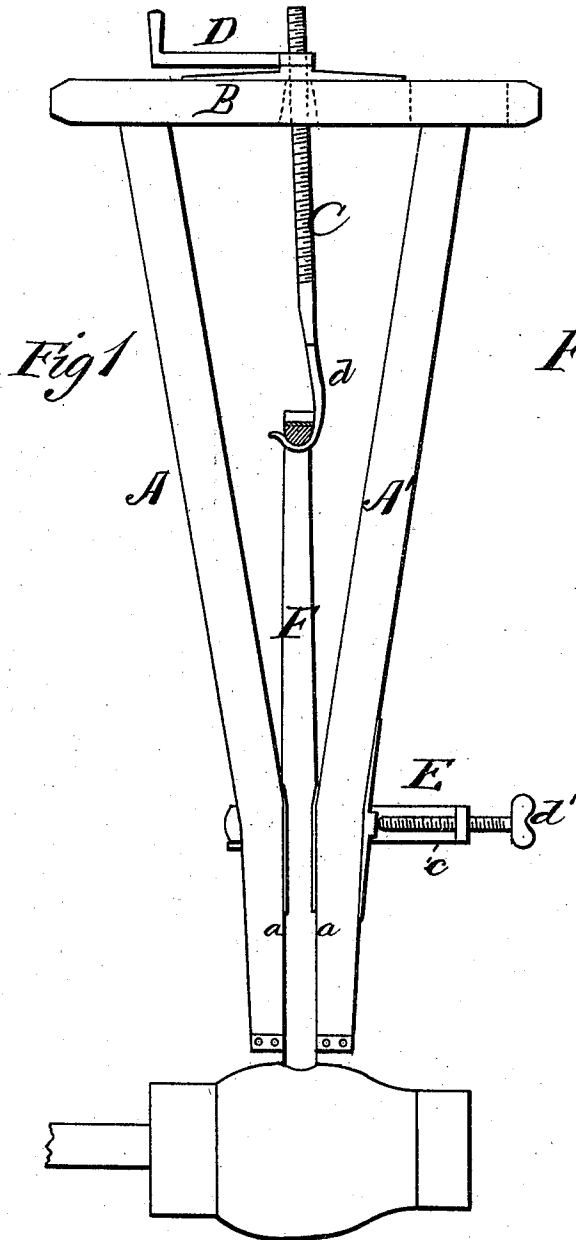


J. W. THAYER.
TIRE-TIGHTENER.

No. 173,374.

Patented Feb. 8, 1876.



WITNESSES

Robert Everett
E. H. Bates

INVENTOR

Jacob W. Thayer
Chipman & Co.
ATTORNEYS

UNITED STATES PATENT OFFICE.

JACOB W. THAYER, OF PENN YAN, NEW YORK.

IMPROVEMENT IN TIRE-TIGHTENERS.

Specification forming part of Letters Patent No. **173,374**, dated February 8, 1876; application filed December 18, 1875.

To all whom it may concern:

Be it known that I, JACOB W. THAYER, of Penn Yan, in the county of Yates and State of New York, have invented a new and valuable Improvement in Tire-Tighteners; 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 plan view of my tire-tightener; and Fig. 2 is a vertical sectional view thereof.

This invention has relation to improvements in tire-tighteners; and it consists in the arrangement and novel construction of the various devices used, whereby a very effective implement is obtained, as will be hereinafter fully explained and claimed.

In the annexed drawings, the letters A A¹ designate the standards of my improved tightener, the first of which is permanently mortised into a cross-bar, B, and the second loosely applied in a slot, shown in dotted lines, Fig. 1, formed in the said bar. These standards gradually converge, plane surfaces *a*, in the nature of a butt miter, being formed at their inner free ends for a purpose hereinafter explained.

C represents a bifurcated hook, the shank of which passes through a central perforation in bar B, and has a crank-nut, D, applied upon its projecting screw-threaded end, for a purpose hereinafter explained.

The operation of the tightener is as follows: Standards A A¹ are forcibly clamped, by means of the usual well-known clamp E, consisting of the -shaped frame *c* and a set-screw, *d'*, around the spoke F, the plane of the wheel being at right angles to that of the implement. The ends of standards A A¹ are not in contact with the hub, so that when the felly is drawn outward there will be no danger of drawing the inner end of the spoke out of, or partly out of, the said hub. The hooks *d* of the stretcher-hook C are then engaged over

the felly, one on each side of the spoke F, and the crank-nut D, operated or set up with the effect of drawing the felly outward from the hub, thus effectually tightening the tire. I then introduce a leather washer between the shoulder of the spoke and the felly, thereby preserving this adjustment of the tire to the wheel.

The crank-nut being centrally located on bar B, between standards A A¹, the draft upon the felly, exercised when the stretcher or tightening hook is actuated, will be in the direct line of the spoke outwardly, thus guarding against breaking off the tenon of the spoke or splitting the felly.

Standard A¹ being removably secured to bar B, the implement may be detached from the wheel by removing clamp E, when, by drawing the said standard outward, it may be lifted free from the wheel and applied in succession to various spokes, as may be required.

In practice, plane surfaces *a* will be covered with leather or other like substance, in order that when standards A A¹ are clamped around spokes, the paint on the latter may not be defaced or broken.

I am aware that, to tighten tires by expanding the fellies, as shown in Letters Patent dated October 6, 1874, No. 155,677, is not new; and I therefore lay no claim to such invention.

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

1. In combination with the clamp E, the fixed standard A, and the detachable standard A¹, substantially as specified.

2. The standards A A¹, clamp E, bar B, tightening-hook C, and crank-nut, combined and arranged substantially as and for the purposes set forth.

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

JACOB WILLIE THAYER.

Witnesses:

D. A. OGDEN,

GEO. Y. EASTMAN.