

T. A. FRAKES.
TIRE-TIGHTENER.

No. 187,838.

Patented Feb. 27, 1877.

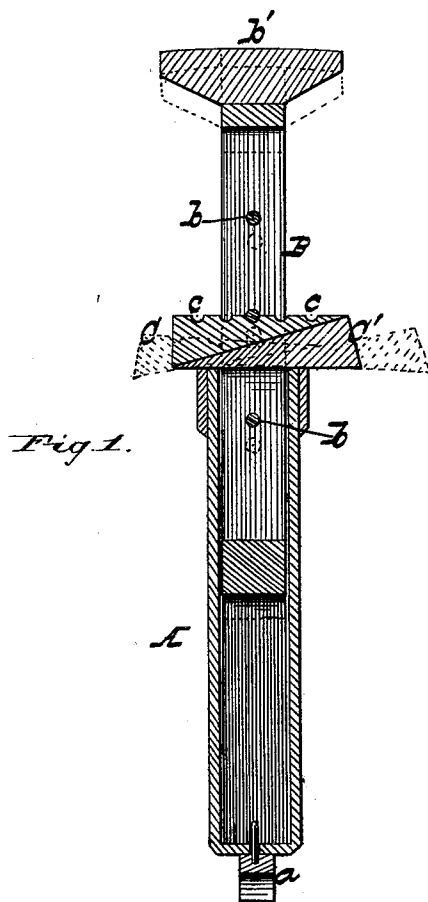


Fig. 1.

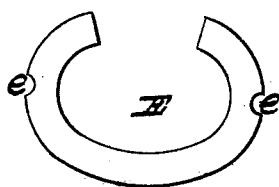
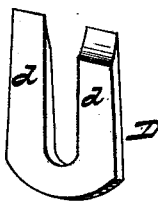


Fig. 2.

Fig. 3.



Witnesses.
David G. Dietrich
J. H. Miller.

Inventor.
Thomas A. Frakes
Edwin Brothers
by

Attys

UNITED STATES PATENT OFFICE.

THOMAS A. FRAKES, OF NEW HOLLAND, ILLINOIS.

IMPROVEMENT IN TIRE-TIGHTENERS.

Specification forming part of Letters Patent No. 187,838, dated February 27, 1877; application filed January 22, 1877.

To all whom it may concern :

Be it known that I, THOMAS A. FRAKES, of New Holland, in the county of Logan and State of Illinois, have invented certain new and useful Improvements in Tire-Tighteners; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, and in which—

Figure 1 is a vertical section of my improved tire-tightener, and Figs. 2 and 3 are views of the spoke and felly-wedges.

Like parts in the figures are denoted by like letters.

This invention relates to a certain improvement in tire-tighteners; and it consists of a hollow upright or case having a second upright, also hollow, and provided with a series of internal bars, with which engages a notched or grooved wedge, operating in connection with a second wedge, and in the construction of the felly-wedge, substantially as hereinafter more fully set forth.

In the annexed drawing, A refers to a hollow upright or case, which is adjusted upon the hub of the wheel, in practice, by a swiveled foot, *a*. Within the hollow upright or standard A is a second hollow standard or upright, B, having a series of internal cross-bars, *b b*, arranged one above the other, suitable distances apart. Upon the upper end of the lifting-standard B is a block, *b'*, beveled to conform to the under surface of the fellyes of the wheel, to adjust it thereto in tightening the tire. C is a wedge for insertion between the upper end of the upright A and any one of the cross-bars *b b*, as seen in Fig. 1, to secure the lifting-standard B firmly against the inner periphery, or fellyes, of the wheel. By the cross-bars *b b* the greatest adjustment of the lifting-standard is obtained.

In the upper surface of the wedge C is a se-

ries of notches or grooves, *c c*, which engage with the cross-bars *b b* as the wedge is moved horizontally. C' is a second wedge, adjusted with reference to the wedge C, as shown, and by moving which, as indicated in dotted lines in Fig. 1, the standard B will be lowered. By withdrawing the wedge C and adjusting it, as indicated in dotted lines in same figure, the standard B can be still lowered. The height of the said standard can be further varied by moving their larger ends toward each other, in which instance it will be elevated, thus adapting the tightener to wheels of different diameters.

D is a wedge for tightening the fellyes, the prongs *d d* of which are beveled, as seen in Fig. 3, so as that, when it is driven in between the loose fellyes, they (the said prongs) will strike against the inner surface of the tire, and be bent down between the same and fellyes, and thus be clamped in place.

E is a wedge for insertion between the spokes and fellyes, and for tightening the former. Its external circumference is notched, as at *e e*.

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

1. The tire-tightener consisting of the swiveled footed hollow upright A, having the hollow lifting upright or standard B, provided with the cross-bars *b b*, in combination with the wedge C, having notches or grooves *c c* and wedge C', substantially as and for the purpose set forth.

2. The felly-tightening wedge D, having beveled prongs *d d*, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I hereunto affix my signature in presence of two witnesses.

THOMAS A. FRAKES.

Witnesses:

JACOB BOLINGER,

I. H. HUGHES, M. D.