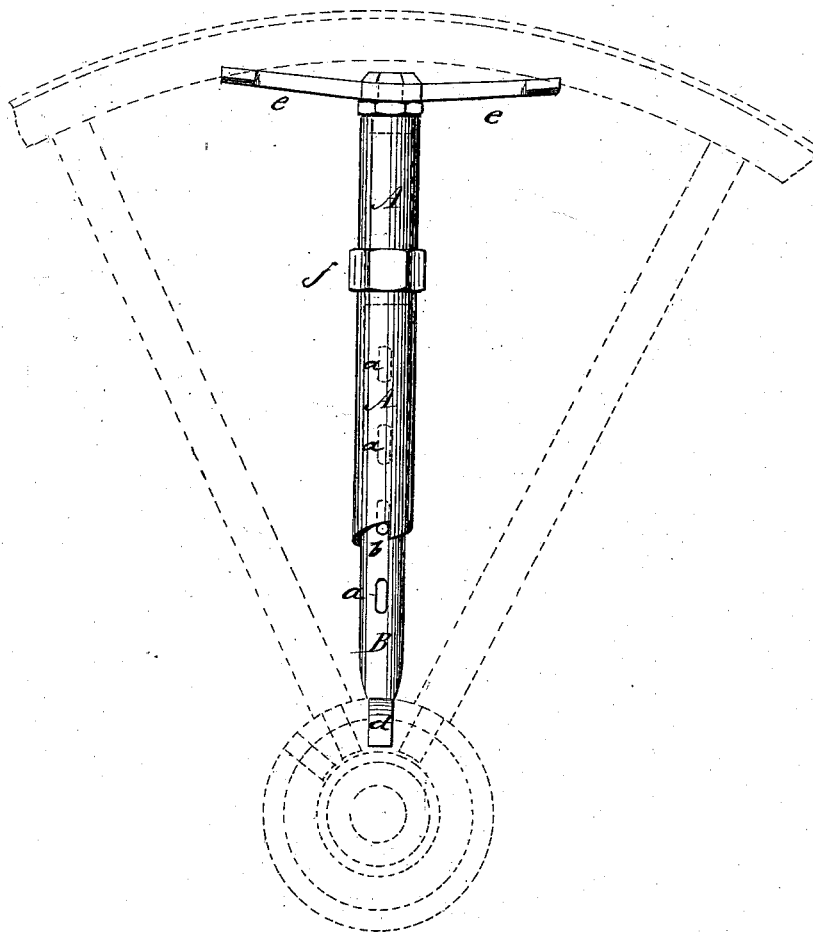


S. STOUT.  
TIRE-TIGHTENERS.

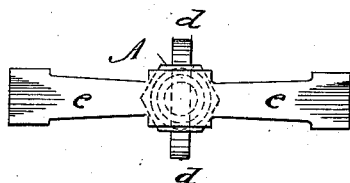
No. 194,742.

Patented Aug. 28, 1877.

*Fig. 1*



*Fig. 2*



WITNESSES:

*C. Verma*  
*J. H. Scarborough*

INVENTOR:

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BY

*M. M. M.*  
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# UNITED STATES PATENT OFFICE.

STEPHEN STOUT, OF TREMONT, ILLINOIS.

## IMPROVEMENT IN TIRE-TIGHTENERS.

Specification forming part of Letters Patent No. **194,742**, dated August 28, 1877; application filed May 12, 1877.

*To all whom it may concern:*

Be it known that I, **STEPHEN STOUT**, of Tremont, Tazewell county, Illinois, have invented a new and Improved Tire-Tightener, of which the following is a specification:

Figure 1 represents a side elevation, and Fig. 2 a top view, of my improved tire-tightening device.

Similar letters of reference indicate corresponding parts.

The invention relates to a simple and readily-operated device for expanding the fellyes and securing them tightly to the tire; and it consists of a standard or arm resting on the hub, and carrying, in slots and cross-pin, a tube with top support bearing against the felly. The tube is spirally notched at its lower end, and turned by a wrench on the pin, expanding the felly and admitting the springing in of the split-leather rings around the tenons of the spokes.

In the drawings, A represents outer inclosing-tube, and B the standard or arm, on which the tube is adjusted to the radius of the wheel by slots *a* of the standard and a cross-pin, *b*.

The standard B rests, by a suitable foot, *d*,

on the hub between the spokes, while the tube A bears, by a swiveled support, *e*, on the inner side of the felly.

Onto the tube A is shrunk or otherwise attached a fixed nut, *f*, by means of which the tube may be turned by a wrench, so that its lower spirally-notched end, which is seated on the cross-pin, is raised thereon, and forces its upper support *e* against the felly, expanding the same and pressing it tightly against the tire, so as to admit the springing on of split-leather rings or washers to the tenon of the spoke, and thus secure the tight fitting of the tire.

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

A tire-tightener formed of standard or arm B, having cross-pin, and of expanding-tube A, having spirally-notched lower end, and fixed nut to apply the wrench to expand the felly, substantially as specified.

STEPHEN STOUT.

Witnesses:

A. J. DAVIS,  
T. E. MCGINNIS.