

(No Model.)

G. W. & E. RISHEL.  
Tire-Tightener.

No. 227,995.

Patented May 25, 1880.

Fig. 1.

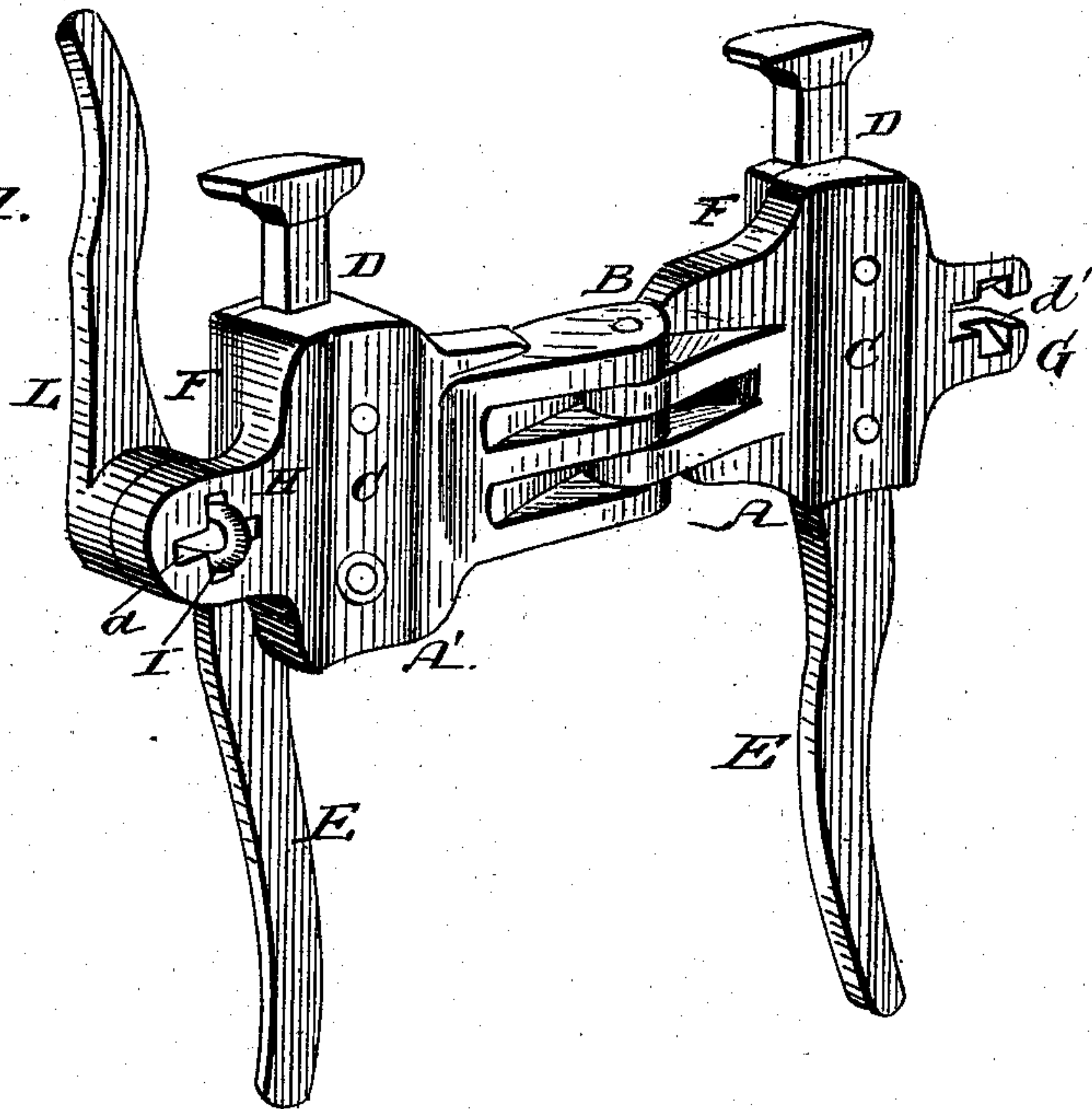


Fig. 2.

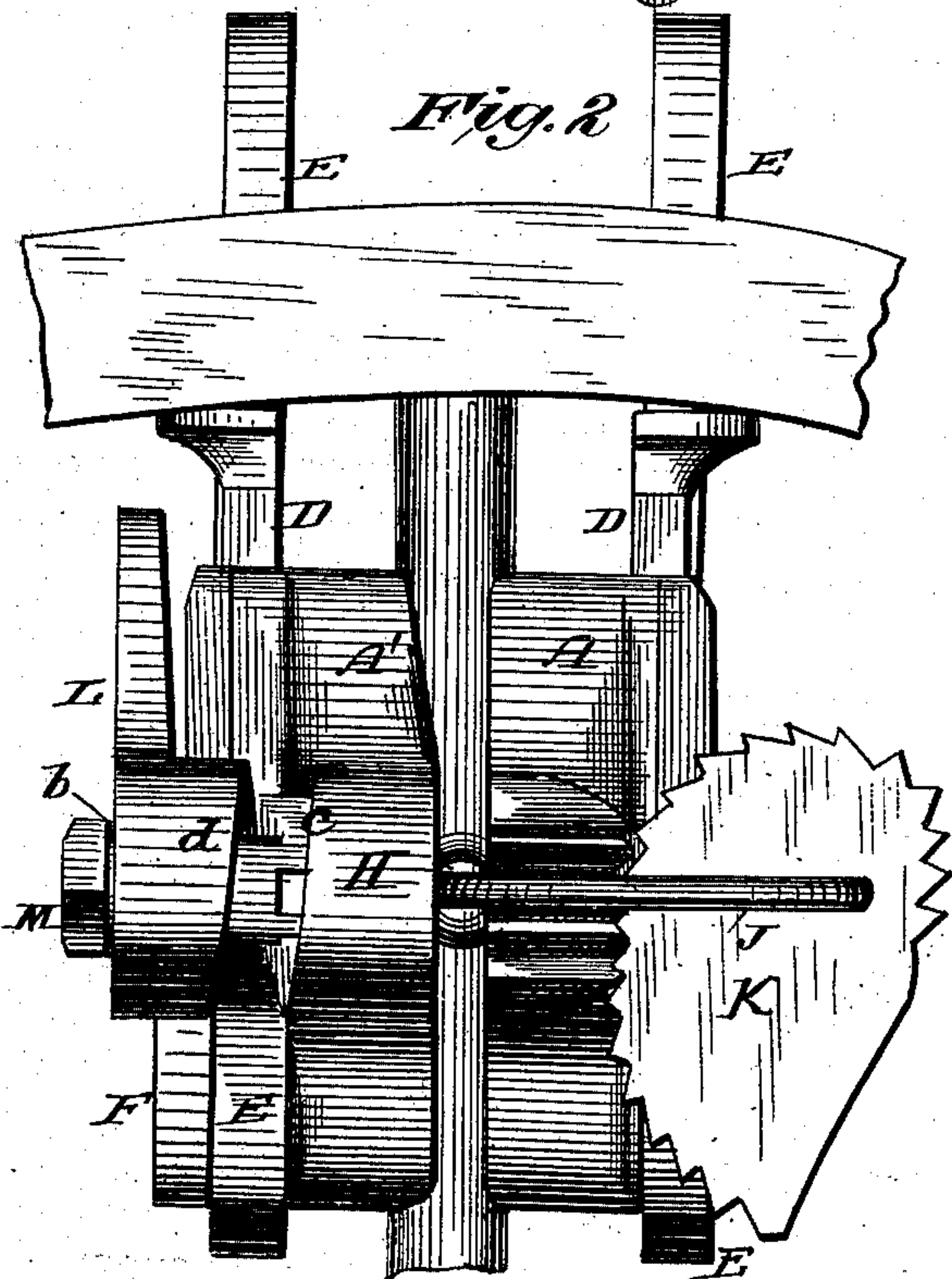
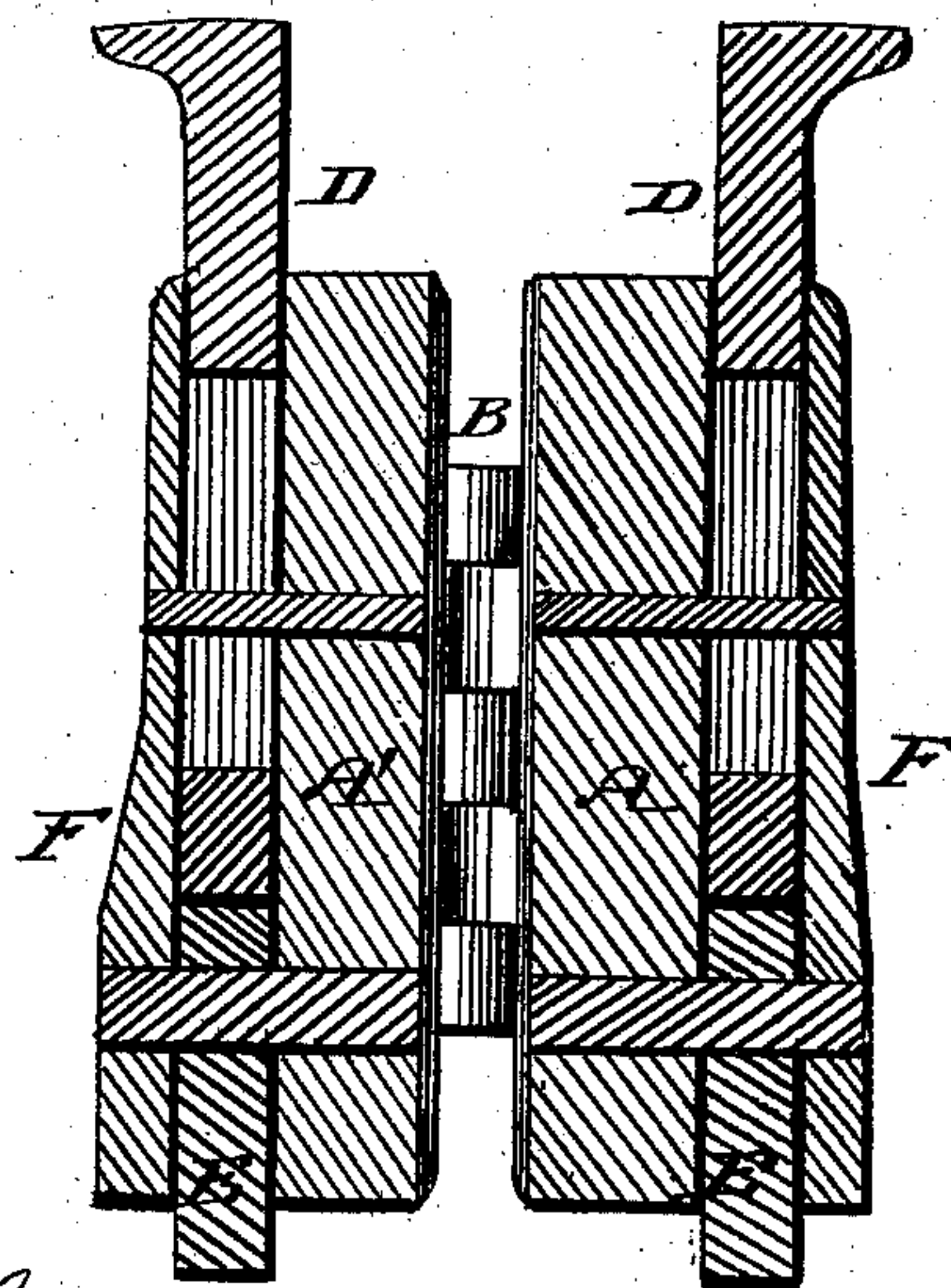


Fig. 3.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

GEORGE W. RISHEL, OF NORTH MOUNTAIN, AND ELIAS RISHEL, OF  
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## TIRE-TIGHTENER.

SPECIFICATION forming part of Letters Patent No. 227,995, dated May 25, 1880.

Application filed April 13, 1880. (No model.)

*To all whom it may concern:*

Be it known that we, GEORGE W. RISHEL, of North Mountain, Lycoming county, Pennsylvania, and ELIAS RISHEL, of Turbotville, in the county of Northumberland and State of Pennsylvania, have invented certain new and useful Improvements in Tire-Tighteners; and we do hereby declare that the following is a full, clear, and exact description of the invention, 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, which form a part of this specification.

This invention relates to tire-tighteners for wagon and buggy wheels; and it consists in the improvements in the construction of the same, hereinafter fully described, and particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of the device when expanded. Fig. 2 is a view of the device applied to the spoke of the wheel; and Fig. 3 is a vertical sectional view, showing the cam-levers and sliding jacks.

Referring by letter to the drawings, A A' designate the jaws, hinged at B and grooved at C, to clamp the spoke of the wheel. The jaws A A' carry sliding jacks D D, operated by cam-levers E E, fulcrumed beneath the ways F, in which the jacks D work. The jaw A has a slotted projection, G, and the jaw A' has a perforated projection, H, recessed on its inner face at *a* in the form of a cross, to receive a hook, I, and link J, provided with a scroll-shaped serrated wedge, K.

The hook I is screw-threaded near its end, is passed through the perforation in the projection H and through a perforation in the cam-lever L, and is held in place by a nut, M, a washer, *b*, being interposed between the face of the cam-lever L and the nut M.

The rear face of the projection H has an incline, *c*, corresponding with the incline *d* on the front face of the cam-lever L. The slotted projection G of the jaw A is also recessed at *d'* to receive the juncture of the link J and

hook I, so that the jaws A A' may be clamped tightly together, if necessary.

In placing the device upon a wheel the levers should all be turned up, the jacks D forced down, the jaws A A' opened and placed around one of the spokes of the wheel, then brought together, bringing the tops of the jacks D against the under side of the felly, and the link J dropped into the slot in the projection G. The cam-lever I should then be turned to cause the scroll-shaped wedge K to bind upon the slotted projection G and cause the device to be securely fixed to the spoke. The cam-levers E E should then be turned down to force the jacks D D up against the fellyes and expand them against the tire, which will leave a space between the tenons of the spokes and the felly, into which a lap-washer is to be inserted to hold the tire tightly when the device has been removed.

Having thus fully described our invention, what we claim as new and useful, and desire to secure by Letters Patent, is—

1. In a tire-tightener, the combination of the jaws A A', provided with jacks D D, operated by levers E E, and projections G and H, constructed as described, with the hook I and link J, having serrated scroll-wedge K, and the cam-lever L, constructed and operating substantially as and for the purposes set forth.

2. In a tire-tightener, the hinged jaws A A', having projections G H, in combination with the link J, hook I, wedge K, and cam-lever L, substantially as and for the purposes set forth.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

GEORGE W. RISHEL.

ELIAS RISHEL.

Witnesses to the signature of George W. Rishel:

MARTHA C. KEELER,

A. S. WAGNER.

Witnesses to the signature of Elias Rishel:

W. K. KANE,

S. P. SOPER.