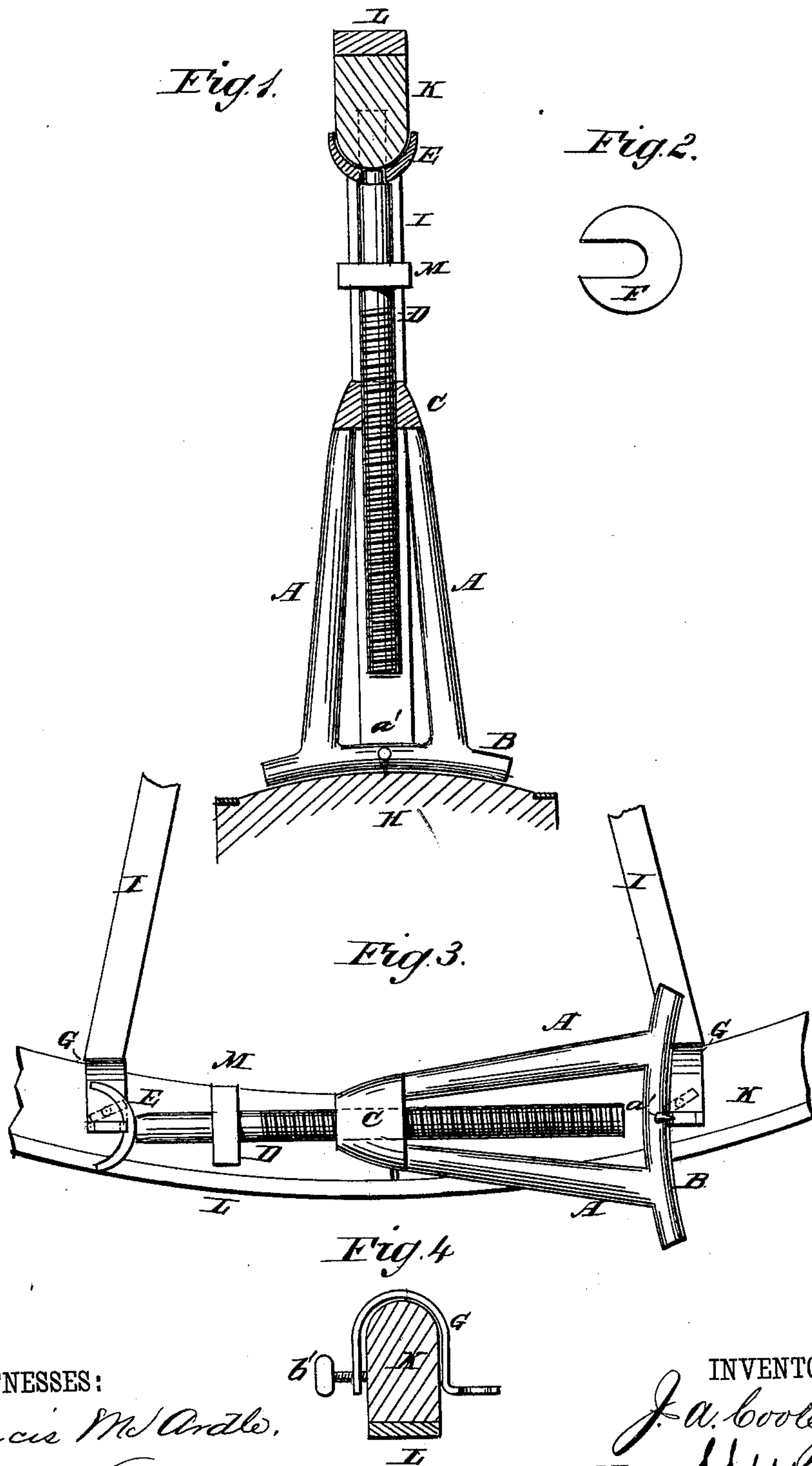


J. A. COOLEY.
Tire-Tightener.

No. 220,345.

Patented Oct. 7, 1879.



WITNESSES:
Francis Mc Ardle,
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UNITED STATES PATENT OFFICE.

JOHN A. COOLEY, OF SAVANNA, ILLINOIS.

IMPROVEMENT IN TIRE-TIGHTENERS.

Specification forming part of Letters Patent No. **220,345**, dated October 7, 1879; application filed August 9, 1879.

To all whom it may concern:

Be it known that I, JOHN A. COOLEY, of Savanna, in the county of Carroll and State of Illinois, have invented a new and Improved Tire-Tightener, of which the following is a specification.

Figure 1 is a front elevation of the device, partly in section. Fig. 2 is a plan of the washer used. Fig. 3 is a representation of the device applied for separating parts of the felly. Fig. 4 is a side elevation of a clamp applied to a felly.

Similar letters of reference indicate corresponding parts.

The object of this invention is to provide a device for tightening wheel-tires by raising or spreading the fellies so that washers may be inserted between the ends of the spokes and the felly or between the parts of the felly itself.

The invention consists in a device for tightening tires, consisting of standards, base provided with stud, screw, screw-nut, pivoted top and nut, and in a clamp provided with set-screws combined with the tightener, as hereinafter described.

In the drawings, A A represent the standards, B the curved base cross-bar uniting the standards at the bottom and curved to fit upon the hub of the wheel. C is the screw-nut, in which the upper ends of the standards terminate. D is the long upright screw, having fixed upon its shank a nut, M, for the application of a wrench to turn the screw, and E is the crescent-head of the device pivoted on the screw-shank.

To operate the device, its base is placed upon the hub H between the spokes I I, as shown in Fig. 1, and the head is set under and against the felly K, near the outer end of the spoke; then by extending the screw the felly is lifted off the spoke, so that a circular slotted washer, F, of hard leather or other suitable substance

can be inserted between the shoulder of the spoke and the felly, thus tightening the tire L; and this application can be made to two or more spokes should the treatment of one not be sufficient.

Upon one side of the base of the device is seen a sharp projecting pin or stud, *a'*, which is of service in the case of old wheels, in which the spokes are sometimes loose in the hub. In such cases the stud is made to penetrate and hold the base of the spoke and prevent it from drawing from the hub when the felly is being raised from the other end.

In operating on very old wheels, where the fellies have shrunk so that they do not fill the tires, I make use of two clamps, G G, furnished with set-screws *b' b'*, and these I fasten to parts of the felly at a sufficient distance apart for the tightener to be placed between them, as shown in Fig. 3; then by the extension of the screw I force the felly apart so that a washer may be inserted between their ends, thus tightening all the joints in the felly and making it solid.

The instrument is simple, easily adjusted, and most effective.

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

1. The within-described device for tightening tires, consisting of standards A A, base B, provided with stud *a'*, screw-nut C, screw D, pivoted top E, and nut M, substantially as herein shown and described.

2. The clamp G, provided with set-screws *b'*, in combination with the tire-tightener, substantially as herein shown, and for the purpose described.

JOHN ALDEN COOLEY.

Witnesses:

L. S. BOWEN,
B. H. GILBERT.