

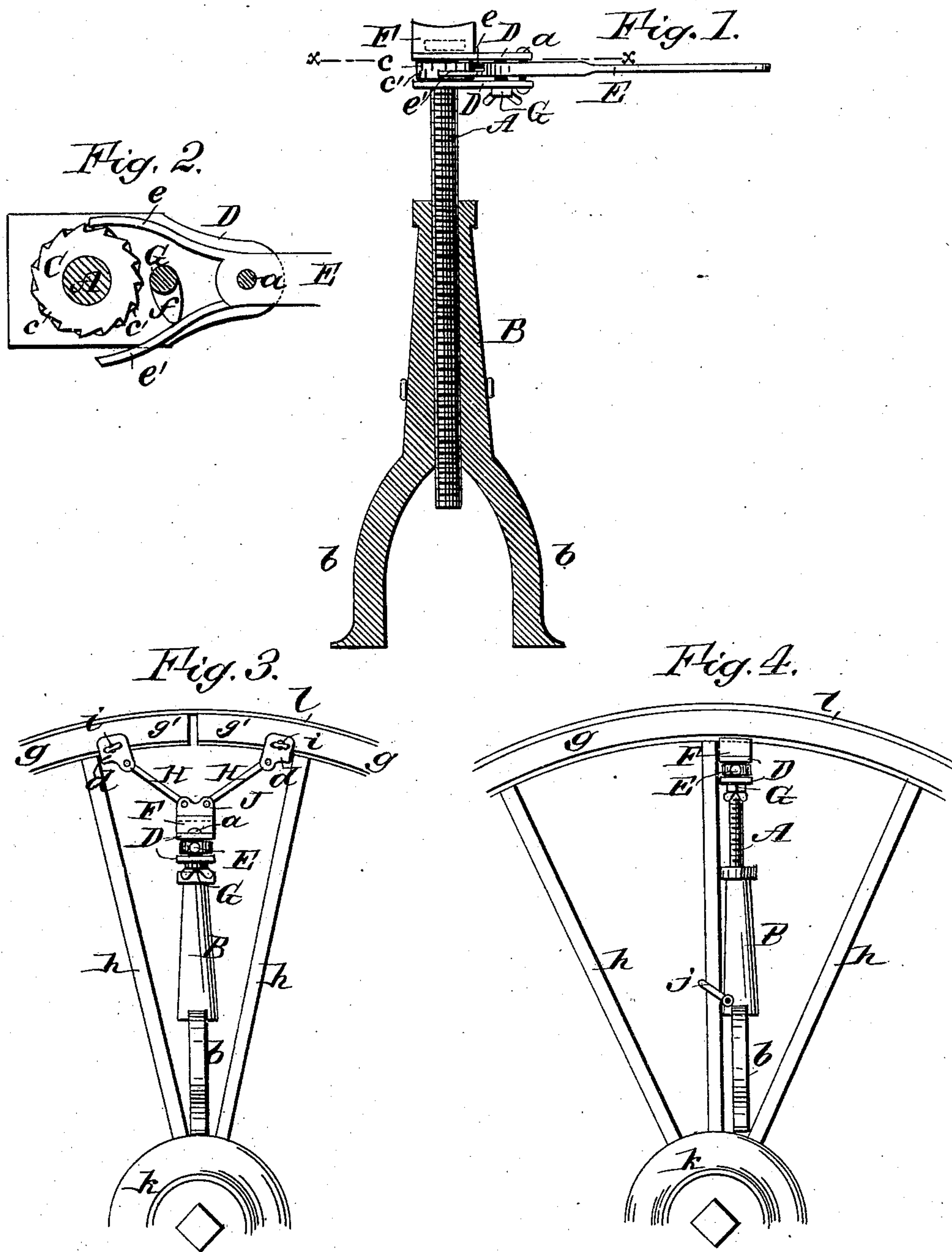
(No Model.)

R. McCLOSKEY & A. E. TOZIER.

COMBINED TIRE TIGHTENER AND JACK.

No. 294,895.

Patented Mar. 11, 1884.



WITNESSES:

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UNITED STATES PATENT OFFICE.

RILEY McCLOSKEY AND ALBERT E. TOZIER, OF WALLA WALLA,
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COMBINED TIRE-TIGHTENER AND JACK.

SPECIFICATION forming part of Letters Patent No. 294,895, dated March 11, 1884.

Application filed September 11, 1883. (No model.)

To all whom it may concern:

Be it known that we, RILEY McCLOSKEY and ALBERT E. TOZIER, of Walla Walla, in the county of Walla Walla and Territory of Washington, have invented a new and Improved Combined Tire-Tightener and Wagon-Jack, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional elevation of our new and improved lifting-jack arranged for general use, such as raising the axle of a wagon for removing the wheel. Fig. 2 is a sectional plan view of the same, taken on the line *x x* of Fig. 1; and Figs. 3 and 4 illustrate the method of using the jack for spreading the fellys of wagon-wheels for tightening the tire.

The invention will first be described in connection with the drawings, and then pointed out in the claims.

A represents the lifting-screw, and B the standard in and through which the screw A works. The standard B is, by preference, made of cast-iron, and is formed or provided with the legs *b b*. Upon the upper end of the lifting-screw A is secured the ratchet-wheel C, which is formed with double sets of ratchet-teeth *c c'*, which are oppositely arranged, as shown clearly in Fig. 2. Above and below the ratchet-wheel C are placed loosely upon the screw A the yoke-plates D D, between which the operating-lever E is pivoted or fulcrumed upon the bolt *a*, and upon the upper end of the screw A is swiveled the plate or head-block F, which is, by preference, made concaved upon its upper surface, as shown clearly in Fig. 1. The operating-lever E is formed or provided on opposite sides with the spring-pawls *e e'*, which are adapted to engage, respectively, with the ratchet-teeth *c c'* of the ratchet-wheel C—one for elevating the lifting-screw A, and the other for lowering it. Between the pawls *e e'* is pivoted in the yoke-plates D D the thumb-nut G, which is formed between the plates D D with the enlargement *f* on one side, by which either of the pawls *e e'* may be forced outward out of engagement with the ratchet-wheel C, leaving the other in

contact therewith, as shown in Fig. 2, so that by turning the thumb-nut G the pawls may be arranged so that the screw A may be turned either to the right or left, as desired, by operating the single lever E.

H H are arms pivoted to the block J, which block is adapted to be placed upon the head-block F for the screw A to lift against.

Pivoted to the outer ends of the arms G G are the shoes *d d*, which are provided with the set-screws *i i*, for securing the shoes to the parts *g g* of the felly of a wagon-wheel, as illustrated in Fig. 3.

For ordinary use, or for lifting the felly of a wheel off from a spoke in the wheel, the block J, arms H H, and shoes *d d* will not be used with the jack.

For ordinary use—such, for example, as lifting the axles of a wagon for removing the wheels—the jack will simply be placed under the axle, and the thumb-nut G turned to permit the pawl *e* to engage with the ratchet-wheel C and disengage the pawl *e'* therefrom, and the lever E operated, which will turn the screw A and lift the axle. For lowering the axle, the thumb-nut G will be turned to reverse the pawls *e e'*, and the lever E again operated.

For lifting the felly *g* of a wagon-wheel off from the spoke *h*, the jack will be set upon the hub *k* of the wheel and clamped to the spoke by the clevis or similar device, *j*, for holding the spoke from being lifted out of its socket in the hub. The lever E will then be operated, which will bring the head-block F against the under side of the felly *g*, as shown in Fig. 4, and cause it to be lifted off from the outer end of the spoke *h*, to which it is attached by clevis *j*.

For spreading the parts *g' g'* of the felly for tightening the tire of the wheel, the jack will be placed upon the hub *k*. The block J will then be placed upon the head-block F, and the shoes *d d* will then be made fast to the felly by the set-screws *i i*, and then the lever E will be operated, as before, to elevate the screw A, which, acting against the block J and arms H H, will spread the parts *g' g'* of the felly, as illustrated in Fig. 3, so that they may be packed or wedged apart, and thus tighten and hold the tire tight upon the felly.

Instead of placing the block J upon head-block F while spreading the felly, as just described, and as shown in Fig. 3, the block F might be removed and the block J placed directly upon the screw A, as will be readily understood.

We are aware that the lifting-screw and standard A B are not new, nor the head-block F, nor the pivoted arms H; but

10 . What we do claim as new and of our invention is—

1. The combination, with the lifting-screw, of the fast wheels C, having reversed ratchet-teeth *c c'*, the plates D D, loose on the screw,

the lever E, pivoted between said plates on the fulcrum-bolt *a*, and carrying on opposite sides the spring-pawls *e e'*, and the thumb-nut G, as and for the purpose specified.

2. In a tire-tightener, the combination, with the head-block arms H, of the shoes *d*, pivoted thereto, having a slot and provided with a set-screw, as shown and described.

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Witnesses:

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