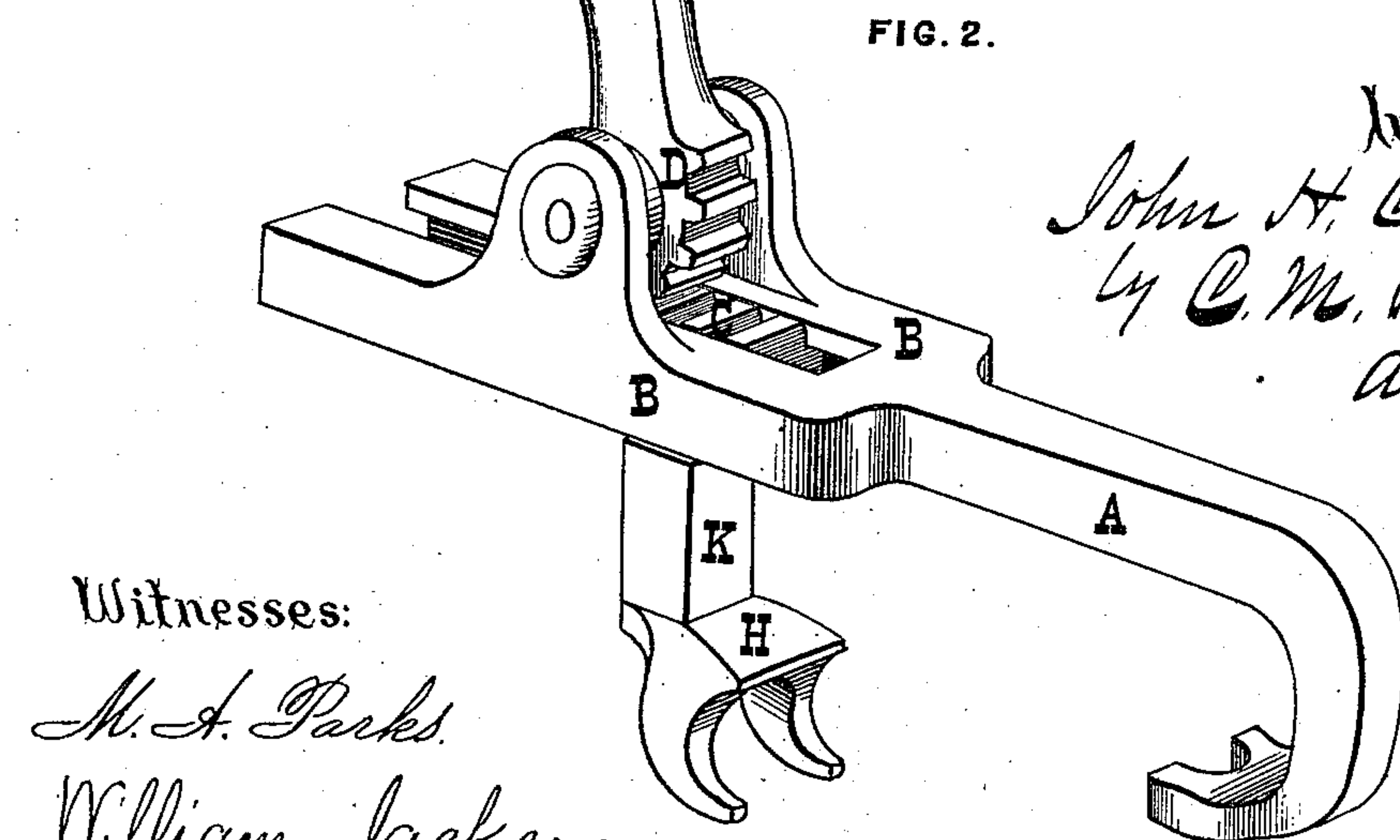
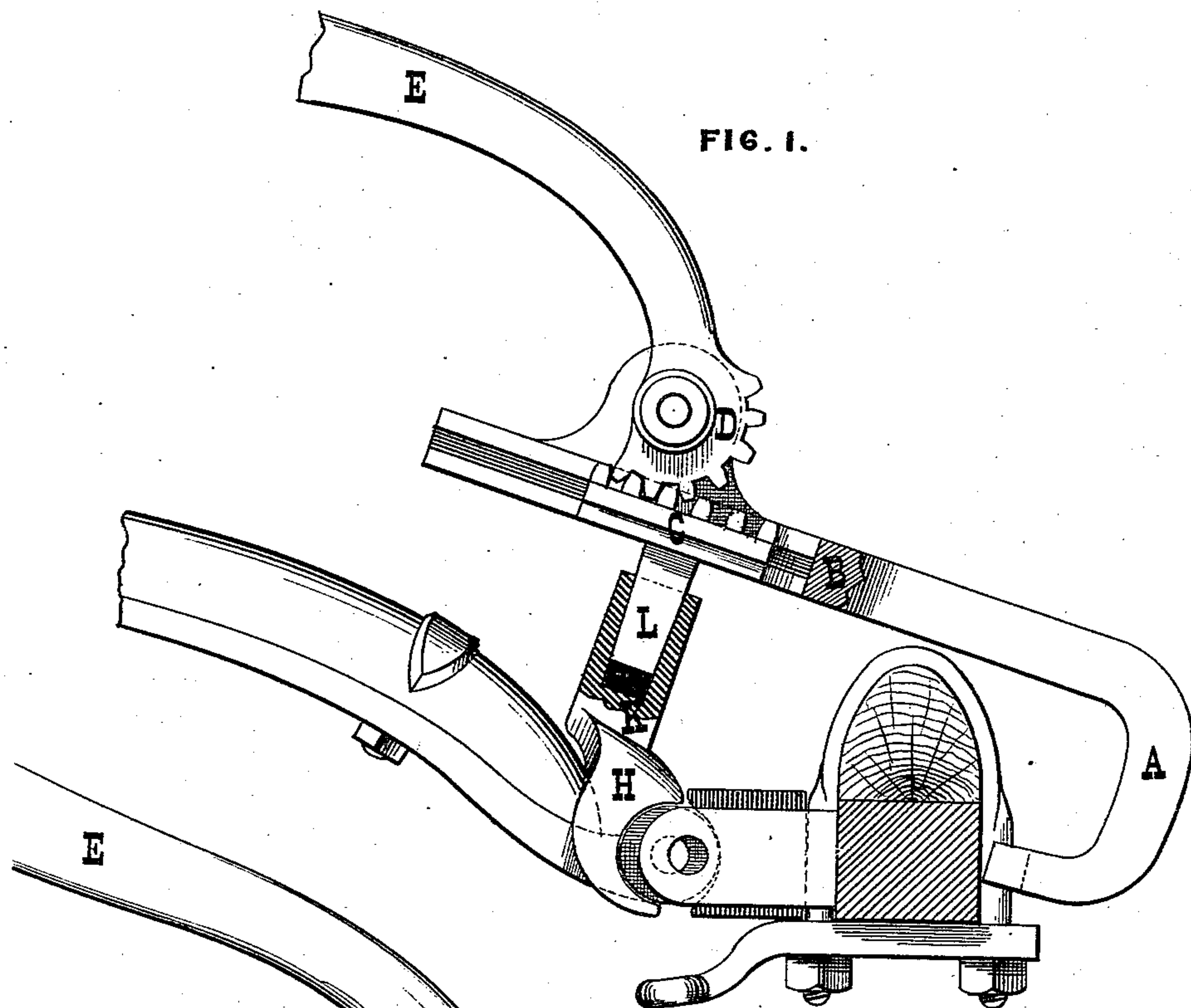


J. H. COMBS.
Thill-Coupling Jack.

No. 161,387.

Patented March 30, 1875.



Inventor.
John H. Combs.
By *C. M. Parks*
Attorney

Witnesses:
M. A. Parks.
William Jackson.

UNITED STATES PATENT OFFICE.

JOHN H. COMBS, OF STAMFORD, CONNECTICUT.

IMPROVEMENT IN THILL-COUPLING JACKS.

Specification forming part of Letters Patent No. **161,387**, dated March 30, 1875; application filed September 9, 1874.

To all whom it may concern:

Be it known that I, JOHN H. COMBS, of Stamford, Fairfield county, Connecticut, have invented an Improved Shackle - Jack for Wagons; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a sectional view of my shackle-jack, and Fig. 2 a perspective view of the same.

My invention relates to a tool for forcing the shaft-eyes of the shafts of a wagon against their rubber buffers, so that the shackle-bolt can be easily inserted; and it consists in providing the shank of the jaw of the jack or clamp which clasps the axle with an adjustable and removable fork, made adjustable by a ratchet-head sliding in ways and operated by a pinion.

In the drawings, A is the jaw, which is intended to clamp the axle of the wagon, and is provided with a notched end and a crook for that purpose. B is the shank, bifurcated, with a groove in each inner side for the reception of splines upon either side of the sliding head C. Upon the upper side of the head C are cogs or teeth, forming a rack, which engage a pinion, D, hung in suitable bearings, which pinion is operated by a lever, E, or otherwise. Upon the lower side of the sliding head C is

a spur, L, upon which is fitted the shank K of a fork, H, which is made to fit the shoulders of a shaft-eye.

It is plain that when the jaw A is placed against the rear side of the clip upon the axle of a wagon, and the fork H placed against the shoulders of a shaft-eye, and a rubber buffer placed behind the eye and in the shackle, that, by revolving the pinion D in the proper direction, the eye can be forced against its buffer until the holes in the eye and in the shackle coincide, and the bolt be inserted without any difficulty.

The shank K is made removable from the spur L, so that forks of different sizes may be employed.

Having fully described my shackle-jack, what I claim, and desire to secure by Letters Patent, is—

A shackle-jack consisting of the hooked jaw A and the removable sliding jaw H, to be operated by a rack and pinion, substantially as and for the purpose set forth.

The above specification of my said invention signed and witnessed at Stamford this 15th day of July, A. D. 1874.

J. H. COMBS.

Witnesses:

BYRON W. COHEN,
HENRY N. WEED.