P. P. CARNES.

Firemen's Ladder.

No. 160,081. Patented Feb. 23, 1875

Fig. 2.

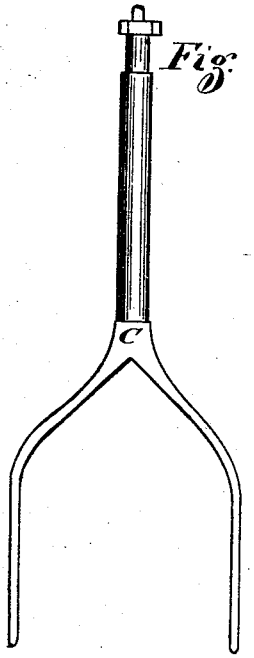


Fig. 1.

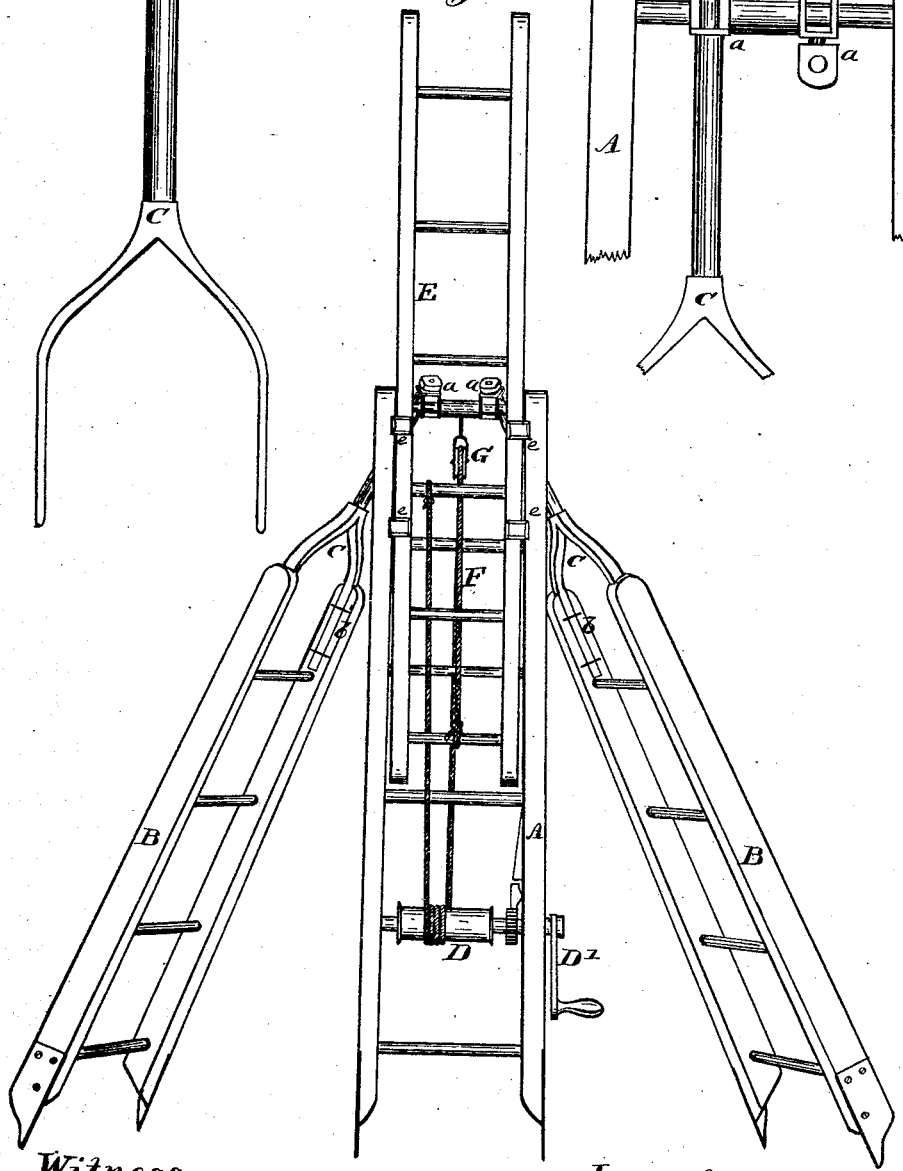
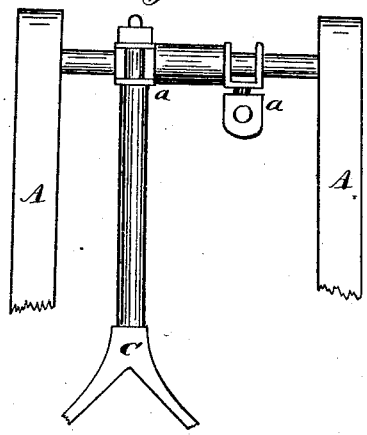


Fig. 3.



Witness,
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UNITED STATES PATENT OFFICE.

PHILON P. CARNES, OF CLEVELAND, OHIO.

IMPROVEMENT IN FIREMEN'S LADDERS.

Specification forming part of Letters Patent No. **160,081**, dated February 23, 1875; application filed January 11, 1875.

To all whom it may concern:

Be it known that I, PHILON P. CARNES, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain Improvements in Firemen's Ladders, of which the following is a specification:

This invention relates to certain improvements in "firemen's tripod ladders," being additional improvements on my patent granted May 5, 1874, No. 150,394; and consists in making the yokes removable from the ladders, and employing but two yokes, one for each of the auxiliary ladders, the third ladder having the swivels for attaching said yokes attached to the top round of said third ladder, whereby an extensible section ladder may be attached to said third ladder. The improvement further consists in attaching each end of the rope to the ladders, and passing it around the windlass-drum, so that the windlass may be used as a down-haul as well as for elevating the extensions.

To enable others to fully understand my invention, I will proceed to describe the same in detail, with the aid of the accompanying drawing, in which—

Figure 1 is a front elevation of a tripod ladder constructed after my improvements. Fig. 2 is an enlarged detached view of one of the yokes. Fig. 3 is an enlarged detached view of the swivel-joints.

A, Fig. 1, is a ladder having the top round arranged for the swivels *a a*. B B are two shorter ladders having grooves *b b* to receive the yokes C C, the said yokes having a shoulder, screw-thread, and nut on the upper end, for attaching them to the swivels. The ladders A and B B are single solid rail ladders, and when set up, as seen in Fig. 1, form a complete tripod. The ladder A has a windlass and drum, D, operated by a crank, D'. E is an extension section ladder attached to the ladder A, sliding in guide-sockets *e e*, and is operated by a rope, F, passing through a pulley, G, suspended to the top round of ladder A, one end of said rope being secured to the lower round of ladder E. The other end, after being passed three or four times around the drum D, is secured to the top round of ladder A. This forms a ready means of elevating and down-hauling the ladder E. By the use of the removable yokes the ladders may be used separately.

Having thus described my invention, I claim as follows:

In a tripod ladder having its sections secured together at the top, the removable yokes C C, as shown and described, and for the purpose set forth.

P. P. CARNES.

Witnesses:
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