(No Model.)

O. CHATFIELD, Jr.

STEP LADDER.

No. 300,846. Patented June 24, 1884.

Fig. 1.

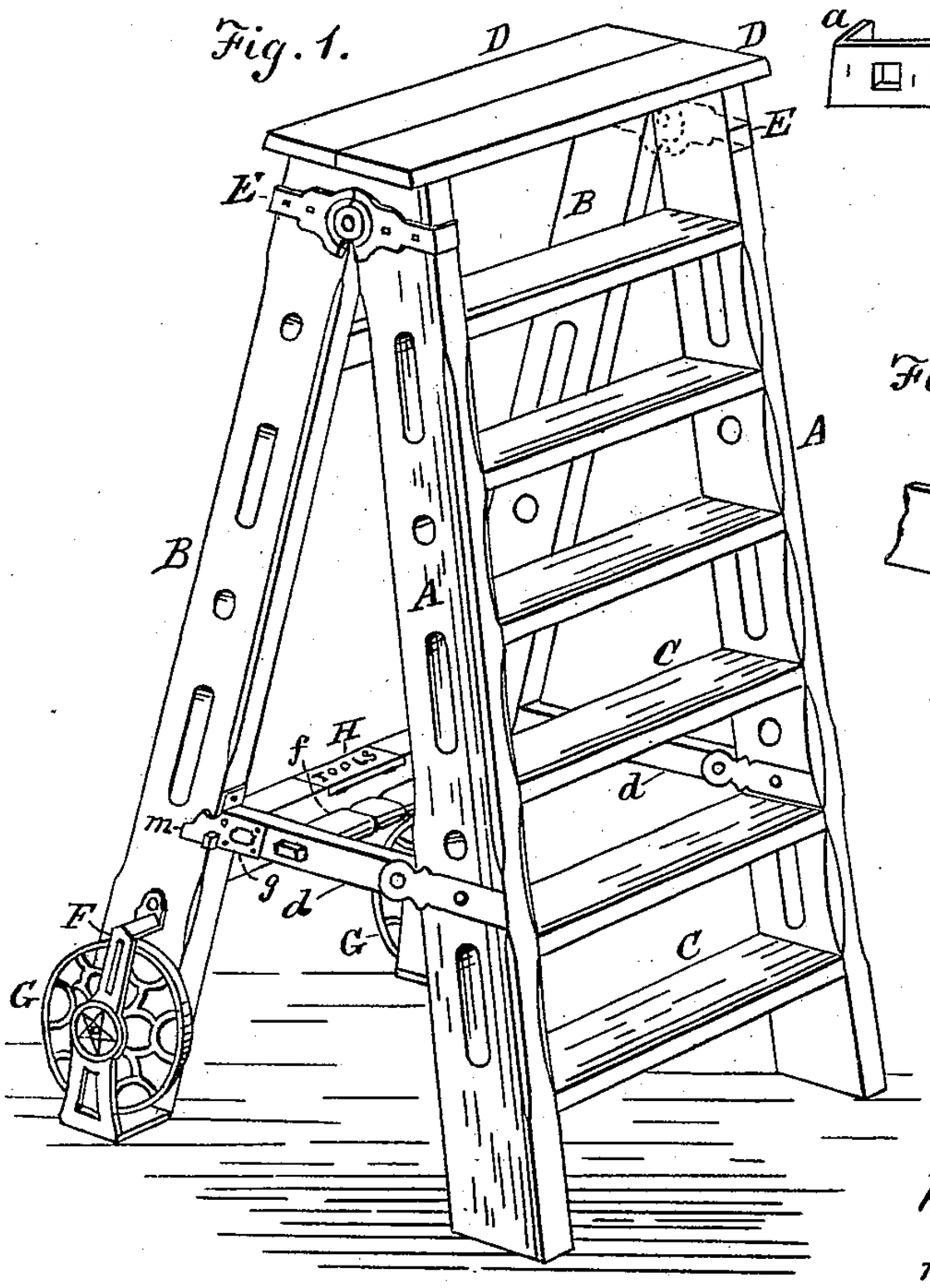


Fig. 2.

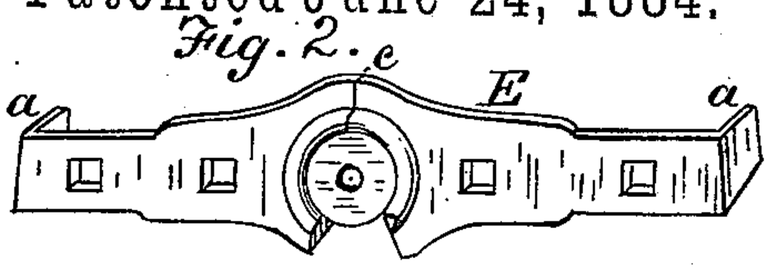


Fig. 3.

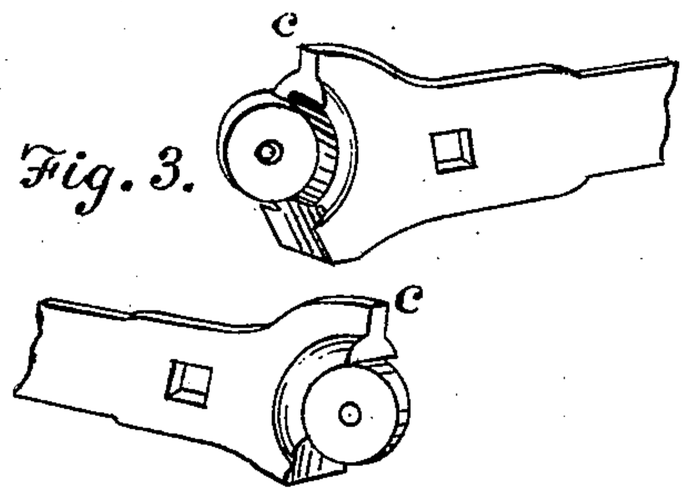


Fig. 4.

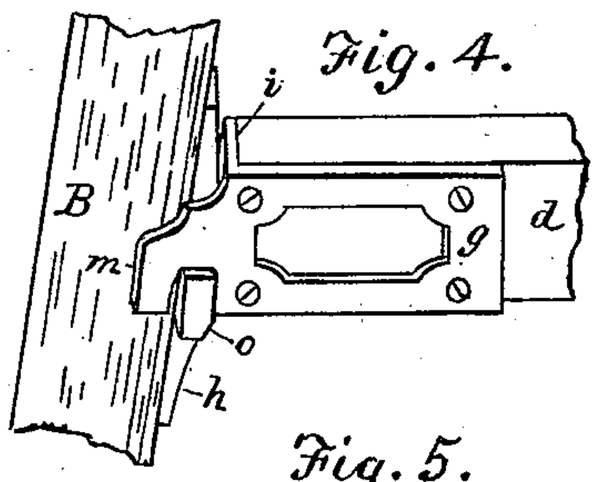


Fig. 5.

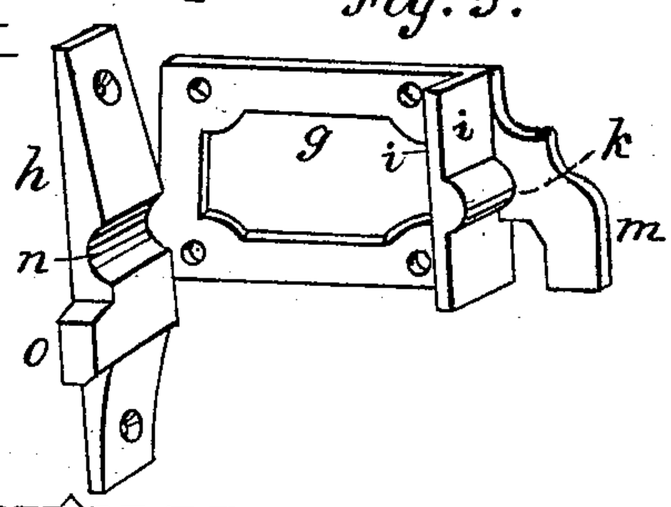


Fig. 6.

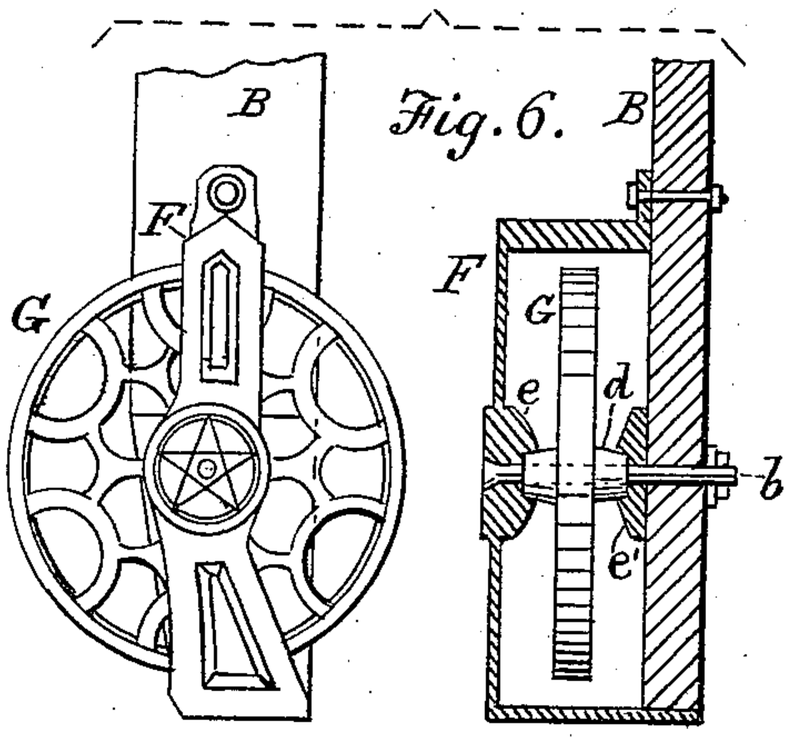
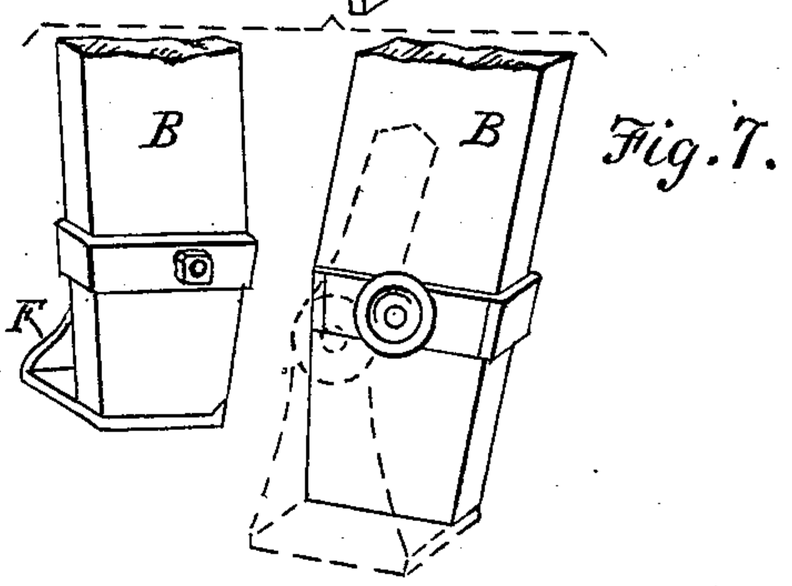


Fig. 7.



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UNITED STATES PATENT OFFICE.

ORRIN CHATFIELD, JR., OF LOCKPORT, NEW YORK.

STEP-LADDER.

SPECIFICATION forming part of Letters Patent No. 300,846, dated June 24, 1884.

Application filed August 23, 1883. (No model.)

To all whom it may concern:

Be it known that I, ORRIN CHATFIELD, Jr., a citizen of the United States, residing at Lockport, in the county of Niagara and State of New York, have invented certain new and useful Improvements in Step-Ladders, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to step-ladders; and it consists in certain improvements in the construction of the same, as hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a step-ladder having my improvements. Fig. 2 represents one of the hinge-couplings of the main parts of the ladder. Fig. 3 shows the two parts of a hinge-coupling detached. Fig. 4 illustrates the catch-fastenings of the locking device used in securing the ladder in position. Fig. 5 shows the two parts of a catch-fastening detached. Fig. 6 illustrates, in side view and section, the wheel attachments of the rear standards of the ladder. Fig. 7 shows the inner and outer sides of one of the rear standards.

A designates the front and B the rear standards of the step-ladder, the former having the steps C, and the latter being connected by cross bars. The said standards are provided with the top pieces, D, and are held together at the top by means of the couplings E, fastened thereto, each of said couplings being provided at its outer extremities with angle-irons *a*, to inclose the edges of the standards, and a central hinge having in its upper part the shoulders or stops *c*, closing against each other, the hinge being so constructed as to prevent the front and rear parts of the ladder from spreading apart too much, but allow the lower parts to be brought together. (See Figs. 1 and 2.)

To each of the rear standards, B, and at the lower end, is secured a housing, F, within which is placed a wheel, G, the same being on a fixed shaft or bolt, *b*, passed through housing and standard, and properly secured. The hub *d* of wheel G extends into and rotates in the fixed sockets *e* and *e'*, one of which is formed with or attached to the housing, the other being made fast to the standard. This construction of wheel hub and sockets prevents the wheel becoming clogged or its rotation affected by grass or weeds when the ladder is being moved over the ground from one place to another. As will be seen, the wheels G do not bear on the ground when the ladder is in position for use, as seen in Fig. 1; but when it is desired to remove the ladder from one place to another it may be turned over backward, so that the wheels G are brought in contact with the ground, and the ladder can be easily moved about like a wheelbarrow.

At the lower part of the ladder it is provided with a locking device for further securing the front and rear parts in proper position for use. The locking device consists of the bars *d*, each of which is hinged at one end to a standard, A, the other end of the bar being provided with a catch-fastening, by which it may be adjustably secured to a standard, B. The two bars *d* are usually connected by a bar, *f*. Each of the catch-fastenings is formed in two parts, being a plate, *g*, which is fastened to a bar, *d*, and a plate, *h*, fastened to a standard, B. The plate *g* is formed with a rectangular part, *i*, to set against the end of the bar, as shown, a bulge, *k*, to enter a corresponding recess in plate *h*, when the fastening is adjusted, and a hook or recessed projection, *m*, to close on a lateral projection of plate *h*. The plate *h* is constructed to be fastened to a standard, B, and has a recess, *n*, to receive the bulge *k*, and a lateral projection, *o*, on which closes the recessed projection *m*.

For convenience in conveying tools with the ladder, a box, H, for such tools as are frequently required when the ladder is used, is constructed in connection with a cross-bar of the rear standards, the box being sunken in the bar.

Having described my invention, I claim—

1. A step-ladder provided with wheels mounted in the stiles thereof at a short distance from the lower ends, the periphery of said wheels extending beyond the edges of said stiles, but not beyond their ends, so that said wheels are not in contact with the ground when the ladder is adjusted in an upright position, but may be brought to bear on the ground by turning the ladder toward a horizontal position, substantially as and for the purpose described.

2. A step-ladder having wheels within housings secured to the standards of the ladder,

the hub of each wheel extending into fixed sockets *e* and *e'*, and rotating therein, substantially as shown and described.

3. In a step-ladder having front and rear standards, a locking device for said standards, having catch-fastenings, each of which consists of a plate, *g*, having recessed projection *m* and bulge *k*, and a plate, *h*, having a recess, *n*, and projection *o*, substantially as set forth.

4. In a step-ladder having front and rear standards, the hinged locking device having plates *g* and *h*, in combination with a hinged coupling, E, provided with stops *c*, the parts being constructed substantially as shown, for the purposes set forth.

In testimony whereof I have affixed my signature in presence of two witnesses.

ORRIN CHATFIELD, JR.

Witnesses:
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