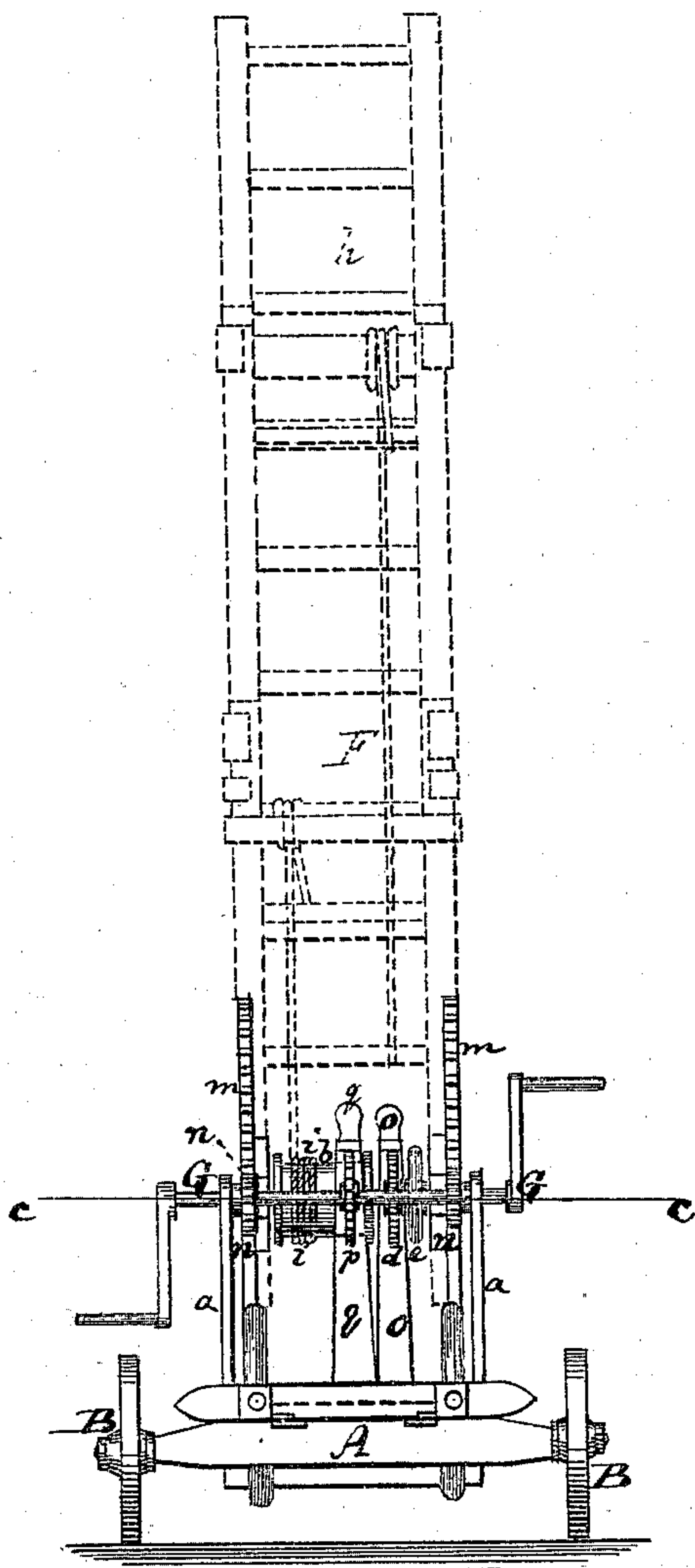


**G. PFLEEGER.**  
**Fire-Escape Ladders.**

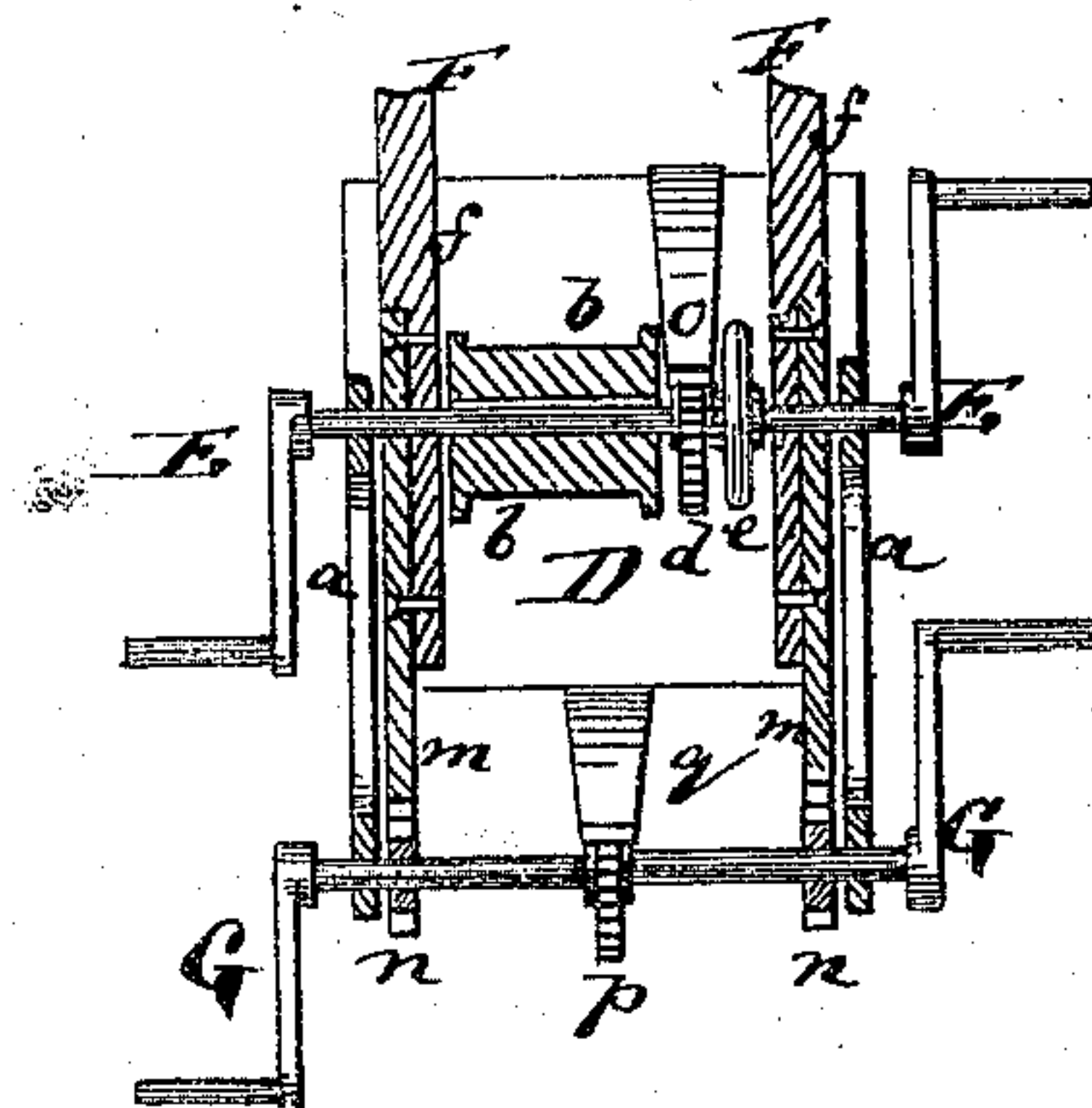
No. 143,462.

Patented Oct. 7, 1873.

*Fig. 1.*



*Fig. 2.*



*Witnesses.*

*John Becker.*  
*Fred Harnes*

*George Pfleeger*  
*by his Attorneys*  
*Brown & Allen*

# UNITED STATES PATENT OFFICE

GEORGE PFLEEGER, OF DEERFIELD, NEW YORK.

## IMPROVEMENT IN FIRE-ESCAPE LADDERS.

Specification forming part of Letters Patent No. **143,462**, dated October 7, 1873; application filed May 6, 1873.

*To all whom it may concern:*

Be it known that I, GEORGE PFLEEGER, of Deerfield, in the county of Oneida and State of New York, have invented an Improvement in Fire-Escapes, of which the following is a specification:

Figure 1 is an end elevation of a fire-escape ladder containing my improvement; Fig. 2, a horizontal section on the plane of the lines *c c*, Fig. 1.

Similar letters of reference indicate corresponding parts in the figures.

The invention consists in a new arrangement of ratchets and detaining devices for securing an extension-ladder in any suitable position.

In the accompanying drawing, the letter A represents the bed or body of the carriage, mounted on wheels B B, and supporting a platform, D, that is connected by a bolt with the carriage. E is a crank-shaft, hung in arms *a* that project from the frame D, and carries a drum, *b*, between said arms, a ratchet-wheel, *d*, near said drum, and a wheel or disk, *e*, near said ratchet-wheel. F is an extension-ladder, made in sections. The lower section *f* is pivoted to the shaft E, while the other sections, *g h*, can slide along *f* to extend or contract, as desired. A rope, *i*, connects at one end to the drum *b*, passes thence upward around a friction-roller that hangs in the outer part of the section *f*, and thence to the lower part of *g*. By this rope the ladder can be extended or contracted when the drum *b* is turned. The upper sections *g* and *h* are similarly connected. A toothed segment, *m*, is formed at the lower part of the section *f*, and is in gear with a pinion, *n*, that is mounted upon a crank-shaft, G, that hangs in front of the frame D. By

turning the shaft G, and thereby the toothed segment, the ladder will be inclined more or less by suitable means.

By turning the crank-shaft E, the drum will be revolved to extend or contract the ladder in the desired manner. When contracted and placed horizontally, as shown, the ladder is in a convenient position for transportation, together with the carriage.

A click or pawl, *o*, bears against the ratchet-wheel *d*, and serves to retain the extended ladder in any position to which it may have been extended.

When it is desired to contract the ladder, the click or pawl *o* must be withdrawn from contact with the ratchet-wheel, and it is then placed against the disk *e*, where it will serve as a sort of brake to lessen the speed of the descent of the contracting ladder.

A ratchet-wheel, *p*, is also mounted upon the shaft G, and engages with a pawl, *q*, for the purpose of allowing the ladder to be placed at the desired inclination, and a disk similar to E may be employed upon G to receive the pawl *q*, when the contact between *p* and *q* is interrupted, for the purpose of bringing the ladder back to a horizontal position.

I claim as my invention, and desire to secure by Letters Patent—

In a fire-escape, constructed as set forth, the combination of the click or pawl *o* with the ratchet-wheel *d* and disk *e*, to operate in combination with each other, substantially as described.

GEORGE PFLEEGER.

Witnesses:

F. W. KLAGES, Jr.,  
H. A. KLAGES.