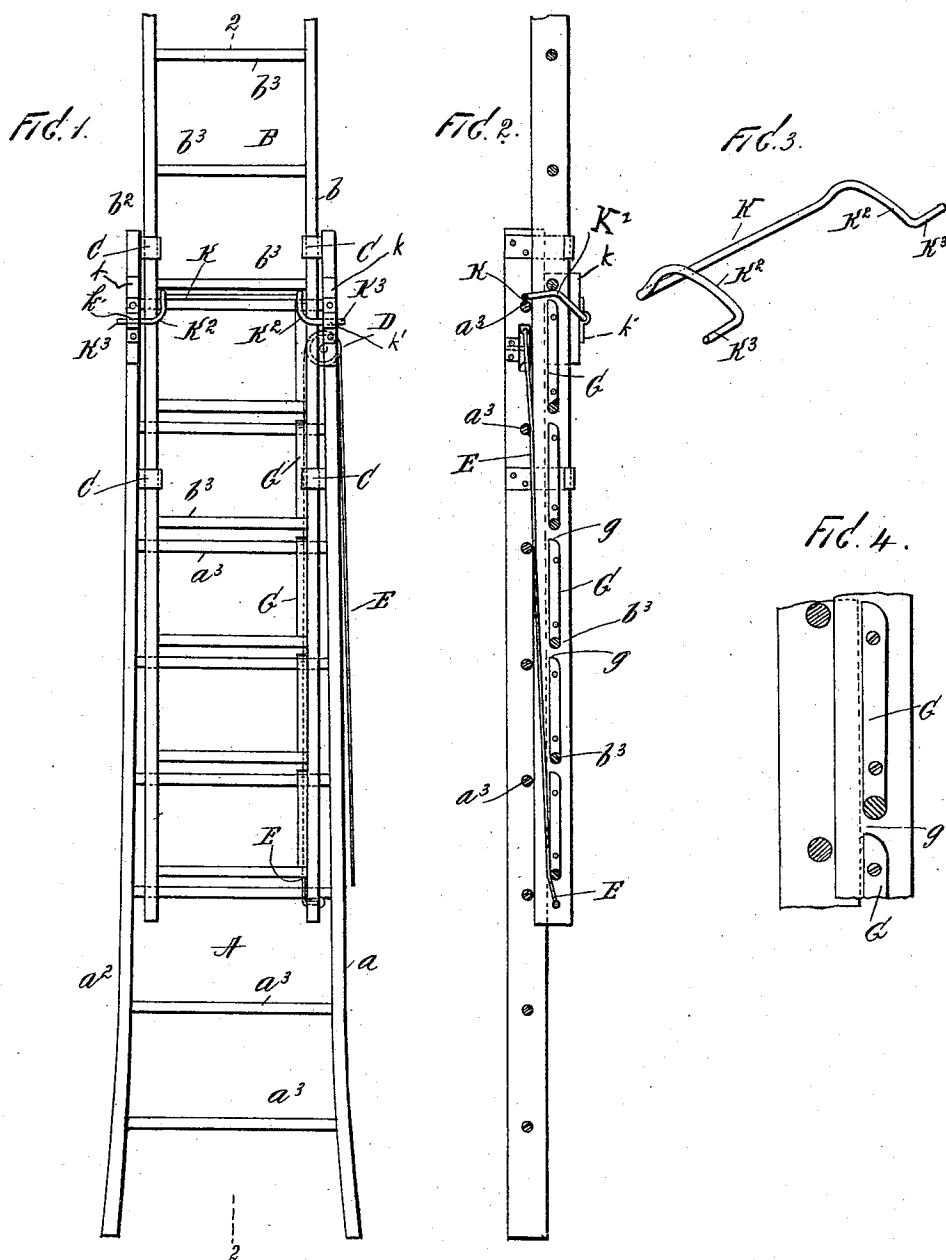


J. C. FERRIS.
EXTENSION LADDER.

Patented Mar. 9, 1897.



WITNESSES:

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JOHN C. FERRIS, OF MILLVILLE, NEW YORK.

EXTENSION-LADDER.

SPECIFICATION forming part of Letters Patent No. 578,323, dated March 9, 1897.

Application filed February 18, 1896. Serial No. 579,689. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. FERRIS, a citizen of the United States, and a resident of Millville, in the county of Orleans and State of New York, have invented certain new and useful Improvements in Extension-Ladders, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to extension-ladders; and the object thereof is to provide an effective ladder of this class which is simple in construction and operation and comparatively inexpensive, a further object being to provide an extension-ladder which is composed of two separate sections, one of which is adapted to slide upon the other, and in which the adjustable and extensible section may be operated by a rope connected with the lower end thereof and passed over a pulley mounted in the upper end of the stationary section.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a front view of my improved extension-ladder; Fig. 2, a central longitudinal section on the line 2 2; Fig. 3, a perspective view of a detail of my construction, and Fig. 4 a detailed view showing some of the parts on an enlarged scale.

In the practice of my invention I provide a ladder consisting of two sections, one of which is adjustable upon the other, and in the drawings forming part of this specification A represents the stationary section and is composed of the side bars a and a^2 , which are united by rounds a^3 , and B represents the adjustable section, which is composed of the side bars b and b^2 , which are united by the rounds b^3 . The adjustable section is adapted to be placed within the side bars a and a^2 of the stationary section, so that the side bars b and b^2 thereof will rest and slide upon the rounds a^3 of the stationary section, and at predetermined points near the upper end thereof are clamps C, which are adapted to hold the adjustable section in position and permit of its longitudinal adjustment on the stationary section, and the side bars a and a^2 of the sta-

tionary section may be widened somewhat or directed outwardly at their upper ends, but this feature is not essential to my invention and is not shown. Mounted in one of the side bars of the stationary section and near the upper end thereof is a roller or pulley D, and secured to the lower end of the adjustable section is a rope or cord E, which is carried upwardly between the sections and passed over said pulley. Secured to side bars a and a^2 of the stationary section near the upper end thereof and projecting beyond the sides of the adjustable section are extensions k . Keepers k' are fastened on the said extensions. A swinging bail K is provided at each end with a segmentally-curved arm K^2 , which projects substantially at right angles therefrom, and the ends of these arms K^2 are provided with outwardly-directed projections K^3 , which are journaled in the keepers k' . I also secure to the inner side of one side of the adjustable section cleats or strips G, which extend from one of the rounds upwardly to within a short distance of the next round, as shown at g , thus leaving a narrow space between the upper ends of each of said cleats or strips and the round above it, and said strips or cleats are designed to act as guides for the bail K and to automatically control the action thereof, as hereinafter described.

The operation will be readily understood from the foregoing description when taken in connection with the accompanying drawings and the following statement thereof.

In order to slide the adjustable section upwardly or to adjust the same to any desired point, it is only necessary to pull downwardly on the cord or rope E and the adjustable section will be moved upwardly, and in this operation the bail K moves over the cleats or strips G and will be swung outwardly until it comes in contact with the clamps C, and said bail will slide over said cleats or strips, and when the adjustable section has been raised to the desired point the pull on the cord E is relaxed so that said adjustable section will move downward slowly, and said bail will drop in over the ends of one of said cleats or strips beneath the adjacent round, as clearly shown in Fig. 2, and the outer end of the bail will bear upon one of the rounds a^3 of the stationary section, and thus lock and hold the

adjustable section in position. If, however, the pull on the cord E is relaxed, so that said adjustable section moves downward rapidly, said bail will be sustained by the action of the strips or cleats G, and thus allow the adjustable section to be lowered to the desired point, when it may be locked by checking the movement of the adjustable section, as above described.

It will be understood that the action of the bail is automatic, and when the adjustable section is again raised the operation above described will be repeated, and it will thus be seen that I provide an effective extension-ladder, and one which is simple in construction and operation, and which is not liable to get out of order or to need repair, and which is also comparatively inexpensive. It will also be apparent that changes in and modifications of the construction herein described may be made without departing from the spirit of my invention or sacrificing its advantages.

Having fully described my invention, I claim as new and desire to secure by Letters Patent—

1. An adjustable ladder, consisting of two sections one of which is mounted on the other and adapted to slide thereon, clamps or bands attached to the stationary section and adapted

to hold the adjustable section in position, a pulley mounted on the upper end of the stationary section, a cord or rope passed over said pulley and having its ends secured to the lower end of the adjustable section, a swinging bail attached to the stationary section, and cleats secured to the inner surface of one of the sides, of the adjustable section and extending from one of the rounds to within a short distance of the round above it, said parts being constructed, combined and arranged substantially as shown and described.

2. In an adjustable ladder, consisting of two sections, one of which is mounted on the other and adapted to slide thereon, as means for holding the sliding section in position, the combination of cleats secured on the inner surface of one of the sides of the adjustable section and a swinging bail attached to the stationary section, substantially as herein shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 5th day of February, 1896.

JOHN C. FERRIS.

Witnesses:

CHARLES WHEDON,
MILFORD D. WHEDON.