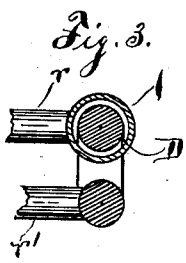
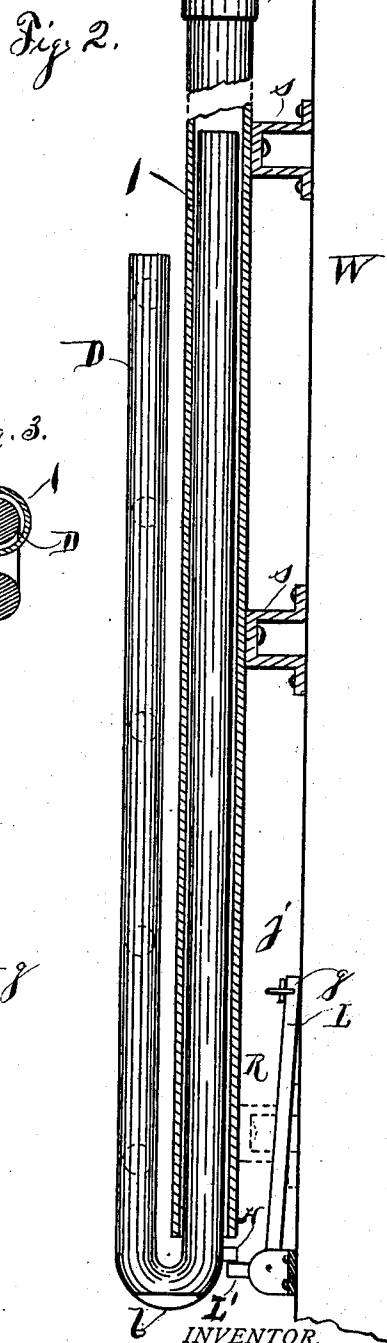
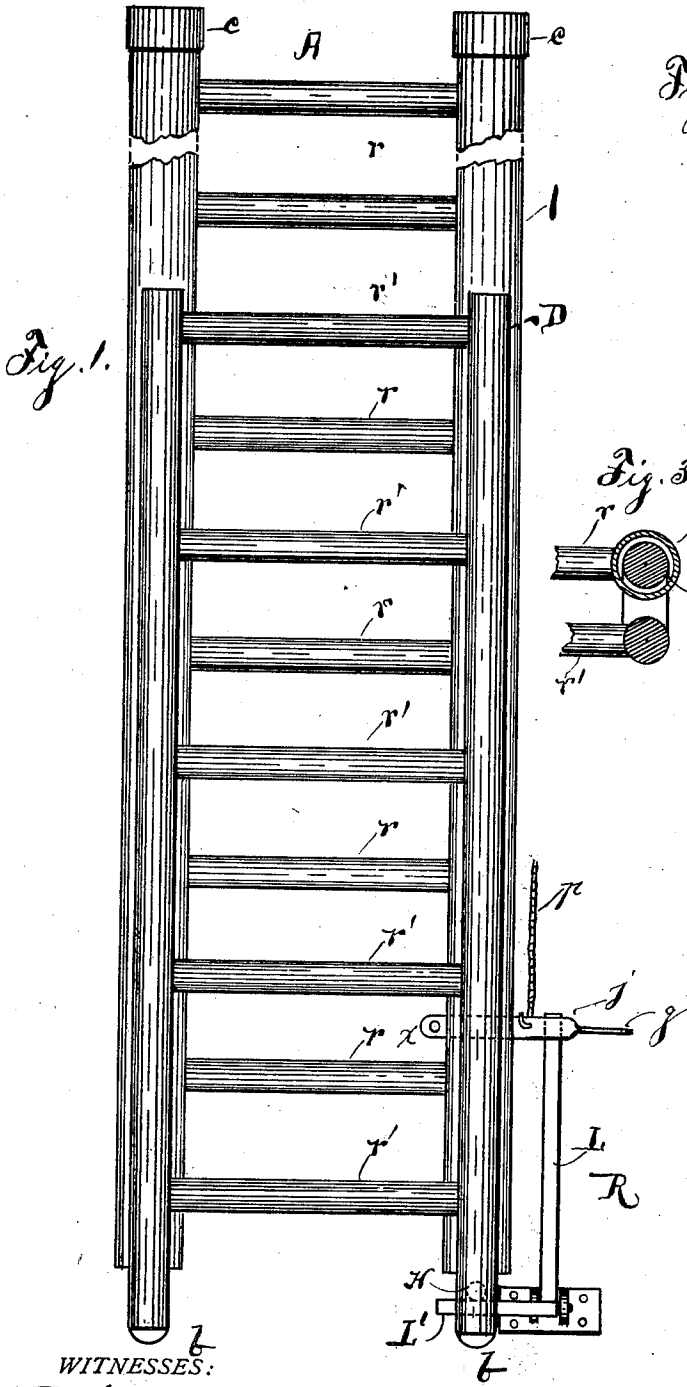


W. C. BUELL.
LADDER.

APPLICATION FILED OCT. 23, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

Charles E. Buell.
Rollo R. Jones

INVENTOR.

William C. Buell.

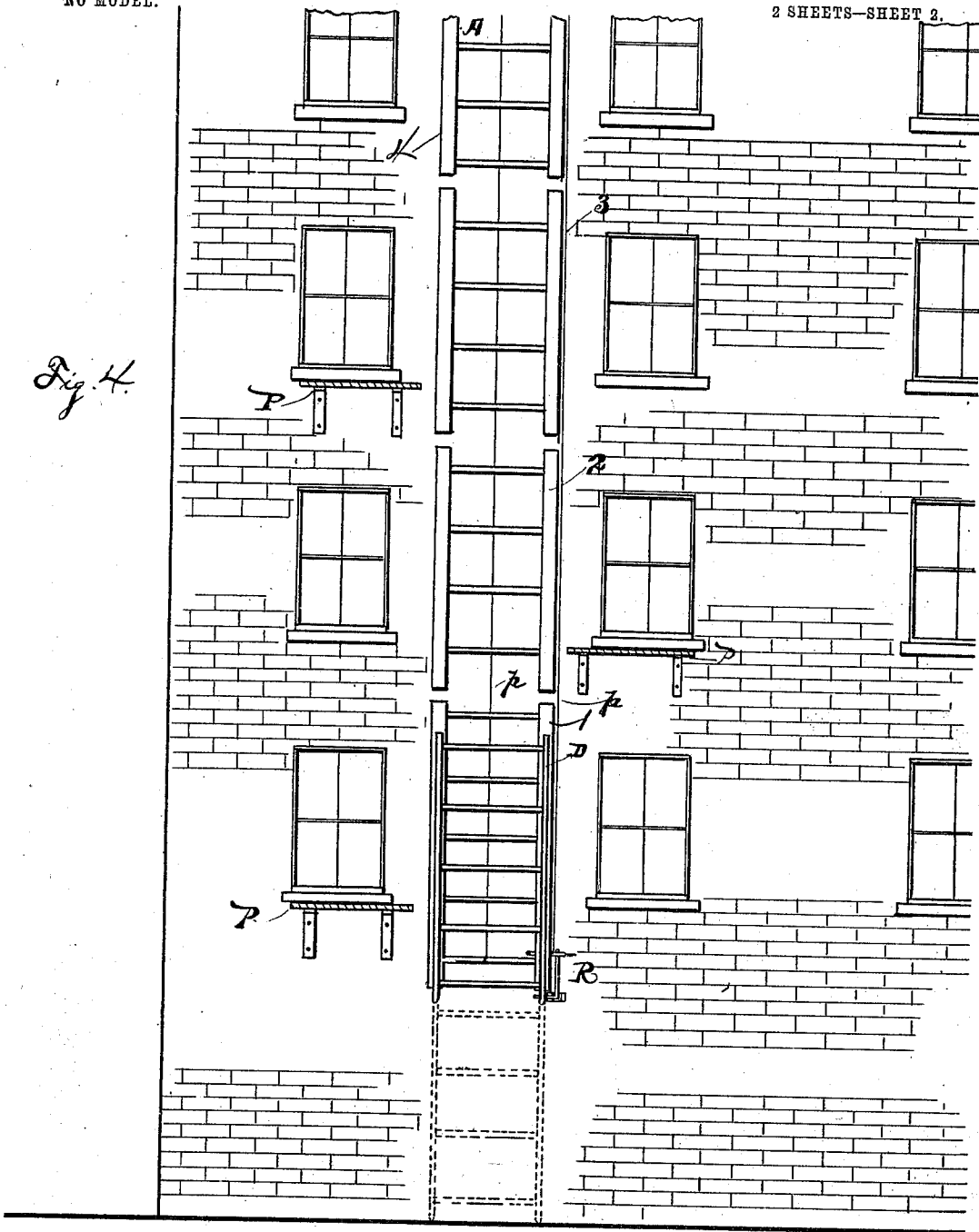
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2 SHEETS—SHEET 2.

Fig. 4.



WITNESSES:

Charles E. Buell.
Rollo R. Jones

INVENTOR.

William C. Buell

UNITED STATES PATENT OFFICE.

WILLIAM C. BUELL, OF CAMDEN, NEW JERSEY.

LADDER.

SPECIFICATION forming part of Letters Patent No. 719,183, dated January 27, 1903.

Application filed October 23, 1902. Serial No. 128,446. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. BUELL, a citizen of the United States, and a resident of the city of Camden, in the county of Camden and State of New Jersey, have invented Improvements in Ladders, of which the following is a full, clear, and exact description.

My invention consists, primarily, of a ladder secured to a structure and provided with a section that is adapted to be moved to extend the said secured ladder, substantially as hereinafter described.

My invention further consists in certain combinations and subcombinations, as hereinafter set forth.

In the accompanying drawings, Figure 1 is a front view of a ladder arranged according to my invention. Fig. 2 is a sectional side elevation of the same. Fig. 3 is a sectional plan view of a portion of said ladder, and Fig. 4 is a view of the ladder secured to a structure and arranged for carrying out my invention.

Referring to Fig. 1, there is shown the ladder A, comprising the section 1, of tubular metal, having the rungs $r r r r$ and closed at the top by the caps $c c$, secured thereon. There is shown the section D, also of metal, having rungs $r' r' r'$ and adapted to be secured to the section 1 by having a portion that is without rungs and that is folded or turned back upon the portion with rungs and the said bent-back portion inserted in the tubular side pieces of section 1, as shown in Fig. 2. The section 1 is secured to the wall of a structure, and the section D is held or supported within the tubular sides of the said secured section 1 by a releasing device R, which comprises a pivoted lever L, which is also secured to the wall of the structure and adapted to have its short arm L' interlock with the projection H on section D, and when thus interlocked to be held in position to support the said section D by means of the latch j . The said latch j is pivoted at x and has a flattened portion g at right angles to the line of movement, which admits of raising the said latch j by means of a pole in the hands of a person standing on the ground beneath or by a stream of water from fire-hose, and

when the said latch is lifted to release the lever L the section D by its weight drops to the ground. There is also shown a rope p , attached to the latch j , which is adapted to extend to the top of the ladder, and by this means the said latch j can be lifted to release the supported section D. The advantages of closing the upper ends of the tubular sides of section 1 are the exclusion of water and dirt from within the tubular sides of said section. To lessen shock when section D is released and drops to the ground, I have provided the buffers $b b$, of elastic material, secured to the bent portion of the section D.

In Fig. 2, in which the ladder is shown in sectional side elevation, the tubular section 1 is shown secured to the wall W by the metal fastenings $s s$.

In Fig. 4 there is shown the ladder A, secured to a building and consisting of sections 1, 2, 3, and 4, each of said sections being independently secured to said building, with the advantage of greater security when several persons descend simultaneously on said ladder, as the strain on the ladder is no greater than the strain on any one section.

There is shown the rope p , leading from the latch of the releasing device R, running up along one side and down back of the ladder, admitting of a downward pull for releasing the sustaining-lever.

The platforms P P P are provided for convenience in stepping from the window onto the ladder and are shown properly secured to the wall of the building.

The section D is represented in dotted lines as being in the position which it takes after it has been released. To reset this section, it is lifted up and the projection H is interlocked with the short arm of lever L, and the latch j is placed in the position shown in Fig. 1 for retaining the said lever interlocked with section D.

What I claim is—

1. A ladder that comprises a section having tubular side pieces, a movable section of ladder having a turned-back rungless portion adapted to slide within said tubular side pieces of the first-named section, a mechanism for supporting and releasing the said movable

section of ladder when raised to its highest position, and a series of platforms in operative relation to said ladder.

2. A ladder comprising a section of tubular side pieces, a movable section that is provided with a portion which is adapted to enter within the said tubular side pieces and to be guided by its relation therewith when in motion, a releasing mechanism adapted to support the last-named section, and means for securing the first-named section and the said releasing mechanism to a structure, substantially as described.

3. A ladder comprising a series of sections each of which is supported upon a structure independent of the others, a lower section of said series being adapted to support and guide a movable section, a movable section supported thereon, a releasing mechanism adapted to normally support said movable section and means in operative relation with

the several sections for making operative the said mechanism to release said movable section.

4. A ladder that comprises a section having tubular side pieces that are sealed at their upper ends, a metal section that is provided with a portion which is adapted to slide within the said tubular side pieces, a mechanism for supporting the said sliding section that is secured to a structure upon which the ladder is also secured, and that comprises a releasing device that is adapted to be made operative to allow said metal section to slide and fall into contact with the ground, and buffers secured to the metal section to reduce the shock of impact of said section.

WILLIAM C. BUELL.

Witnesses:

CHARLES E. BUELL,
PHILIP SCHMITZ.