No. 791,531. PATENTED JUNE 6, 1905.

W. F. & E. H. ALTHOFF.

LADDER JACK.

APPLICATION FILED JUNE 6, 1904.

2 SHEETS—SHEET 1.

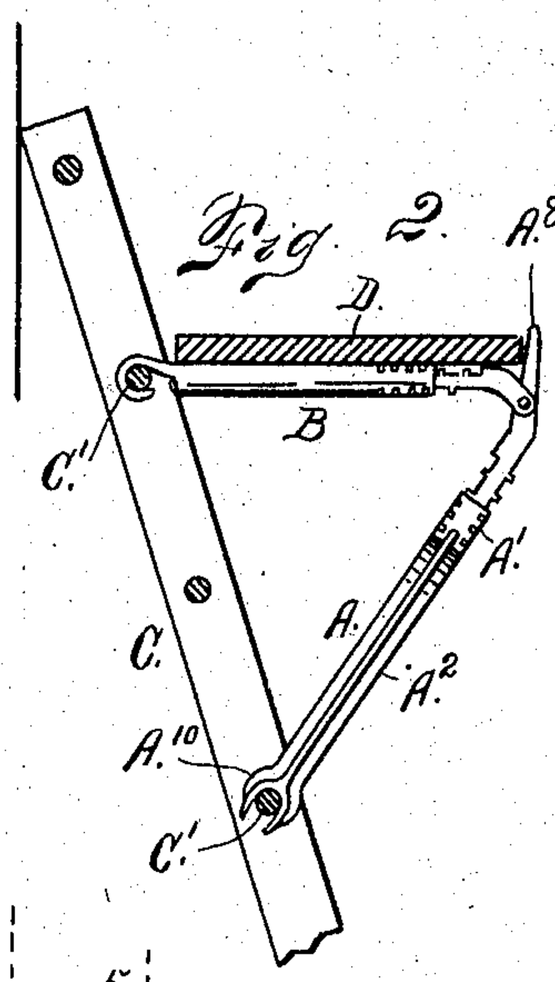

Fig. 2.

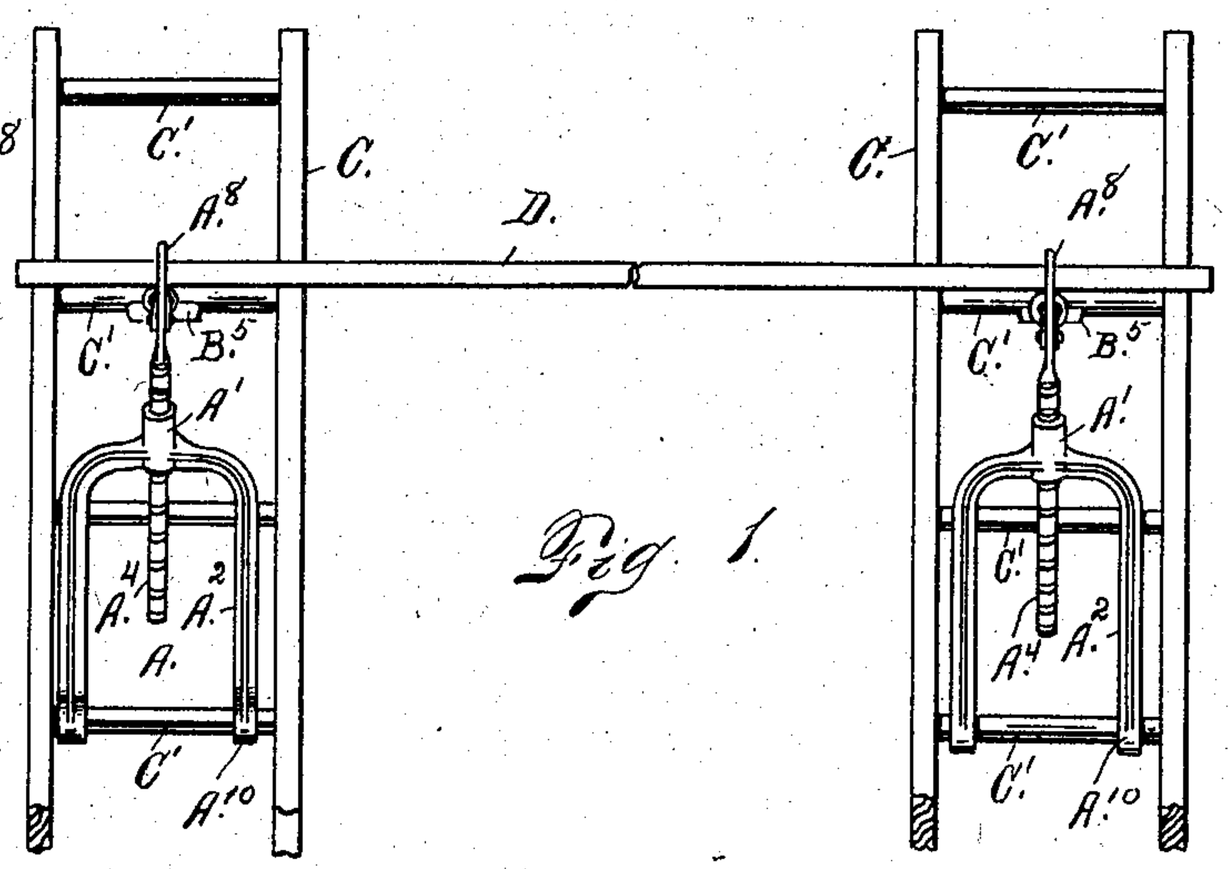

Fig. 1.

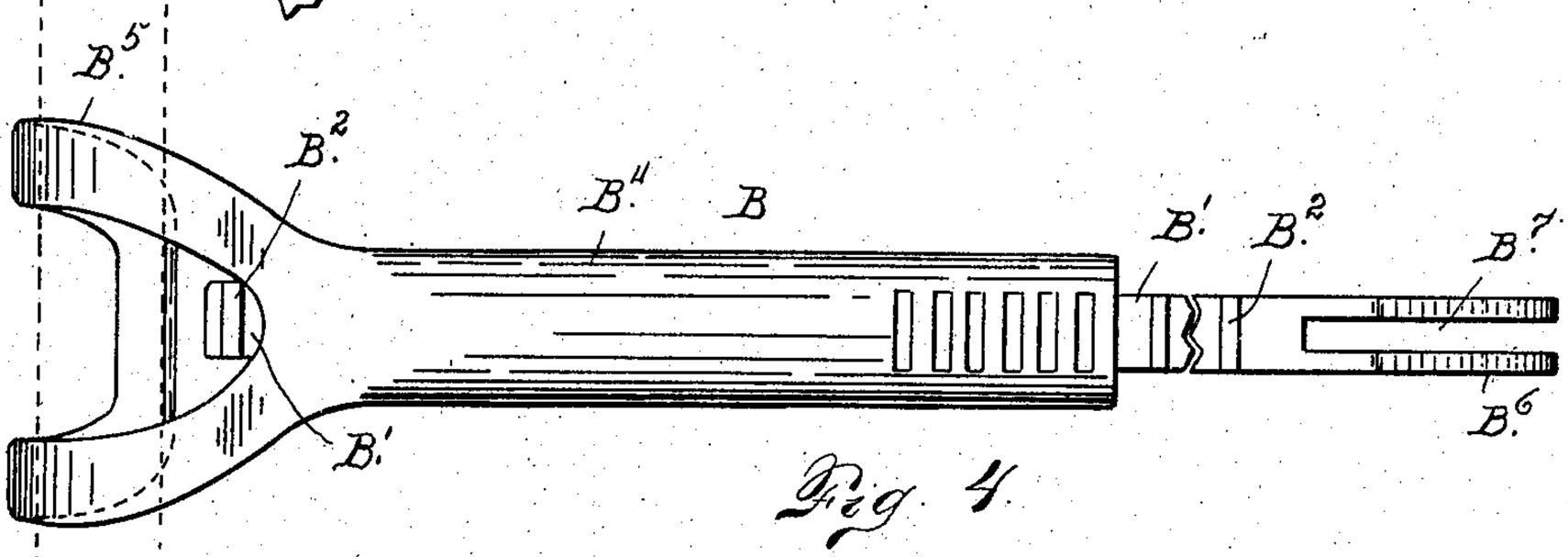

Fig. 4.

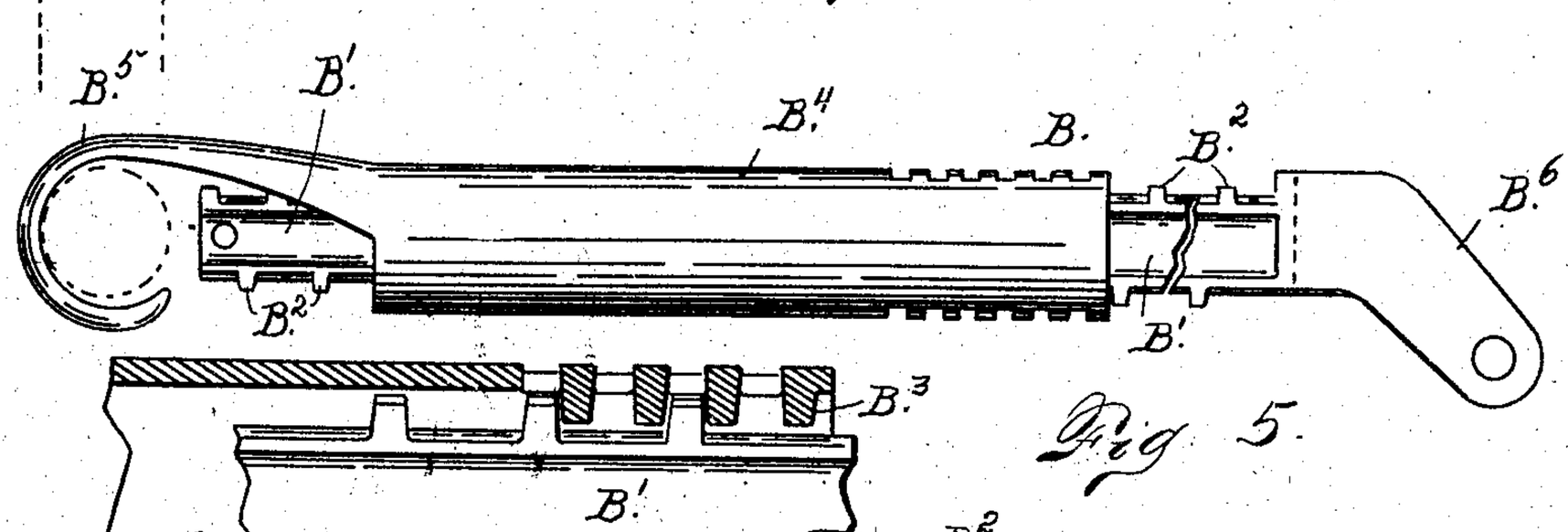

Fig. 5.

Fig. 6.

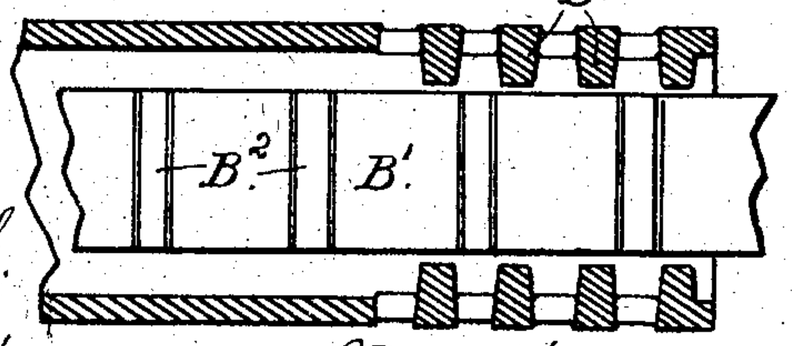

Fig. 7.

Witnesses
Otto E. Hoddick.
Dena Nelson.

W. F. Althoff
E. H. Althoff.
Inventors
By
Attorney

No. 791,531. PATENTED JUNE 6, 1905.

W. F. & E. H. ALTHOFF.

LADDER JACK.

APPLICATION FILED JUNE 6, 1904.

2 SHEETS—SHEET 2.

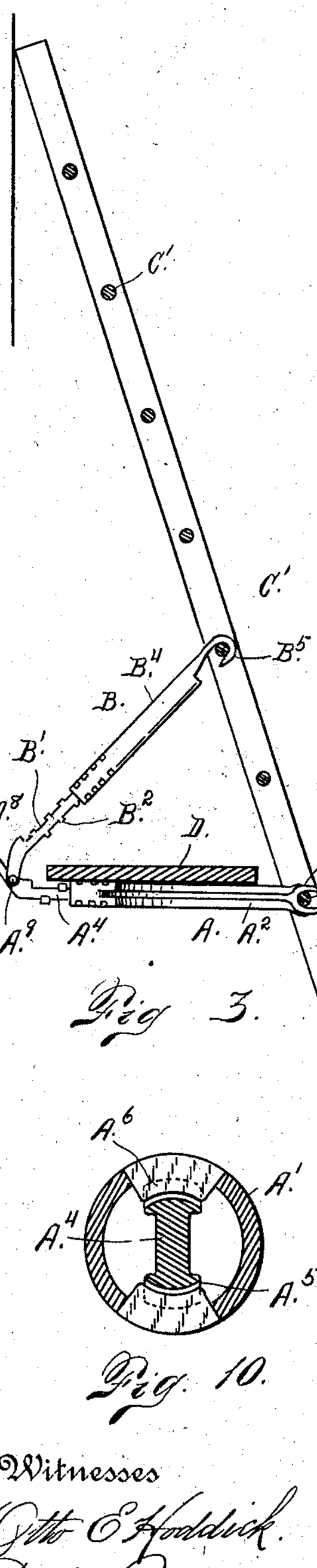

Fig. 3.

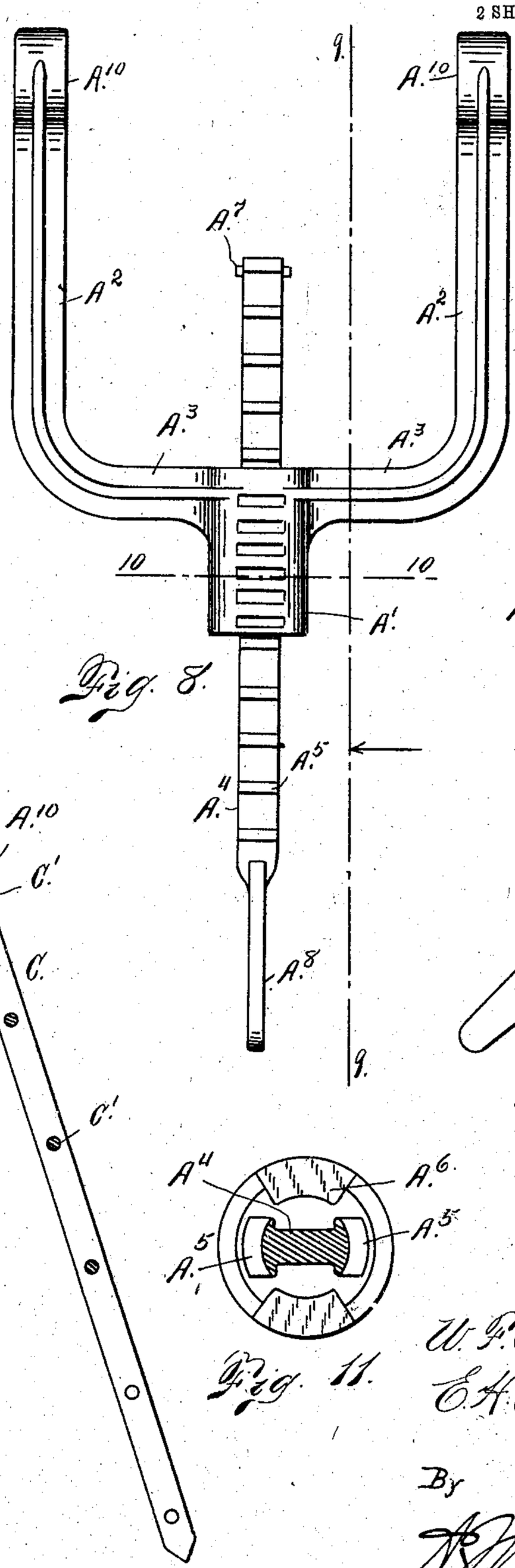

Fig. 8.

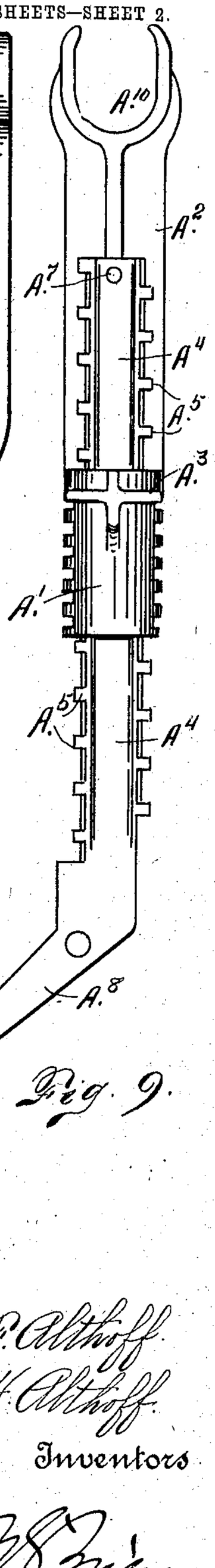

Fig. 9.

Fig. 10.

Fig. 11.

W. F. Althoff.
E. H. Althoff.
Inventors
By
Attorney

Witnesses
Otto E. Hoddick.
Dena Nelson.

No. 791,531. Patented June 6, 1905.

UNITED STATES PATENT OFFICE.

WILLIAM F. ALTHOFF AND EDWARD H. ALTHOFF, OF DENVER, COLORADO.

LADDER-JACK.

SPECIFICATION forming part of Letters Patent No. 791,531, dated June 6, 1905.

Application filed June 6, 1904. Serial No. 211,416.

To all whom it may concern:

Be it known that we, WILLIAM F. ALTHOFF and EDWARD H. ALTHOFF, citizens of the United States, residing at the city and county of Denver and State of Colorado, have invented certain new and useful Improvements in Ladder-Jacks; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in ladder-jacks or means adapted to be attached to ladders to form a support whereby a scaffold is constructed without the use of the ordinary supports therefor.

In our improved apparatus at least two of the devices should be employed, and two ladders suitably separated are also required.

Our improved device consists of two hinged parts, both of which are extensible. These two parts are adapted to engage two rungs or steps of the ladder and are so adjusted that one of the parts is held in the horizontal position, whereby it is adapted to form a support for a scaffold-board whereby workmen, as painters and others, may stand upon the board while doing their work.

Our improved device is quickly attached and detached, and its elevation on the ladder may be quickly changed as circumstances may require.

Having briefly outlined our improved construction, as well as the function it is intended to perform, we will proceed to describe the same in detail, reference being made to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 illustrates our device in use, being a front view showing two ladders and two of the devices applied and forming a support for the board. Fig. 2 is a side elevation of the same, the board and ladder being shown in section. In Figs. 1 and 2 the upper member of the device is in the horizontal position. Fig. 3 is a view similar to Fig. 2, but showing the lower member of the device in the horizontal position, the device in this case being mounted on the inside of the ladder, or between the ladder and the building, while in Figs. 1 and 2 the device projects outwardly from the ladder. Figs. 4 and 5 are top and side views, respectively, of one of the members of the jack. Figs. 6 and 7 illustrate the interlocking features of the extensible telescoping parts. Figs. 8 and 9 are top and side views, respectively, of the lower member of the jack, the parts being shown on a larger scale than in Figs. 1, 2, and 3. Fig. 9 is also a section on the line 9 9, Fig. 8. Figs. 10 and 11 are views illustrating the interlocking features of the telescoping parts. In Fig. 10 the parts are shown in the locked position and in section. In Fig. 11 the parts are shown in the unlocked position, one of them being in cross-section and the other in end elevation. Fig. 10 is also a section taken on the line 10 10, Fig. 8.

The same reference characters indicate the same parts in all the views.

Let A and B designate the two members of our improved device, each being considered in its entirety and consisting of two telescoping parts, whereby each member is made extensible. The part A consists of a sleeve A′, provided with separated arms A^2, which project outwardly from the sleeve in opposite directions, as shown at A^3. The extremity of each arm A^2 is bifurcated, as shown at A^{10}, to engage the rung C′ of the ladder C. The member A is further provided with a bar A^4, which telescopes in the sleeve A′, and is provided with transverse lugs A^5, which coöperate with interiorly-projecting lugs A^6, formed on the sleeve A′. One extremity of the bar A^4 is provided with a pin A^7, which prevents the bar from slipping entirely out of the sleeve, while the opposite extremity is provided with a projection A^8, which is pivotally connected, as shown at A^9, with the bar B′ of the member B. The member B′ is provided with lugs B^2, which coöperate with interiorly-projecting lugs B^3, formed on the tubular part B^4 of the member B. One extremity of the member B is provided with a hook B^5,

adapted to engage a rung C′ of the ladder C. The extremity of the bar B′ remote from the hook B^5 is provided with an angular part B^6, pivoted to the angular part A^8 of the bar A^4.

When using the device, if it is desired to place it outside of the ladder the two members A and B are adjusted to place the member B in the horizontal position, while the member A occupies an inclined position. In this event the angular part A^8 of the member A projects upwardly above the member B and forms a stop to prevent the scaffold-board D from slipping off the jack. In adjusting the two members A and B the tubular part of each is turned to disengage the interlocking lugs. This can be done by giving either tubular part a quarter-turn. The tubular part is then allowed to slide freely on the bar until the parts are properly adjusted to answer the required purpose, after which the tubular part of each member is given a quarter-turn, or returned to its original position, whereby the lugs of the two telescoping parts are made to interlock.

After the two parts are properly adjusted they may be applied to the ladder on the outside, as shown in Figs. 1 and 2, or on the inside, as shown in Fig. 3. If applied as shown in Fig. 1, the member A is applied to one of the rungs C′ of the ladder and occupies an inclined position, while the member B is hooked over one of the rungs and occupies a horizontal position, forming a support for the board D. In this event the extension or angular part A^8 of the telescoping bar A^4 projects upwardly above the member B and forms a stop to engage the outer edge of the scaffold-board, whereby the latter is prevented from slipping outwardly.

When the parts are applied to the inside of the ladder, as shown in Fig. 3, the member B is hooked over one of the rungs C′ of the ladder and occupies an inclined position, while the member A straddles one of the rungs and occupies a horizontal position, and the scaffold-board in this event rests on the member A between the ladder and the hinged extremity B′ of the member B.

Attention is called to the fact that the arms A^2 of the member are sufficiently separated to form a stable support for the jack upon the ladder, while the member B, as shown in the drawings, is hooked over the central portion of one of the rungs.

Attention is called to the fact that in the tubular parts of both members the interiorly-projecting lugs are located on opposite sides and are interrupted on both sides to permit the telescoping bar to engage the spaces on opposite sides, which are free from the lugs when the said bar is turned from the position shown in Fig. 10 to that shown in Fig. 11 of the drawings or from that shown in Fig. 6 to that shown in Fig. 7 of the drawings. The angular part B^6 of the telescoping bar B′ is slotted, as shown at B^7, (see Fig. 4,) to straddle the angular part A^8 of the member A.

It must be understood that we do not limit the invention to the details of the construction herein shown, as we are aware that many modifications may be employed without departing from the spirit of the invention.

Having thus described our invention, what we claim is—

1. In a ladder-jack, the combination of two hinged members each consisting of two telescoping parts, the two parts of each member being provided with interrupted interlocking lugs whereby by giving one part a partial rotary movement the lugs of the two parts are disengaged permitting one part to slide freely on the other, the extremities of the two members remote from the hinged members, being fashioned to engage the rungs or steps of a ladder or other support.

2. In a device of the class described, the combination of two members, each member consisting of two telescoping parts, the two parts of each member being provided with interrupted interlocking lugs for the purpose stated, one part of each member being pivotally connected with the corresponding part of the other member, and the other parts of the two members being fashioned to engage the rungs or steps of a ladder or similar device.

3. In a device of the class described, the combination of two members, each consisting of two telescoping parts, the two parts of each member being provided with interrupted interlocking lugs whereby by giving one part a partial rotary movement, the lugs of the two parts are disengaged permitting one part to slide freely on the other part, one part of each member being pivotally connected with the corresponding part of the other member, and the extremities of the two members remote from the pivot being fashioned to receive the rungs or steps of a ladder or similar device.

4. In a ladder-jack, the combination of two members, each provided with telescoping parts, the two parts of each member being provided with interrupted interlocking lugs the two corresponding parts of the two members being pivotally connected and the two members being fashioned to engage the rungs or steps of a ladder or similar device.

5. In a ladder-jack, the combination of two members each provided with telescoping parts the two parts of each member being provided with interrupted interlocking lugs, the two corresponding parts of the two members being pivotally connected, the two members being fashioned to engage the rungs or steps of a ladder or similar device, the hinged extremity of one of the members being provided with an angular extension for the purpose set forth.

6. In a device of the class described, the combination of two members, one member con-

sisting of a sleeve provided with two separated arms whose extremities are fashioned to engage the rungs of a ladder or similar device, a bar telescoping in the sleeve and the sleeve and bar being provided with interlocking parts interrupted to permit the longitudinal movement of one part whereby the member becomes extensible; the other member consisting of two telescoping parts provided with interlocking features interrupted to permit longitudinal extension by a partial rotary movement; one part of the last-named member being hook-shaped to engage the rung or step of a ladder or similar device; and the two corresponding parts of the two members being pivotally connected.

7. In a device of the class described, the combination of two members each composed of a tubular part and a telescoping bar, the two parts of each member being provided with interrupted interlocking lugs whereby the two parts of each member may be unlocked and free to permit the longitudinal movement of one member by a partial rotation of either member, the tubular part of one of the said members being provided with two separated arms fashioned to engage the rung of a ladder or similar device; the tubular part of the other member being also fashioned to engage a ladder rung or step, and the two telescoping bars of the two members being pivotally connected for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM F. ALTHOFF.
EDWARD H. ALTHOFF.

Witnesses:
DENA NELSON,
A. J. O'BRIEN.