

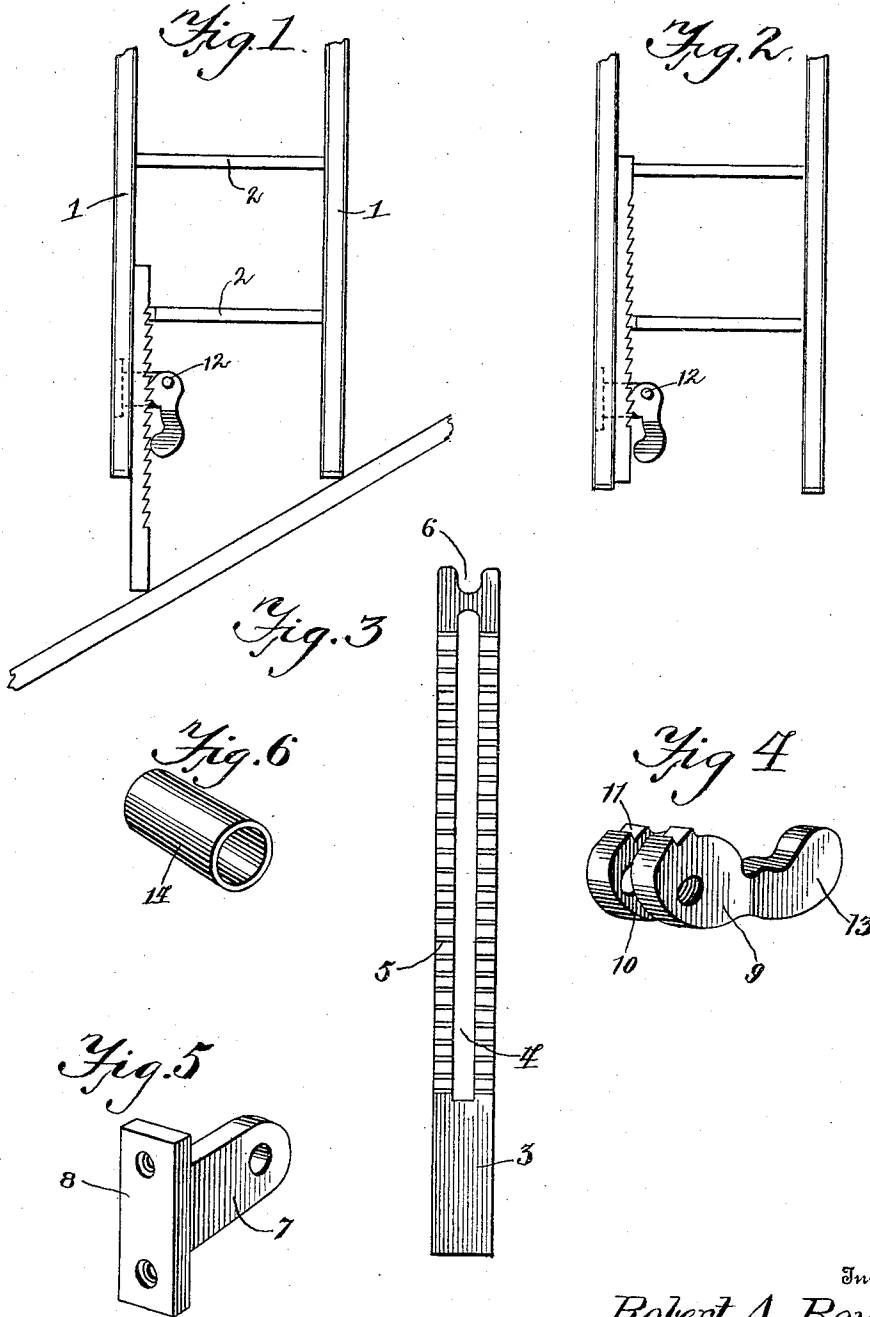
R. A. BOYD.

LADDER.

APPLICATION FILED JUNE 12, 1908.

908,387.

Patented Dec. 29, 1908.



Witnesses
William M. Smith.
R. M. Smith.

Inventor
Robert A. Boyd
By *Victor J. Evans*
Attorney

UNITED STATES PATENT OFFICE.

ROBERT A. BOYD, OF ALBANY, NEW YORK.

LADDER.

No. 908,387.

Specification of Letters Patent.

Patented Dec. 29, 1908.

Application filed June 12, 1908. Serial No. 438,177.

To all whom it may concern:

Be it known that I, ROBERT A. BOYD, a citizen of the United States, residing at Albany, in the county of Albany and State of New York, have invented new and useful Improvements in Ladders, of which the following is a specification.

This invention relates to ladders and has for its object to provide a convenient and practical extension leg for ladders which is capable of easy adjustment which will adapt the ladder to be used on side hills, slanting roofs, steps and other irregular or inclined surfaces, the invention being especially designed for builders, painters, roofers and mechanics in general and particularly for the use of fire departments where an appliance of the kind referred to is wanted quickly.

With the above and other objects in view, the nature of which will more fully appear as the description proceeds, the invention consists in the novel construction, combination and arrangement of parts as herein fully described, illustrated and claimed.

In the accompanying drawings:—Figure 1 is a front elevation of the lower portion of a ladder showing the extension leg projected and the ladder resting on an inclined surface. Fig. 2 is a similar view showing the extension leg retracted. Fig. 3 is a plan view of the extension leg detached. Fig. 4 is a detail perspective view of the dog. Fig. 5 is a similar view of the pivot lug. Fig. 6 is a detail perspective view of the roller sleeve.

In the drawings I have shown an ordinary ladder comprising the wooden legs or side bars 1 and the wooden rungs or cross bars 2.

In carrying out the present invention, I employ an extension leg 3 of metal provided with a central longitudinal slot 4 extending the greater portion of the length thereof as shown in Fig. 3 while at the opposite sides of the slot, one face of the extension leg is provided with ratchet teeth 5, a double ratchet face being thus formed for engagement with the locking dog hereinafter described. In its upper end the extension leg 3 is provided with an end notch 6 adapted to engage the second rung from the bottom as shown in Fig. 2.

To secure the extension leg to the ladder, I employ a pivot lug 7 provided with an attaching face 8 which is secured to the outside of one of the legs on side bars of the ladder as shown in Figs. 1 and 2, while the lugs 7 project through a hole in the leg or side bar and

is adapted to receive at its inner end a dog 9 which is slotted or bifurcated as shown at 10 and provided at opposite sides of such slot with ratchet teeth 11 adapted to engage the teeth 5 of the extension leg in the manner illustrated in Figs. 1 and 2. The dog 9 and the pivot lug 7 are provided with openings to receive a pivot 12 and it will be noted that the teeth 11 of the dog are concentric to the pivot so that when the dog is rocked in one direction the teeth will be moved out of engagement with the ratchet face of the extension leg and in order to move in the opposite direction, will interlock and hold the extension leg projected or retracted as shown respectively in Figs. 1 and 2. The dog is also provided with a weighted operating arm 13 adapting the dog to fall by gravity and to its locking position as shown in Figs. 1 and 2 after the dog is released. The dog may be thrown out of engagement by lifting the weighted arm 13.

In order to insure the easy working of the extension leg 3 and the falling of the same by gravity from the position shown in Fig. 2 to the position shown in Fig. 1, I provide a metal roller sleeve 14 which encircles one end of the lowermost rung 2 of the ladder as shown in Figs. 1 and 2, said sleeve being slightly less in external diameter than the width of the slot 4 in the extension leg. The sleeve 14 may either be mounted tightly on the rung of the ladder or left loose thereon so as to turn as may be found expedient by the manufacturer of the invention.

I claim:—

1. The combination with a ladder, of a longitudinally slotted extension leg embracing one of the rungs of the ladder movable in the direction of length of the ladder, and means for locking said extension leg at any point in the sliding movement thereof.

2. The combination with a ladder, of a pivot lug arranged at a distance from the lowermost rung of the ladder, a longitudinally slotted extension leg embracing the lowermost rung of the ladder and said pivot lug, and a locking dog mounted on said pivot lug and adapted to interlock with the extension leg.

3. The combination with a ladder, of an extension leg movable in the direction of length of the ladder and provided with a longitudinal slot, a pivot lug on the ladder projecting through said slot and a weighted locking dog mounted on said pivot lug and

having a double ratchet face adapted to engage teeth on the extension leg at opposite sides of the slot therein, substantially as described.

- 5 4. The combination with an extension ladder, of an extension leg movable in the direction of length of the ladder and provided with a longitudinal slot which receives one of the ladder rungs, a metal sleeve dis-
10 posed around the rung embraced by the extension leg, and a locking dog arranged at

a distance from said rung and provided with teeth adapted to interlock with other teeth on the extension leg, substantially as described.

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

ROBERT A. BOYD.

Witnesses:

DAVID BOYD,
LANSING CLOSE.