

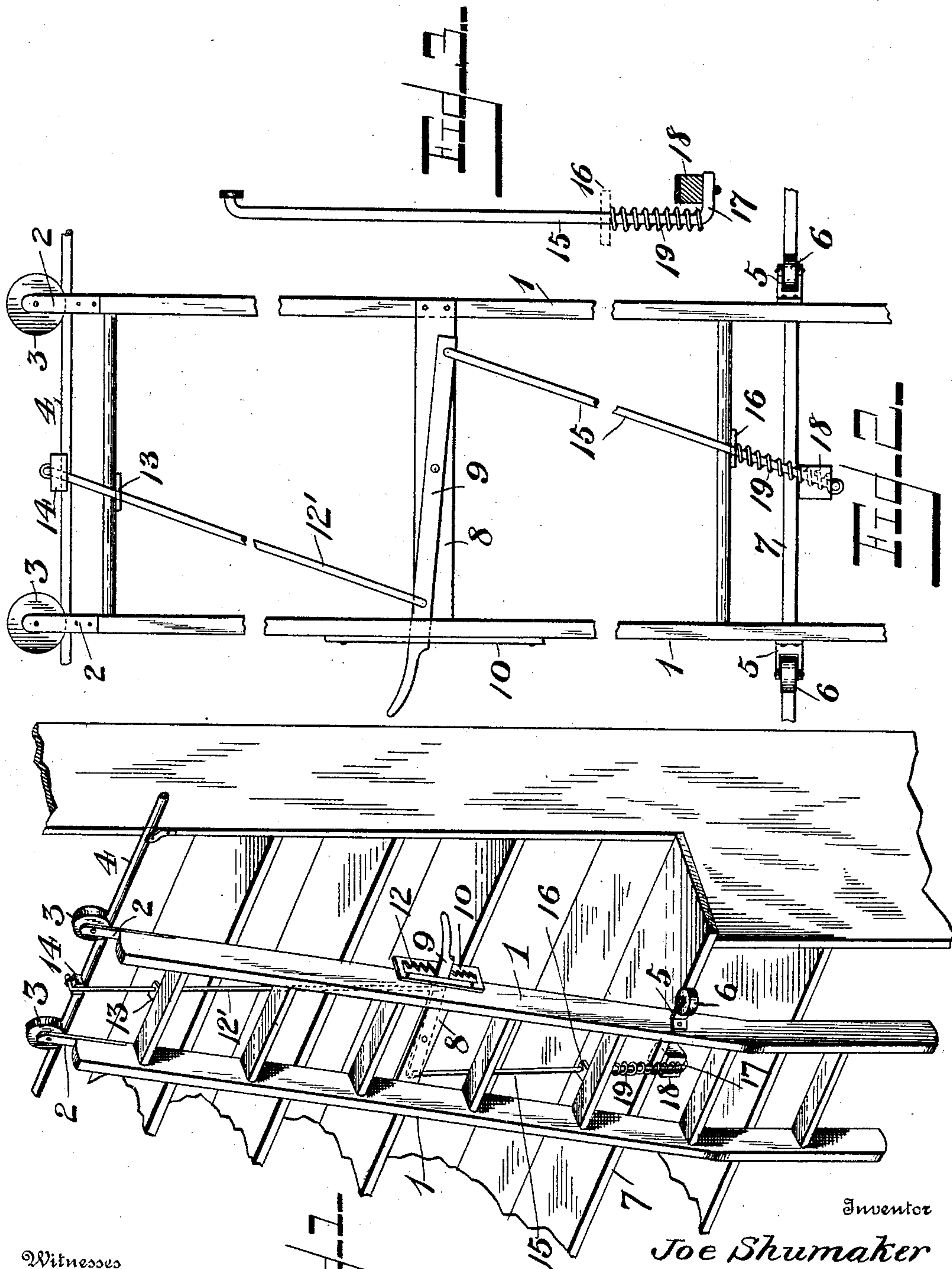
No. 771,673.

PATENTED OCT. 4, 1904.

J. SHUMAKER.
SHELF LADDER.

APPLICATION FILED APR. 15, 1904.

NO MODEL.



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JOSEPH SHUMAKER, OF RICHMOND, MISSOURI.

SHELF-LADDER.

SPECIFICATION forming part of Letters Patent No. 771,673, dated October 4, 1904.

Application filed April 15, 1904. Serial No. 203,018. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH SHUMAKER, a citizen of the United States, residing at Richmond, in the county of Ray and State of Missouri, have invented certain new and useful Improvements in Shelf-Ladders; and I 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.

This invention relates to improvements in shelf-ladders for store service.

The object of the invention is to provide means whereby ladders of this character may be locked and held at any desired point, thereby enabling the occupant of the same to reach out in either direction without danger of the ladder slipping from under him.

With this object in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a perspective view of a shelf-ladder, showing the application of the invention. Fig. 2 is a rear elevation of the same on an enlarged scale, parts being broken away. Fig. 3 is a detail fragmentary sectional view through the lower end of the lower holding device.

Referring more particularly to the drawings, 1 denotes the ladder, which may be of the usual construction, having secured to its upper end hangers 2, having journaled therein grooved rollers 3, which are adapted to engage a track 4, arranged at the top of the shelving or other place it is desired the ladder should be hung. On the sides of the lower portion of the ladder are secured inwardly-projecting brackets 5, having journaled therein horizontally-disposed rollers 6, which are adapted to engage the edge of the lower shelf 7. To the rear side of the ladder is secured a horizontal transversely-disposed plate or bar 8, to the rear side of which is pivotally connected a lever 9, on one end of which is formed a handle which projects beyond the side of the ladder, as shown. On the side of the ladder adjacent to the projecting end of the lever is secured a combined guide and

rack-bar 10, having a series of teeth or notches 12, with which said lever is adapted to be engaged.

To the lever 9, between its pivotal point and the handle end of the same, is pivotally connected the lower end of a link or rod 12', the upper end of which passes through a guide-opening formed in a rearwardly-projecting plate or guide-bracket 13, secured to the upper step of the ladder. The upper end of the rod 12' is bent at right angles and has secured thereto a shoe 14, of rubber or other suitable material. The shoe 14 is arranged over the track 4 and is adapted to be brought into engagement with the same, said shoe being provided on its lower side with a groove to facilitate the engagement of the same with said track-bar. To the opposite end of the lever is pivotally connected the upper end of a link or rod 15, the lower end of which passes through a guide-opening in a plate or guide-bracket 16, secured to the rear side of one of the lower steps of the ladder. On the lower end of the rod 15 is formed a rearwardly-projecting arm 17, which extends under the projecting edge of the lower shelf 7 and has secured thereto a shoe 18, formed of rubber or similar material, said shoe being adapted to be brought into engagement with the under side of the shelf 7. On the rod 15, between the arm 17 and the guide-bracket 16, is arranged a coiled spring 19, the tension of which is exerted to push the rod 15 downwardly.

After the ladder has been shifted to bring the same to the desired point the handle end of the lever is forced downwardly, thereby drawing the rod 12' downward and the rod 15 upward and causing the shoe 14 to grip the track 4 and the shoe 18 to grip the under side of the shelf 7. The lever 9 is now engaged with one of the notches in the rack-bar 10, whereby the shoes 14 and 18 will be locked in engagement with track and shelf and the ladder firmly held in place. The lever 9 may be actuated by the hand of a person when standing on the floor or on the lower steps of the ladder, and when standing on the upper steps of the ladder the lever may be actuated by the foot to engage or release the gripping mechanism. As soon as the lever is dis-

gaged from the teeth of the rack-bar the coiled spring 19 will force the rod 15 downwardly, thereby rocking said lever and forcing the rod 12' upwardly, thus releasing the gripping-shoes and permitting the ladder to be shifted.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

1. A slidably-mounted shelf-ladder, having pivotally connected thereto a lever, means for holding said lever in adjusted positions, upwardly and downwardly extending links or rods pivotally connected at their inner ends to said lever on opposite sides of its pivotal connection, and gripping devices carried by the outer ends of said rods or links, substantially as described.

2. A slidably-mounted shelf-ladder, having pivotally connected thereto a lever, means for holding said lever in adjusted positions, upwardly and downwardly extending links or rods pivotally connected at their inner ends to said lever on opposite sides of its pivotal

connection, an elastic shoe secured to the upper end of said upwardly-projecting rod to engage said track, a similar shoe secured to the lower end of said downwardly-projecting rod to engage the lower shelf and means whereby said shoes will be automatically disengaged from said track and shelf upon the release of said lever, substantially as described.

3. A slidably-mounted shelf-ladder, having pivotally connected thereto, a lever, a rack-bar adapted to be engaged by said lever to hold the same in adjusted positions, upwardly and downwardly extending links or rods pivotally connected at their inner ends to said lever on opposite sides of its pivotal connection, upper and lower guide-brackets to receive said rods or links, elastic shoes secured to the outer ends of said rods or links in position to respectively engage the track-rod and the lower shelf and a spring arranged between the lower guide-bracket and a stop on said lower rod or link whereby when said lever is released said rods will be retracted to disengage said shoes from the track and shelf, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOSEPH SHUMAKER.

Witnesses:

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