J. MOSIMAN.

EXTENSION STEP LADDER ATTACHMENT.

APPLICATION FILED JUNE 29, 1912.

1,068,805.

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Fig. 1.

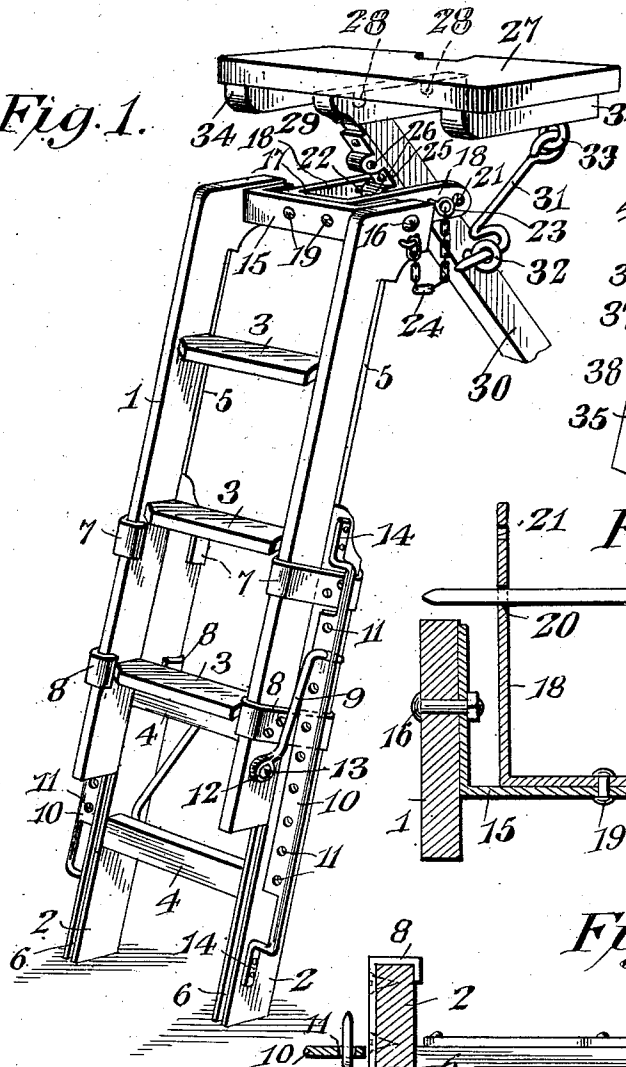


Fig. 5.

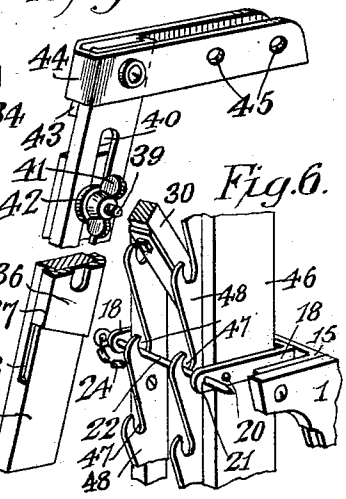


Fig. 6.

Fig. 3.

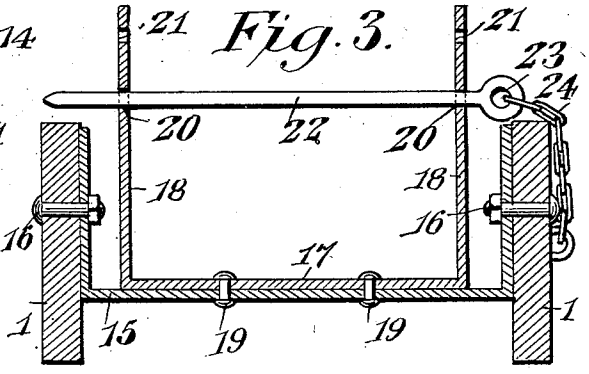


Fig. 2.

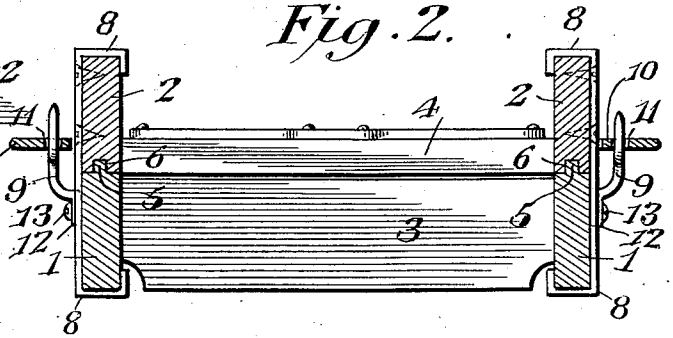
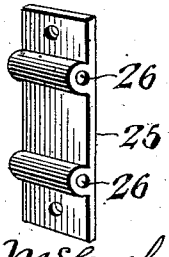


Fig. 4.



WITNESSES

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EXTENSION-STEP-LADDER ATTACHMENT.

1,068,805. Specification of Letters Patent. Patented July 29, 1913.

Application filed June 29, 1912. Serial No. 706,808.

To all whom it may concern:

Be it known that I, JOHN MOSIMAN, a citizen of the United States, residing at Sedalia, in the county of Pettis and State of Missouri, have invented a new and useful Extension-Step-Ladder Attachment, of which the following is a specification.

The invention relates to an extension step ladder attachment.

The object of the present invention is to provide for use in connection with a jack forming the subject-matter of Patent No. 968,254, granted to me Aug. 23, 1910, a simple, inexpensive and efficient step ladder attachment, capable of adjustment to correspond with the jack and adapted to permit a person to easily and conveniently get up and down from a platform carried by the jack, especially when the platform is in a more or less elevated position.

The invention also has for its object to provide an extensible step ladder attachment of this character, which will also be susceptible of use independently of the adjustable jack.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:—Figure 1 is a perspective view of an extension step ladder attachment, constructed in accordance with this invention. Fig. 2 is a transverse sectional view taken through the central portion of the step ladder attachment. Fig. 3 is a similar view through the top portion thereof. Fig. 4 is a detail perspective view of the attaching plate of the brace. Fig. 5 is a detail perspective view of one of the adjustable legs for enabling the step ladder attachment to be used independently of the jack. Fig. 6 is a detail perspective view, illustrating the manner of mounting the step ladder attachment at the back of the jack.

Like numerals of reference designate corresponding parts in all the figures of the drawing.

In the accompanying drawing in which is illustrated the preferred embodiment of the invention, the step ladder attachment comprises in its construction upper and lower slidably connected ladder sections 1 and 2, the sides of the upper section being connected by horizontal steps 3, while the sides of the lower section are connected by transverse bars 4 having their front side faces arranged in the plane of the front edges of the sides of the lower section, but the connecting bars of the lower section may be of any preferred construction, and the two sections may be of any desired length to adapt it to the size and character of the jack for which the extension ladder attachment is designed. The upper section of the step ladder attachment is provided at the rear longitudinal edges of its sides with ribs 5, which fit in longitudinal grooves 6 in the front longitudinal edges of the lower section, and the two sections are maintained in slidable interlocked relation by means of upper and lower guides 7 and 8, arranged in pairs and preferably consisting of metallic straps bent into approximately oblong form and each secured to the side bars of one section and slidably embracing the contiguous side bar of the other section. The upper guides 7 are secured to the side bars of the lower section 2, and the lower guides 8 are fastened to the side bars of the upper section 1.

The upper and lower sections of the step ladder attachment are secured in their adjustment by means of approximately L-shaped hooks 9 and bars 10 provided at intervals with perforations 11, arranged to be engaged by the hooks 9. The hooks 9 have elongated shanks provided with terminal eyes 12 for the reception of screws 13, which pivot the hooks to the outer faces of the sides of the upper section 1. The hooks 9 extend upwardly from the pivots, and they are provided at their upper ends with bills extending rearwardly from the shanks and adapted to be introduced into any of the perforations 11 of the bars 10. The bars 10, which are located at the outer faces of the sides of the lower section, are provided with terminal approximately L-shaped attaching arms 14, which are perforated for the reception of suitable fastening devices. The bars, which are flat, have their inner edges arranged close to the sides of the lower section, but spaced sufficiently therefrom to provide a passageway for the guides 8 of the upper section. When the hooks are engaged with the perforations of the longi-

tudinal bars 10, the upper and lower sections of the step ladder attachment are rigidly and securely held in their adjustment.

The upper ends of the sides of the upper section of the step ladder attachment are enlarged, and are connected by an approximately U-shaped metallic bracket 15, consisting of a transverse portion and spaced sides or arms, which are secured by bolts 16 to the inner faces of the sides of the upper section 1. The bracket 15 supports an approximately U-shaped yoke 17 constructed of suitable metal and consisting of a transverse portion and spaced sides or arms 18, the transverse portion of the yoke being secured by rivets 19, or other suitable fastening devices to the rear face of the transverse connecting portion of the bracket. The sides of the yoke are arranged in spaced relation with the sides of the bracket and are extended beyond the same and are provided in their outer or rear portions with inner and outer perforations 20 and 21, adapted to receive a transverse rod 22 provided at one end with an eye 23 and connected by a short chain 24, or other suitable flexible connection with one of the sides of the upper section 1.

The pin and the yoke are adapted for securing the step ladder attachment to the jack of the aforesaid patent, and the step ladder attachment may be arranged either in front or in rear of the jack. When the step ladder attachment is arranged at the back of the jack, it is placed against the standard 46 thereof, and the transverse pin is placed in the outer perforations 21 and is arranged in one of the notches 47 of the supporting plates 48 of the said standard. In applying the step ladder attachment to the jack in this manner, there is no change in the construction of the jack and illustration thereof is deemed unnecessary. The perforations 11 of the longitudinal bars 10 of the adjusting devices will, of course, be arranged to correspond with the arrangement of the shoulders of the supporting bar, so that when the standard is adjusted one notch an adjustment of one perforation of the step ladder attachment will be sufficient to arrange the attachment to correspond to the adjustment of the standard.

In order to enable the step ladder attachment to be connected with the jack at the front thereof, an attaching plate 25 is secured to the inclined brace 30, which supports the step 29 of the jack of the aforesaid patent. The attaching plate is provided with upper and lower eyes 26, which are adapted to receive the transverse rod 22, and they coöperate with the rod to form a hinge connection between the step ladder attachment and the jack to permit the attachment to be arranged at the proper inclination in adjusting the same to the height of the adjustable step 29 of the jack. In connecting the step ladder attachment to the front of the jack, the rod 22 is arranged in the perforations 20 of the yoke. The attaching plate 25 while shown arranged at the front edge of the inclined brace 30 may, of course, be mounted on the jack at any other suitable point.

The step 29 may be equipped with a removable platform 27 detachably connected at the central portion with the step by dowel pins 28, and secured at opposite sides to the brace by means of hooks and eyes 31 and 32. The brace is provided at each side with one of the eyes 32, and the hook 31 is connected with the platform by a screw eye 33, which is embedded in an end cleat 34. When the hooks 31 are disengaged from the eyes 32, the platform may be readily lifted off the step of the jack.

In order to enable the step ladder to be used independently of the jack, especially for indoor use, each of the sides of the upper section is designed to be equipped with an adjustable leg 35, provided with an upper sheet metal section 36 having side flanges 37, which embrace the leg 35. The leg 35 is provided at its opposite longitudinal edges with grooves or recesses 38 to engage with the flanges 37 of the section 36. The leg 35 is secured in its adjustment by means of a bolt 39, mounted on the said leg 35 and extending through a slot 40 of the section 36 and equipped with a thumb nut 41, which engages the said section 36, a washer 42 being preferably interposed between the nut 41 and the section 36. The section 36 is provided at the top with a filler block 43, and it is equipped with an approximately U-shaped yoke 44, projecting from the section and adapted to embrace one of the sides of the upper section 1 of the step ladder attachment. The yoke 44 is provided with suitable perforations 45 for the reception of fastening devices for securing it to the upper section 1 of the step ladder attachment. When the extensible legs are applied to the step ladder attachment, the parts form an extensible step ladder, which is adapted to be raised and lowered to provide a step ladder of the desired height.

What is claimed is:—

1. The combination with a standard having a supporting plate provided with notches, and a lifting bar slidable along the standard and provided with means for engaging the said notches, of a front plate carried by the lifting bar and provided with an eye, a ladder provided with projecting arms spaced apart a sufficient distance to receive the standard between them and permit the ladder to rest against the rear side of the standard, said arms being of a length to project in advance of the standard, and

a transverse pin piercing the arms and adapted either to rest in one of the notches of the supporting plate or to be arranged in the eye of the front plate, whereby the ladder is interchangeable and adapted to be arranged either at the back or front of the standard.

2. A step ladder attachment including a ladder having spaced sides, an approximately U-shaped metallic bracket composed of a transverse portion extending across the space between the sides of the ladder, and opposite arms secured to the inner faces of the sides of the ladder, an approximately U-shaped yoke consisting of a transverse portion fixed to the transverse portion of the bracket and being of a length less than the same, and spaced arms extending from the transverse portion of the yoke and projecting rearwardly beyond the arms of the bracket and arranged in spaced relation with the same, and a transverse rod located in rear of the bracket and piercing the arms of the yoke for detachably connecting the ladder to a support.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOHN MOSIMAN.

Witnesses:
W. T. WALLACE,
E. E. MAY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."