

Dec. 6, 1927.

1,651,863

M. J. BAUR

LADDER JACK

Filed Feb. 9, 1927

Fig. 1.

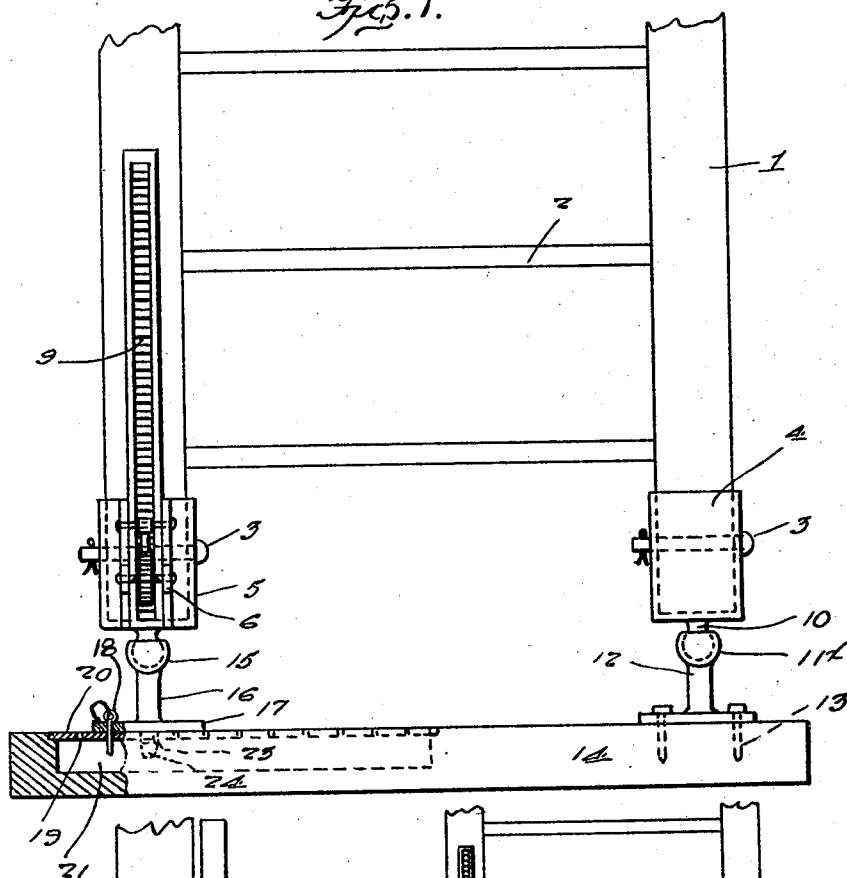


Fig. 2.

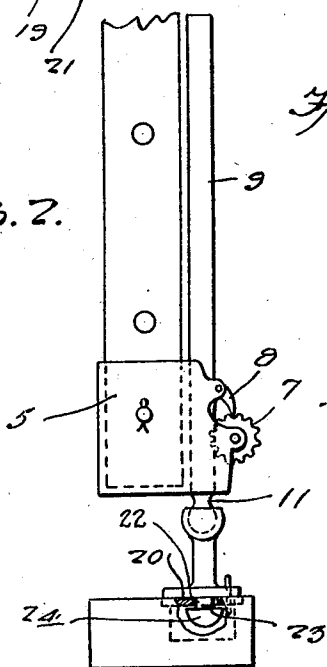


Fig. 3.

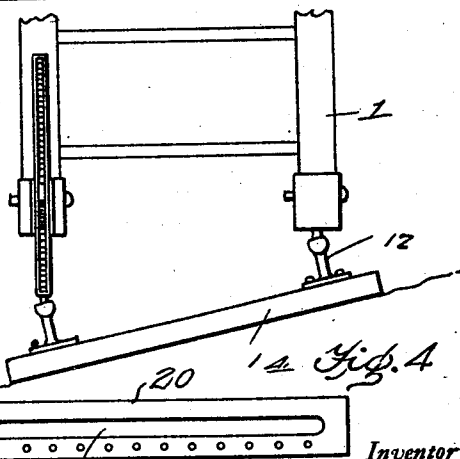
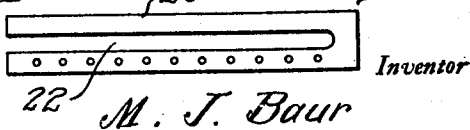


Fig. 4.



Inventor

M. J. Baur

By *Clarence A. O'Brien*
Attorney

UNITED STATES PATENT OFFICE.

MATHIEU J. BAUR, OF WOODLYN, PENNSYLVANIA.

LADDER JACK.

Application filed February 9, 1927. Serial No. 166,932.

The object of my present invention is the provision of a ladder jack possessed of the capacity of strongly and safely supporting a ladder, and this irrespective of whether or not the support on which the base of the jack is to be superposed is horizontal or is inclined. The invention also contemplates the provision of a ladder jack readily adjustable to ladders of different width and susceptible of being readily applied to and disassociated from a ladder.

Other objects and practical advantages of the invention will be fully understood from the following description and claims when the same are read in connection with the drawing, accompanying and forming part of this specification, in which:—

Figure 1 is a view, partly in elevation and partly in section, showing a jack of my invention as combined with a ladder.

Figure 2 is a detail elevation taken from a view point at the left of Figure 1.

Figure 3 is a view in elevation showing the manner in which my novel jack is employed to support a ladder when it is necessary to superpose the base of the jack on an inclined support such, for instance, as an inclined portion of ground.

Figure 4 is a detail plan view of the plate positively illustrating the longitudinal slot 22 therein.

Similar numerals of reference designate corresponding parts in all the views of the drawing.

The ladder illustrated is of the ordinary well known construction in that it comprises side stiles 1 and rungs 2. I prefer, however, to provide the stiles 1 with transverse apertures adjacent to the lower ends thereof for the reception of the shanks of the bolts 3 hereinafter referred to.

Among other elements my novel jack comprises a socket member 4, and a socket member 5, the said socket members being adapted to receive the lower ends of the stiles 1 and being preferably, though not necessarily, connected to the stiles through the medium of the transverse bolts 3.

The socket member 5 is provided with spaced front flanges 6 between which are mounted a spur gear 7 and a gravitational pawl 8. It will also be noted that a vertical rack bar 9 is guided between the front flanges 6 in position to mesh with the gear 7.

The socket member 4 is provided at its lower end with a ball extension 10, and the

rack bar 9 is provided at its lower end with a ball extension or terminal 11. The ball extension 10 is disposed in a socket 11* on a pedestal 12 that is fixedly connected at 13 to the upper side of a base 14. The socket 15 complementary to the ball extension 11 is carried by a pedestal 16 on a plate 17 that is adjustable on the base 14 in the direction of the length of the latter, and is designed to be adjustably fixed to the base 14 through the medium of a pin 18 extended through an aperture in the plate 17 and through one of a plurality of apertures 19 in a plate or wall 20 fixed in and to the base 14.

Manifestly by virtue of the connection described between the socket member 5 and the base, my novel jack may be expeditiously and easily adjusted to suit the jack to ladders of different width.

Again it will be appreciated that notwithstanding the positioning of the base 14, the ladder may be arranged to rest vertically. For instance, if the support on which the base 14 is superposed is inclined from the horizontal, the rack bar 9 may be extended beyond the lower end of the socket member 5, after the manner illustrated in Figure 3, the gravitational pawl 8 by cooperation with the spur gear 7 in mesh with the rack bar 9 averting the possibility of the socket member 5 and the portion of the ladder carried by the same inadvertently moving downwardly. In this connection it will further be appreciated that because of the described relative arrangement of the gear 7, rack 9 and pawl 8, the gear 7 will be permitted to turn when the rack bar 9 is moved longitudinally upward.

It will be understood by comparison of Figures 1 and 2, that the base 14 is chambered as designated by 21 and the plate 20 is longitudinally slotted alongside the longitudinal series of apertures 19, the slot designated by 22, Figures 2 and 4, being designed for the reception and movement of an anchor shank 23 pendent from the plate 17 and provided with a T-head as designated by 24 to prevent upward movement of the plate 17 on the plate 20. The head 24 is preferably so disposed that it may be dropped through the slot 22 and then on turning of the plate 17 about its center, the head 24 will be disposed at an angle to the length of the slot 22, Figures 2 and 4, and at the same time the pin for adjustably fixing the plate 17 with respect to the plate 20 is positioned

to enter one of the apertures 19 in the plate 20.

It will be appreciated from the foregoing that my novel jack is simple and inexpensive in construction, well adapted to withstand the rough usage to which ladder appurtenances are ordinarily subjected, and calculated to be quickly and easily applied to a ladder and as readily adjusted to suit different conditions.

I have entered into a detailed description of the construction and relative arrangement of the parts comprised in the present and preferred embodiment of my invention in order to impart a full, clear, and exact understanding of the said embodiment. I do not desire, however, to be understood as limiting myself to the precise construction and arrangement of parts disclosed, my invention being defined by my appended claims within the scope of which modifications may be made without departure from my invention.

Having thus described the invention, what I claim is:—

1. A ladder jack comprising a base, a member adapted to engage one side portion of a ladder, a ball and socket connection between the base and said member, a rack bar, a ball and socket joint between said rack bar and the base, and a second member adapted to engage the side portion of the ladder and receiving the rack bar and having a gear in mesh with the rack bar and also having a pawl to cooperate with said gear; the lower section of the ball and socket joint between the base and the rack bar being adjustable in the direction of the length of the base and equipped for adjustable connection to the base.

2. In a ladder jack and in combination a chambered base, a slotted and apertured plate arranged over said chamber of the base and carried by the base, a member connected with the base and adapted to engage one side portion of a ladder, a rack bar, a ball and socket connection between said rack bar and the base, the lower section of said connection having a plate superposed on the first named plate and also having a headed anchor, the shank of which is disposed in the slot of the first named plate and the head of which is disposed below said first named plate, a pin for adjustably fixing the lower section of the ball and socket connection to the plate, and a second member adapted to engage one side portion of a ladder and receiving the rack bar and equipped with a spur gear in mesh with the rack bar and also equipped with a pawl for cooperation with said spur gear.

3. A ladder jack comprising a base, a socket member connected with the base and adapted to receive the lower end of one side stile of a ladder, a rack spaced from said socket member, a connection between said rack and the base, a second socket member adapted to receive the lower end of the other stile of a ladder and receiving the rack, a spur gear carried by the second named socket member and meshed with the rack, and a pawl carried by the second named socket member and arranged in engagement with said spur gear; the connection between the first named socket member and the base being a ball and socket connection, and the connection between the rack and the base being also a ball and socket connection.

In testimony whereof I affix my signature.
MATHIEU J. BAUR.