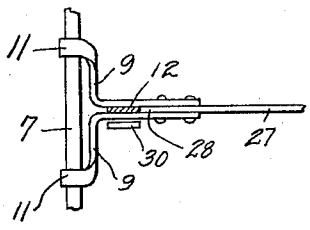
Aug. 11, 1925. 1,549,657

C. M. DUNLAP

LADDER BRACKET

Filed Oct. 24, 1923

Fig. 4



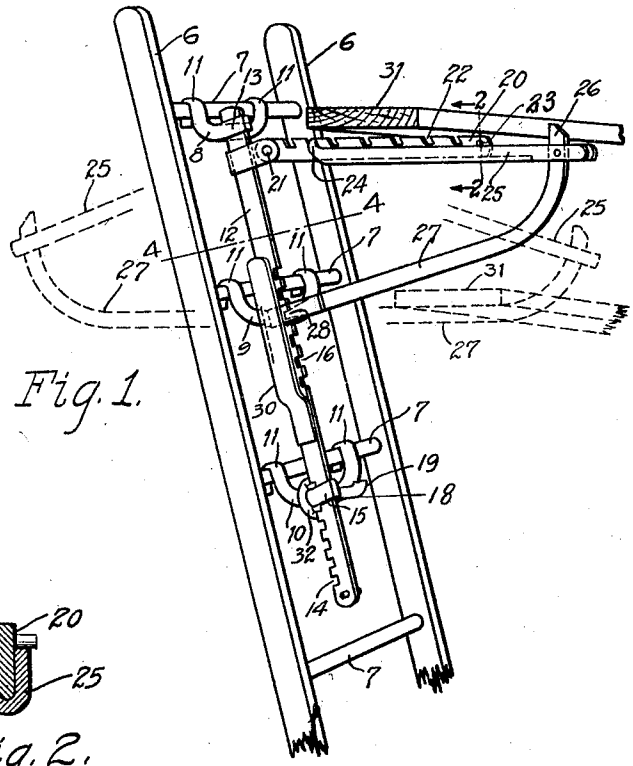


Fig. 1.

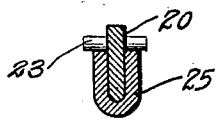


Fig. 2.

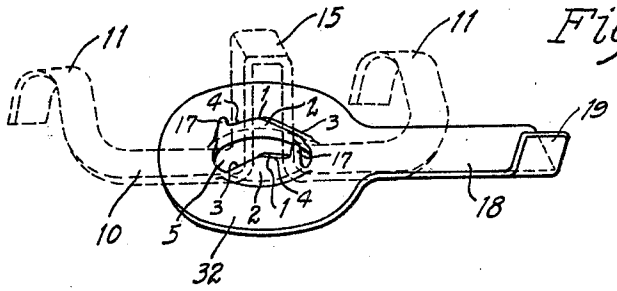


Fig. 3.

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UNITED STATES PATENT OFFICE.

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LADDER BRACKET.

Application filed October 24, 1923. Serial No. 670,487.

To all whom it may concern:

Be it known that I, CHARLES M. DUNLAP, a citizen of the United States, residing at South Pasadena, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Ladder Brackets, of which the following is a specification.

One object of this invention is to simplify such brackets making them applicable to ladders in which the distance between rungs is not equal.

Another object is to equally distribute the weight on the different rungs of the ladder.

Another object is to construct a safety bracket that will not collapse under reasonable usage.

Another object is to make the device easily attachable and adjustable for different angles in which the ladder may be set.

Other objects will appear from the following description and appended claims as well as from the accompanying drawing, in which—

Figure 1 represents a perspective view of the ladder bracket on a ladder with a plank on the arm member.

Figure 2 represents a sectional view on line 2—2 of Figure 1.

Figure 3 represents a perspective view of the lower rung bar locking means.

Figure 4 is a plan view of the angle brace taken on line 4—4 of Figure 1.

The ladder 6 with the rungs 7, or any device of similar construction is used as the foundation or supporting part in conjunction with my device. The bars 8, 9 and 10 form the engaging means of my device, being provided each with a pair of suitably formed hooks 11 to engage over the rungs or cross members of ladders or similar devices. The connecting or supporting bar 12 is preferably rigidly secured to the hook bar 8, as indicated by the rear connection at 13. The bar 12 is provided at the center of the front edge with notches or recesses 16 and the lower end on the rear edge with notches or recesses 14 to form the interlocking means between the bar 12 and the hook bars 10 and 9 respectively. Through this arrangement any number of hook bars can easily be interlocked with a supporting bar 12 (of suitable length) to distribute the weight of the scaffold 31 over a suitable number of cross members or rungs 7 on the ladder 6, as will be easily understood. The bar 10 is formed intermediate its ends with a yoke 15 which extends through an opening 5 in a collar 32, which collar rests upon said bar. The lower portion of the bar 12 slides freely through said yoke 15 over the collar 32 and across the opening 5. The flanges 2 are integral with the top face of the collar 32 bordering the said hole 5, and the cams 1 are formed on the upper edges of the flanges 2 facing the under side of the bar 12 with the outer wedge surfaces 3 thereof sloping upwardly from the top face of the said collar 32 to the inner wedge surfaces 4, and the said inner wedge surfaces 4 in turn slope downwardly a distance toward the stop member 17, the stop members 17 being integral with the top portions of the said flanges 2, as shown in Figure 4. The arm 18 is integral with one side of the said collar 32 and extends therefrom a distance, and a finger 19 projects upwardly from the upper end portion of the said arm 18 for a thumb hold, to turn the said arm 18 and collar 32.

An adjusting bar 20 is pivotally engaged at 21 with the bar 12, the bar 20 being provided with a suitable number of notches 22 along the top edge and the free end having a stop 23, as can be more clearly seen in the detail illustrations in Fig. 1. The hook 24 at the end of the bar 25 is provided to engage in the several notches 22 for adjustment forming the interlocking means between the adjusting bar 20 and the bar 25, the adjusting bar 20 and the bar 25 forming one member as a brace for the device. The bar 25 engages pivotally with the end portion 26 of the brace 27, the brace 27 being rigidly secured to the hook bar 9. The board 31 will then be positioned in a practically horizontal level on the bar 20 or brace 27 which is necessary if the board is to be used for men to stand or work on, as will easily be understood. The adjusting bar 20 and bar 25 serve to help the arranging of the board in a desired level.

The hooks 11 of the bar 9 are secured to the two sides respectively of the inner end of brace 27, and a tongue 28 is formed on the said inner end portion of brace 27 to mesh into the notches 16 in the bar 12, as shown in Figure 1.

The hook bar 8 is hooked to one of the rungs 7 in the ladder 6 and the bars 9 and

10 each are then adjusted to bring the tongue 28 into engagement with one of the notches 16 and the flanges 2 into engagement with two of the notches 14, respectively, in the supporting bar 12 so as to locate the hook bars 9 and 10 in suitably engaging position in relation to other cross members of the ladder.

In such adjusted position the hook bars 8, 9 and 10 will of course fit on either side of the ladder, the upper side illustrated in the drawing in Fig. 1, or the under side or behind the ladder as indicated in dotted lines.

In placing the device illustrated in Fig. 1, the upper end of the adjusting bar 20—25 is already pivotally engaged to the device at the joint 21, there remains only to secure the brace 27 with its tongue 28 into the bar 12, and then to adjust the adjusting brace 20—25 so as to bring either the brace 27 or bar 20—25 to a practically horizontal position to form a good rest for the scaffold 31.

When placing the device behind the ladder or under it as indicated in dotted lines, it naturally leaves only to hook the hook-ends 28 as hereinbefore described.

The guard 30 is secured to one side of the bar 12 in a line with the travel of the brace 27 and tongue 28, to serve as a safety means in the event the connecting rung 7 should break and free the bar 9 and relative hooks 11 from the ladder 6, by holding the bars 9 and brace 27 between the said guard 30 and bar 12 as shown. The said bar 25 is U-shaped in section to telescope around the under edge portion of the said bar 20, as shown in Figure 3.

The guard 30 assists the operator to release and adjust the tongue 28 on the end portions of the brace 27 into the required notches 16, without permitting the hook bar 9 to shift outwardly beyond the supporting bar 12, by providing a suitable slidable engagement between the said guard 30 and bar 9.

The adjusting bar 20 rests in the U-bar 25, and they are held in their adjusted positions by inserting the hook 24 into the required notch 22, and the lower lineal edge of the said bar 20 rests in the trough of the bar 25 as shown in Figure 2, to form an anticollapsing joint when resting a scaffold 31 on the said adjusting bar 20, as shown in Figure 1.

Having thus described my invention, I claim:

1. In a ladder bracket, a suitable number of hook bars adapted to engage with the cross members of a ladder, a supporting bar having means for engaging with the hook bars so as to bring the several hook bars into engagement with the several cross members of the ladder to form a united support for the supporting bar, a brace secured at one end to one of the hook bars so as to project with its other end forward from the ladder, and an adjusting bar having one end pivotally engaged with the upper end of the supporting bar and having its other end pivotally engaged with the forward projecting end of the brace, and an open-ended guard means adapted to slidably receive the said brace.

2. In a ladder bracket of the class described, a suitable number of hook bars adapted to engage with the cross members of a ladder, a supporting bar secured at one end to one of the hook bars and having means for adjustably engaging with the other hook bars so as to bring the several hook bars into engagement with several cross members of the ladder to form a united support for the supporting bar, a brace secured at one end to one of the hook bars so as to project with its other end forward from the ladder, and an adjusting bar having one end pivotally engaged with the upper end of the supporting bar and having its other end pivotally engaged with the forward projecting end of said brace, and an open-ended guard means adapted to slidably receive said brace.

3. In a ladder bracket of the class described, a supporting bar having a suitable number of notches along the lower longitudinal edge thereof, a hook bar rigidly secured to the upper end of the supporting bar having hook members adapted to engage over one of the cross members of a ladder a lower hook bar having hook members adapted to engage over lower cross members of the ladder, and having a yoke slidingly engaging over the supporting bar, a locking collar member positioned around the yoke member of the lower hook bar and between the said lower hook bar and the supporting bar adapted to engage with said notches in the said supporting bar, a brace adjustably secured at one end to the said supporting bar so as to project with its other end forward from the ladder, and an adjusting bar having one end pivotally engaged with the upper end of the supporting bar and having its other end pivotally engaged with the forward projecting end of said brace.

4. In a ladder bracket of the class described, a supporting bar having a suitable number of notches along the upper and lower longitudinal edges thereof between predetermined points, a hook bar rigidly secured to the upper end of the suporting bar and having hook members adapted to engage over one of the cross members of a ladder a lower hook bar formed with hook members adapted to engage over a lower cross member of the ladder, and having a yoke slidingly engaging over the supporting bar, a locking collar member positioned around the yoke member of the lower hook bar and

between the said hook bar and the supporting bar adapted to engage with the lower notches in the said supporting bar, a brace adjustably secured at one end to the said supporting bar so as to project with its other end forward from the ladder, a tongue member integral with the end portion of the said brace adapted to mesh adjustably into a suitable notch in the upper longitudinal edge of the said supporting bar, an open ended guard member secured to the said supporting bar adapted to hold the said tongue member in an adjustable position over the supporting bar, and an adjusting bar having one end pivotally engaged with the upper end of the supporting bar and having its other end pivotally engaged with the forward projecting end of said brace.

5. In a ladder bracket of the class described, a supporting bar having a suitable number of notches along the upper and lower longitudinal edges thereof between predetermined points, a hook bar rigidly secured to the upper end of the supporting bar and having hook members adapted to engage over one of the cross members of a ladder, a lower hook bar having hook members adapted to engage over a lower cross member of the ladder, and having a yoke slidingly engaging over the supporting bar, a locking collar member positioned around the yoke member of the lower hook bar and between the said lower hook bar and the supporting bar adapted to engage with the lower notches in the said supporting bar, a brace adjustably secured to the said supporting bar at one end so as to project with its other end forward from the ladder, a tongue member integral with the end portion of the said brace adapted to mesh adjustably into a suitable notch in the upper longitudinal edge of the said supporting bar, an open ended guard member secured to the said supporting bar adapted to hold the said tongue member in an adjustable position over the supporting bar, and an adjusting bar having one end pivotally engaged with the upper end of the supporting bar and having its other end pivotally engaged with the forward projecting end of said brace, and an anti-collapsing means integral with said adjusting bar.

In testimony whereof I affix my signature.

CHARLES M. DUNLAP.