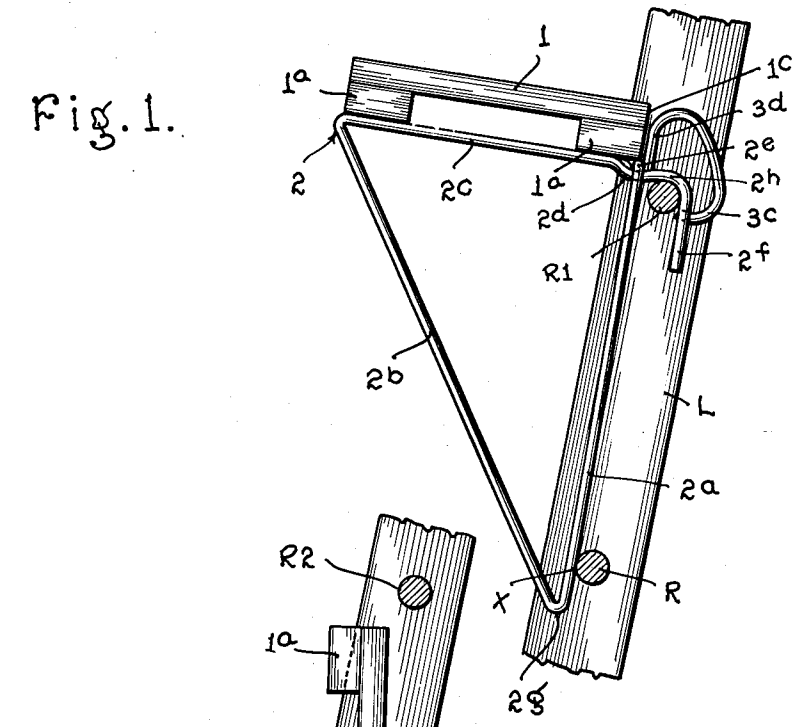
Jan. 16, 1934. L. M. RICHARD 1,943,626

PLATFORM FOR USE WITH LADDERS, ETC

Filed Feb. 15, 1929 2 Sheets-Sheet 1

Fig. 1.



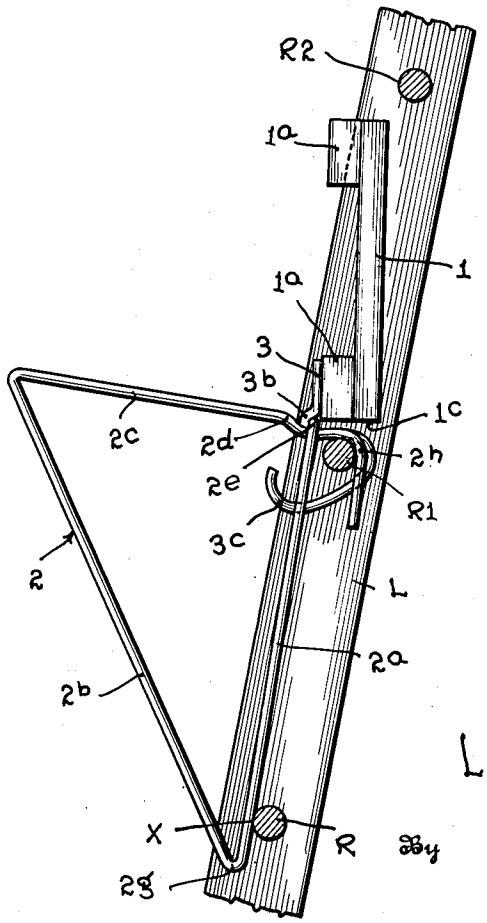


Fig. 2.

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PLATFORM FOR USE WITH LADDERS, ETC

Filed Feb. 15, 1929 2 Sheets-Sheet 2

Fig. 3.

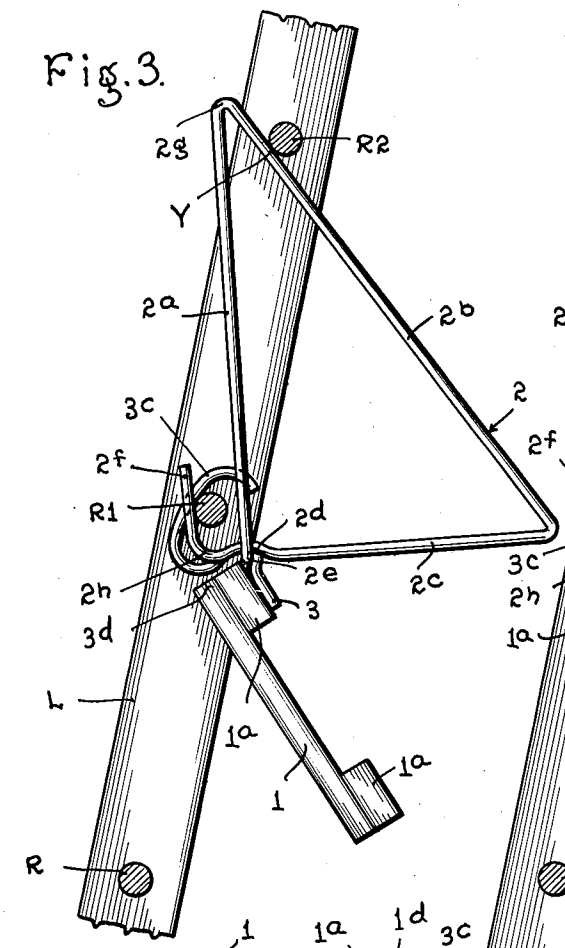


Fig. 4.

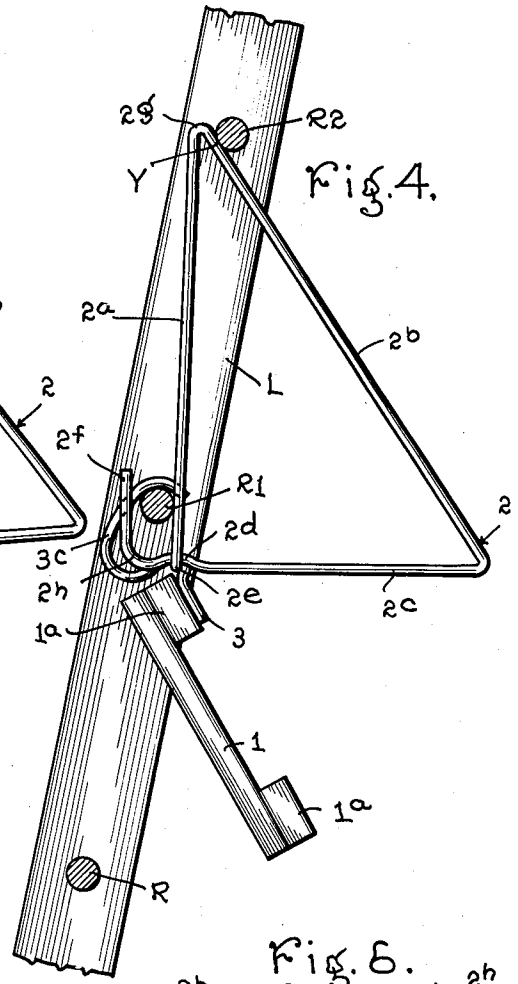


Fig. 5.

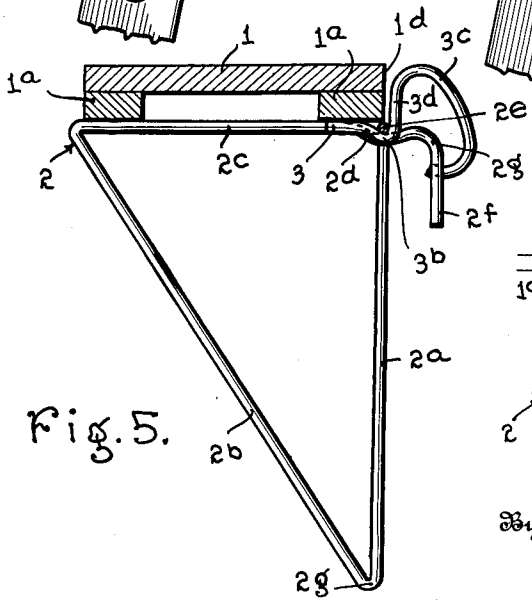
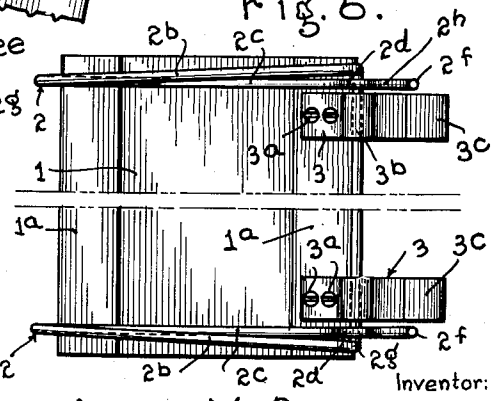


Fig. 6.



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UNITED STATES PATENT OFFICE

1,943,626

PLATFORM FOR USE WITH LADDERS, ETC.

Louis M. Richard, Woodbridge, Conn.

Application February 15, 1929. Serial No. 340,166

6 Claims. (Cl. 228—17)

This invention relates to supporting devices or platforms for use in connection with ladders and more particularly to a platform for use with a ladder of the so-called "runged" type.

One of the objects of the present invention is the provision of a platform adapted to be supported upon the rung of a ladder so that it may be readily swung into normal operative position and further so that it may be readily revolved into inoperative position whereby without removal from the ladder it does not interfere with the ordinary use of said ladder.

A further object of the invention is the provision of such a platform and support therefor which prevents accidental displacement or removal of the platform and its support from the ladder.

A still further object of the invention is a provision for a platform of the character set forth above with an associated supporting member so constructed that a person upon the ladder may readily move said platform and support into operative or inoperative position.

A still further object of the invention is the provision of a platform and support of the character set forth above which may be readily attached to or removed from the ladder.

Still further objects and advantages of the present invention will appear from the more detailed description set forth below, it being understood however that this more detailed description is given by way of explanation and illustration only and not by way of limitation since various changes may be made therein by those skilled in the art without departing from the scope and spirit of this invention.

In connection with that more detailed description set forth below there is shown in the drawings:

In Fig. 1, a side elevational view of the platform and supporting member therefor illustrating the same and attached to a ladder and in operative position, the ladder being shown in section;

In Fig. 2, a side elevational view similar to Fig. 1 illustrating the platform raised from the supporting member illustrating the first step in the placing of the device in inoperative position;

In Fig. 3, a view similar to Fig. 1 illustrating both the platform and the supporting member pivoted backward to the limit of their rearward movement into inoperative position;

In Fig. 4, a side elevational view similar to Fig. 3 illustrating the entire device dropped into the final inoperative position;

In Fig. 5, a side elevational view of the platform and supporting member therefor detached and in position ready for engagement with the rung of the ladder or the like; and

In Fig. 6, a bottom plan view of the platform and supporting member therefor, the platform being shown broken away.

In further explanation of the device shown in the drawings, the platform may be of any desired form, construction and material but is preferably of such size as to pass conveniently between the rungs of the ladder and the side members thereof. Also it is desirable that the platform taper towards its front end so that at its inner end adjacent the ladder it will be but slightly smaller than the distance between the side pieces of the ladder while at its front end it is considerably narrower so that it may be readily passed between the side pieces of the ladder.

For example the platform 1 reinforced by cross pieces 1*a*, is mounted upon a support 2. For this purpose hinge members 3, one at each side of the platform and attached thereto as by screws 3*a*, project rearwardly from below the platform and are bent as shown at 3*b* to embrace the connecting element of the support to be described below. The relationship of the members 3 and the faces-connecting member of the support is similar to that between the hinge plates and the pintle of a hinge. After passing about the connecting member of the support the member 3 extends from the said depression 3*b* rearwardly and is shaped into a hook member 3*c* adapted to surround the rung R1 of the ladder as explained below. The portion of the member 3 extending just beyond the platform 1 is placed in close proximity as shown at 3*b* to the face 1*c* of the platform so that the connecting member 2*e* described below acts as a pintle about which the platform 1 may be moved.

The support generally referred to as 2 is desirably formed from a continuous metallic element having faces which may be substantially parallel and are substantially similar in geometric contour. For example these faces may be triangular in form having face elements 2*a*, 2*b*, and 2*c*. The upper face element 2*c* is desirably bent or depressed to allow passage of the connecting member 2*e* beneath the platform. By constructing the support in this manner with the connecting member 2*e* joining the substantially parallel and similarly contoured faces 2 and preferably whereby the connecting member 2*e* lies just above the underface element 2*c*, a very rigid structure is obtained. The ends of the metallic element desirably project beyond the connecting member 2*e* to form rung engaging projections 2*f*. The face element 2*a* immediately contiguous to the ladder is desirably of such length that when supported by the rung engaging projection 2*f* upon a rung of the ladder the angle 2*g* of the support will extend just below the next rung R of the ladder.

When assembled in the manner set forth above, the device is ready for use in conjunction with a

ladder. The members 3, 3, attached to the underface of the platform 1 are desirably placed contiguous to the faces of the support 2 so that there will be little play of the parts. While the connecting member 2e of the support acts as a hinge pin or pintle for movement of the platform thereabout, such movement is limited by the fact that the rear face 1c of the platform will engage the portion 2h on the rung engaging projection 2f.

In attaching the device to a ladder or placing it upon a rung thereof, the platform and support are disposed in the position illustrated in Fig. 5 of the drawings and the entire device is then bodily positioned upon the ladder rung as illustrated in Fig. 1. In the position of the structure as shown in Fig. 1 it will be noted that engagement is had between the rung and the rung engaging projection 2f of the supporting member, and further the support 2 due to the length of the face 2a extends just below the next lower rung R of the ladder and contacts therewith at x of Fig. 1. The support is thus rigidly held in position and increase in pressure upon the platform merely serves to increase the rigidity of the support. Assuming that the platform is in a position indicated in Fig. 1 of the drawings and that it is desired to move the platform into inoperative position, the platform 1 is swung into the position shown in Fig. 2, which represents the limit of movement between the platform and its associated support. Further movement of the platform 1 will then carry the associated support into the position shown in Fig. 3 wherein the hooked element of the member 3 is also brought into engagement with the rung R1 of the ladder. In this position the face element 2b will contact with the rung R2 lying just above the rung on which the support is positioned.

At this point the entire device may drop of its own weight to the position illustrated in Fig. 4 of the drawings and is maintained in this inoperative position by means of the elliptical hook-like portions 3c of the hinge members engaging the ladder rung R1. In the final inoperative position illustrated in Fig. 4, it will be noted that both the platform and the associated supports are so placed that they will not interfere with the ordinary use of the ladder even though the platform and support remain supported upon the rung R1 of the ladder L. Further the hook-like portion 3c of the hinge member which engages the ladder rung prevents the platform and associated support from being accidentally displaced therefrom.

From the inoperative position illustrated in Fig. 4 the device may be readily restored to operative position by a reversal of the operation set forth above. The end angle 2g of the support 2 may be readily moved in a counter clockwise direction whereby the support is rotated about the rung R1 and assumes the position illustrated in Fig. 1 of the drawings. The platform 1 is also carried back into that position shown in Fig. 1 due to the association of parts as described above.

The arrangement of parts is such that the platform and associated supports are very nearly balanced so that a minimum of effort is required to bring these supports and platform into operative or inoperative position. Further these operations may be readily performed by the foot of a person standing upon the ladder and above the rung on which the support and platform are supported.

Having thus set forth my invention, I claim:

1. In combination with a rung type ladder, a support adapted to embrace a rung of said ladder, a platform carried by such suport for movement on said support into operative and inoperative positions, means for permitting movement of the support into operative position, and means for permitting movement of the support into inoperative position.

2. In combination with a rung type ladder, a platform adapted to be pivotally mounted upon a rung thereof so that it may be swung about a rung into operative and inoperative position, and support means carried by said platform for securely maintaining the same in both operative and inoperative positions.

3. In combination with a ladder, a platform, a supporting member therefor, hinge members carried by the platform for pivotal engagement thereof with the supporting member, the said platform having pivotal engagement with the rung of the ladder, whereby the platform is adapted to be swung into operative and inoperative position, said platform supporting member including means for securely maintaining the said platform in operative and inoperative positions, said means comprising rung engaging projections on the supporting member and hooked portions upon the hinge members adapted to engage with the ladder rung.

4. In a platform adapted to be used with a rung type ladder, a support comprising a metallic element shaped to form substantially parallel faces of similar geometric contour joined by a connecting member, the ends of said metallic element projecting under and beyond the connecting member joining the faces, the said ends being formed into rung engaging projections, and a platform carried by said support.

5. In a platform adapted to be used with a rung type ladder, a support comprising a metallic element shaped to form substantially parallel faces of similar geometric contour joined by a connecting member, at least one of said faces being of a length greater than the distance between contiguous rungs of the lader, the ends of said metallic elements projecting under and beyond the connecting member joining the faces, said ends being formed into rung-engaging projections and a platform carried by said supports.

6. In a platform adapted to be used with a rung type ladder, a support comprising a metallic element shaped to form substantially triangular parallel faces and a connecting member joining said faces, at least one of said faces being of a length greater than the distance between contiguous rungs of the ladder, the ends of said metallic element projecting under and beyond the connecting member joining the faces, said ends being formed into rung-engaging projections, and a platform carried by said supports, said platform carrying projecting hooked members embracing the faces of the connecting member of the support whereby the platform and support are pivotally associated, said hooked members further surrounding the supporting rung in order to limit the movement of the platform about said rung.

LOUIS M. RICHARD.