

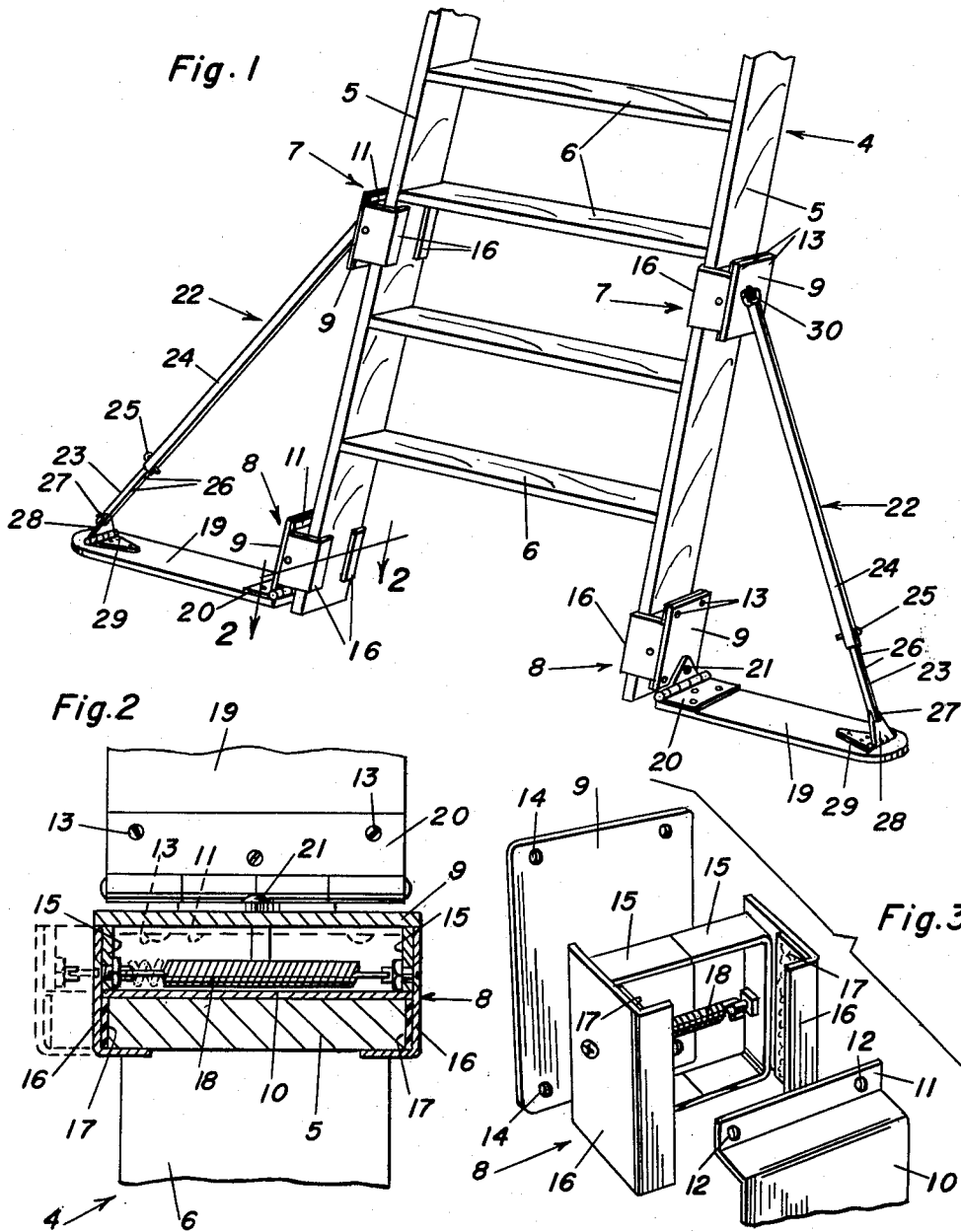
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LADDER HOLDER

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1

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LADDER HOLDER
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This invention relates to new and useful improvements in holders or supports particularly, although not necessarily, for stepladders and has for its primary object to provide, in a manner as hereinafter set forth, novel means for positively bracing such ladders laterally for preventing tipping-over thereof.

Another very important object of the present invention is to provide a lateral brace or holder of the aforementioned character comprising novel means for expeditiously mounting the device on the ladder.

Still another important object of the invention is to provide an attachment of the character set forth which is readily adjustable for use on ladders of various dimensions and types.

Another object of the present invention is to provide a holder or brace of the character set forth which may be left in position on the ladder when it is not in use.

Other objects of the invention are to provide a ladder holder or brace which will be comparatively simple in construction, strong, durable, compact, of light weight and which may be manufactured at low cost.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a perspective view, showing the lower portion of a ladder equipped with a pair of holders constructed in accordance with the present invention;

FIGURE 2 is a view in horizontal section on an enlarged scale, taken substantially on the line 2-2 of FIGURE 1; and

FIGURE 3 is a perspective view of one of the mounting clamps, showing the component parts separated.

Referring now to the drawing in detail, it will be seen that reference character 4 designates generally the lower portion of a conventional stepladder. The stepladder 4 includes the usual side rails 5 having mounted therebetween steps 6.

The embodiment of the invention which has been illustrated comprises substantially similar upper and lower clamps 7 and 8, respectively, adapted to be removably and adjustably secured at vertically spaced points on either of the side rails 5 of the ladder 4.

Each of the clamps 7 and 8 includes a substantially rectangular, vertical metallic plate 9 having mounted thereon a generally U-shaped guide 10. The guide 10 includes end flanges 11 which are apertured, as indicated at 12, to receive bolts 13 for securing said guide on the plate 9, the corner portions of said plate having openings 14 therein accommodating said bolts.

Slidably mounted in the guide 10 is a pair of opposed, generally U-shaped end-abutting brackets 15. A pair of opposed, generally L-shaped jaws 16 are fixed on the bight portions of the brackets 15 for receiving and gripping the ladder rail therebetween. The jaws 16 comprise faces 17 of rubber or other suitable material for engagement with the ladder rail. A coil spring 18 is secured under tension to the bight portions of the brackets 15 for yieldingly closing the jaws 16 on the ladder rail.

Mounted for universal adjustment on the lower clamp 8 is an elongated base 19 of wood or other suitable material. One end portion of the elongated base 19 is connected to the plate 9 of the lower clamp 8 by means

2

comprising a hinge 20. One leaf of the hinge 20 is secured to the base 19. The other leaf of the hinge 20 is pivotally secured at 21 on the plate 9 of the lower clamp 8. Thus, the base 19 is rotatably mounted on the lower clamp 8 to compensate for the inclination of the ladder 4.

A telescopically adjustable brace 22 connects the free end portion of the base 19 to the upper clamp 7. The brace 22 includes male and female sections 23 and 24, respectively. The adjustment of the sections 23 and 24 is secured through the medium of a cotter pin 25 mounted in the section 24 and engageable selectively in spaced openings 26 provided therefor in said section 23. The lower end portion of the brace 22 is pivotally secured at 27 to one of the leaves 28 of a hinge 29 on the free end portion of the base 19. The upper end portion of the brace 22 is pivotally secured at 30 to the plate 9 of the upper clamp 7.

It is thought that the use of the invention will be readily apparent from a consideration of the foregoing. Preferably, but not necessarily, two of the devices are used on the ladder 4, one on each of the side rails 5, as shown. To secure the upper and lower clamps 7 and 8 in position on the side rails 5, the opposed, coacting jaws 16 are opened against the tension of the springs 18 for receiving said side rails therebetween. Of course, when the jaws 16 are released the springs 18 immediately close said jaws on the ladder rails. The adjustability of the upper clamps 7 and the telescopic braces 22 permits the angle of the bases 19 relative to the side rails 5 to be varied as desired. These adjustments also facilitate the mounting of the device on various types and sizes of ladders. The pivotal connections 21 and 27 allow the bases 19 to rotate in a manner to lie flat on a supporting surface regardless of the inclination of the ladder. When the invention is not in use the clamps 7 are moved upwardly on the ladder to swing the bases 19 upwardly to closed or inoperative position adjacent the rails 5.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A ladder attachment comprising: substantially similar upper and lower clamps mounted for vertical sliding adjustment on one of the rails of the ladder, said clamps including plates and generally U-shaped guides mounted on said plates, pairs of generally U-shaped, inwardly opening brackets slidable in the guides, generally L-shaped, opposed jaws on the bight portion of said brackets for receiving and gripping the ladder rail therebetween, tensioned springs within the confines of the brackets and connected to said bight portions thereof for closing the jaws on the ladder rail, a base hingedly mounted for vertical swinging movement on the lower clamp and engageable with a supporting surface, and a brace having its end portions pivotally connected to said base and to the upper clamp.

2. A ladder attachment comprising: a clamp mounted on the lower end portion of a rail of the ladder, said clamp including a pair of opposed, slidably mounted, spring actuated jaws for receiving and gripping the ladder rail therebetween, an elongated base having one end hingedly and pivotally secured to the clamp for vertical swinging movement and rotary adjustment on its longitudinal axis, said base being engageable with a supporting surface, a brace pivotally connected to the other end

portion of the base, and means connecting the other end of the brace to the ladder rail for pivotal and sliding adjustment.

3. A ladder attachment comprising upper and lower clamps mounted on one of the rails of the ladder, an elongated base hingedly and pivotally connected at one end to the lower clamp for vertical swinging movement and for rotation about its longitudinal axis, a brace having one end pivotally connected to the upper clamp, and means operatively connecting said brace to the base, said means including a hinge leaf mounted for vertical swinging movement on the free end portion of the base with its axis transverse thereto, said brace comprising telescopically adjustable sections, and a longitudinal pivot connecting the outer end of one of the sections to the hinge leaf for lateral swinging movement.

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