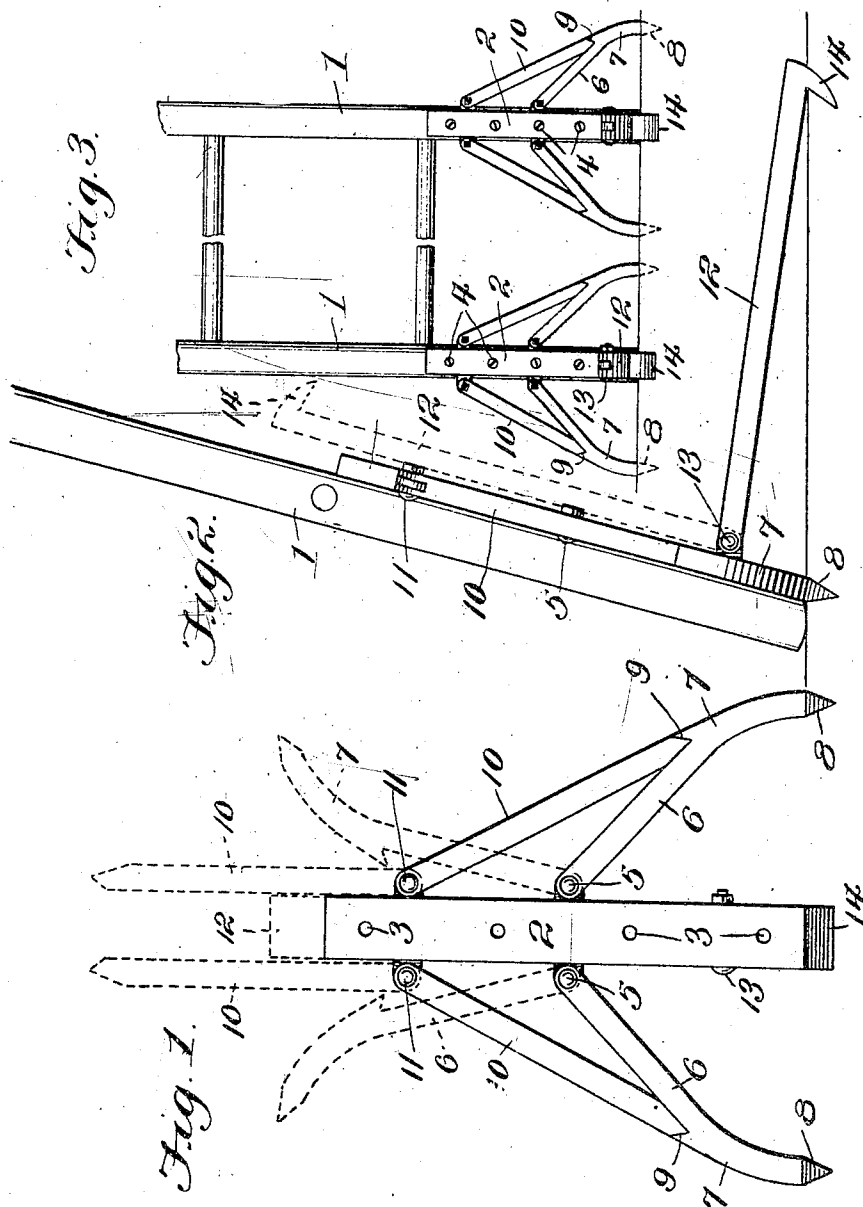


936,219.

Patented Oct. 5, 1909.



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UNITED STATES PATENT OFFICE.

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LADDER.

936,219.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH COPLINKY, a citizen of the United States, residing at Harrisburg, in the county of Dauphin and State of Pennsylvania, have invented new and useful Improvements in Ladders, of which the following is a specification.

This invention relates to ladders and particularly to an attachment for ladders to prevent the same from slipping and falling when arranged and supported for use.

The main object of the invention is to provide simple and effective means adapted to engage the ground or surface on which the base of the ladder rests to hold the latter firmly from movement, which means may be folded to an inoperative position when the ladder is used interiorly to prevent marring of the floor, or to permit the ladder to be stored in close compass when not in use.

A further object of the invention is to provide holding means of the described character which may be applied to ladders already in use.

The invention consists of the features of construction, combination and arrangement of parts hereinafter fully described and claimed, reference being had to the accompanying drawings, in which:—

Figure 1 is a front view of the attachment showing the projected and folded positions of the parts in full and dotted lines. Fig. 2 is a side view of a ladder showing the application of the invention thereto. Fig. 3 is a rear elevation of the same.

Referring to the drawing, the numeral 1 designates the side bars of a ladder to which my invention is shown applied, an anti-slipping or holding device being applied to the lower end of each of said bars. Each holding device comprises an attaching bar or plate 2 provided with a series of openings 3 for the passage of screws or other suitable fastening devices 4 to secure the same vertically upon the inner or rear face of each bar, or that face which lies adjacent the wall or other structure from which the ladder is supported in use. The lower end of the bar or plate 2, which constitutes a fastening bracket, terminates above the lower end of the bar 1 and is provided with central, lateral pivot supports 5 for a pair of bracing arms 6, which latter are adapted to be swung below or above their pivots, as shown in full and dotted lines in Fig. 1, and are formed with inwardly curved lower ends 7 terminat-

ing in spurred or pointed extremities 8 to enter the ground or surface on which the ladder rests to hold the same against lateral or sidewise movement. The arms 6 are formed with beveled or inclined lugs or shoulders 9 which are adapted to be engaged by the lower beveled or V-shaped ends of a pair of locking arms, dogs or detents 10, pivoted at their upper ends to the sides of the bracket 2 above the bracing arms 6, as shown at 11, the construction being such that when the arms 6 are projected the arms 10 may be swung downward into locking engagement therewith to hold the said arms 6 from outward and upward movement, thus insuring the firm embedment of the pointed ends 8 in the ground and the secure retention of the ladder against sidewise movement.

In order to hold the ladder against outward movement from the wall or other support against which it rests, a retaining or anchoring arm 12 is provided and pivotally connected at one end, as shown at 13, to the outer or rear face of the bracket 2 near the lower end of the latter. This arm is adapted when the ladder is arranged for use, as shown in Fig. 2, to be swung downward to the position illustrated in full lines to bring its opposite or free end, which is provided with a spur or hook 14, into engagement with the ground between the ladder and wall or other supporting element, so that said spur or hook may be forced into the ground to prevent the lower end of the ladder from slipping outwardly with relation to said wall or element. Hence by the use of the bracing and anchoring arms, the ladder may be firmly and securely held from slipping or shifting in any direction, so that it can not possibly fall.

The holding devices are more especially adapted for use when the ladder is employed for exterior work, but they may also be used when the ladder is used for interior work where the base surface on which the ladder rests is of a nature to permit the bracing and anchoring arms to obtain an anchoring engagement. When the ladder is rested on a floor or other surface, the arms may be swung upwardly to the dotted line positions shown in order to prevent marring of the floor and adjacent woodwork. The folded positions of the arms will also permit the ladder to be packed or stored in close compass without interference therefrom. It will

be understood that the pivotal connections of the arms will be such as to institute sufficient friction to retain them against movement when folded in the manner described.

5 While I have described the invention as an attachment for ladders, and the arms as being pivotally mounted upon an attaching bracket, it will be understood that they may be mounted directly upon the bars 1 in
10 equipping a new ladder with the invention. The construction disclosed, however, permits of the application of the invention to ladders already in use for the purpose of preventing the same from slipping, and it will be appar-
15 ent that the invention is exceedingly effective for this purpose and is susceptible of manufacture and sale at a comparatively low cost.

Having thus fully described the invention, what is claimed as new, is:—

20 1. The combination with a ladder, of bracing arms pivoted to the bars of the ladder to swing laterally therefrom, said arms being provided with pointed engaging ends and beveled locking shoulders, and pivoted lock-
25 ing arms on said bars having beveled locking ends to engage said shoulders and hold said arms in outfolded position.

30 2. The combination with a ladder, of bracing arms pivoted to the ladder to swing outwardly therefrom and having curved free ends provided with pointed terminals and

beveled locking shoulders above the same, and locking arms pivoted to the ladder above said bracing arms and provided with beveled ends to engage said shoulders to lock said
35 bracing arms in outfolded position.

3. The combination with a ladder, of bracket plates secured to the bars of the ladder, bracing arms pivoted to said bracket plates to swing laterally therefrom and hav-
40 ing pointed outer engaging ends and beveled locking shoulders above the same, and locking arms pivoted to the brackets above said bracing arms and provided with beveled
45 outer ends to interlock with said shoulders and hold said arms in outfolded position.

4. The combination with a ladder, of bracing arms pivoted to swing laterally of the bars of the ladder and having pointed outer ends and locking shoulders above the same,
50 pivoted locking arms adapted to engage said shoulders to lock the bracing arms in outfolded position, and a hooked anchoring arm pivoted to the ladder at right angles to said bracing arms and at a point below the
55 pivotal connections thereof.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH COPLINKY.

Witnesses:

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