

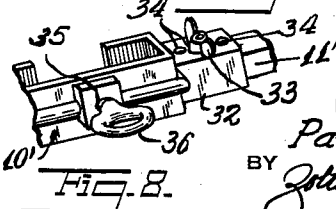
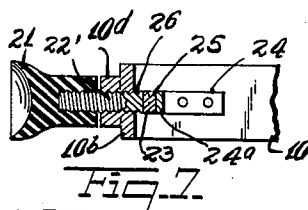
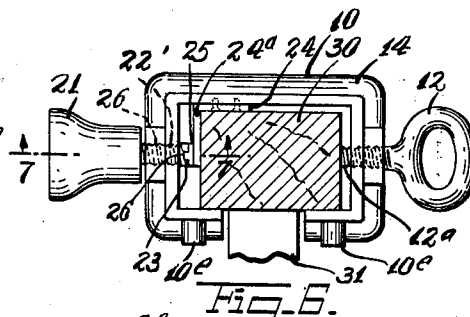
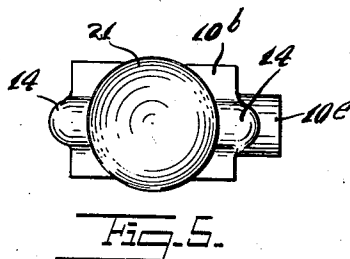
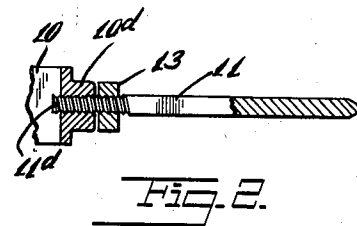
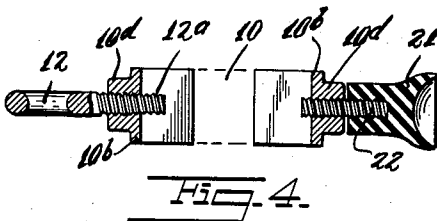
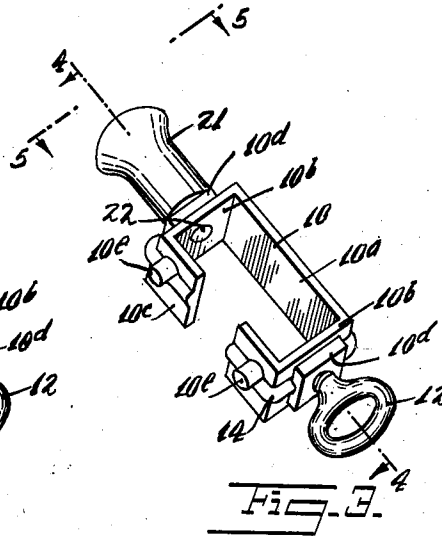
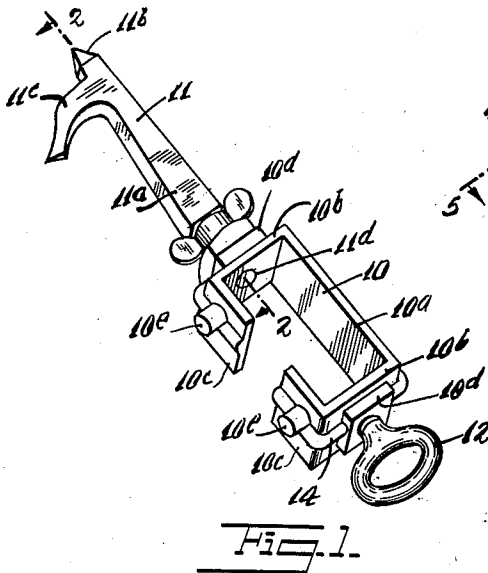
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ADJUSTABLE NONSLIP LADDER PROTECTOR

Filed July 31, 1936



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ADJUSTABLE NONSLIP LADDER
PROTECTOR

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4 Claims. (Cl. 228—61)

This invention relates to new and useful improvements in an adjustable non-slip ladder protector.

The invention has for an object the construction of a device as mentioned which is adapted to encircle the side bar of a ladder and which includes a band member having an outer side portion continuing into end portions, continuing into fragmentary side portions sufficiently spaced to permit passage of the rungs of the ladder.

Still further the invention contemplates the provision of a gripping element fixed on the outer side of one of said end portions and adapted to be associated with the side of a house or other element for holding the ladder against slipping.

Still further the invention contemplates the provision of a clamp screw engaging through the other of said end portions for clamping the band member upon the side bar of the ladder.

Still further the invention also proposes the provision of a means for preventing the disengagement of the gripping element when the ladder protector is fixed on a ladder.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawing, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawing forming a material part of this disclosure:

Fig. 1 is a perspective view of an adjustable non-slip ladder protector constructed according to this invention.

Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1.

Fig. 3 is a perspective view of another adjustable non-slip ladder protector constructed according to this invention but illustrating another embodiment.

Fig. 4 is a sectional view taken on the line 4—4 of Fig. 3.

Fig. 5 is an end elevational view looking in the direction of the line 5—5 of Fig. 3.

Fig. 6 is a sectional view of the side bar of a ladder with a non-slip ladder protector constructed according to a modification of this invention, mounted thereon.

Fig. 7 is a sectional view taken on the line 7—7 of Fig. 6 but illustrating the ladder protector per se.

Fig. 8 is a fragmentary perspective view of the

device constructed according to another form of the invention.

The adjustable non-slip ladder protector, according to this invention, comprises a band member 10 adapted to encircle the side bar of a ladder and having an outer side portion 10^a continuing into end portions 10^b, continuing into fragmentary side portions 10^c sufficiently spaced to permit passage of the rungs of a ladder. A gripping element 11 is fixed on the outer side of one of the end portions 10^b. A clamp screw 12 engages through the other of said end portions 10^b.

In the form of the invention illustrated in Figs. 1 and 2 the gripping element 11 comprises a shank portion 11^a continuing at its outer end into a gripping point 11^b and at the side being formed with a gripping hook 11^c. At the end the shank portion 11^a is formed with a threaded portion 11^d which threadedly engages through a boss 10^d formed on the end portion 10^b. Nut 13 threadedly engages on a portion of the threaded portion 11^b and is adapted to be screwed tightly against the outer face of the boss for holding the gripping element fixedly in position.

The bar member 10 is reinforced by a rib portion 14 arranged around the outside thereof. The side portions 10^c are provided with bosses 10^e which may be bored and tapped to receive holding screws for supporting a pail of water or other cleaning necessities.

The side of the band member which is provided with the clamp screw 12, also has a boss portion 10^d. It is through this boss portion that a threaded end 12^a of the clamp screw engages. This threaded end extends completely through the side of the band member and is adapted to engage against the side bar of the ladder.

In Figs. 3-5 inclusive another embodiment of the invention has been disclosed which distinguishes from the prior form merely in the gripping element 21. This gripping element is in the form of a suction cup. The inner end is provided with a stud 22 which threadedly engages into the boss 10^d formed on the end portion of the band member.

In Figs. 6 and 7 another modified form of the invention has been disclosed in which an arrangement is provided for holding and locking the gripping element when the protector is in use upon the ladder. According to this form the gripping element 21 is formed with a threaded stem 22' having a slot 23 upon its end. A leaf spring 24 is attached on one side of the band member and has a resiliently extending portion 55

24^a provided with a head element 25 having a tongue portion 26 engageable into the slot 23. The ladder protector is shown upon the side bar 30 of a ladder having rungs 31. Note that the 5 rungs pass in the space between the side portions 10^c.

When the clamp screw 12 is turned hard against the side bar 30 of the ladder it will force the leaf spring 24^a into a position in which the 10 head 25 has its tongue portion 26 engaging the slot 23. Thus, the ladder protector will be firmly gripped against sliding, and furthermore, the gripping element 21 cannot rotate and therefore the screw threads of the threaded portions thereof, cannot disengage from the band. 15

The operation of the device is as follows:

The band member is engaged on the side bar of a ladder. The clamp screw is turned down so as to fix the band member on the ladder. The 20 gripping element is then adapted to engage against the side of a wall or hook, window sill, or other device.

In Fig. 8 another modified form of the invention has been disclosed, in which the engaging end 11' of the gripping hook is of rectangular cross-section and is adapted to fit into a corresponding socket 32 formed integral with band member 10'. Set screw 33 may be screwed in one of a plurality of threaded holes 34 to engage the 30 gripping hook 11' and permit to lock the latter in any extended position. This arrangement will also prevent the turning of the gripping hook. A screw 35 is threadedly secured in band member, 10', and is formed with an eye 36, to permit various articles to be supported thereon. 35

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims. 40

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:— 45

1. An adjustable non-slip protector comprising a band member adapted to encircle the side bar of a ladder and having an outer side portion continuing into end portions continuing into fragmentary side portions sufficiently spaced to permit passage of the rungs of said ladder, a gripping element fixed on the outer side of one of said end portions, and a clamp screw engaging through the other of said end portions, said gripping element being provided with a threaded stud threadedly engaging through said end portion, the inner end of said stud being formed with a slot, 50

a leaf spring mounted on said band member and supporting a head element engageable with said slot to hold said stud from turning.

2. An adjustable non-slip protector comprising a band member adapted to encircle the side bar of a ladder and having an outer side portion continuing into end portions continuing into fragmentary side portions sufficiently spaced to permit passage of the rungs of said ladder, a gripping element fixed on the outer side of one of said end portions, and a clamp screw engaging through the other of said end portions, said gripping element being provided with a threaded stud threadedly engaging through said end portion, the inner end of said stud being formed with a slot, 15 a leaf spring mounted on said band member and supporting a head element engageable with said slot to hold said stud from turning, said leaf spring being adapted to extend along the sides of the side bar of said ladder. 20

3. An adjustable non-slip protector, comprising a band member adapted to encircle the side bar of a ladder and having an open side so that said band member may be moved past the rungs in said ladder, a gripper element having a threaded stud portion engaged through one end of said band member, a clamp screw threadedly engaged through the other end of said band member to engage the side bar of said ladder to hold the protector in position, and means adapted to engage the end of said stud portion to lock said gripper element against accidentally disengaging from said band member. 25 30

4. An adjustable non-slip protector, comprising a band member adapted to encircle the side bar of a ladder and having an open side so that said band member may be moved past the rungs in said ladder, a gripper element having a threaded stud portion engaged through one end of said band member, a clamp screw threadedly engaged through the other end of said band member to engage the side bar of said ladder to hold the protector in position, and means adapted to engage the end of said stud portion to lock said gripper element against accidentally disengaging from said band member, comprising a leaf spring fixedly mounted in said band member to be between said band member and the side bar of said ladder and having a free end, and a head element on the free end of said leaf spring adapted 50 to engage a slot in said stud element so that said clamp screw may be tightened to force the side bar of said ladder against the leaf spring thereby forcing said head element to engage said slot to lock said gripper element against accidental disengagement. 55

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