J. STEPHAN.

SAFETY DEVICE FOR LADDERS.

APPLICATION FILED MAY 17, 1920.

1,352,323.

Patented Sept. 7, 1920.

2 SHEETS—SHEET 1.

Fig. 1.

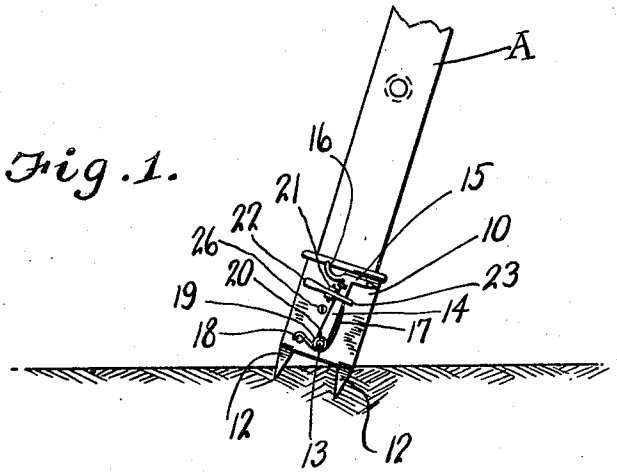


Fig. 2.

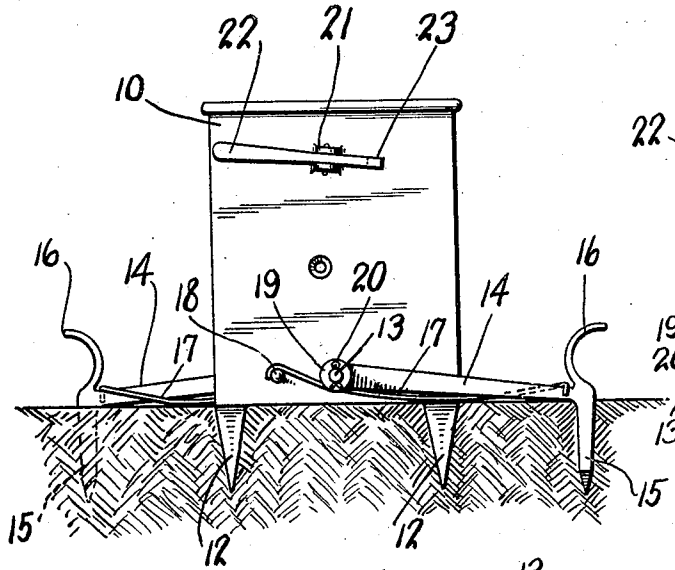


Fig. 4.

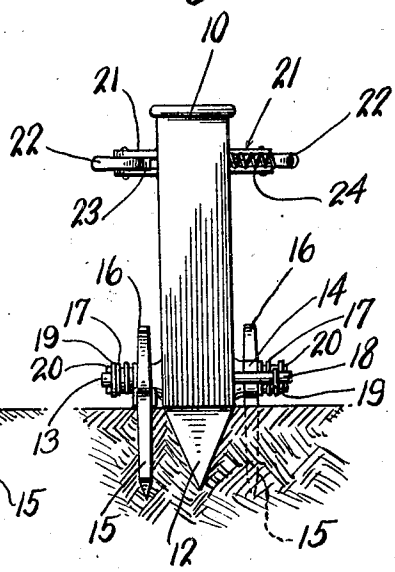
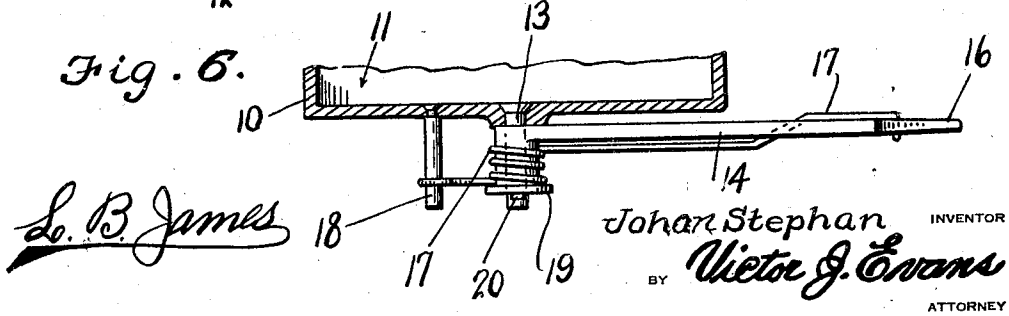


Fig. 6.



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2 SHEETS—SHEET 2.

Fig. 3.

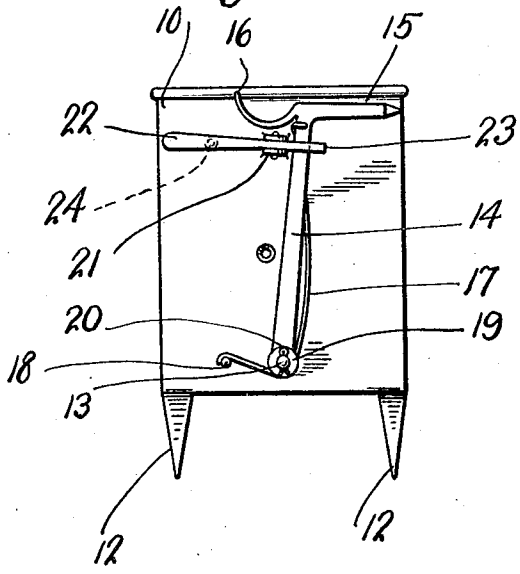


Fig. 7

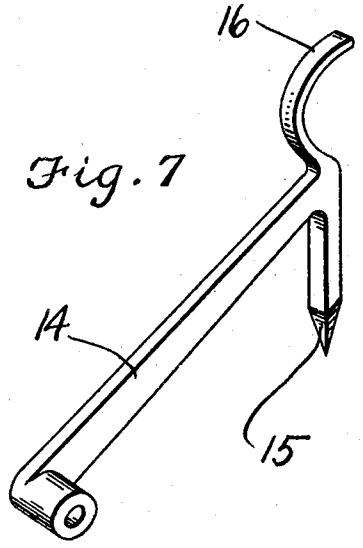


Fig. 5.

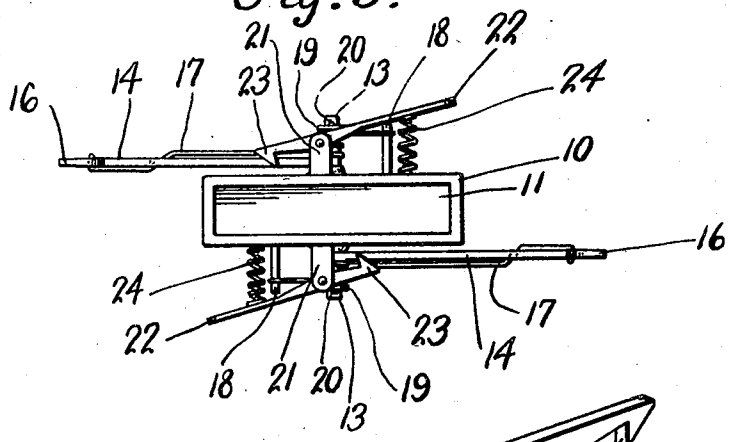
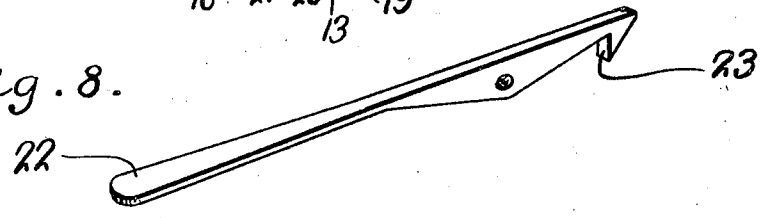


Fig. 8.



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JOHAN STEPHAN, OF CLIFTON, NEW JERSEY.

SAFETY DEVICE FOR LADDERS.

1,352,323. Specification of Letters Patent. Patented Sept. 7, 1920.

Application filed May 17, 1920. Serial No. 381,986.

To all whom it may concern:

Be it known that I, JOHAN STEPHAN, a citizen of Hungary, residing at Clifton, in the county of Passaic and State of New Jersey, have invented new and useful Improvements in Safety Devices for Ladders, of which the following is a specification.

This invention relates to attachments for ladders and has for its object the provision of a device adapted for engagement upon the lower ends of the sides of a ladder and having spring-pressed prongs adapted to engage the surface upon which the ladder is supported whereby to prevent any slipping of the ladder.

An important object is the provision of a device of this character which is formed as a separate entity which may be manufactured complete in itself and subsequently engaged upon any ordinary existing ladder.

Another object is the provision of a device of this character in which means is provided for holding the prongs in retracted position when desired.

An additional object is the provision of a device of this character which will be simple and inexpensive to manufacture, easy to apply and operate, highly efficient and durable, and a general improvement in the art.

With the above and other objects and advantages in view, the invention consists in the details of construction to be hereinafter more fully described and claimed, and illustrated in the accompanying drawings in which—

Figure 1 is a fragmentary side elevation of a ladder showing my device in position thereon, with the prongs in upright position,

Fig. 2 is a side elevation of the device detached, on a larger scale and showing the prongs in operative position,

Fig. 3 is a similar view with the prongs in retracted position,

Fig. 4 is an edge elevation,

Fig. 5 is a plan view, and

Fig. 6 is a fragmentary cross sectional view,

Fig. 7 is a perspective view of one of the arms, and

Fig. 8 is a perspective view of the catch lever.

Referring more particularly to the drawings, letter A designates the sides of a ladder. In carrying out my invention I provide a body 10 formed preferably as a casting or from sheet metal stamped to shape and this body is of elongated rectangular formation and has a socket 11 adapted to receive the side of the ladder. Formed integrally upon the lower edges of the body 10 are spurs 12 which are adapted to penetrate the ground or other surface upon which the ladder stands.

Formed or secured upon the lower end of the body 10 at opposite sides thereof, are stubs 13 upon each of which is rotatably mounted a sleeve portion formed on an arm 14 which has its free end formed with a lateral prong 15 and also formed with a curved portion 16 constituting a handle. Surrounding each sleeve member is a coil spring 17 which has one end engaging the arm 14 adjacent the free end thereof and which has its other end coiled about a post 18 extending from the side of the body. The tension of the spring 17 normally urges the arm 14 into such position that the prong 15 thereof will engage the ground or other surface upon which the ladder stands. The spring 17 is retained in position upon the sleeve member by a washer 19 which is held in place by a cotter pin 20 extending through the stub. The arms 14 at the opposite sides of the body are arranged in reverse position with respect to each other whereby one arm will tend to swing downwardly at one edge of the body and the other arm will tend to swing downwardly at the opposite edge, as clearly shown.

In order that the arms may be held in retracted or elevated position, I provide upon each side of the body spaced ears 21 between which is pivoted a lever 22 having one end formed with a retaining catch head 23 engageable with the arm 14 and having its other end engaged by a spring 24 interposed between the lever and the body. The spring 24 normally holds the lever 22 in such position that the catch 23 thereof will engage the arm 14. The catch end 23 of each lever is beveled, as shown at 25, so that when engaged by the arm 14 the lever will be moved against the resistance of the spring 24 to permit the arm 14 to engage the catch 23.

The use of the device is as follows:

When the body 10 is engaged upon the lower end of each side of a ladder and secured in position, as by means of screws 26, and if the use of the arms 14 and their prongs is not desired, the operator grasps the handles 16 and swings the arms 14 upwardly so that they will engage with the

catches 23. The parts will then be disposed as shown in Fig. 3. When the use of the arms is desired to prevent slipping of the ladder, it is merely necessary that the operator press upon the rear ends of the levers 22 to move the catches 23 out of engagement with the arms 14 whereupon the springs 17 will cause the arms 14 to swing forcibly downwardly with the prongs 15 engaging the ground or other surface upon which the ladder stands. As the arms 14 are oppositely arranged it will be apparent that they will prevent slipping of the ladder in either direction so that a ladder thus equipped will be very safe and secure in use.

While I have shown and described the preferred embodiment of my invention, it is of course to be understood that I reserve the right to make such changes in the form, construction, and arrangement of parts as will not depart from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I claim:

1. A safety attachment for ladders comprising a body engaged upon the lower end of each side of a ladder, spring-pressed arms pivoted upon the sides of the body and having prongs adapted to engage the surface upon which the ladder stands, and means for holding said arms in elevated position with said prongs out of engagement with said surface.

2. A safety attachment for ladders comprising a body engaged upon the lower end of each side of a ladder, spring-pressed arms pivoted upon the sides of the body and having prongs adapted to engage the surface upon which the ladder stands, and means for holding said arms in elevated position with said prongs out of engagement with said surface, said means comprising spring-pressed levers pivoted upon the sides of the body and having catches formed thereon for engagement with the arms.

3. A device of the character described comprising a body adapted for association with the lower end of each side of the ladder and formed with a socket for the reception of the ladder side, stubs projecting from opposite sides of the body at the lower portion thereof, arms pivoted upon said stubs and arranged in reverse relation with respect to each other, a substantially right angularly extending prong on the free end of each arm, a handle member on the free end of each arm, a sleeve portion on each arm revolubly engaged upon the stub, a spring encircling each sleeve portion and having one end rigid with respect to the body and the other end connected with the associated arm, said springs normally urging said arms downwardly with said prongs engaging the surface upon which the ladder stands, and releasable catch members for holding said arms in elevated position with said prongs out of engagement with said surface.

JOHAN STEPHAN.

Witness:
SANDOR WEISS.