Jan. 7, 1941. L. ZANGER 2,228,042

SAFETY DEVICE FOR SCAFFOLDS

Filed Feb. 2, 1939

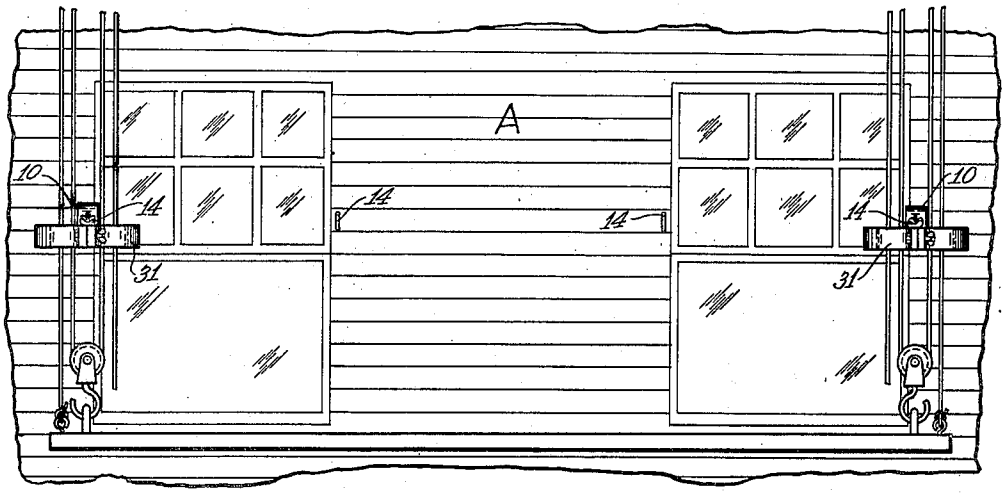


Fig. 1

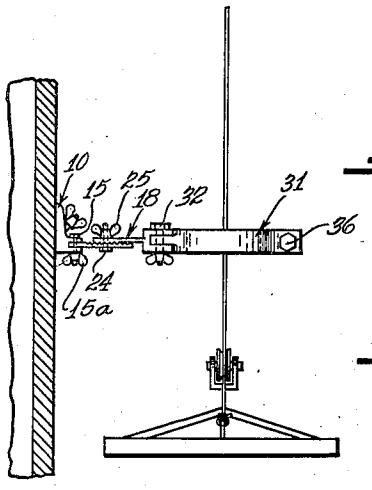


Fig. 2

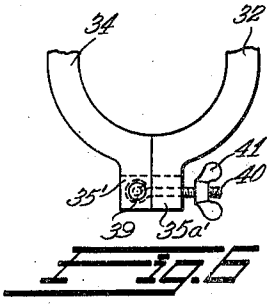


Fig. 3

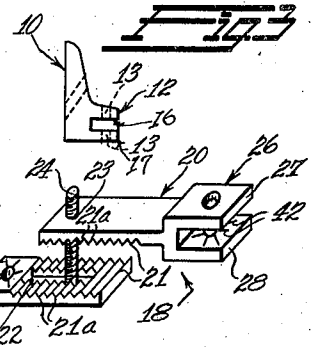


Fig. 4

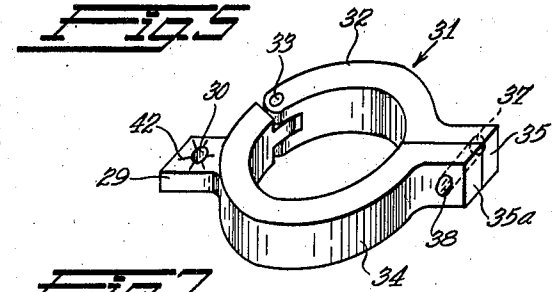


Fig. 5

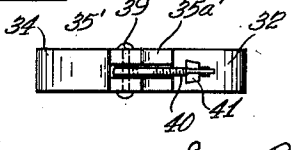


Fig. 6

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SAFETY DEVICE FOR SCAFFOLDS

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Application February 2, 1939, Serial No. 254,281

5 Claims. (Cl. 304—32)

This invention relates to an improvement in safety devices for rope suspended scaffolds and has for its main object the protection of property and life by securing the scaffold and ropes for same to the side of the building adjacent which the scaffold is hung and thereby eliminate pendulum action caused during storms, high air velocity or any other disturbing forces likely to cause movement thereof.

A further object is to improve the construction of scaffold rope holders and thereby adapt them for attachment to a building by means of bolts used by window cleaners for their safety belts.

Another object of my invention is the provision of means to extend and lock the rope holder in any adjusted position in accordance with the contour of the building wall, the width of the scaffold and the distance of the ropes from the wall.

The most inexpensive and easiest scaffold to install on the side of a building is the rope suspended type, but because of the tendency of this type of scaffold to swing when disturbed by wind or other causes, it has been too dangerous for use on the higher buildings. As a result it is generally necessary to hire scaffold building concerns to erect an elaborate scaffold structure at considerable expense.

The present device eliminates these difficulties and is adapted to be quickly attached to the building wall and secured around each rope near the scaffold and thereby secure it from dangerous movement.

Other objects and advantages of my invention will be apparent from the following detailed description together with the accompanying drawing, in which;

Figure 1 is an illustration of the side of a building with a rope suspended scaffold adjacent thereto showing a front end elevational view of my invention as it appears in use.

Figure 2 illustrates a section of a building wall showing a side elevational view of my invention applied around the scaffold ropes.

Figure 3 is an elevational view of the L-shaped base portion of the device which is secured directly to the building wall.

Figure 4 is a perspective view of the extensible locking section of my device which is positioned intermediate the base portion shown in Figure 3 and the rope holding portion disclosed in Figure 5.

Figure 5 is a perspective view of the rope enclosing member to which an end of the extensible section shown in Figure 4 is attached.

Figure 6 is a top plan view in elevation partly broken away illustrating a modification of the rope enclosing member and showing a preferred form for securing the pivoted section of the rope holder against displacement from around the scaffold rope.

Figure 7 is a front elevational view of the modification shown in Figure 6.

Referring to the drawing numeral 10 designates a substantially L-shaped base member or bracket adapted to be secured to the side of a wall by bolts 14 projecting from the building wall A as illustrated in Fig. 1.

The bracket 10 is diagonally bored from near the center of the vertically extending leg of the said L bracket, whereby to cooperate with the angle at which the usual window cleaners' bolts extend from a building and said L bracket is vertically bored through the horizontally extending leg 12 at 13 for the reception of a bolt 15 on which is threaded a wing nut 15*a*.

The leg 12 of the L bracket 10 is also slotted horizontally from the outer end to approximately one-half its length to form opposed parallel arms 16 and 17, for the reception of a locking adjustable flat arm 18 having a bolt opening therein at one end for alignment with the divided bore 13 extending through each arm 16 and 17 for the reception of bolt 15 with the wing nut 15*a* to lock them together.

The adjustable arm 18 consists of two overlapping flat bars 19 and 20 provided with transverse teeth 21 and complementary grooves 21*a* on their opposed surfaces. The bar 19 is longitudinally slotted for adjustment intermediate each end thereof as indicated by numeral 22 and bar 20 is threadedly bored adjacent one end at 23 for alignment with said slot.

A bolt 24 loosely extends upwardly through the slot at 22 in bar 19 and is threaded into bar 20 at 23 sufficiently to receive a wing nut 25 having complementary threads with those of bolt 24, whereby upon moving the lower bar 19 relative to the upper bar 20, as required for proper adjustment in use, the nut 25 when threaded against the bar 20 forces the two bars together and locks them in adjusted position, with the teeth of bar 20 interlocking with the grooves in bar 19 or vice versa to maintain them in secured adjusted position should the nut 25 become loosened.

The bar 20 has a precast U-shaped head 26 at its free end with bolt receiving holes in each leg 27 and 28 thereof in vertical alignment and into which an ear or lug 29 carried by a rope enclosing ring 31 having a complementary bolt hole 30

is secured by threading a bolt **32** through the said aligned bolt receiving openings and locking the same therein by wing nut **32***a*.

The rope enclosing ring **31** has a pivoted segment **32** adapted to swing on a pivot **33** and a stationary segment **34** whereby the rope is readily engaged and disengaged from the rope holding ring. The segments **32** and **34** are each provided on the free end with a projecting lug or flange **35** and **35***a* respectively adapted to fit together when the ring **31** is closed and through which a bolt **36** is threaded and the segments locked together by wing nut **36***a*, holes having been bored through said flanges **35** and **35***a* in horizontal alignment, as indicated by numerals **37** and **38**, in Fig. 5.

Figures 6 and 7 are details of a modification of the flanges and bolt for securing the ring segments **32** and **34** together, and differ from the construction shown in the other figures only in that flanges **35'** and **35***a'* are slotted horizontally.

Flange **35'** has a pivot pin **39** extending through it transversely of the slot around which is loosely curled the end of a bolt **40** adapted to swing into the slot formed within flange **35***a'* and which is then locked in the slot by wing nut **41**.

In each instance where a bolt and wing nut connection is made between the elements, I provide corrugations **42** on the surfaces of the connecting parts to assure a tight friction joint, see Figs. 4 and 5.

In operation my device, when all the hereinbefore described parts are assembled, is used to secure the scaffold ropes by placing the L bracket **10** over the window cleaner bolt **14**, adjusting the arm **18** according to the width of the scaffold and the distance the ropes hang from the wall A and swinging the segment **32** with its protruding flange **35** of the rope holding ring **31** into abutment with the stationary segment flange **35'** and bolting the said flanges together to close the ring **31** around the ropes. A duplicate device is then similarly secured about the scaffold ropes at the opposite end of the platform and the scaffold is held from swinging.

The ring **31** may also be used as a hand hold by workmen on the scaffold.

Though the features of this invention have been described specifically and in detail, I wish it understood that various changes in construction may be resorted to within the scope of the appended claims.

What I claim is:

1. In a rope and scaffold securing device comprising a bracket adapted to be secured to the side of a building, an adjustable arm having an end housed and secured in said bracket, a U-shaped head on the other end of said arm, a rope holding segmental ring, a lug projecting from said ring housed within the said U-shaped head on the adjustable arm, and connecting means adapted to secure the said lug within the U-shaped head whereby the said ring is held in extended position for engagement with a scaffold rope depending opposite the side of a building to which said bracket is secured.

2. In a scaffold rope holding device comprising, an L-shaped wall bracket having a diagonal opening through the vertical leg and a vertical opening through the horizontal leg, a pair of parallel legs in vertical alignment with each other in said horizontal leg dividing the opening therethrough, an adjustable arm consisting of two overlapping interlocking bars, the first of said bars having an opening therethrough complementary with said opening in the horizontal leg of said bracket and an elongated slot intermediate each end thereof, the second bar having a bolt receiving opening therethrough at the end overlapping the first bar in alignment with said slot in the first bar, a U-shaped head on the other end of the second bar, interlocking teeth on the opposed surfaces of the respective bars, means projecting through the slot and opening in said bars adapted to interlock the toothed surfaces together and rope holding means secured to the U-shaped head.

3. The structure as described in claim 2, in which the rope holding means includes a ring with a pivoted segment and a relatively larger segment carrying said pivoted segment, complementary flanges on the free end of each segment, each flange having aligned openings therein when the ring is closed, and means to secure the flanges together.

4. In a safety device for rope suspended scaffolds comprising a wall bracket, an adjustable arm extending from the wall bracket and a scaffold rope holder having two segments, one segment being pivoted to the other, squared flanges on the free end of each segment, each flange having a slot therein in alignment with each other when together, a pivot pin transverse the slot in one flange, a bolt freely curled around said pin and a nut on said bolt adapted to secure the bolt in the aligned slot of the other flange when the ring is closed around a scaffold rope.

5. In a rope and scaffold securing device comprising a bracket adapted to be secured to the side of a building, an adjustable arm having an end secured to said bracket, a head on the other end of said arm, ribs on said head, a rope holding ring, a lug projecting from said ring, ribs on said lug complementary with said ribs on said head and connecting means adapted to secure and lock the said head and lug together by interengagement of said ribs in adjusted position whereby the rope holding ring is held in locked extended position for engagement with a scaffold rope.

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