Feb. 10, 1942. L. P. WINSLOW 2,272,494

SAFETY DEVICE

Filed March 1, 1941 2 Sheets-Sheet 1

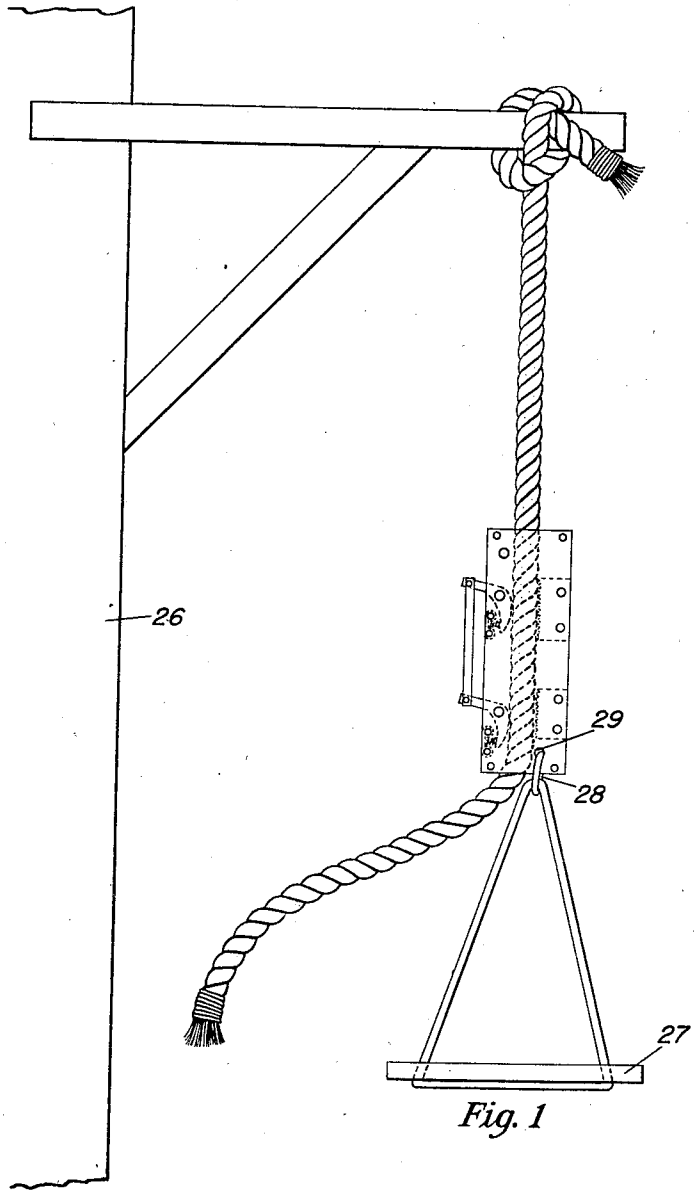



*Fig. 1*

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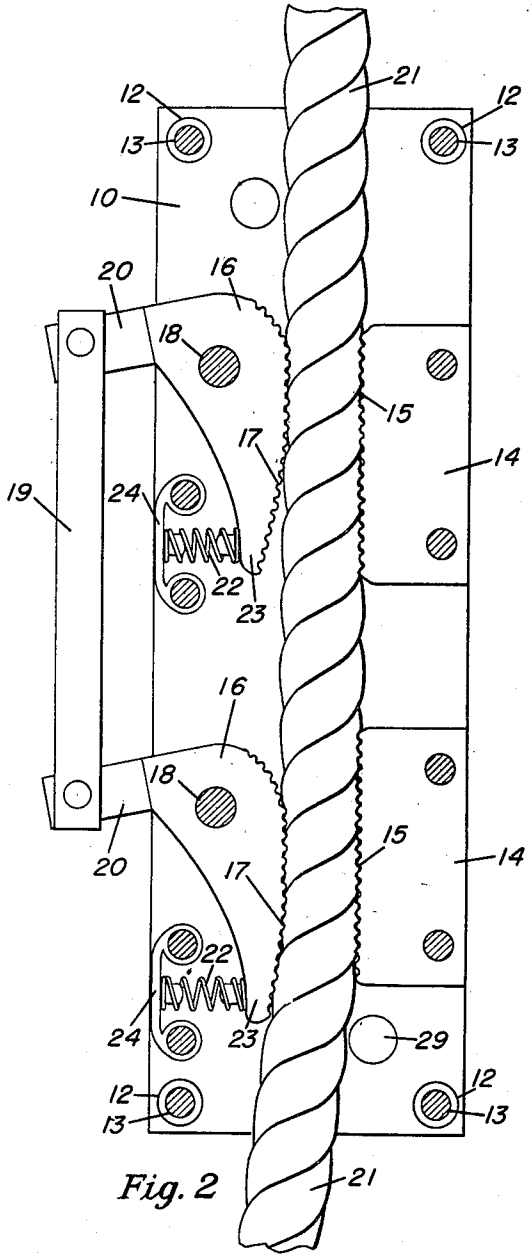



Fig. 2

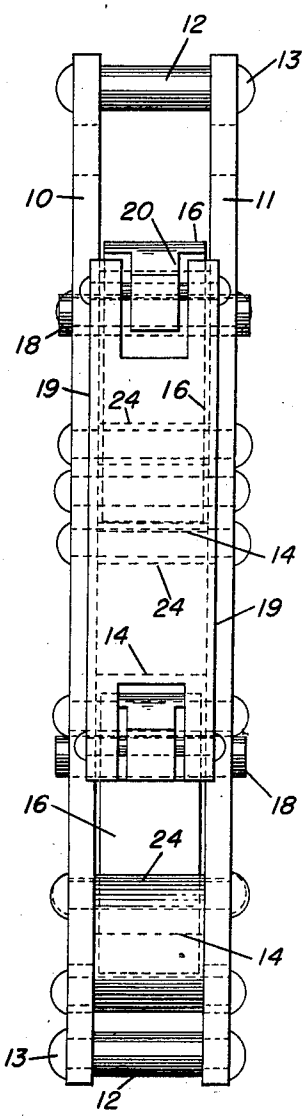



Fig. 3

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Patented Feb. 10, 1942 2,272,494

# UNITED STATES PATENT OFFICE

2,272,494

## SAFETY DEVICE

Lawrence P. Winslow, Berkeley, Calif.; dedicated to the free use of the People in the territory of the United States

Application March 1, 1941, Serial No. 381,276

1 Claim. (Cl. 24—132)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

This application is made under the act of March 3, 1883, as amended by the act of April 30, 1928, and the invention herein described and claimed, if patented, may be manufactured and used by or for the Government of the United States of America for governmental purposes without the payment to me of any royalty thereon.

I hereby dedicate the invention herein described to the free use of the People in the territory of the United States to take effect on the granting of a patent to me.

This invention relates to a mechanical safety device for use in connection with a supporting rope or other cable, and the general object is the provision of such a device which can be attached to a carrier, such as an elevator carriage or platform or to the harness or belt of a person suspended from a vertical cable, such as a rope, such that the device normally clamps the cable and holds the carrier at a fixed position along the cable, means being provided for unclamping the cable when it is desired to change position, reclamping of the cable being accomplished automatically so that should the operator lose control from any cause whatsoever during the change of position, such as from accidental causes or illness, the device instantly checks the fall of the carrier along the cable to prevent injury.

This invention is particularly useful to persons engaged in such occupations as window cleaning, house painting, building construction, mountain climbing, repairing of overhead telephone lines and the like.

Further objects and advantages of this invention will be apparent from the following description and the accompanying drawings, in which drawings:

Figure 1 is a view showing an embodiment of my invention attached to an elevator carriage suspended from a rope on the side of the building;

Figure 2 is a front elevational view of the device detached from the carriage, partly in section; and

Figure 3 is a side elevational view.

Referring with more particularity to the drawings, in which like numerals designate like parts, the embodiment illustrated comprises a pair of plates 10 and 11 held in spaced relation by means of tubular spacers 12 and rivets 13. Between the plates 10 and 11 there is secured on one side abutment blocks 14, 14 of any suitable number, preferably two, as illustrated. The inner sides 15 of the abutment blocks are corrugated to provide a gripping surface. Opposite each abutment block there is pivotally mounted on a shaft 18 a rocker dog 16 having a corrugated or gripping surface 17 in the general shape of a spiral facing its corresponding abutment block 14, so as to vary the distance between its corrugated surface 17 and the surface 15 of its corresponding abutment block. To provide simultaneous action of the dogs 16 when more than one is employed, a bar 19 is pivotally connected to arms 20 of the dogs, which arms extend beyond plates 10 and 11, substantially as illustrated. In operation a cable 21 is threaded between the plates 10 and 11 and between the abutments 14 and the dogs 16. To hold the dogs 16 in operative position against the cable 21, a spring 22 is compressibly mounted between the toe 23 of each dog and a suitable abutment 24 fixed to the plates 10 and 11, substantially as illustrated. With the dogs 16 contacting the surface of the cable 21, an upward pull on the rope would tend to cause the dogs 16 to turn so as to grip tighter the cable between the surface 17 and the abutment block 14. Consequently, when the cable is used for supporting an elevator carrier, such as the carriage 27, as illustrated in Figure 1, the upper end of the cable is fixed to the building 26 while the carriage 27 is attached to the plates 10 and 11 by any suitable means, such as clevises 28 disposed through suitable apertures 29 through the plates 10 and 11. When the operator desires to change to a lower position, the dogs 16 are turned against the action of the springs 22 by pressing on the bar 19, thereby releasing the grip on the cable 21, whence the position of the carriage can be changed along the cable. If, for any reason, during such a change of position, the operator should lose control, release of the bar 19 would automatically cause the springs 22 to reset the dogs 16 against the cable 21 and the movement of the carriage would be arrested. When it is desired to change to a higher elevation, it is not necessary for the operator to operate the bar 19, since movement of the device upward on the cable would automatically cause the dogs to turn about their pivots and release the grip on the cable.

Having thus described my invention, I claim:

A device of the character described comprising a pair of plates secured together in spaced relation, fixed abutments between said plates, spiral-like abutments, one for each fixed abutment, pivoted between said plates facing said fixed abutments so that movement of said spiral-like abutments about their pivots causes the distance between them and their corresponding fixed abutments to change, said spiral-like abutments having lever arms, a bar pivoted to said arms so as to constrain said pivoted abutments to operate simultaneously, and means between said plates, including a spring, for urging said spiral-like abutments to turn about their pivots in the direction opposite to the direction of evolution of their spirals.

LAWRENCE P. WINSLOW.