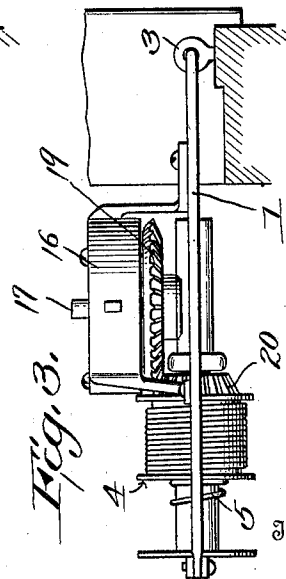
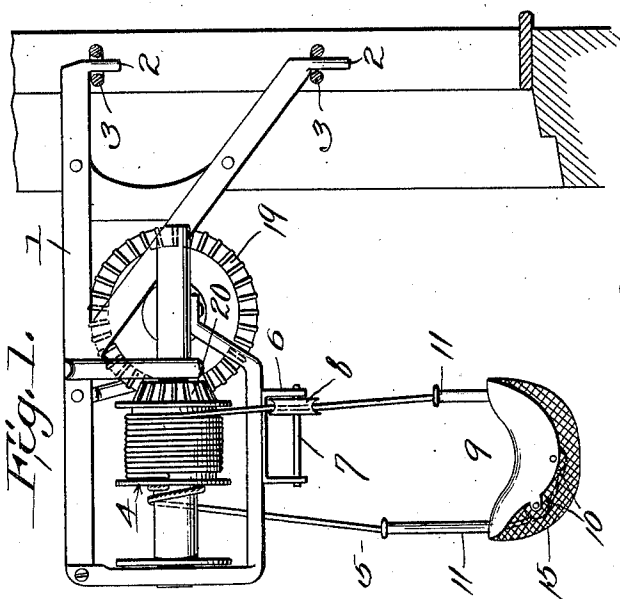
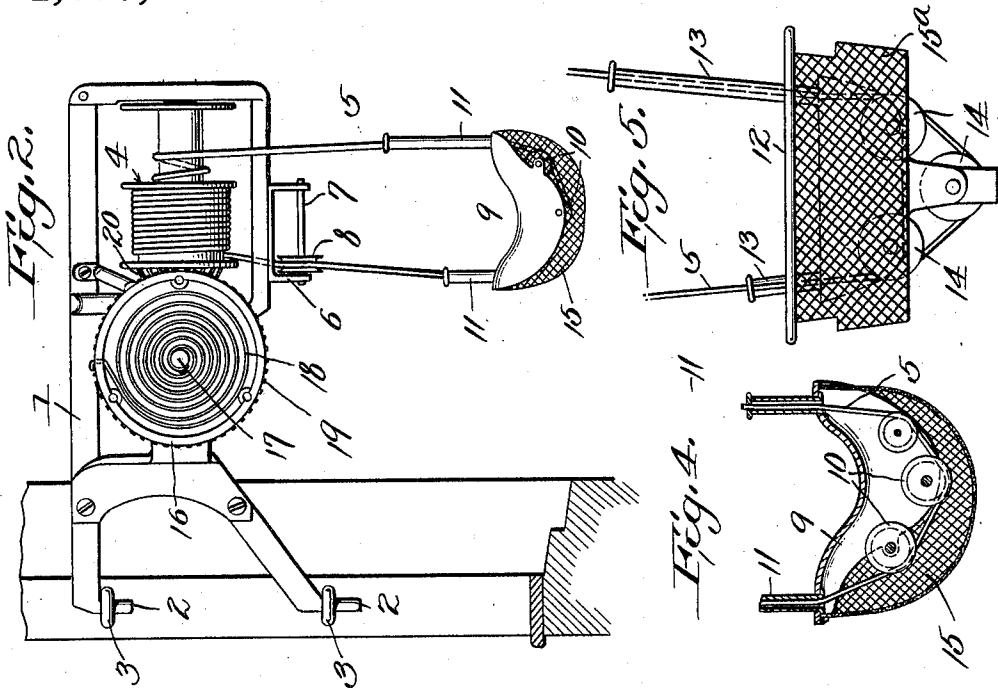


R. LANG & W. E. JAMES.
FIRE ESCAPE.
APPLICATION FILED AUG. 10, 1911.

1,037,026.

Patented Aug. 27, 1912.



Witnesses

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ROBERT LANG AND WILLIAM E. JAMES, OF ST. LOUIS, MISSOURI.

FIRE-ESCAPE.

1,037,026.

Specification of Letters Patent.

Patented Aug. 27, 1912.

Application filed August 10, 1911. Serial No. 643,385.

To all whom it may concern:

Be it known that we, ROBERT LANG and WILLIAM E. JAMES, citizens of the United States, residing in the city of St. Louis and State of Missouri, have invented a new and useful Improvement in Fire-Escapes, of which the following is a specification.

This invention relates to fire escapes and the object of the invention is to provide a device of this kind which can be quickly attached or detached to any form of window.

A further object of the invention is to provide a device of this kind which can be safely lowered by the party using the same and which will be automatically returned into position to receive a second load.

A still further object of the invention is to provide a device of this kind in which there will be no danger of the cable becoming tangled or twisted thus preventing successful use of the apparatus.

The invention consists of the novel features of construction hereinafter described, pointed out in the claims, and shown in the accompanying drawing, in which:

Figure 1 is a side elevation parts being in section. Fig. 2 is a side view, showing the device from the side opposite that shown in Fig. 1, the cover plate of a spring casing being removed. Fig. 3 is a plan view. Fig. 4 is a detail vertical section through a saddle. Fig. 5 is a detail side elevation of a form of basket.

In these drawings 1 represents a suitable metal frame provided at its inner end with downwardly extending pins 2 which are adapted to be detachably secured in eye-bolts 3 which are secured in vertical alinement in the window casing. Supported within this frame is a deep flanged double drum 4, the half of the drum nearest the window being of greater diameter than the outer half. To the respective portions of this double drum are secured opposite ends of a cable 5, and below the larger drum is secured a smaller bracket 6 which is provided with a horizontal shaft 7 upon which is slidably mounted a pulley 8 over which the cable runs as it leaves the larger drum.

For the support of the persons using the apparatus we preferably employ a saddle 9 beneath which is secured suitable pulleys 10, and the cable 5 is fed through the top of the saddle and to and from said pulleys by means of vertically arranged tubes 11. The

saddle can be replaced if desired by a basket device 12, likewise provided with guiding tubes 13, and beneath the basket with pulleys 14. In both cases the pulleys are protected by suitable wire net work 15 and 15^a.

It will be obvious that the saddle 9 will exert substantially the same pull upon one portion of the cable as upon the other, and will remain stationary unless a positive pull is exerted upon one portion of the rope. It will furthermore be obvious that if the cable unwound and again wound upon drums of the same diameter the cable would simply run over the pulleys 10, and there would be no vertical movement of the saddle, as the drum upon which the cable was winding would take up exactly as much cable as each rotation of the drum caused to unwind. But if the person in the saddle pulls upon the rope so as to cause the same to unwind from the larger drum and wind upon the smaller the amount unwound with each rotation of the drum will exceed the amount taken up by the smaller drum and the saddle will descend. If the rope is pulled in the opposite direction the larger drum will take up more cable than is unwinding during each rotation of the drum and the saddle will ascend.

In order that the device may be returned automatically into elevated position we secure a suitable casing 16 to the frame 1 provided with a central shaft 17 and a spring 18 which is secured to said shaft and to the casing. The shaft 17 carries also a beveled gear 19 which meshes with a beveled gear 20 carried by the double drum 4. The spring is so mounted that when the cable is wound upon the larger drum the cable is unwound. As the saddle or basket descends the cable unwinds from the larger drum and winds upon the smaller drum and at the same time winds the spring. By the time the descent has been accomplished the spring has been wound to such an extent that when the saddle or basket is released from its load the unwinding of the spring will again elevate it to normal position and rewind the cable upon the larger drum.

What we claim is:—

1. In a device of the kind described, comprising a double drum of different diameters, a cable having its opposite ends secured to the respective sections of the drum, a load carrying device provided with guide tubes through which said cable passes, pul-

leys arranged beneath said carrying device over which the cable travels, a shaft arranged parallel to the drum and a pulley slidably mounted upon said shaft and guiding the cable as it unwinds.

2. In a fire escape a double drum having larger and smaller drum sections, a cable having its ends attached respectively to said sections, a fixed shaft arranged beneath and parallel to the larger drum section, a carrier supported by said cable, vertical guide tubes arranged upon the carrier for receiving the cable, and pulleys arranged beneath the carrier and between the said guide tubes, the cable running over said pulleys.

3. In a fire escape a double drum having sections of different diameters, a cable having its ends secured to said sections and normally wound upon the larger section, a spring operatively connected to said double drum and normally unwound, a carrier,

guide tubes mounted upon the carrier through which said cable passes, and guide pulleys beneath the carrier, the said spring being wound upon descent of the carrier and unwinding of the cable from the larger drum section, and returning said carrier automatically to normal position upon removal of the load.

4. In a device of the kind described a saddle, vertically arranged tubes arranged at opposite ends of the saddle and adapted to receive a cable, cable guiding pulleys arranged beneath and carried by the saddle, and a suitable net work inclosing said pulleys and that portion of the cable traveling between the guide tubes, as and for the purpose set forth.

ROBERT LANG.
WILLIAM E. JAMES.

Witnesses:

ALBERT B. LANG,
PHILLIP WURTZ.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."