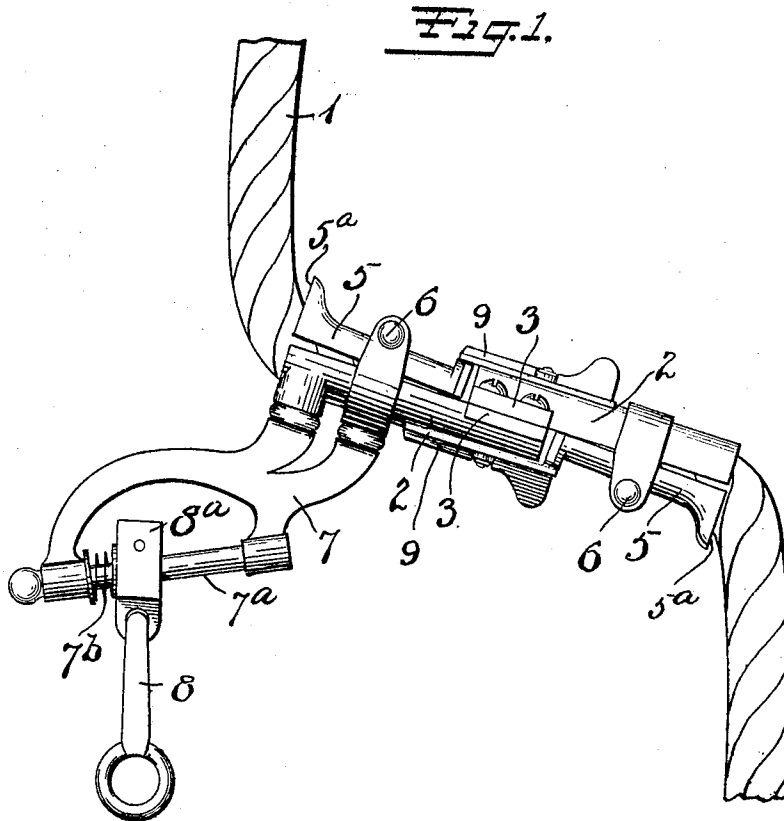


J. LUCKETT.
FIRE ESCAPE.
APPLICATION FILED NOV. 20, 1908.

926,430.

Patented June 29, 1909.

2 SHEETS—SHEET 1.



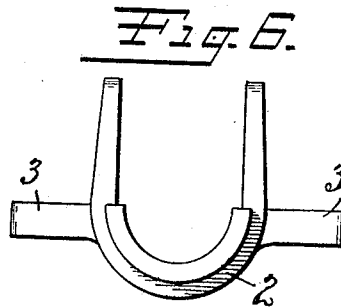
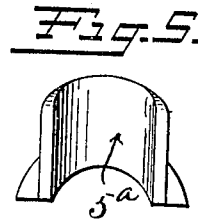
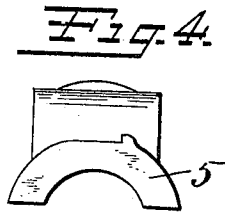
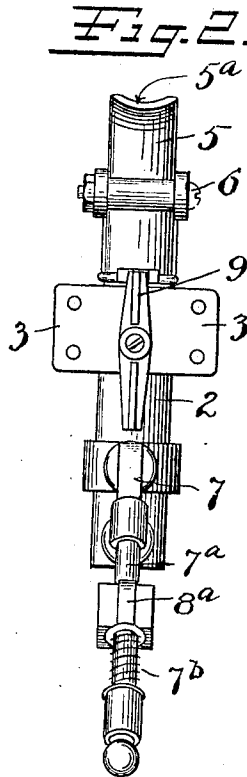
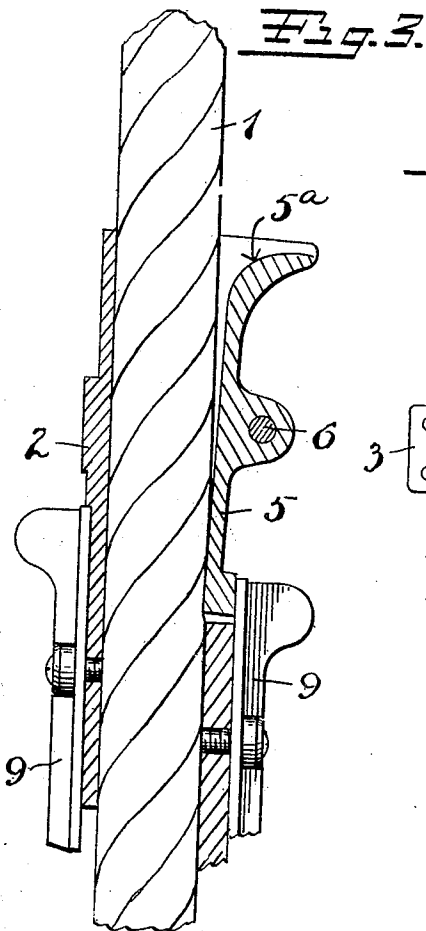
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

JAMES LUCKETT, OF BROOKLYN, NEW YORK.

FIRE-ESCAPE.

No. 926,430.

Specification of Letters Patent.

Patented June 29, 1909.

Application filed November 20, 1908. Serial No. 463,515.

To all whom it may concern:

Be it known that I, JAMES LUCKETT, a citizen of the United States, residing at Brooklyn, county of Kings, State of New York, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a full, clear, and exact description.

My invention relates to fire escapes, and the object is to provide a simple, inexpensive and portable construction whereby one may safely escape from a room by means of a rope, the fire escape proper being a traveling element adapted to slide down the rope at a safe speed so as to avoid injury to the user.

In the accompanying drawings, Figure 1 is a side elevation of my invention in the position in which it stands in actual use. Fig. 2 is a front elevation. Fig. 3 is a relatively enlarged central sectional view of one end of the apparatus. Figs. 4 and 5 are respectively rear and front end elevations of one of the details. Fig. 6 is an end elevation of another detail.

Broadly speaking, the mechanical part of my device comprises a traveling element or "traveler" as I term it, equipped with a friction holding means or clutch for engagement with a rope down which the apparatus travels as the user is making his escape. This device has a carrier arm to which a supporting sling is attached and by which the apparatus is turned into such position that the clutch operates to apply a proper braking effect upon the rope.

1 represents a rope. 2—2 companion body sections of similar contour and arranged to partially overlap so that said body portions may be firmly secured together as by flanges 3—3. These body portions are each grooved or channeled on their contiguous sides to afford a passage for the rope 1. Since a portion of this channel in each body member is open at each end, owing to the fact that said body members do not bear throughout their length upon one another, but merely overlap, I utilize this open space for toggles or clutch members 5—5. These clutch members may correspond in shape. Each clutch member is grooved so that when it is in place its grooved side will face up with the groove or channel in the adjacent body section 2. Each clutch member 5 is also pivoted at 6 to its adjacent frame section 2, said pivot being located intermediate the length of the clutch mem-

ber, whereby the inner end of each clutch will operate to frictionally press upon the rope as it travels through the apparatus. This can best be seen in Fig. 1. A rounded bearing 5^a is provided on each jaw member, over which the rope 1 may travel without danger of cutting, or without danger of becoming jammed.

7 is a bracket arranged at one end of the apparatus, and to which a sling (not shown) is attached, as by means of a snap hook 8. This bracket is connected to the upper end of the apparatus and is so arranged relatively thereto that when weight is applied it causes the apparatus to tilt up into the position shown in Fig. 1, so as to put a double bight in the rope 1.

In the preferred construction, the connection of the sling to the bracket 7 is through the medium of a pulley 8^a, slidable upon a rod 7^a, which latter forms a rearwardly and downwardly inclined track when the escape apparatus is in position for use.

7^b is a yielding spacer spring located to the rear of the pulley 8, the function of which will later be described.

9—9 are latches which may be provided if desired to hold the clutches 5—5 in position where a light friction is applied to that part of the rope which passes through the apparatus to hold the traveling element in place when not in use. To insert, or pass, the rope through in the first instance, these latches are swung to one side (each being pivoted upon the body 2) whereupon the gripping end of the clutch is freed to such an extent that the end of the rope may be easily inserted. When this is done, the latches are swung into place, crowding the clutches down to apply the aforesaid light or initial friction.

The rope 1 is suitably anchored at its upper end to a place convenient to a window or other platform of escape. The "traveler", as I shall now term the apparatus, is placed upon the rope near the anchorage, the balance of the rope being coiled up. When a fire occurs and it becomes necessary to use the escape, the coil of rope is thrown out, the user slips his arms through the sling attached to the snap hook 8. He then lowers himself out of the window so as to let his weight come upon the bracket 7, making no effort to hold the rope. Instantly the "traveler" tilts up into the position shown in Fig. 1. The drag of the upper part of the rope upon

the uppermost of the two clutches 5—5 tends to tilt the same upon its pivot, throwing the inner clutch-end, against the rope within the traveler thus applying a more powerful braking influence than initially provided by the latches 9—9. The weight of the rope pendant from the "traveler" also pulls down on the outer end of the lowermost clutch so as to cause its inner end to apply its frictional resistance to the passage of the rope through the "traveler", or, to the passage of the "traveler" down the rope. In the case of a light person, the pulley 8 would stand upon the track 7^a, well to the right, as viewed in Fig. 1, thus not causing the traveler to tilt to quite the angle shown in said figure, hence applying a lesser frictional resistance to the passage of the "traveler" down the rope. On the other hand, the heavier person would cause the pulley 8^a to ride down the inclined track 7^a compressing the spring 7^b, so that the position of said pulley and the weight of the person making his escape would tilt the body of the "traveler" to a more abrupt angle, thus applying the necessary added clutch action to guarantee a safe descent.

As will be seen, when the "traveler" is in use, the angle at which it is turned by reason of the weight of the person making his escape forms the aforesaid bight in the rope, which is always at a point coincident with ends of the "traveler". As this bight is hardened, so to speak, the tension of the clutches is correspondingly increased for the purpose before described.

It should be understood that I have shown my invention only in one form, in which the body portion is built up of the two sections 2—2, but these, of course, might be made integral. Indeed, in various ways the apparatus might be modified so long as the essential features of the invention are not omitted. One advantage of making the body portion in two sections, as shown, is that by inserting adjustable shims between the two lugs 3—3, the same apparatus or traveler may be adapted to different ropes whereas if the frame is made integral, this would be impossible and the apparatus would be adapted to only approximately one size of rope.

What I claim is:

1. In a fire escape, a traveler element arranged to slide down a rope and including a body portion having a rope passage, means for suspending a weight from said body portion to cause the latter to tilt out of the vertical position to put a bight in a rope to produce a frictional drag thereon, with means to increase the frictional drag relatively to an increase in the weight suspended by said traveling element.

2. In a fire escape, a traveling element arranged to slide upon a rope, and including a body portion having a rope passage, a tilting clutch member carried thereby arranged to

frictionally bear down at one end upon said rope as it passes through said body and being provided at its other end with an end bearing around which said rope travels, and means for suspending a weight secured to and projecting from said body member at its upper end whereby when a weight is applied thereto said traveling element will be tilted bodily at an angle to form a bight in the rope adjacent the end bearing of said clutch.

3. In a fire escape, a rope, a traveler surrounding the same and arranged to slide thereon and including a body portion, a tilting clutch member at the upper end of said body portion, one part of the clutch being arranged to bear upon that portion of the rope within the body of the traveler, another part of the same being arranged to form a bight in said rope where it leaves said traveler when the latter is tilted, and means for tilting said traveler in use comprising an offset bracket carried by the traveler body, with means for securing a weight thereto.

4. In a fire escape, a rope, a traveler surrounding the same and arranged to slide thereon and including a body portion having a clutch member at its upper end, one part of the same being arranged to bear upon that portion of the rope within the traveler, another part of the same being arranged to form a bight in the rope where it leaves said traveler and when said traveler is tilted, and means for tilting said traveler in use out of a vertical position comprising a bracket projecting laterally beyond the upper end of said traveler, with means for securing a weight thereto, said means being movable toward and away from the traveler to vary the leverage and to correspondingly vary the operative angle of said traveler on the rope while in use.

5. In a fire escape, a traveler comprising a body portion, a tilting clutch member at each end and on opposite sides thereof, a rope arranged to pass through said traveler and bear upon each of said clutch members when in use, means for carrying a weight, said means being secured to said body portion and projecting laterally beyond said upper end thereof whereby when a weight is applied thereto said traveler will be tilted bodily at an angle out of the vertical to form a double bight in the rope at points immediately adjacent the outer ends of each of said clutch members.

6. In a fire escape, a rope, a traveler arranged to slide thereon, said traveler comprising a body portion, a clutch member at one end thereof, said clutch member being pivoted intermediate its length, a bearing at the outer end of the clutch member around which the rope may draw when the traveler is descending, a clutch face at the inner end of said clutch for applying friction to a part of the rope within the traveler during the period of descent, and means for tilting said

traveler and clutch out of a vertical position when in use.

7. In a fire escape, a rope, a traveler arranged to slide thereon, said traveler comprising a body portion, a clutch member at one end thereof, said clutch member being pivoted intermediate its length, a bearing at the outer end of the clutch member around which the rope may draw when the traveler is descending, a clutch face at the inner end of said clutch for applying friction to that part of the rope within the traveler during the period of descent, and means for tilting said traveler out of a vertical position when in use, said means serving to carry the weight of the person using the said escape apparatus.

8. In a fire escape, a traveler element composed of two separable grooved sections with means for securing the same together and affording a passage for a rope, a hinged clutch member carried by the body portion around one end of which a bight in the rope passes, the opposite end being arranged to frictionally engage the rope, and means for suspending a weight from said traveler to tilt the same out of a vertical position to form a bight in said rope at the end of said clutch.

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