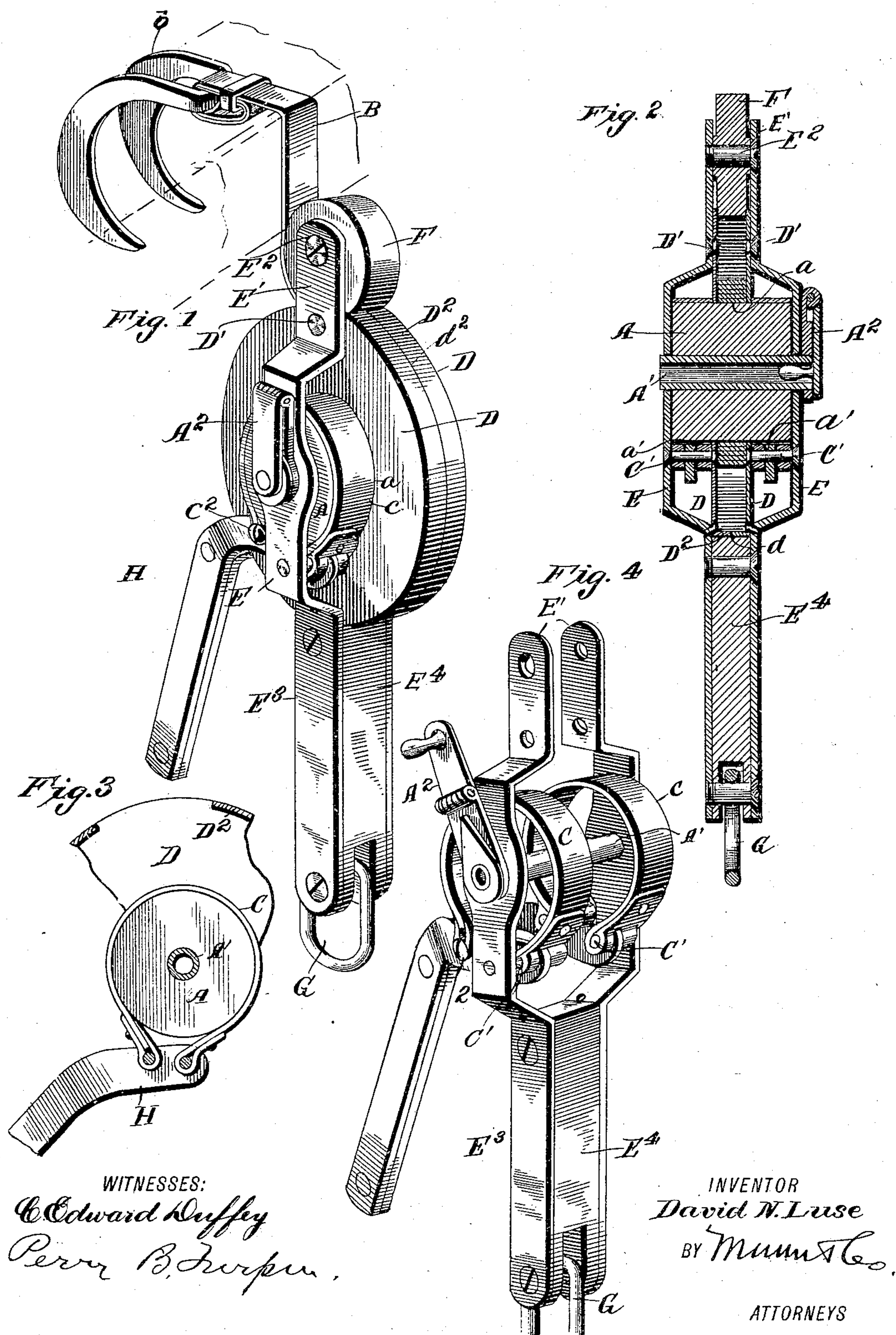


No. 791,921.

PATENTED JUNE 6, 1905.

D. N. LUSE.  
FIRE ESCAPE.

APPLICATION FILED JULY 21, 1904.





# UNITED STATES PATENT OFFICE.

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## FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 791,921, dated June 6, 1905.

Application filed July 21, 1904. Serial No. 217,490.

*To all whom it may concern:*

Be it known that I, DAVID N. LUSE, a citizen of the United States, residing at Carroll, in the county of Carroll and State of Iowa, have made certain new and useful Improvements in Fire-Escapes, of which the following is a specification.

My invention is an improvement in fire-escapes; and it consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of a fire-escape embodying my invention when applied for use. Fig. 2 is a vertical longitudinal section thereof. Fig. 3 is a partial vertical transverse section of the fire-escape; and Fig. 4 is a detail perspective view showing the hanger-frame, the shaft for carrying the drum, and the brake devices.

In the construction shown the drum A is adapted at its center, at *a*, to receive the tape or strap B and at its ends, at *a'*, to form brake-surfaces on which operate the brake-bands C. Over this drum fit the opposite sections D D of the casing, the drum A revolving within the openings *d* at the center of the sections D, as will be understood from Figs. 1 and 2, the casing-sections D dividing the intermediate portion *a* of the drum from the outer or end portions *a'*, on which operate the brake-bands C.

The casing-sections D are fixed at D' and at *d'* by rivets, as shown, or otherwise to the side bars E of the hanger-frame and are provided at their outer edges with inwardly-projecting flanges D<sup>2</sup>, which meet at an intermediate point *d'*<sup>2</sup> and inclose the tape B, as will be understood from Figs. 1 and 2 of the drawings. It will be noticed that the casing is thus held from revolving and that the drum A turns within the casing. This drum A has the central shaft A', which journals at its ends in bearings in the side bars E of the hanger-frame. These side bars E project at their upper ends, at E', above the casing and are provided at E<sup>2</sup> with bearings for the guide-pulley F, which guides the tape as the escape descends, as well as in rewinding the tape, which may be effected by means of the han-

dle A<sup>2</sup>, secured to the shaft A', as shown in Figs. 1 and 2. At their lower ends the side bars E extend at E<sup>3</sup> below the casing-sections, and a filling block or bar E<sup>4</sup> is secured between the lower extensions E<sup>3</sup> and combines therewith in forming a broad strong handle, which is grasped, together with the brake-lever, and the tension of brake regulated by the grip or grasp by the escaping person supported from the ring G by means of a loop or belt snapped into same and may also aid in operating the brake-handle H, which is shown in Figs. 1, 3, and 4. The brake-bands C are secured at one end, at C', to the hanger-frame and casing-plates and at their other ends, at C<sup>2</sup>, to the brake-lever H, the latter being pivoted to the hanger-frame and arranged when drawn toward the depending portions E<sup>3</sup> and E<sup>4</sup> to set the brake, as will be understood from the drawings.

The tape B passes through an opening formed in the rim-flanges D<sup>2</sup> of the casing-sections and is secured at one end to the drum and at its other end to a grapple or hook *b*, which may be engaged with the window-frame or otherwise suitably secured.

The construction is simple, economical, and will be found to efficiently serve the purpose for which it is designed.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The improvement in fire-escapes herein described, consisting of the drum having a central portion to receive the tape, and end portions to receive the brake-straps, the hanger-frame having its side bars provided with bearings for the drum and provided with upper extensions having bearings for the guide-pulley, the guide-pulley journaled to said extensions, and the side bars of the hanger-frame having depending portions and a filling-block secured between the same, the casing-sections secured to the side bars of the hanger-frame and fitting over the drum and provided at their outer edges with inwardly-projecting flanges inclosing the tape and drum, and the brake-straps and lever, substantially as set forth.

2. The combination in a fire-escape with the



side bars of the hanger-frame and the drum journaled to the said side bars, of the casing composed of opposite side sections fitting over the drum, and secured to the side bars of the hanger-frame and provided at their outer edges with inwardly - projecting flanges, substantially as set forth.

3. The combination of the side bars of a hanger - frame, the drum journaled to such bars, the casing composed of sections fitting over the drum and held to the side bars of the hanger-frame the ends of the drum protruding through and laterally beyond the casing, and the brake-straps operating on said lateral extensions of the drum, substantially as set forth.

4. The combination of the hanger - frame having side bars, the drum journaled to said side bars, the opposite casing-sections fitting over the drum and secured to the side bars of the hanger-frame, and the guide-pulley journaled to the side bars of the hanger-frame above the casing, substantially as set forth.

5. The combination of the drum and the casing, the hanger-frame having side bars provided with bearings for the drum, and projecting below the casing, the filling-block between the lower projections of the side bars, the brake-straps and the brake-lever, all substantially as and for the purposes set forth.

6. A fire-escape comprising a hanger-frame, a casing, a drum extending through the casing and projecting at its opposite ends laterally beyond the casing and made of approximately uniform diameter throughout whereby the end extensions are not relatively larger than the intermediate portion which receives the tape, the tape on said intermediate portion and the brake-straps applied to the lateral extensions of the drum, substantially as set forth.

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Witnesses:

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