No. 660,917. Patented Oct. 30, 1900.

J. O. MILLER & D. AGNEW.

FIRE ESCAPE.

(Application filed July 12, 1900.)

(No Model.)

Fig. 1

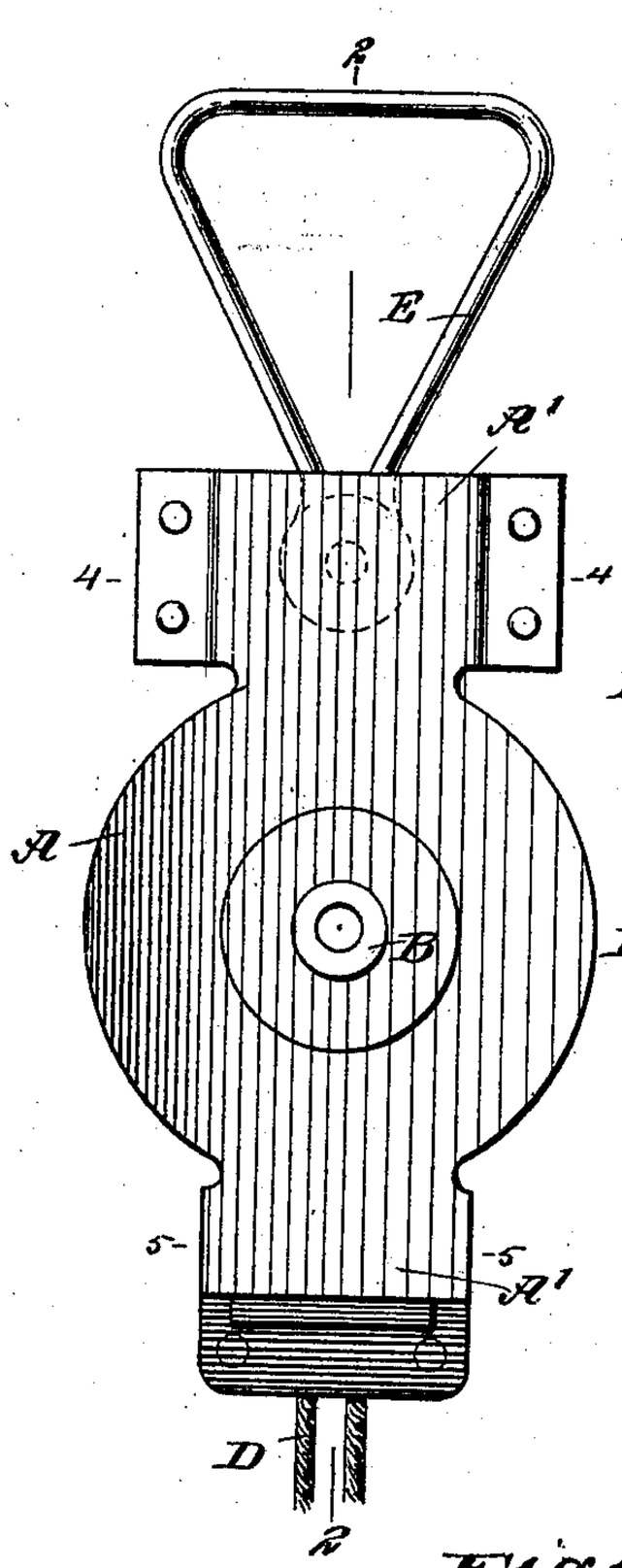


Fig. 2

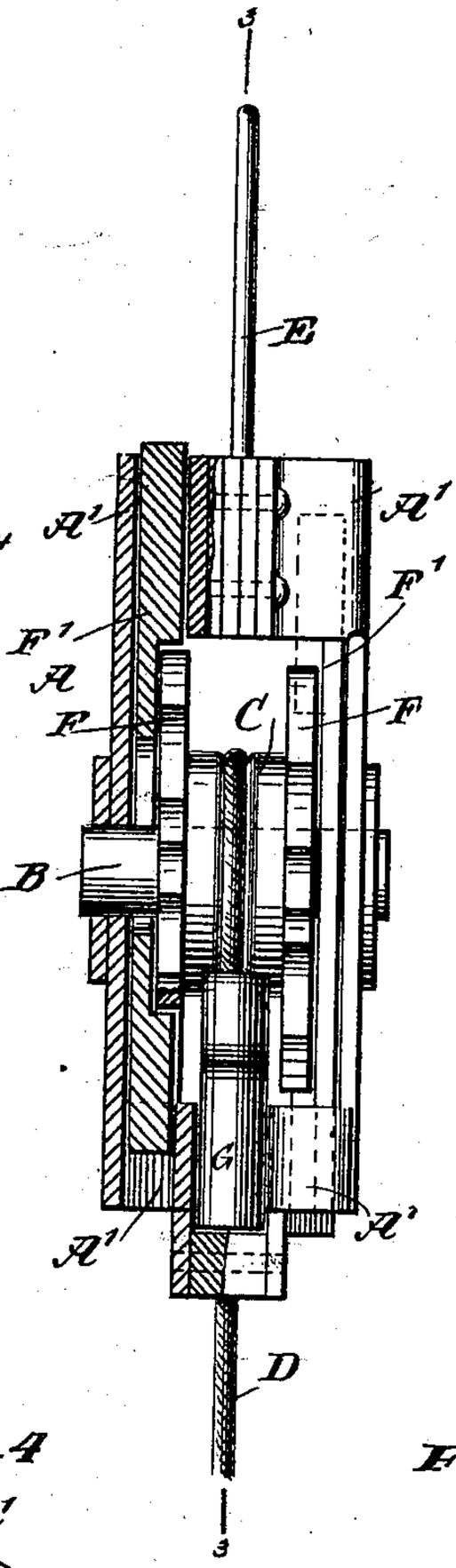


Fig. 3

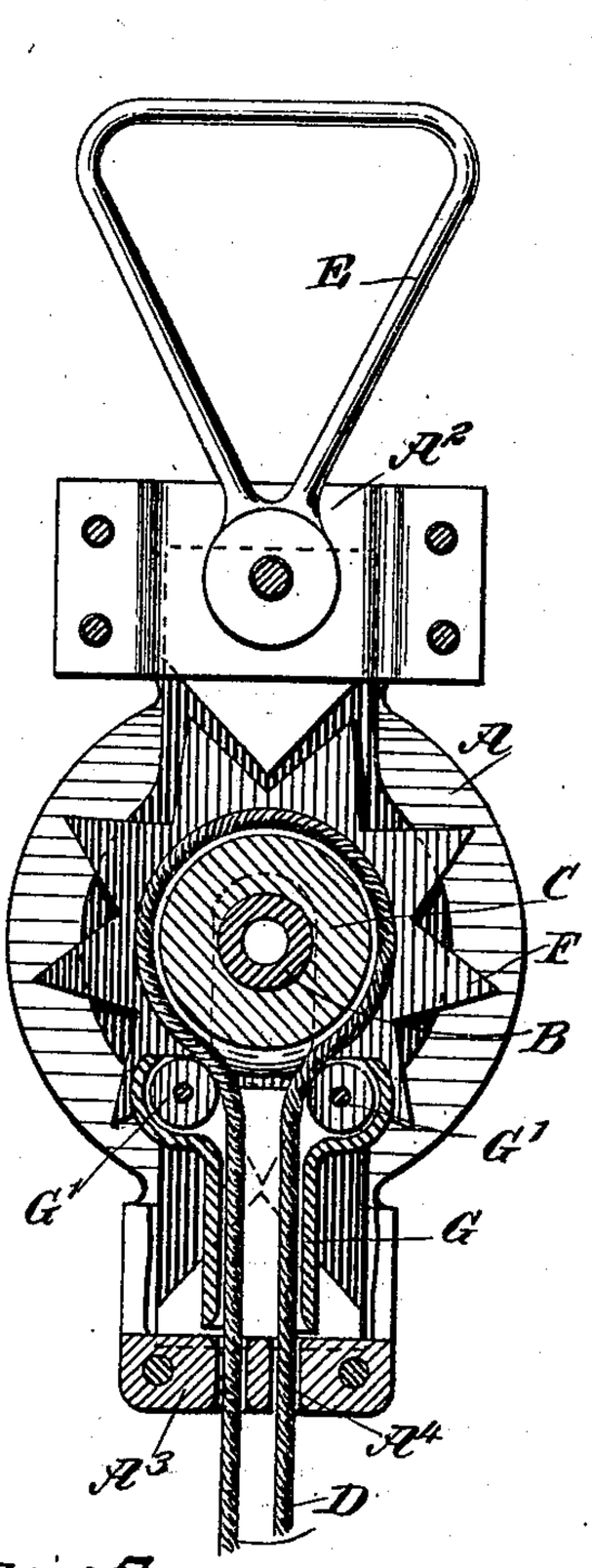


Fig. 4

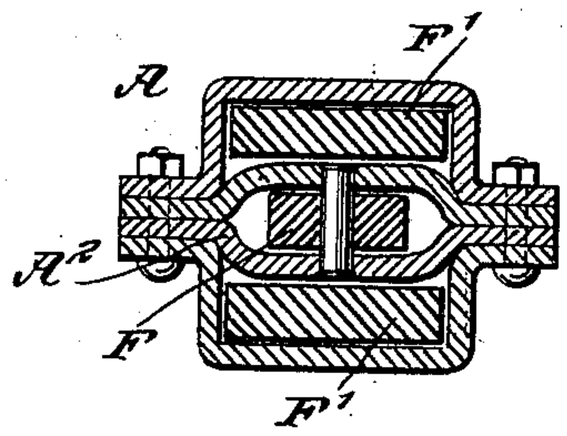
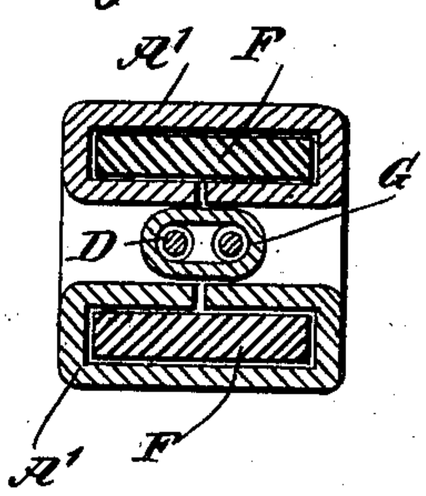


Fig. 5



WITNESSES:

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FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 660,917, dated October 30, 1900.

Application filed July 12, 1900. Serial No. 23,382. (No model.)

To all whom it may concern:

Be it known that we, JAMES OMAR MILLER and DANIEL AGNEW, citizens of the United States, and residents of Rochester, in the county of Fulton and State of Indiana, have invented a new and Improved Fire-Escape, of which the following is a full, clear, and exact description.

The invention relates to fire-escapes such as shown and described in the Letters Patent of the United States No. 622,059, granted to James O. Miller on March 28, 1899.

The object of the invention is to provide a new and improved fire-escape arranged to insure a gradual descent of a person according to the weight of the latter and without any manual assistance whatever on the part of the person descending.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the improvement. Fig. 2 is a transverse section of the same on the line 2 2 in Fig. 1. Fig. 3 is a sectional side elevation of the same on the line 3 3 in Fig. 2. Fig. 4 is a sectional plan view of the same on the line 4 4 in Fig. 1, and Fig. 5 is a similar view of the same on the line 5 5 in Fig. 1.

The improved fire-escape has a casing A, preferably made in sections bolted or otherwise fastened together, a drum-shaft B being journaled in suitable bearings formed in the side plates of the casing. On the drum-shaft B is secured a drum C, having a V-shaped groove for receiving a rope or cable D, carrying at each end a suitable belt for attachment to the person desiring to escape from a burning building. The casing A is adapted to be supported from a hook or the like by a suitable loop E, pivoted in a separate piece A^2 of the casing A at the top thereof, as is plainly shown in the drawings, so that the casing can always hang in a proper vertical position when in use to insure a proper working of the rope or cable on the drum C. The speed of the drum is controlled by an escapement consisting, essentially, of escapement-wheels F, in mesh with escapement-bars F′, mounted to slide in vertical bearings A′, formed on the casing A at the top and bottom thereof, said bars receiving an alternate up-and-down sliding movement from the escapement-wheels when the drum C is rotated.

In order to insure a proper contact of the rope or cable with the drum C, a guiding-tube G is provided, having an elongated opening extending over the guide-openings A^4 in the bottom piece A^3 of the casing, said guiding-tube G carrying at its upper end antifriction-rollers G′, over which pass the runs of the rope or cable D on their passage to and from the V-shaped groove in the drum C.

By reference to Fig. 3 it will be seen that the antifriction-rollers G′ are located close to the peripheral surface of the drum C, so that the runs of the cable must at all times pass in the groove without danger of the cable slipping on the drum and without the cable leaving the drum. Furthermore, the antifriction-rollers G′ are so disposed that the downwardly-hanging runs of the cable or rope do not touch the walls of the guiding-tube G nor the walls of the apertures A^4, so that the cable or rope is not subjected to undue wear by rubbing against the walls referred to, and hence longer life of the fire-escape is insured.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

1. A fire-escape, comprising a casing, a supporting-loop pivoted on said casing, an escapement, a drum, journaled in the casing and having a V-shaped peripheral groove for the passage of the cable, a guiding-tube held in the casing and having an elongated opening extending over the guide-openings in the bottom of the casing, and antifriction-rollers journaled in the upper portion of said tube, as set forth.

2. A fire-escape, having a casing, a drum mounted therein, an escapement-wheel fastened to the axis of the drum, an escapement-bar working with the escapement-wheel, and a guide-tube located adjacent to the drum and adapted to have both runs of the cable passed through it, to guide the same to and from the drum.

3. A fire-escape, having a casing, a friction-drum mounted therein, a flat guide-tube carried in the casing and adapted to lead the cable to and from the drum, and anti-friction-rollers mounted at the upper end of the guide-tube directly adjacent to the drum to press the rope into true engagement with the drum.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JAMES OMAR MILLER.
DANIEL AGNEW.

Witnesses:
ROME C. STEPHENSON,
LUCILE HOLMAN.