J. A. DAVIDSON.

CENTRIFUGAL SPEED CONTROL FOR FIRE ESCAPES.

APPLICATION FILED APR. 8, 1915.

1,241,930. Patented Oct. 2, 1917.

Fig. 1.

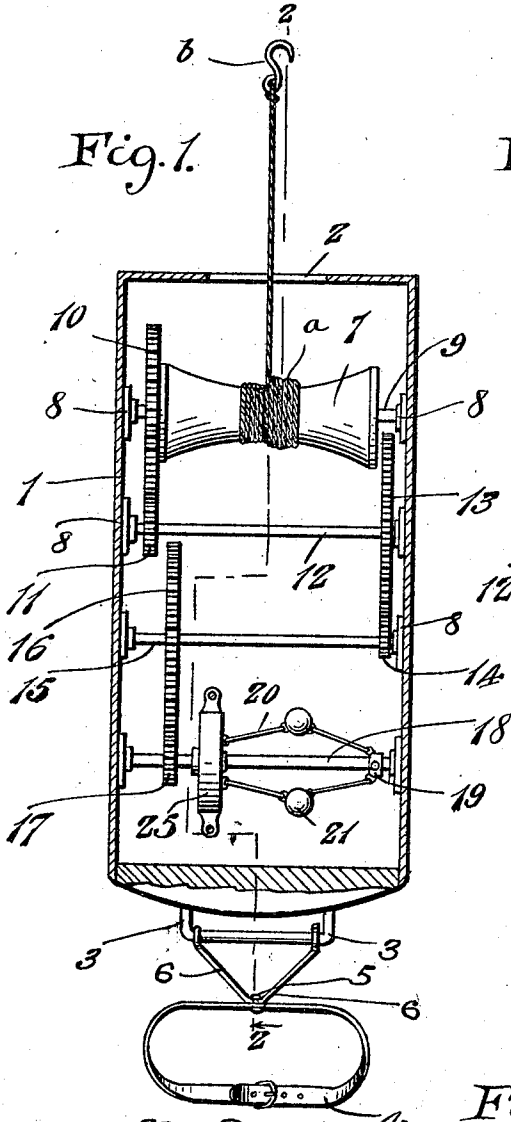


Fig. 2.

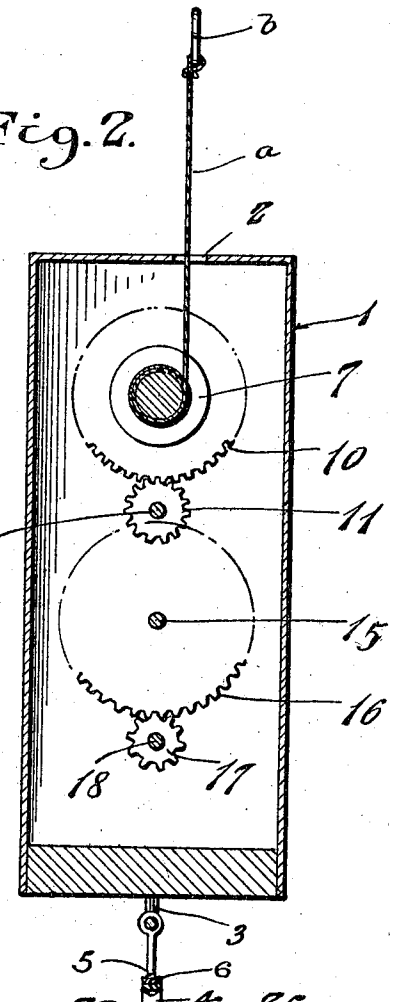


Fig. 3

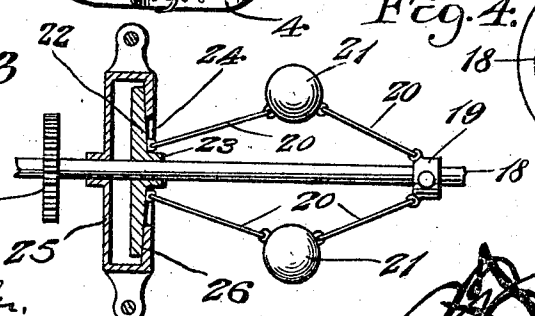
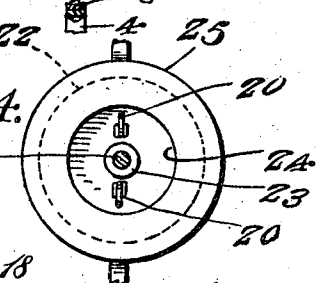


Fig. 4.



Witnesses

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CENTRIFUGAL SPEED CONTROL FOR FIRE-ESCAPES.

1,241,930. Specification of Letters Patent. Patented Oct. 2, 1917.

Application filed April 8, 1915. Serial No. 19,997.

To all whom it may concern:

Be it known that I, JAMES A. DAVIDSON, a citizen of the United States, residing at Loveland, in the county of Larimer and State of Colorado, have invented certain new and useful Improvements in Centrifugal Speed Controls for Fire-Escapes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to pocket fire escapes, and one of the principal objects of the invention is to provide a reliable and efficient device for carrying a person from an upper window of a burning building to the ground and to provide means for properly governing the paying out of the cable or rope and to provide a brake to control the paying out of the rope, said device as a whole being of sufficient size to be readily carried in the pocket of a person or in a suit-case or in a container.

The foregoing and other objects may be attained by means of the construction illustrated in the accompanying drawing, in which—

Figure 1 is a vertical sectional view taken through a casing and showing in elevation the various parts of the fire escape.

Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1,

Fig. 3 is a detail view showing the combined governor and brake, and

Fig. 4 is a detail sectional view taken on the line 4—4 of Fig. 3.

Referring to the drawing, the numeral 1 designates a casing having an open upper end 2 and at the lower end said casing having a bracket 3 for the connection of a waist belt 4 swiveled at 5 to the divergent arms 6, said arms being mounted on the bracket 3.

Within the casing is a roller 7 mounted in bearings 8 at the sides of the casing 1, and the axle 9 of the roller 7 is provided on one end with a gear wheel 10 which meshes with a pinion 11 on a counter-shaft 12, said counter-shaft carrying at its other end a gear wheel 13 which meshes with a pinion 14 on a shaft 15 also journaled within the casing. The shaft 15 carries a gear wheel 16 which meshes with a pinion 17 on the governor shaft 18, said shaft being journaled within the casing and provided with a fixed collar 19 and toggle links 20 to which are connected the balls or weights 21. Connected to the toggles 20 at one side of the weights 21 is a disk brake 22 having a hub 23 which extends through an opening 24 in the casing 25, said casing 25 being secured to the casing 1 to prevent rotation thereof. The opening 24 is formed in the side of the casing and the walls of this side are beveled as shown at 26 to conform to the contour of the disk 22 on the outside thereof.

A wire or cable *a* is wound about the roller 11 and extends through the opening 2 in the casing, said wire being provided with a hook *b* designed to be connected to the window sill or other permanent portions within a room, and when the person using the device has attached the waist belt 4 and engages the hook *b* to the window sill and starts to descend, the governor will be operated and if the velocity is too great, the brake 22 will be drawn up against the beveled side 26 of the casing 25 to regulate the speed of the descent, in an obvious manner.

Various changes may be made in the details of construction without departing from the spirit and scope of the invention as defined in the claim.

What is claimed is:—

A device of the character set forth comprising a supporting structure, a shaft journaled to said supporting structure, a casing journaled on said shaft and having an enlarged opening in one side wall thereof, a pair of oppositely disposed ears formed on said casing and having apertures therein, fastening means extending through the apertures and secured to the supporting structure for holding the casing against rotation upon the shaft, said casing having the inner face of one of the walls beveled in the direction of the openings therein, a disk journaled on said shaft and located within the casing and having one of its faces bev-

eled to coöperate with the beveled wall of the casing, a pair of apertured lugs formed on the disk and extending through the opening in the casing, toggle links pivoted to one end of the shaft, toggle links pivoted to the apertured lugs, and balls connecting the links together for forming a governor adapted to cause the disk to frictionally engage the beveled wall of the casing to retard the speed of the shaft.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES A. DAVIDSON.

Witnesses:

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JNO. R. HANDY.