

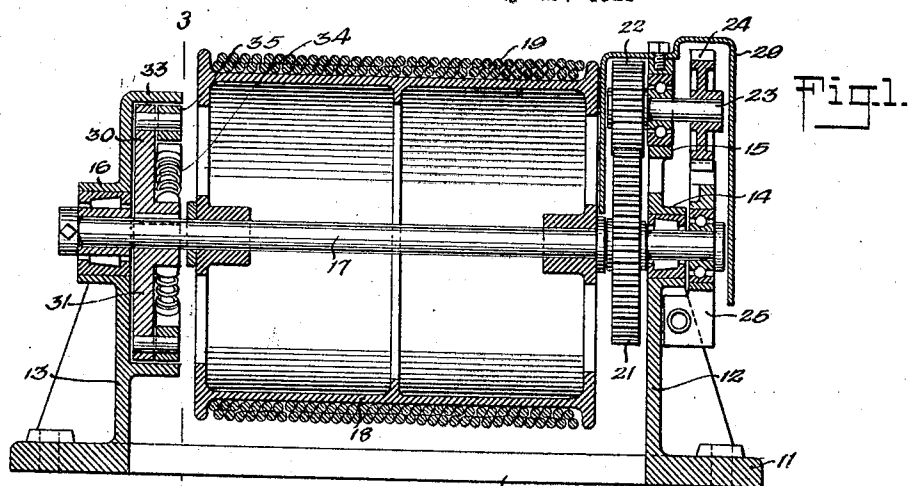
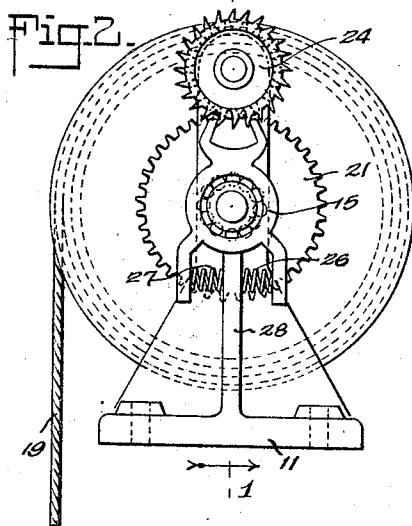
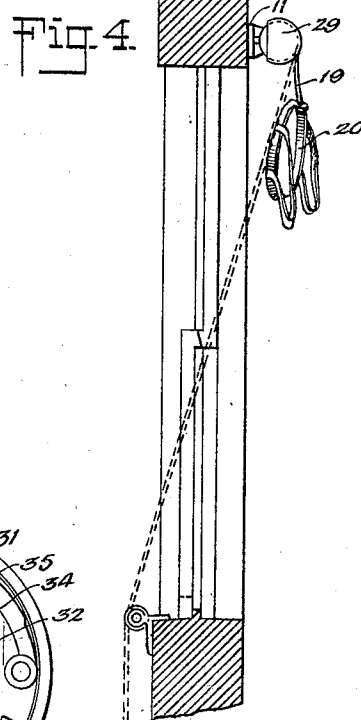
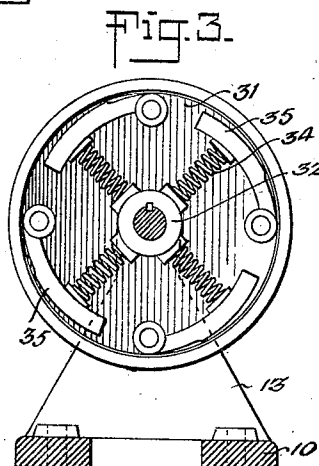
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FIRE ESCAPE

Filed July 12, 1923



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FIRE ESCAPE.

Application filed July 12, 1923. Serial No. 651,124.

To all whom it may concern:

Be it known that I, JEAN D. JOLKOVSKI, a citizen of Russia, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented new and useful Improvements in Fire Escapes, of which the following is a full, clear, and exact description.

This invention relates to fire escapes.

The general object of the invention is the provision of a simply constructed and durable fire escape provided with means for lowering an individual from any elevation and equipped with means for controlling the speed with which the individual is lowered.

This object is accomplished by providing a frame in which a drum having a cable wound thereon is rotatably mounted, connecting to the drum for controlling its operation under normal weights an escapement, and associating with the drum a governor which co-operates with the escapement to control the operation of the drum after it has reached a predetermined speed.

This and other objects of the invention will be more clearly understood from the following detailed description and accompanying drawings.

Figure 1 is a vertical longitudinal section of the fire escape along the line 1—1, Figure 2, showing its construction;

Figure 2 is an end elevation of the fire escape with the casing removed showing the escapement for regulating the speed of operation;

Figure 3 is a section on the line 3—3, Figure 1, showing the construction of the governor;

Figure 4 is an end elevation of the fire escape showing it mounted on a window frame.

Referring to the above-mentioned drawings, the invention includes a frame 10 provided with outwardly extending flanges 11. Openings are provided in these flanges so that the frame may be mounted on any support by the use of screws or bolts. When a fire escape of this type is provided for mounting in buildings where it may be necessary to convey it from one location to another, means are provided for removably attaching the fire escape to any support. Such a mounting may be provided by fix-

ing hooks to any support and adapting the frame 10 for attaching to and detaching from such hooks. Uprights 12 and 13 are formed on the end of the frame 10. In the upright 12 two bearings 14 and 15 are provided while in the upright 13 one bearing 16 is formed. Rotatably mounted in the bearings 14 and 16 is a shaft 17 extending beyond the bearing 14.

Mounted on the shaft 17 between the uprights 12 and 13 and fixed thereto is a drum 18. Wound on this drum is a flexible cable 19 presenting a means for lowering the individual desiring to descend from any elevation by means of the fire escape. One end of the cable would preferably be rigidly attached to the drum so that when there are only a few rounds on the drum there is no danger of the cable slipping. As shown in Figure 4, a belt 20 for attaching about the body is fixed to the outer end of the cable 19.

Rotatably mounted on the shaft 17 is a pendulum 25 for controlling the operation of an escapement wheel 24 fixed to a shaft 23 mounted in the bearing 15. The operation of the pendulum is controlled by springs 26 and 27 interposed between depending arms of the pendulum and a web 28 formed on the upright 12. The escapement wheel 24 is connected to the shaft 17 through a gear 22 fixed to the shaft 23 and a gear 21 fixed to the shaft 17 and meshing with a gear 22. A frame 29 is mounted on the frame 10, enclosing the gears and the pendulum escapement.

Due to the fact that the pendulum escapement may be driven at different speeds by the application of different weights to the cable, a governor 30 is attached to the shaft 17. The governor co-operates with the pendulum escapement after the drum has reached a predetermined speed and thus prevents the cable from unwinding at an unsafe speed. Many different types of governor might be used for co-operating with the pendulum escapement and the type shown in Figure 3 is only one of the preferred forms. This governor includes a disk 31 having a hub 32 formed thereon. The disk is fixed to the shaft 17 and located within a casing 33 carried by the upright 13. A plurality of arms 35 are pivotally mounted on the disk 31 and are also located in the casing 33. Springs 34 are connected between the arms 35 and the

hub 32 for retaining the arms out of engagement with the casing 33 while the shaft is traveling at normal speeds.

The operation of this device is as follows:

5 When a person desires to descend from any elevation he wraps the belt about his body and imposes his weight on the cable. This rotates the drum and sets the pendulum escapement into operation. The speed of
10 the drum is restricted by the pendulum escapement but if the weight is greater than the weight for which the springs of the escapement pendulum have been designed the drum 18 begins to travel faster than is desirable. Immediately the governor 30 goes
15 into action and co-operates with the escapement to control the speed at which the drum 18 rotates.

I would state in conclusion that while the
20 illustrated example constitutes a practical embodiment of my invention, I do not limit myself strictly to the exact details herein illustrated since manifestly the same can be considerably varied without departing from
25 the spirit of the invention as defined in the appended claims.

I claim:

1. A fire escape comprising a frame, a shaft rotatably mounted in the frame, a
30 drum fixed to the shaft, a cable for winding

on the drum, an escapement device mounted on the frame and connected to the drum for controlling the unwinding of the cable, and a governor attached to the shaft co-operating with the escapement device to control the
35 speed of rotation of the drum during the unwinding of the cable.

2. In a fire escape including a drum and a cable for winding on said drum, means for controlling the operation of said drum during the unwinding of the cable, comprising
40 an escapement connected to the drum for restricting its speed of rotation during the unwinding of the cable, and a governor connected with the drum for co-operating with
45 the escapement to control the operation of the drum after it has reached a certain speed.

3. A fire escape, comprising a frame, a shaft rotatably mounted on the frame, a
50 drum connected to the shaft, a cable for winding on the drum, a spring-controlled escapement connected to the shaft for controlling the speed of rotation of the drum during the unwinding of the cable, and a governor
55 connected with the shaft for co-operating with the escapement to restrict the operation of the drum after it has reached a predetermined speed.

JEAN D. JOLKOVSKI