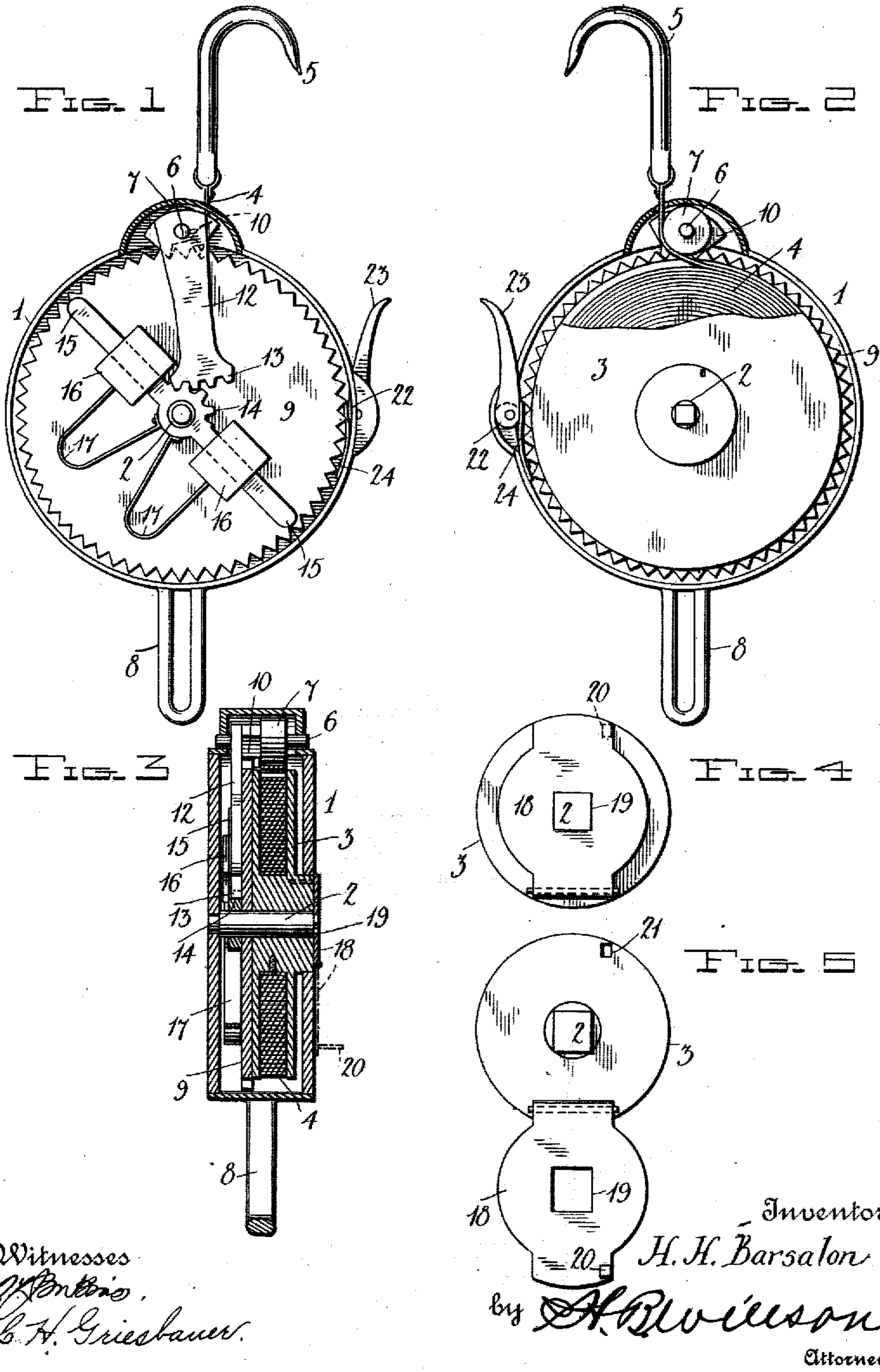


No. 825,506.

PATENTED JULY 10, 1906.

H. H. BARSALON.
PORTABLE FIRE ESCAPE.
APPLICATION FILED AUG. 28, 1905.



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HENRY H. BARSALON, OF MOMENCE, ILLINOIS.

PORTABLE FIRE-ESCAPE.

No. 825,506.

Specification of Letters Patent.

Patented July 10, 1906.

Application filed August 28, 1905. Serial No. 276,146.

To all whom it may concern:

Be it known that I, HENRY H. BARSALON, a citizen of the United States, residing at Momence, in the county of Kankakee and State of Illinois, have invented certain new and useful Improvements in Portable Fire-Escapes; and I do 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 improvements in fire-escapes.

The object of the invention is to provide a portable fire-escape adapted to be connected to a window-sill or other support and by means of which a person may lower himself to the ground, means being provided whereby the speed of descent may be regulated and means whereby the descent may be entirely stopped at any desired point.

With the above and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of the device, one side of the casing being removed. Fig. 2 is a similar view of the opposite side. Fig. 3 is a vertical cross-sectional view of the device. Fig. 4 is a detail side view of the device for locking the winding-drum and shaft together and showing said device in closed position, and Fig. 5 is a similar view showing the device in open position.

Referring more particularly to the drawings, 1 denotes the casing which may be of any suitable shape, but which is here shown as cylindrical. Journaled in the casing 1 is a main shaft 2, on which is loosely mounted a winding-drum 3. On the drum 3 is adapted to be wound a flexible supporting element, said element being here shown and is preferably in the form of a steel tape, to the outer end of which is connected a hook or other suitable attaching device 5. Journaled in the upper portion of the casing is a shaft 6, on which is mounted a guide-roller 7, around which the tape 4 passes from the winding-drum. To the lower side of the casing 1 is secured a loop 8, in which is adapted to be

placed a belt or other means, whereby a person may attach himself to the escape.

Fixedly mounted on one end of the shaft 2 is a toothed escapement-wheel 9, and on the shaft 6 is loosely mounted an escapement-pawl 10, the teeth of which are adapted to be engaged by the teeth of the wheel 9, so that when said wheel is turned the escapement-pawl will be rocked in the usual manner. Formed on or rigidly connected to the pawl 10 is a depending arm 12, on the lower end of which is arranged a toothed segment 13, the teeth of said segment being adapted to mesh with the segmental gear 14, loosely journaled on the end of the shaft 2. Formed on or rigidly connected to the segmental gear 13 are opposite radially-disposed governor-arms 15, on which are slidably mounted governor-weights 16. These weights are connected to and are controlled by bowed springs 18, one end of which is connected to said weights and the opposite end to the segmental gear, as shown.

In order that the winding-drum 3 may be locked to the shaft 2 to revolve the latter, a suitable locking mechanism is provided, said mechanism being here shown as consisting of a plate 18, hingedly connected to the end of the winding-drum and having formed therein a rectangular aperture 19, which when the plate is in folded position or closed against the end of the drum will engage the adjacent squared end of the shaft 2, thereby locking said drum and shaft together. In order that the plate 18 may be held in engagement with the end of the drum, a suitable catch 20 is provided, said catch being in the form of an arm, which when the plate 18 is in folded position will engage a recess 21 in the end of the winding-drum and which when the plate 18 is in open position the catch-arm 20 will form a crank-handle, by which, together with the plate 18, the drum 3 may be loosely revolved on the shaft 2 to wind up the supporting-tape without turning said shaft or operating the governor mechanism.

In one side of the casing 1 is arranged a brake whereby the winding-drum may be stopped when desired, said mechanism consisting of an eccentrically-mounted disk 22, which is adapted to be turned into frictional engagement with the periphery of the wind-

ing-drum, said disk being provided with an operating handle or lever 23, whereby the same may be grasped by the party descending on the escape and the brake operated to stop the escape at any desired point. Secured to the casing 1 is a spring 24, said spring being adapted to bear on the handle of the brake-disk to normally hold the same out of engagement with the winding-drum.

10 In operation as the tape 4 is being unwound from the drum 3 as the device is lowering said drum will be rapidly revolved, and the latter having been locked to the shaft 2 will revolve said shaft and the escapement-
15 wheel 9 fixed thereon, said wheel engaging the escapement-pawls and operating the same. The movement of the escapement-pawl will swing the arm 12 back and forth, causing the segmental gear 13 and the arms
20 15 to be oscillated on the shaft 2, thus throwing the governor-weights 16 outwardly on the arms 15 to a greater or less degree, and thus retarding the movement of the escapement and the parts connected thereto, which
25 will regulate the movement of the drum and the unwinding of the tape, as will be understood.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

1. In a fire-escape of the character described, the combination with a suitable casing, of a centrally-disposed shaft revolubly mounted in said casing, a winding-drum
45 loosely mounted on said shaft, a locking-plate hingedly connected to one end of said drum, said plate having formed therein a rectangular aperture to engage a rectangular projection on the adjacent end of said
50 shaft, a combined crank-handle and catch secured to said locking-plate, whereby when the plate is folded into engagement with said shaft said combined handle and catch will engage a keeper in the end of the drum and
55 when said plate is in open position and the drum disengaged from the shaft, said catch forms a crank-handle and is adapted to be used to turn said drum on the shaft and rewind the flexible supporting element thereon, and means to automatically regulate the
60 unwinding movement of the drum, substantially as described.

2. In a fire-escape of the character described, the combination with a suitable cas-

ing, of a centrally-disposed shaft revolubly 65 mounted in said casing, a winding-drum loosely mounted on said shaft, means to lock said drum to said shaft, a flexible steel supporting element adapted to be wound on and unwound from said drum, means to connect 70 the outer end of said element with a window-sill or other support, a guide-pulley arranged in said casing around which said supporting element is passed, an escapement-wheel fixedly mounted on said shaft, an escapement-
75 pawl pivotally mounted in said casing to engage said wheel, and a governor to automatically control the movement of said escapement-pawl, said governor consisting of an arm formed on or fixed to said escapement-
80 pawl to move therewith, a toothed segment formed on the free end of said arm, a sleeve or hub loosely mounted on the winding-drum shaft, a series of gear-teeth arranged on said sleeve or hub and adapted to mesh with
85 said toothed segment, radially-projecting arms arranged on said hub or sleeve and spring-controlled governor-weights slidably mounted on said arms, substantially as described. 90

3. In a fire-escape of the character described, the combination with a suitable casing, of a centrally-disposed shaft revolubly mounted in said casing, a winding-drum
95 loosely mounted on said shaft, means to lock said drum to said shaft, a flexible steel supporting element adapted to be wound on and unwound from said drum, means to connect the outer end of said element with a window-sill or other support, a guide-pulley arranged
100 in said casing around which said supporting element is passed, an escapement-wheel fixedly mounted on said shaft, an escapement-pawl pivotally mounted in said casing to engage said wheel, a centrifugal governor arranged on said winding-drum shaft, means
105 whereby said escapement-pawl is operatively engaged with said governor, and a manually-operated brake to stop the movement of said winding-drum, substantially as described. 110

4. In a fire-escape of the character described, the combination with a suitable casing, of a centrally-disposed shaft revolubly mounted in said casing, a winding-drum
115 loosely mounted on said shaft, means to lock said drum to said shaft, a flexible steel supporting element adapted to be wound on and unwound from said drum, means to connect the outer end of said element with a window-sill or other support, a guide-pulley arranged
120 in said casing around which said supporting element is passed, an escapement-wheel fixedly mounted on said shaft, an escapement-pawl pivotally mounted in said casing to engage said wheel, a centrifugal governor arranged on said winding-drum shaft, means
125 whereby said escapement-pawl is operatively engaged with said governor and a manually-

operated brake to stop the movement of said winding-drum, said brake consisting of an eccentrically-mounted disk, a hand-lever connected with said disk to turn the same into engagement with said winding-drum and a spring to normally hold said brake in inoperative position, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HENRY H. BARSALON.

Witnesses:

FRED CULEN,
M. M. PORTER.