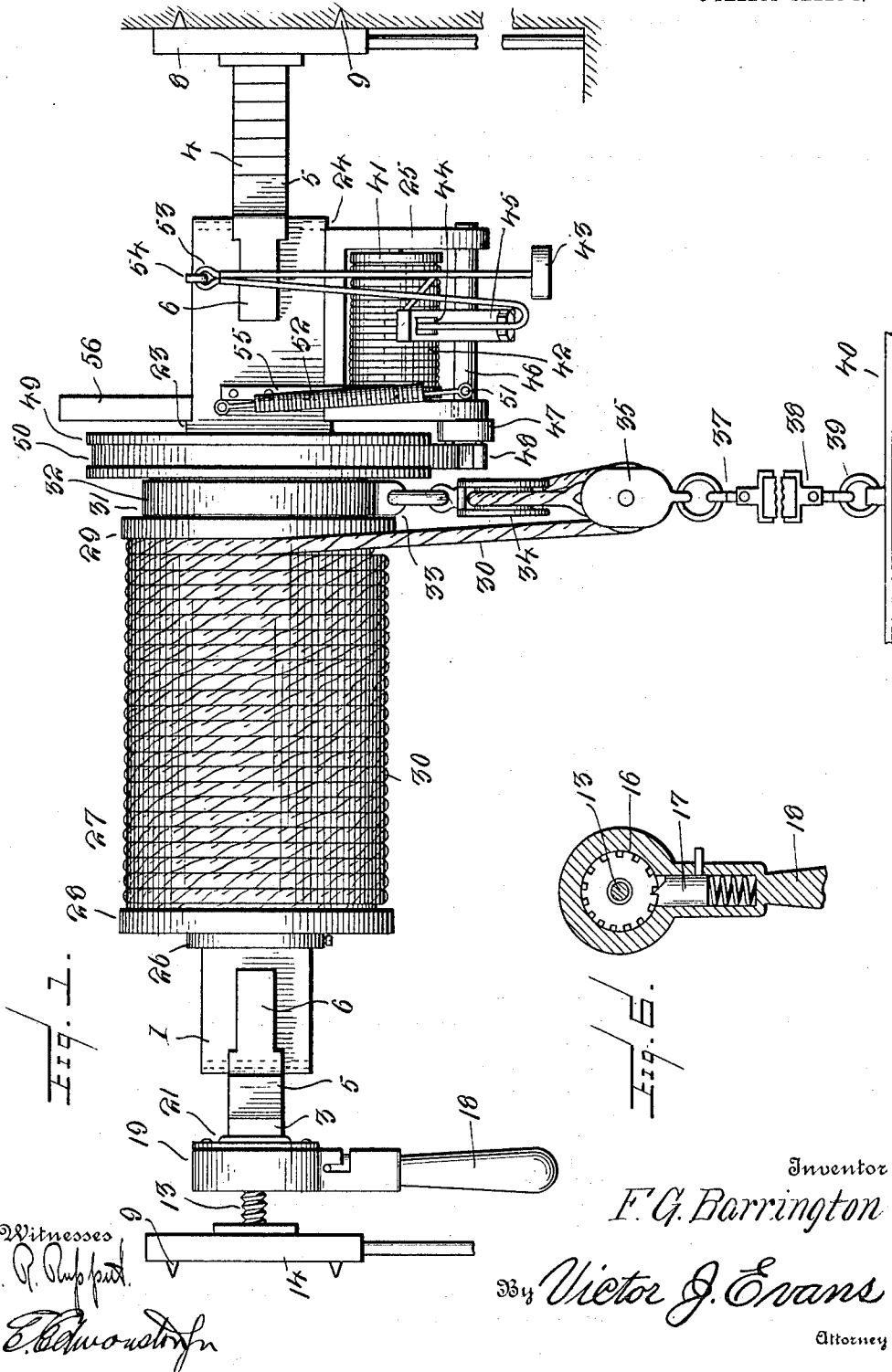


F. G. BARRINGTON.
FIRE ESCAPE.
APPLICATION FILED NOV. 25, 1911.

1,053,772.

Patented Feb. 18, 1913.

3 SHEETS—SHEET 1.



Witnesses
C. P. Ruppert
E. C. Ruppert

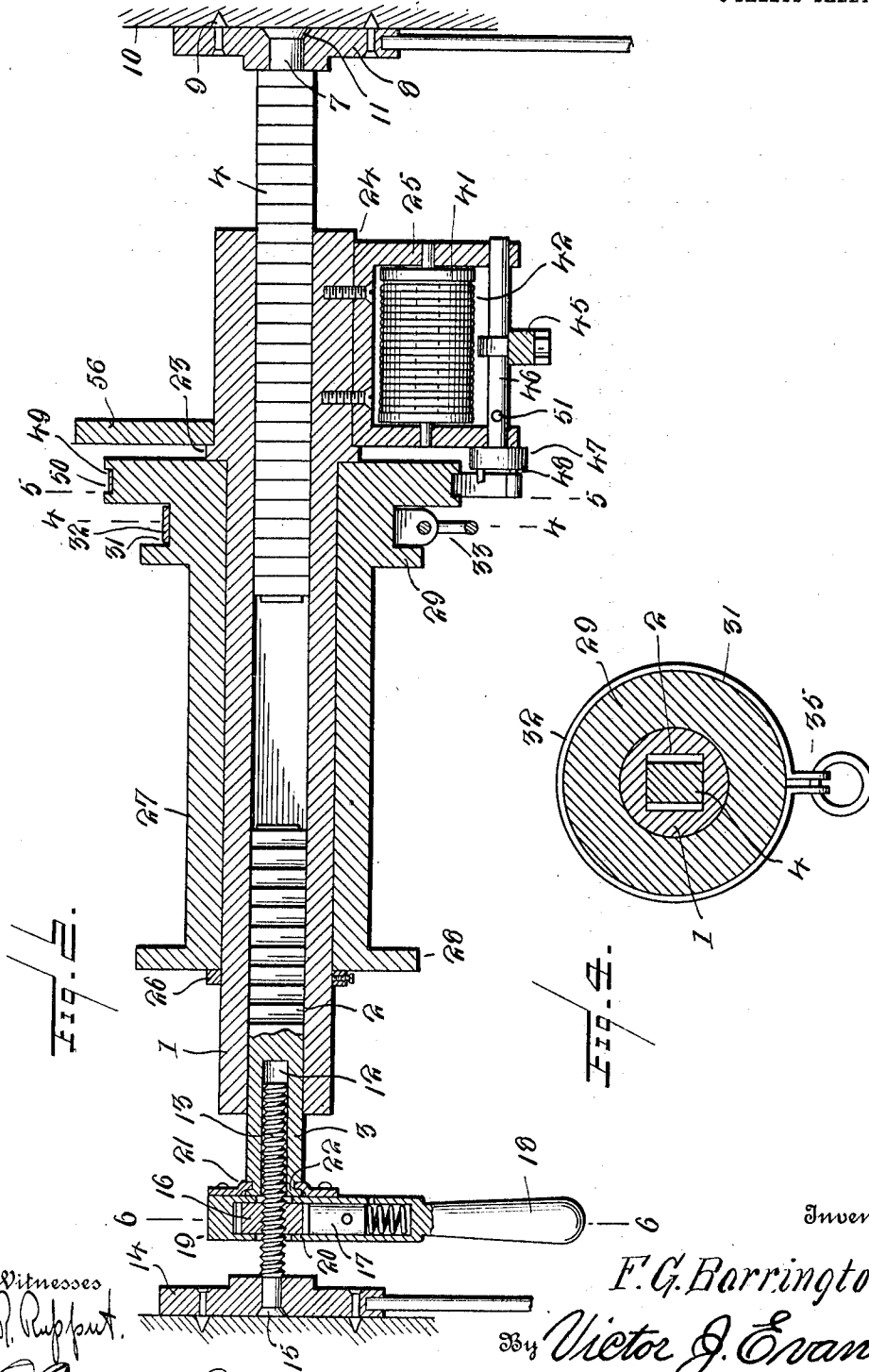
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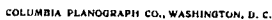


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3 SHEETS--SHEET 3.



UNITED STATES PATENT OFFICE.

FRED G. BARRINGTON, OF PORTSMOUTH, OHIO.

FIRE-ESCAPE.

1,053,772.

Specification of Letters Patent.

Patented Feb. 18, 1913.

Application filed November 25, 1911. Serial No. 662,373.

To all whom it may concern:

Be it known that I, FRED G. BARRINGTON, a citizen of Great Britain, residing at Portsmouth, in the county of Scioto and State of Ohio, have invented new and useful Improvements in Fire-Escapes, of which the following is a specification.

This invention relates to fire escapes and more particularly to portable fire escapes.

The object of the invention is to provide a simple and efficient device of this character which may be cheaply constructed and which is of such size that it may be readily carried from point to point and which may be continually set up in operative position.

A further object of the invention is the provision of a fire escape employing a rope drum and which is provided with novel brake releasing mechanism so that the speed of the rope in unwinding from the drum may be properly regulated to control the descent of the user of the device.

A still further object of the invention is the provision of means for adjusting the device to window frames of different widths and for clamping the mechanism in the frame after being adjusted.

Further objects of the invention will appear as the following specific description is read in connection with the accompanying drawings which form a part of this application, and in which:—

Figure 1 is a side elevation showing the device applied. Fig. 2 is a vertical section through the device. Fig. 3 is a top plan view, the window frame being shown in section. Fig. 4 is a section on the line 4—4 of Fig. 2. Fig. 5 is a similar view on the line 5—5 of Fig. 2. Fig. 6 is a section on the line 6—6 of Fig. 2.

Referring more particularly to the drawings, 1 represents a shaft which is provided with a central bore 2 in which are slidably mounted the rack bars 3 and 4. These rack bars are engaged by spring pressed pawls 5 having manipulating extensions 6 for withdrawing them from engagement with the rack bars when necessary. The outer end of the rack bar 4 is reduced, as shown at 7, and revolutely mounted thereon is a bearing plate 8 having a plurality of pointed projections 9 thereon adapted to enter the frame of a window which is indicated at 10. The reduced portion 7 of the rack bar is headed up as shown at 11 to prevent removal of the

plate. The opposite rack bar 3 is provided with a longitudinal aperture 12 in which is freely slidable a screw 13 reduced at its outer end to receive a bearing plate 14 and being headed at 15 to prevent removal of the plate. This plate is also provided with the pointed projections 9 to enter the frame of the window. Threaded upon the screw 13 is a ratchet member 16 which is engaged by a reversible pawl 17 carried in an operating handle 18 whose head 19 is apertured to receive the nut and to surround the screw 13. The nut is then abutted against the end of the rack bar and is held in this position by means of an annular flange 20 formed on the head 19 and by fingers 21 carried by the head and engaged over a flange 22 formed on the end of the rack bar.

The end of the shaft 1 having a rack bar 3 mounted therein is somewhat enlarged and squared so as to produce a shoulder 23 and a seat 24 for a yoke-shaped bracket 25, the purpose of which will be hereinafter described. Journaled upon the shaft 1 between the shoulder 23 and a collar 26, adjustably keyed upon the shaft 1 is a drum 27 having flanged heads 28 and 29 between which the lowering cable 30 is positioned. The head 29 is provided with an annular channel 31 in which a band 32 is loosely mounted, said band having connected to its lower end through a clevis 33 the pulley block 34 over which the end of the cable 30 passes. A similar pulley block 35 has the cable passing thereover and it also has the terminal end of the cable attached. The end of this block is provided with a ring 36 in which one of the hooks 37 of a snap connector is engaged. The opposite snap 38 is adapted to be connected to a ring 39 carried by a padded body belt 40.

Journaled in the legs of the yoke-shaped bracket 25 is a drum 41 around which a cable 42 is wound. This cable is provided with a weight 43 at its free end and passes over a pulley 44 on a horizontal projecting arm 45 which is keyed to a transverse shaft 46 journaled in the legs of the yoke-shaped body below the drum. Upon the inner end of the shaft is secured a suitable head 47 having laterally extending eccentric pins 48 which are engaged with the opposite ends of a brake band 49 which surrounds the head 29 of the drum and lies in a channel 50 formed therein. The shaft 46 is also provided with a laterally projecting arm

51 which is connected to the shaft 1 by a spring 52 which normally rotates the shaft 46 in such a direction as to apply the brake band and stop the rotation of the drum.

5 The rope 42 is provided with a loop 53 adjacent its end, which closed loop is adapted to be engaged over a hook 54 carried by the shaft 1. In order to prevent the drum 41 from rotating too fast under the impetus

10 of the weight 43 a friction spring 55 is secured to the shaft and bears against one of the heads of the drum. A suitable guard arm 56 is projected from the top of the shaft 1 above the drum so as to form a rest for the window sash where such sash

15 is not weight balanced.

In the operation of the device the drum is placed in the window frame with the lower sash fully raised and the rack bars extended until the plates 8 and 13 engage the window frame. The lever 18 is then operated to unscrew the nut from the screw, which action forces the screw out of the rack bar and causes a relative separation

20 of the plates 8 and 14, thus forcing their projections 9 into the window frame and firmly securing the device in position, it being understood that the pawls are in engagement with the rack bar. The life belt

25 is then placed around the breast of the user and the ring thereon connected to the lower snap of the connector. The user then crawls out of the window feet first holding onto the window sill. His weight is supported by

30 the cable 30, the drum being locked against rotation normally by the action of the spring 52 makes it necessary for the operator to give a slight pull upon the cable 42, which is first disengaged from the hook 54. This

35

action depresses the arm 45 against the tension of the spring 52 and thus rotates the shaft 46 and releases the brake band from the drum. By proper manipulation of the cable 42 the speed of descent may be properly regulated. In removing the device

40 45 from the window frame the pawl 17 is reversed and the lever 18 operated as before to screw the nut 16 upon the screw 13.

Having thus described the invention, what I claim as new is:

1. In a fire escape, a shaft, means for holding said shaft in the window frame, a drum rotatably mounted on the shaft, a cable on the drum, a band journaled on the drum and connected to one of the terminals

50 55 of the cable, pulleys on the cable and a body belt adapted to be removably connected to the pulleys.

2. In a fire escape, a shaft, means for holding the shaft in a window frame or the like, a drum revolubly mounted on the shaft, a supporting cable carried by the drum, a brake band surrounding the drum, means to normally hold the brake band

60 65 against the drum, a second drum carried by the shaft, a weighted cable on the second drum, an operating arm carrying a pulley to receive said weighted cable and an operative connection between the arm and the

70 drum.

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

FRED G. BARRINGTON.

Witnesses:

L. H. SIELING,
JOHN NEU.