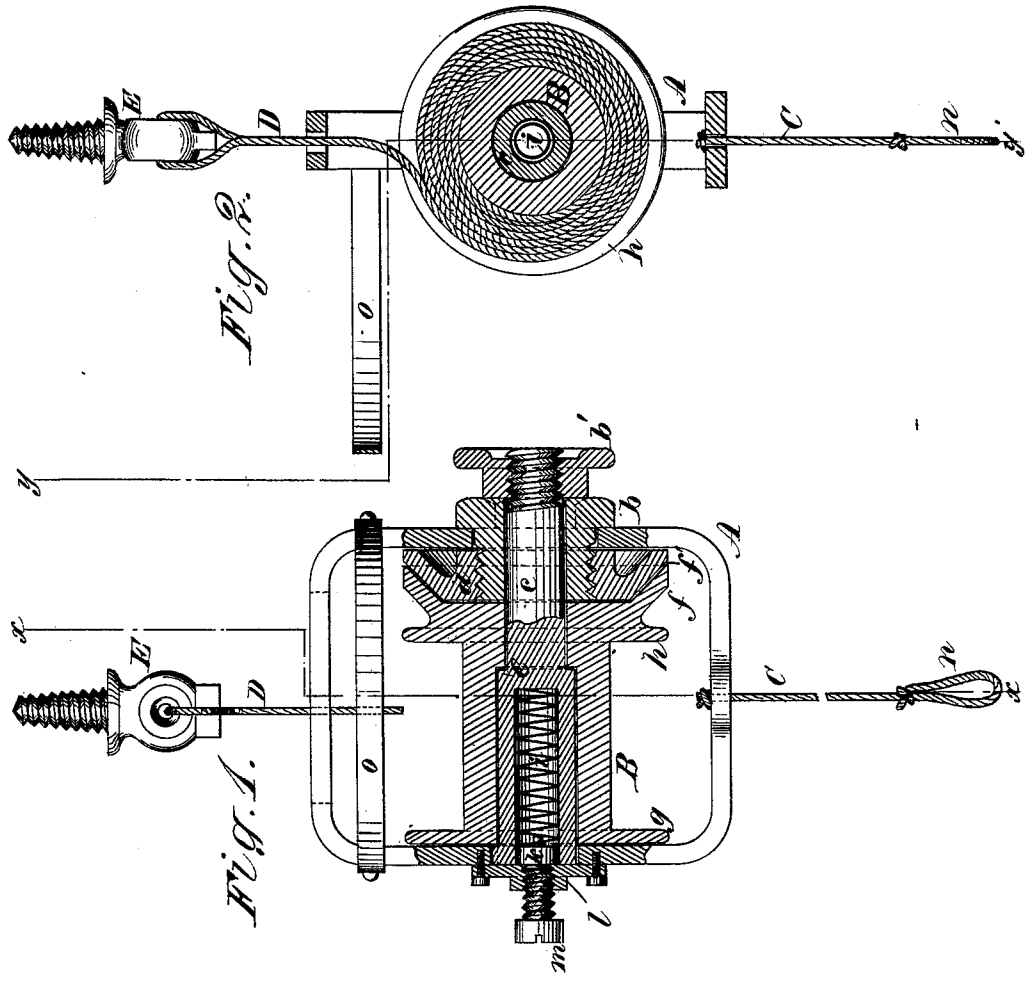
J. SWANK & A. JEHNKE.

Fire-Escape.

No. 202,767. Patented April 23, 1878.



WITNESSES:

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JOHN SWANK AND ARNOLD JEHNKE, OF DENVER, COLORADO.

IMPROVEMENT IN FIRE-ESCAPES.

Specification forming part of Letters Patent No. **202,767**, dated April 23, 1878; application filed August 11, 1877.

To all whom it may concern:

Be it known that we, JOHN SWANK and ARNOLD JEHNKE, of Denver, in the county of Arapahoe and State of Colorado, have invented a new and Improved Fire-Escape, of which the following is a specification:

Referring to the drawings, Figure 1 is a side elevation, in section, on line *y y* in Fig. 2; and Fig. 2 is a transverse section on line *x x* in Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of our invention is to furnish a simple and efficient portable fire-escape in which the downward motion of the person is checked by means of a friction-clutch attached to the drum carrying the rope by which descent is made.

In the drawing, A is a rectangular frame, in one side of which is placed a sleeve, *b*, which receives the end of the pin *c*, and is threaded externally to receive the fixed conical part *d* of the friction-clutch. A nut, *b'*, is placed on the threaded end of the pin *c*, and bears on the sleeve *b*. The pin *c* is provided with a lug, which is received by a notch in the frame A, and prevents it from turning.

There is a shoulder, *e*, on the pin *c*, and a drum, B, is fitted to the pin, and is provided with a flange, *f*, which is fitted to the conical part *d*. It is also provided with flanges *g h* for confining the rope to drum B, and for convenience in winding the rope. Between the conical part *d* and the flange *f* there is a washer, *f'*, of paper or other fibrous material, which increases the friction between the surfaces. The pin *c* is bored longitudinally to receive a spiral spring, *i*, and a follower, *k*. A cap, *l*, is secured to the side of the frame, and through it a screw, *m*, passes, that bears upon the follower *k*, by which the pressure of the spring upon the pin and of the flange *f* upon cone *d* may be regulated.

A rope, C, is attached to the lower portion of the frame A, and at its lower end there is a stirrup, *n*, for receiving the foot of the person descending, and a strap, *o*, is attached to the sides of the frame A for receiving the body. A rope, D, is attached to and coiled upon the drum B, and is tied in a screw-eye, *e*.

The manner of using our improved fire-escape is as follows: The screw-eye E being screwed into the wall of the building or some other fixed object, and the spring *i* being compressed with the force required to carry the flange *f* against the conical part *d* with sufficient pressure to produce enough friction to retard the falling of the person, so that descent may be safely made, the person places his foot in the stirrup *n* and his body in the strap *o*, and releases himself from the window or door. If the friction of the clutch is insufficient to prevent too rapid descent, the nut *b'* is turned so as to draw the flange *f* against the conical part *d* with more or less force. By this means the speed of descent may be perfectly regulated and adjusted to the weight of any person using the apparatus.

The entire apparatus, including the rope, is made of fire-proof material, and, as it is made of few and simple parts, it is not liable to get out of repair.

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

1. The combination, is a fire-escape, of the drum B, having the conical flange *f*, the movable pin *c*, nut *b'*, fixed conical part *d*, and washer *f'*, substantially as shown and described.

2. The frame A, the drum B, having the flanges *g*, *h*, and *f*, the movable pin *c*, having the shoulder *e*, the spring *i*, adjusting-screw *m*, and the conical fixed part *d*, in combination, substantially as shown and described.

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Witnesses:
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