J. A. Griswold,

Fire Escape.

No. 106,812. Patented Aug. 30. 1870.

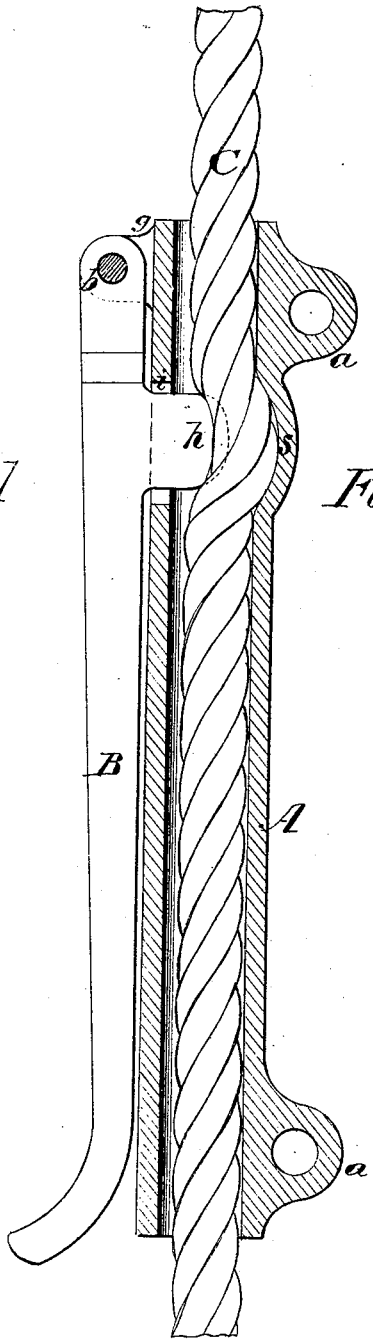


Fig. 1

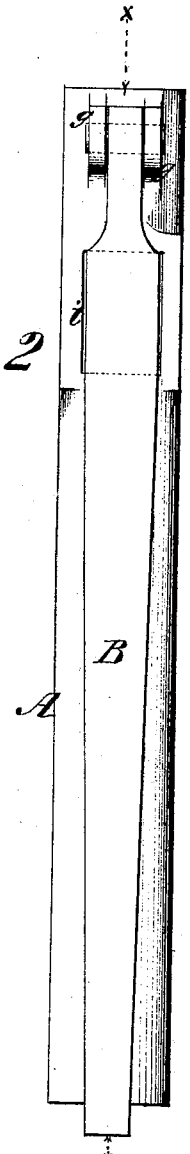
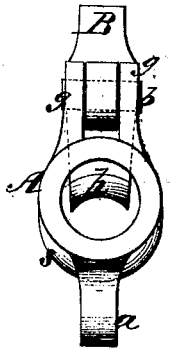


Fig. 2

Fig. 3



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JOHN A. GRISWOLD, OF CHICAGO, ILLINOIS, ASSIGNOR TO HIMSELF AND PHINEAS E. MERRIHEW, OF SAME PLACE.

Letters Patent No. 106,812, *dated August* 30, 1870.

IMPROVEMENT IN FIRE-ESCAPES.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, Dr. JOHN A. GRISWOLD, of Chicago, in the county of Cook and State of Illinois, have invented a new and improved Fire-Escape; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a section through the center of the device, taken in the plane indicated by dotted line *x x* in fig. 2.

Figure 2 is a view of that side of the device on which the pressure-handle is applied.

Figure 3 is a top view of the device.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to afford a safe and ready means for persons to descend from a burning building.

The nature of my invention consists in a tubular shaft or sleeve, which is adapted for receiving through it a rope of sufficient strength to sustain the weight of one or more persons, and also in having suspension straps attached to it, in combination with a pressure device, which is so constructed that a person suspended from the tube, with his hand on the said pressure device, is enabled to safely descend the rope at any desired speed, and also to stop at pleasure, as will be hereinafter explained.

The following description will enable others skilled in the art to understand my invention.

In the accompanying drawing—

A represents a tube of suitable length, and of such diameter as will receive through it a rope strong enough to safely sustain the weight intended to be applied to it.

This tube is constructed on one side with eyes *a a*, for receiving straps or other means by which a person can be secured to the tube.

In practice, straps passed about the body in combination with snap-hooks, or other simple and safe devices, may be used for attaching a person to the tube; or provision may be made for attaching more than one person to the tube, as circumstances may require.

Opposite the upper eye *a* lugs *g g* are formed on tube A, between which the upper end of a lever handle, B, is connected, by means of a transverse pivot, *b*.

Below the pivot *b*, and formed on that side the handle B next the tube, is a strong projection, *h*, the end of which is made concave transversely, and convex vertically, so as to adapt it for bearing against a rope, C, which passes through the tube A.

The passage *i*, made transversely through the wall of the tube A, allows the rounded end of the projection *h* to enter the tube and be pressed against the rope, so as to confine the latter against the concave surface *s* on the inner side of the tube, as shown in fig. 1.

The concavity *s*, opposite the passage *i*, allows the projection or knuckle *h*, on lever-handle B, to press the rope C out of the straight line of the tube, which deviation of the rope produces greater or lesser friction, according to the pressure applied to the lever-handle.

From the above description it will be seen that a person can, by acting on the lever B with the hands, exert powerful pressure on the rope within the tube, and thus produce a greater or lesser amount of friction at the point where the rope is compressed.

To use the instrument, a person in one of the upper stories of a building attaches himself to the tube A in any convenient manner, then passes one end of a rope, C, through the tube, and securely fastens such end to some fixed object in a room or on the roof, as the case may be. The other end of the rope is thrown below, and held more or less obliquely by persons on the ground. It is not absolutely necessary that the rope be held below.

The person attached to the tube grasps the handle, and, by applying more or less pressure to the rope in the tube, descend safely to the ground, or to one of the lower stories of the building.

If desirable, the knuckle or projection *h* may be provided with a grooved roller for bearing against the rope C in the tube, and pressing it into the concavity *s*.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. In a fire-escape, the arrangement of the hand-lever upon the tube, substantially in the manner and for the purpose described.

2. The combination of the concave tooth *h*, with the concavity *s* of the tube, substantially as and for the purpose described.

DR. JOHN A. GRISWOLD.

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