

(No Model.)

C. E. HARVEY.
FIRE ESCAPE.

No. 518,920.

Patented Apr. 24, 1894.

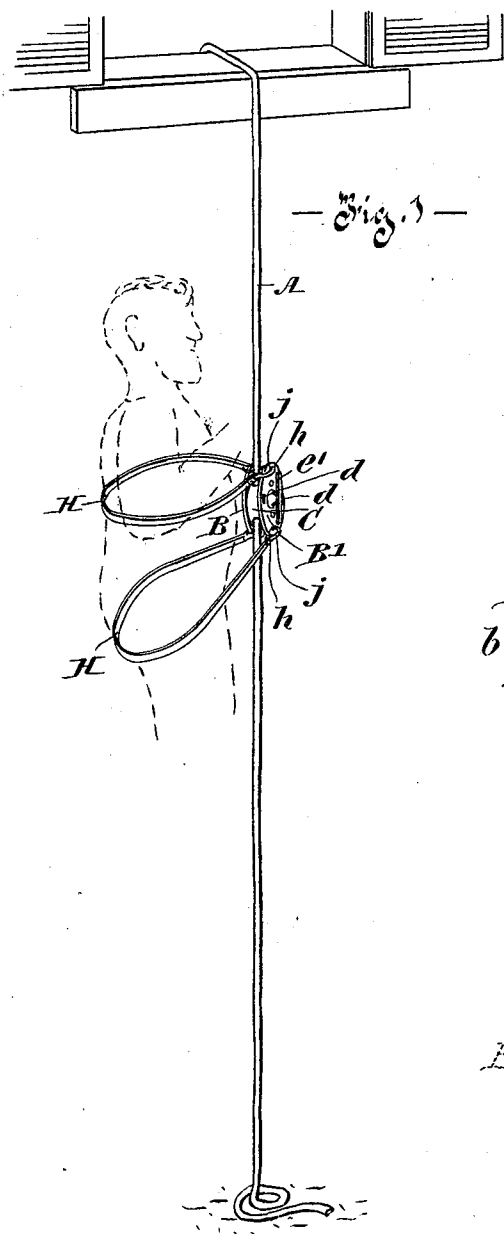


Fig. 2

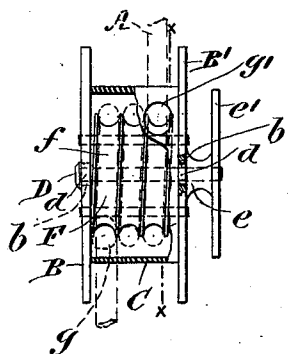


Fig. 3

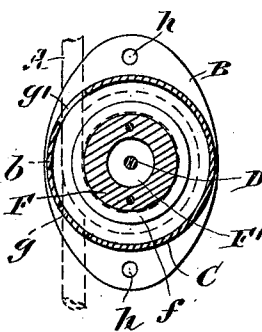
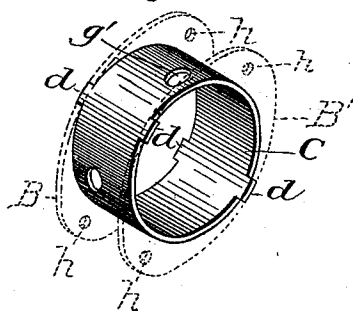


Fig. 4.



Witnesses

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CYRUS ELECTUS HARVEY, OF WATERLOO, CANADA.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 518,920, dated April 24, 1894.

Application filed May 25, 1893. Serial No. 475,531. (No model.)

To all whom it may concern:

Be it known that I, CYRUS ELECTUS HARVEY, of Waterloo, in the county of Shefford and Province of Quebec, Canada, have invented certain new and useful Improvements in Fire-Escapes; and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention relates to the class of fire escapes which are composed of a rope and friction device, and has for its object to produce a device cheaper and simpler in construction than those hitherto produced as well as being readily controllable in operation, and of a portable character.

For full comprehension of the invention, reference must be had to the annexed drawings forming a part of this specification, in which like symbols indicate corresponding parts and wherein—

Figure 1 is a general view of the escape showing it in operation; Fig. 2 a detail view partly broken away of the traveling friction device; and Fig. 3 a sectional view taken at right angles to Fig. 2 on line *x x*, Fig. 4 being a perspective view of the traveling block.

A is the rope which can be secured at one end in any suitable way to a window frame or point of attachment inside a building, the opposite end when the escape is in use hanging freely toward the ground and when not in use the rope can be kept coiled in any convenient place.

The traveling friction block is of metal and constructed of an outer casing preferably composed of two flat sides B B' and intermediate cylindrical body C the two latter being integral and the side B being connected thereto by means of a screw bolt D and a part which is of a compound nut-and-cleat type in that it has a stem portion *e*, recessed and screw-threaded to take onto the projecting screw-threaded end of the bolt D, and a cross bar or cleat *e'* for purposes mentioned farther on. Rigidly secured to the side B is a cylindrical block F of less diameter than and inclosed by the cylindrical casing C and having a worm recess *f*, of a size to accommodate the rope which fits in it, worked or formed around its periphery, while an aperture F' is formed at its axis for the passage of the bolt D there-through. Projections *d d* from the ends of the

intermediate cylinder C fit or interlock with corresponding apertures *b b* in the sides B B' and so insure the better holding together of the several parts. Apertures *g g'* are formed in the cylindrical casing C one aperture to allow the rope to be introduced through and wound around the inner cylinder and led out of the other aperture. Eyes *h h* are made in the projecting ends of the sides B B' to allow of any suitable body straps such as H H being secured to the device by snap-hooks or like fastenings *j*.

In operation the party using the escape passes the straps around his body in the manner best adapted to support him and connecting them to the friction block (which is of course kept permanently in place on the rope near the end that is secured in place) drops the free end of the rope out of the window and then begins to descend upon it keeping a slipping hold of the free portion of the rope if he so wishes or simply taking hold of the friction block. The weight of the person is sufficient to overcome the friction furnished by the surface of the inner cylinder to the rope wound round it, to such a degree as will secure a moderate maximum speed of travel, but should the person be exceptionally heavy the movement of the free portion of the rope to one side so as to bear against the edge of the lower aperture *g* in the cylindrical casing C will tend to retard the descent and should it be desired to absolutely stop at any point the free lower portion of the rope can be bent up and easily and effectively held upon the bar or cleat *e'*. It will also be seen that persons on the ground could take hold of the free end of the rope and guide the one descending out of the way of burning parts of the building that might be beneath him and in the line of his descent.

What I claim is as follows:

1. In a fire escape, the combination of a suspended rope; a traveling friction block composed of an outer perforated frame or casing, an inner cylindrical drum around which a portion of said rope is wound and a cleat bar or projection on the exterior of said casing, as set forth.

2. In a fire escape, the combination of a suspended rope; a traveling friction block composed of an outer perforated frame or casing

formed of an outer cylinder and two sides the cylinder and the sides having interlocking points, an inner cylinder or drum around which a portion of said rope is wound, a central screw bolt and a cleat shaped nut, as set forth.

3. In a fire escape, the combination of a suspended rope; a traveling friction block composed of an outer perforated frame or casing formed of an outer cylinder and two sides the cylinder and the sides having interlocking points, an inner cylinder or drum around which a portion of said rope is wound a central screw bolt, a cleat shaped nut, and a body support secured to said frame or casing, as set forth.

CYRUS ELECTUS HARVEY.

In presence of—

E. STONE,

W. N. CALL.