

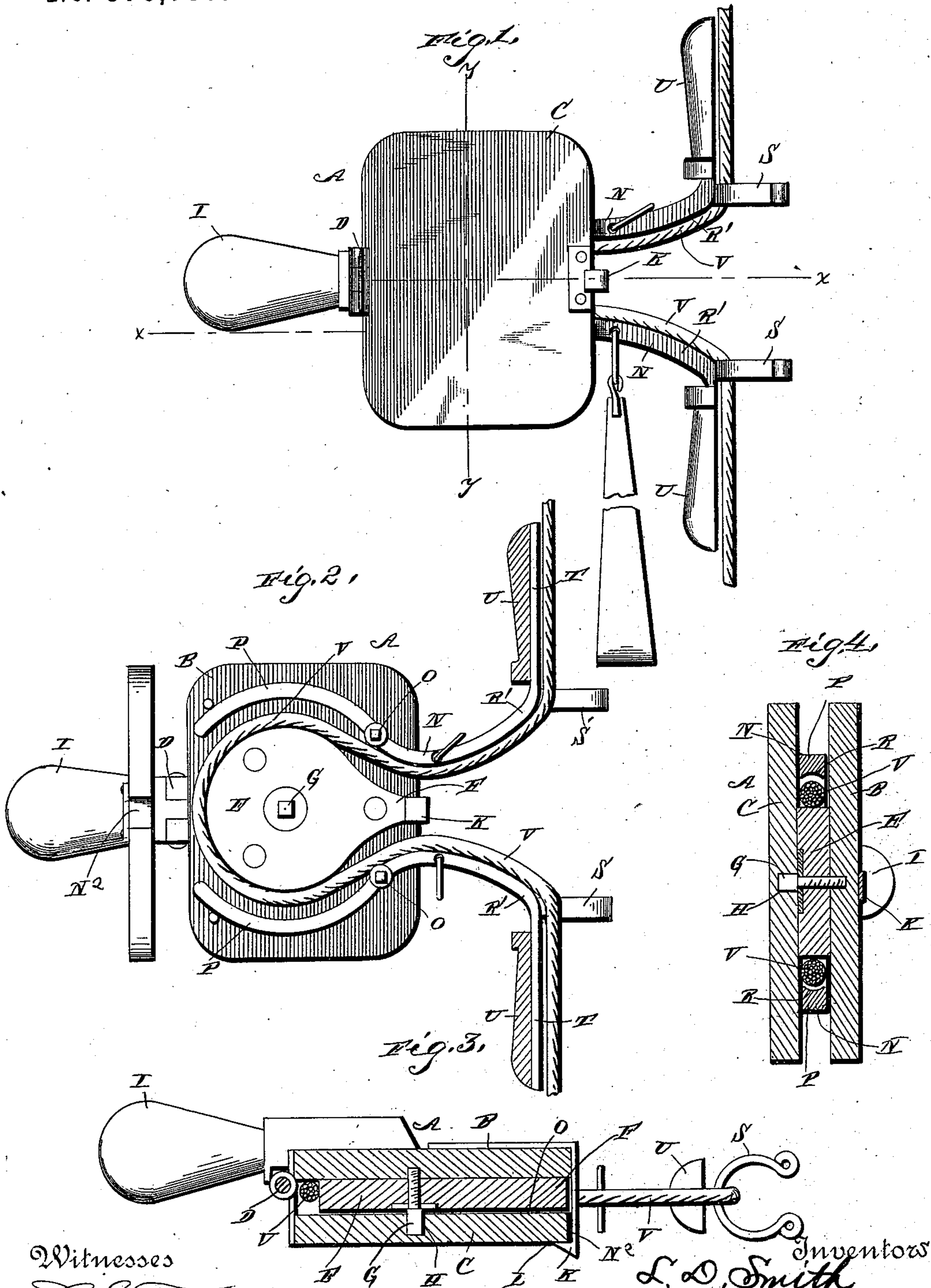
(No Model.)

L. D. SMITH & W. A. OLDS.

FRICTION FIRE ESCAPE.

No. 376,787.

Patented Jan. 24, 1888.



Witnesses

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UNITED STATES PATENT OFFICE.

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FRICTION FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 376,787, dated January 24, 1888.

Application filed June 9, 1887. Serial No. 240,804. (No model.)

To all whom it may concern:

Be it known that we, LENIOUS D. SMITH and WILSON ALBERT OLDS, citizens of the United States, residing at Helix, in the county of Umatilla and State of Oregon, have invented a new and useful Improvement in Friction Fire-Escapes, of which the following is a specification.

Our invention relates to an improvement in friction fire-escapes; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is a side elevation of a fire-escape embodying our improvements, showing the case closed. Fig. 2 is a similar view of the same, showing the case open. Fig. 3 is a horizontal sectional view taken on the line *xx* of Fig. 1, showing the case closed in solid lines and open in dotted lines. Fig. 4 is a vertical sectional view taken on the line *yy* of Fig. 1.

A represents a case, which is made of wood or other suitable material, and comprises the sides B and C, hinged together at one edge by a hinge, D. From the inner side of the part B, at the center thereof, projects a cam, E, which is circular on its outer side and is provided with a projecting arm, F, on its inner side, the upper and lower sides of the said arms being curved, as shown in Fig. 2. From the center of the circular portion or head of the cam projects a stud, G, which is adapted to enter a corresponding recess, H, made in the inner side of the hinged part C. From the outer edge of the part B projects a handle, I.

K represents a spring-detent, which has one end secured to the inner edge of the part B, the said detent extending at right angles therefrom. The free end of the detent is provided on its inner side with a projecting shoulder or barb, L, the outer side of which is beveled. The free edge of the part C is provided with a groove, N, adapted to receive the barb or shoulder, and when the said part C is closed against the outer side of the cam the spring-detent engages the said part C and thereby locks it in the position shown in solid lines in Fig. 3, as will be very readily understood.

P represents a pair of levers, which are pivoted to the inner side of the part B at equal

distances from opposite edges of the cam E by means of bolts O. The outer ends of the said bolts are provided with projecting studs, which are adapted to enter corresponding recesses in the inner side of part C when the latter is closed against the face of the cam. The levers N are provided with friction-arms P, which are curved to correspond to the contour of the opposing edges of the cam, and the said friction-arms are provided on their inner sides with concave grooves R. The outer ends of the levers N, which project beyond the front edge of part B, are curved in opposite directions and form arms R'. The said arms have U-shaped keepers or guides S formed at their outer ends, and from opposite sides of the said arms project shanks T, to which are secured oppositely-extending handles U.

V represents a rope, which is passed around the cam, between the same and the opposing sides of the friction-arms P, and the ends of the rope are turned in opposite directions and passed through the keepers or ropes S.

The operation of our invention is as follows: The rope is first secured near one end on the cam, between the same and the friction-arms, as shown and described, and the part C is closed onto the cam and engaged by the spring-detent, and thereby firmly locked. The person who is to descend from the burning building ties the short end of the rope to a bed-post or to any other suitable object in the room, and throws the long end of the rope out of the window onto the ground below. He then attaches the hook at the upper end of the loop or stirrup to a ring or opening on one of the arms R, grasps the handle I with his right hand and one of the handles U with his left hand, places one or both feet in the stirrup or loop, and lets himself out of the window. His weight causes the rope to fit in the yokes or keepers S, as shown in Fig. 1, and also causes the lever-arm to which the stirrup is attached to press firmly against the yoke and thereby create so much friction between the rope, the cam, and the friction-arm as will cause him to descend slowly as the escape slides downward on the rope. The hand which grasps the handle U also grasps the rope, and the person is thus enabled to add to the friction on the rope by compressing the same with the hand against the handle U.

Having thus described our invention, we claim—

1. In a friction fire-escape, the combination of the case A, comprising the parts B and C, hinged together, and having the detent to lock the said parts when closed, the cam G, the levers N, pivoted to the case on opposite sides of the cam and having the curved friction-arms P and the outward extending arms R', and the rope arranged between the opposing sides of the cam and friction arms, substantially as described.

2. In a friction fire-escape, the combination of the case A, having the cam G, the lever N, pivoted to the case and arranged on one side of the cam, the said lever having the friction-arm P, the handle U, and the keeper or yoke S, the rope passing between the opposing sides of the cam and the friction-arm and through the yoke or keeper, and the stirrup or loop secured to the lever-arm and depending therefrom, substantially as described.

3. The combination of the case A, having the cam G and the lever I, projecting from one side of the case, the levers N, fulcrumed to the case on opposite edges of the cam, the said levers having the friction-arms P, and provided at their outer ends with the oppositely-extending handles U, and the yokes or keepers S, the rope passed around the cam between the same and the friction-arms and engaged by the yokes or keepers S, and the stirrup or loop adapted to be connected to either of the levers N, for the purpose set forth, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

LENIOUS D. SMITH.
WILSON ALBERT OLDS.

Witnesses:

J. L. KILLIAN,
J. GRISWOLD.