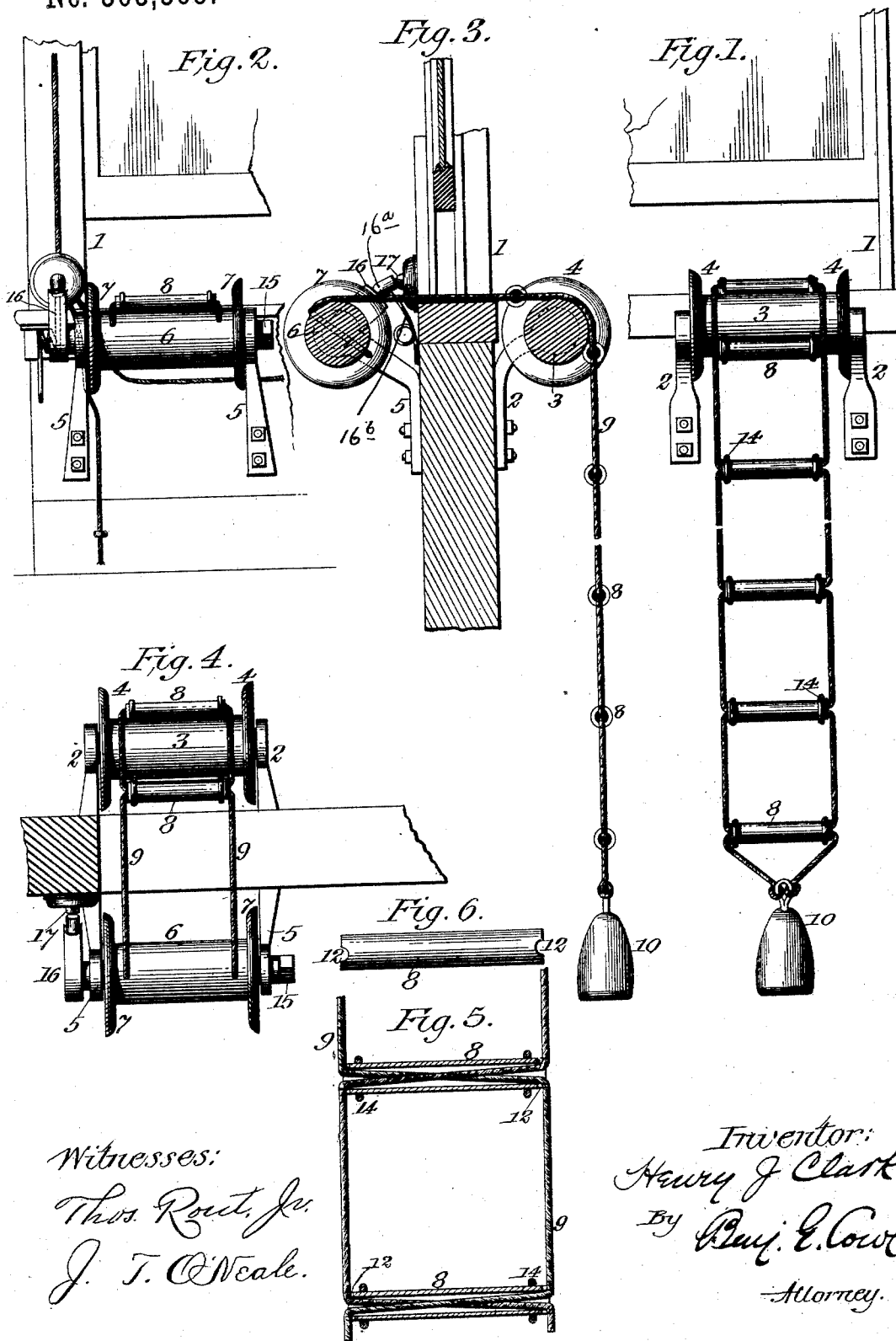


(No Model.)

H. J. CLARK.
FIRE ESCAPE.

No. 503,365.

Patented Aug. 15, 1893.



Witnesses:
Thos. Rout, Jr.
J. T. O'Neale.

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UNITED STATES PATENT OFFICE.

HENRY J. CLARK, OF IRONTON, OHIO, ASSIGNOR OF ONE-HALF TO CHARLES L. DENNELER, OF SAME PLACE.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 503,365, dated August 15, 1893.

Application filed March 24, 1893. Serial No. 467,406. (No model.)

To all whom it may concern:

Be it known that I, HENRY J. CLARK, a citizen of the United States, residing at Ironton, in the county of Lawrence and State of Ohio, have invented certain new and useful Improvements in Fire-Escapes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in fire escapes of that class or description in which a metal ladder is mounted upon a rotatable reel, located in a room in a building in close proximity to a building, so that the occupant of the room in case of fire, can lower the ladder and afford a means of escape.

The invention consists in the novel construction and combination of parts hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a front elevation of a window showing my improvements applied thereto. Fig. 2 is a rear view of the same, or looking from the inside. Fig. 3 is a vertical sectional view. Fig. 4 is a plan view. Fig. 5 is a detail view of a portion of the ladder, and Fig. 6 is a detail view of one of the rounds.

In the said drawings, the reference numeral 1 designates a window frame, to the front of which or to the building below the sill are secured two brackets 2, 2, in which is journaled a roller 3, having annular end flanges 4.

To the inside of the building are secured two brackets 5, 5, in which is journaled a reel, consisting of the hub 6, and end disks 7, to which one end of the ladder is secured. This ladder consists of a series of rounds or metal tubes 8, through which the wires or cables 9, pass. These cables are secured to the hub of the reel, and are passed through the tubes from opposite sides as will be clearly seen in Fig. 4. The free ends are then connected together and provided with a weight 10. The rounds as before stated consist of metal tubes and at each end are formed with notches or recesses 12, which engage with the

cables during the descent of a person and thus prevent rotation of the same. Otherwise the tubes or rounds would be liable to turn resulting in the falling of the person descending.

In order to prevent accidents caused by the tubes splitting, which is liable to occur, I provide at each end thereof rings 14, which encircle the tubes or rounds. These rings are loose on the tubes when the latter are in proper condition, but should they split the rings are pushed toward the center thereof so as to embrace such split portions and confine them in place.

At one end the shaft of the reel is provided with a crank 15 by which the ladder is wound and unwound to raise and lower the same, and at the other end is provided with an arm 16, which is adapted to strike a block 16^a on the free end of a spring arm 16^b, which block in turn strikes an electric push button 17 secured to the window frame. This push button is connected with an ordinary electric bell, located at any suitable point or place, so that as the ladder is let down in case of fire by the occupant of the room the arm will strike the button at each revolution of the reel and sound an alarm.

The operation will be readily understood. In case of fire the occupant of the room passes the free end of the ladder out of the window on the roller on the outside of the building and lowers the same by means of the crank, thus affording a convenient means of escape.

Having thus described my invention, what I claim is—

1. In a fire escape, the combination with the brackets secured to the outside of a building and the flanged roller journaled therein, of the reel journaled in brackets secured to the inside of the building, the cables secured to said reel, and the tubes having notches at each end through which said cables pass alternately from opposite sides, substantially as described.

2. A ladder for fire escapes consisting of the tubes or rounds having notches or recesses at their ends and the cables passing through said tubes, alternately, at opposite sides, substantially as described.

3. A ladder for fire escapes, consisting of

the tubes or rounds having notches or recesses at the ends, the rings encircling the same, and the cables passing through said tubes, alternately, from opposite sides, substantially as 5 and for the purpose specified.

4. In a fire escape, the combination with the flanged roller on the outside of a building, the reel on the inside thereof and the ladder secured thereto, of the arm on the shaft of 10 said reel the spring arm provided with a block

which said shaft arm is adapted to strike during the rotation of said reel, and an electric push button depressed by the movement of said block, substantially as described.

In testimony whereof I affix my signature in 15 presence of two witnesses.

HENRY J. CLARK.

Witnesses:

DANIEL CARROLL,
PERRY L. CLAY.