

J. M. CHANDLER.
Fire-Escape.

No. 199,028.

Patented Jan. 8, 1878.

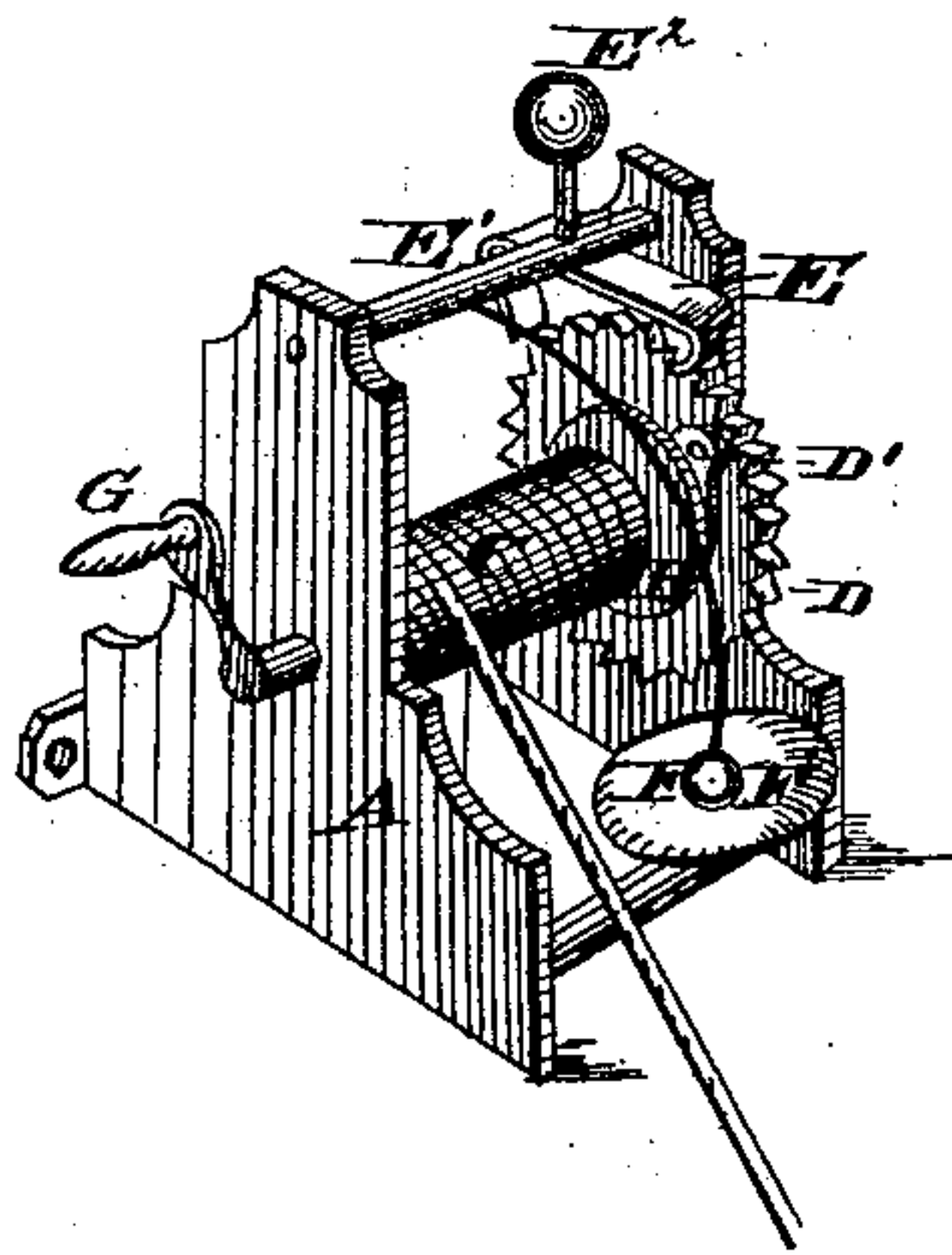


Fig. 1.

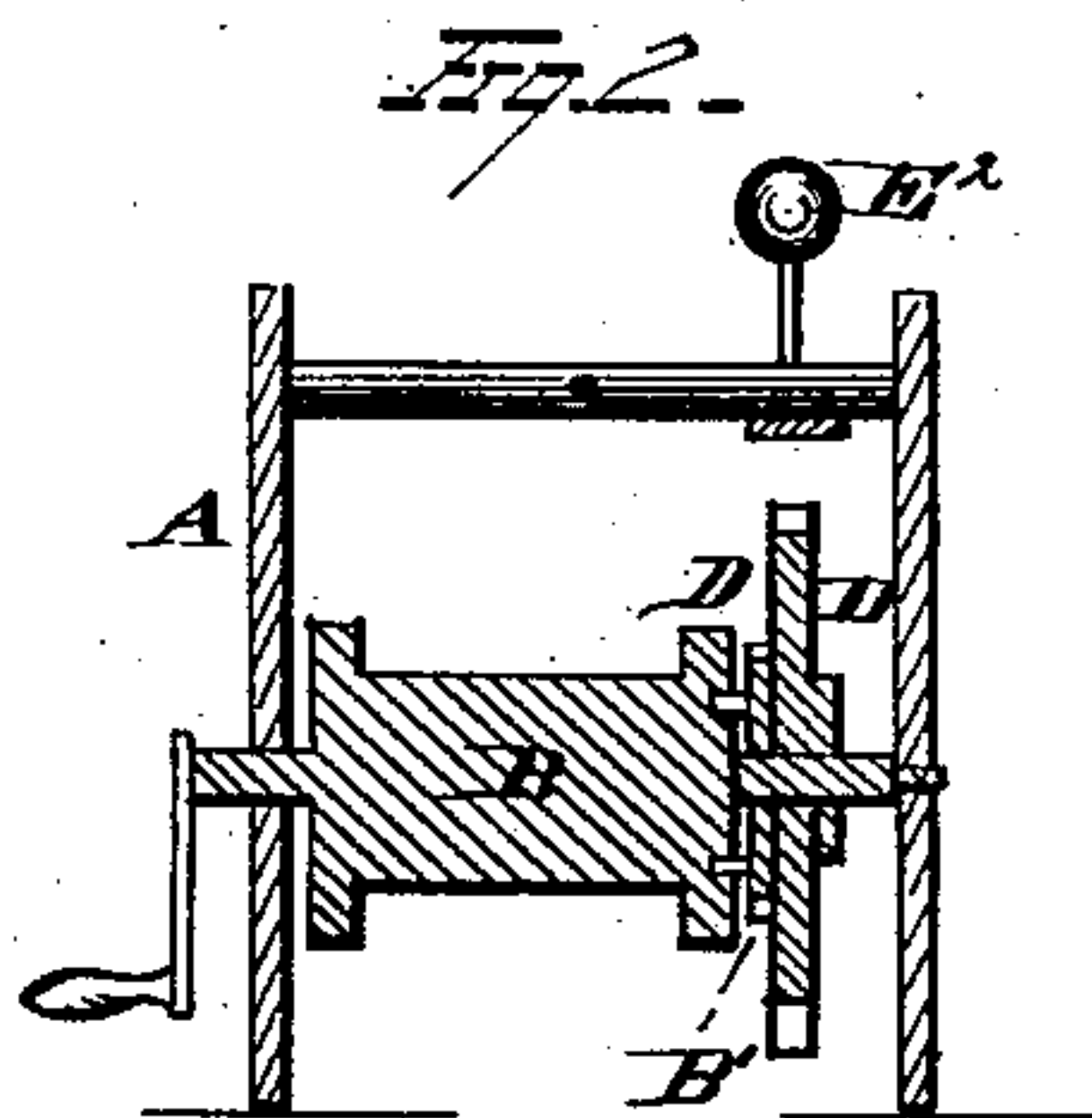


Fig. 2.

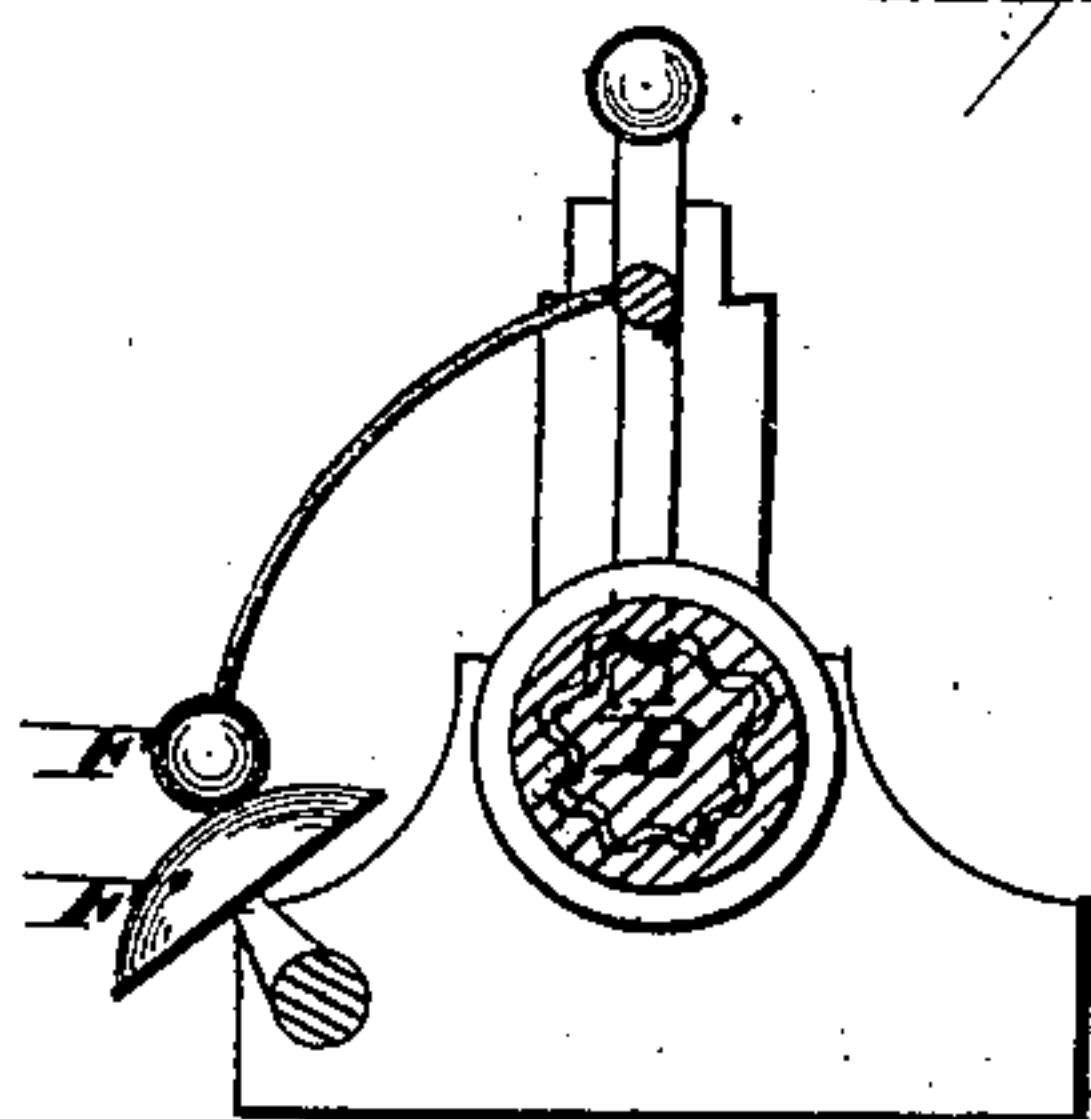


Fig. 3.

WITNESSES

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IMPROVEMENT IN FIRE-ESCAPES.

Specification forming part of Letters Patent No. **199,028**, dated January 8, 1878; application filed August 11, 1877.

To all whom it may concern:

Be it known that I, JOHN M. CHANDLER, of Fredonia, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in Fire-Escapes; and I do hereby 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in fire-escapes, and more particularly to that class of fire-escapes which is designed to lower a person from a room or apartment by means of a cable from an apparatus located within the room.

In the drawings, Figure 1 is a perspective view of an apparatus embodying my invention, looking upon that side adjacent to the signal or gong. Fig. 2 represents a longitudinal central section, by a vertical plane, embracing the axis of the drum. Fig. 3 represents a variation of my invention.

A is a suitable frame-work for supporting the drum B, and upon this drum is wound any suitable rope or other cable, C. B' is a ratchet secured to the roll B, which ratchet engages with the pawls D' on the loose wheels D, so that as the rope is being unwound—or, in other words, as a person is descending—the wheel D will turn with the roll; but in the reverse motion of winding the rope by the crank, the pawls will ride over the ratchets without disturbing the wheel D.

In the present instance the wheel D is an escapement-wheel, which operates the verge E on the shaft E¹.

F is a clapper, and F' a gong within range of the clapper. E² is a ball, which assists the verge E to operate as a brake or governor.

The operation of the device is as follows: The apparatus is supposed to be located adjacent to the window within the apartment. If a fire should occur, the occupant secures the apparatus, by any suitable harness, to his

body in any suitable position for securely holding him as he descends. He then throws himself out of the window and immediately begins to descend, his weight operating to unwind the cable from the roll. The moment the roll begins to unwind, it carries with it the escapement-wheel D, which, in turn, causes the verge and clapper F to vibrate, and immediately gives an alarm on the gong F to all occupants of the building that may be adjacent to the alarm.

This alarm continues to sound as long as the rope or cable is unwinding. At the same time the roll operates the escapement D the verge E operates as a governor to govern the descent. This governing action is effected through the friction between the escapement-wheel and the verge, and is materially assisted by the ball E².

This ball may be made stationary upon its arm, or it may be left loose, so as to rise and fall on its arm as the speed is increased or diminished; or this may be made adjustable, so that it may be fixed in any desired position on its arm.

Moreover, the escapement-wheel and the verge, in the form shown, are not absolutely essential. The same principle will obtain if a device be employed such as shown in the variation in Fig. 3, wherein the verge E projects down against the end of the drum, and suitable studs or projections extend into an undulating cam in the end of the drum, which cam will cause the verge and clapper to vibrate.

So, also, it is not essential that my device should be provided with a loose roll and an accompanying pawl-and-ratchet mechanism for gearing it with the escapement. This is only desirable in case I may wish to make the machine so as to readily wind the rope or cable after it has been uncoiled.

The roll may be made rigid with the escapement-wheel or its equivalent, and will serve all the purposes it now serves, so far as concerns the descent of a person from an apartment; but the other method is the preferable

construction, as it readily enables another person in the room to wind up the rope and use it again in lowering another person.

G is a suitable crank or its equivalent for winding up the cable.

What I claim is—

The combination, with a fire-escape apparatus, of an escapement-wheel, D, or its equivalent, verge E, vibrating clapper F, and gong

or bell F', substantially as and for the purposes described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN M. CHANDLER.

Witnesses:

E. D. HOWARD,

GEO. HAYDEN.