

No. 720,996.

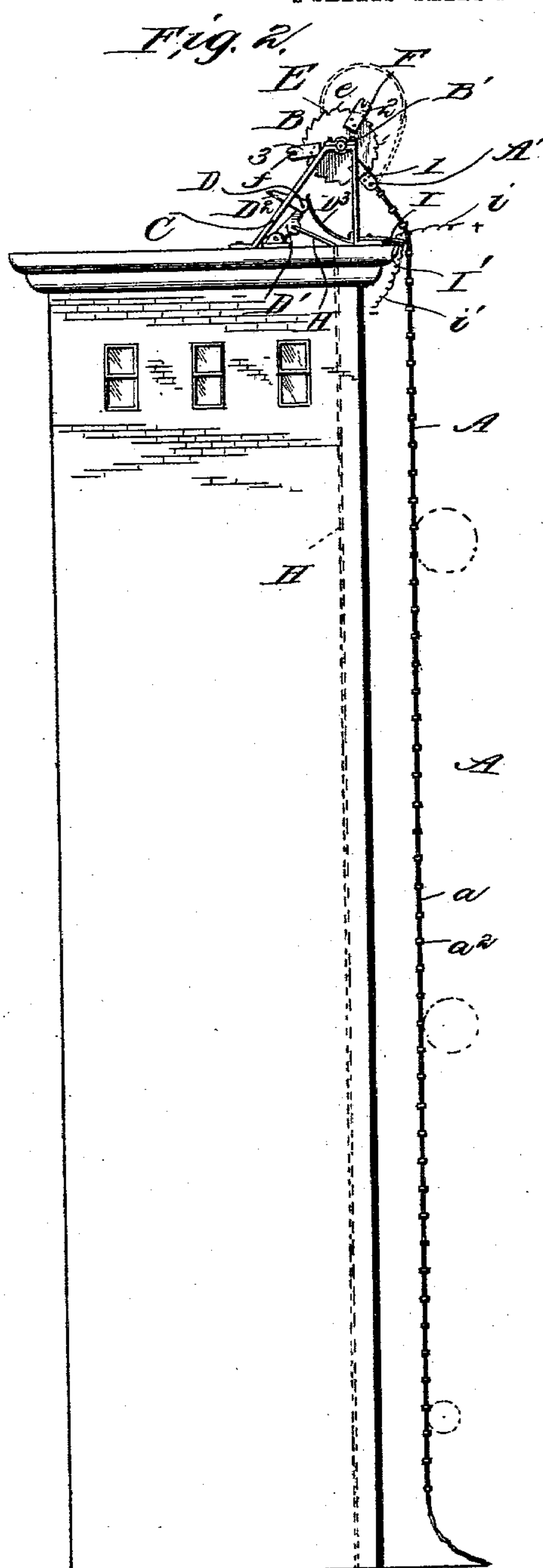
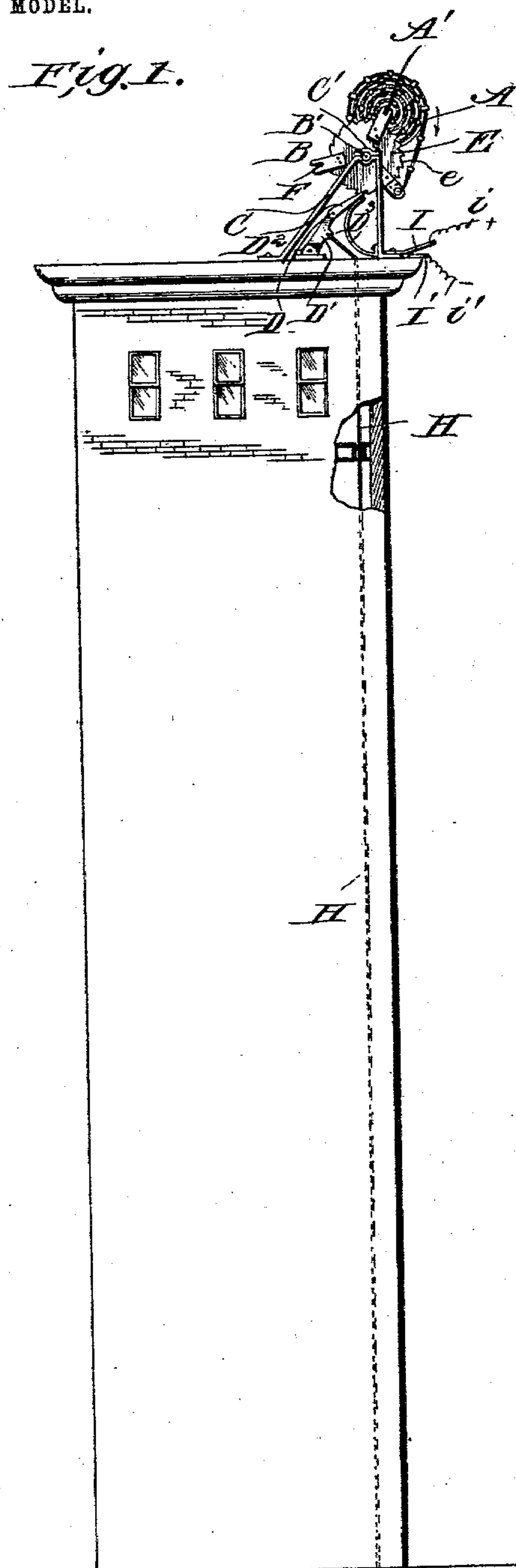
PATENTED FEB. 17, 1903.

T. B. BARBER.  
FIRE ESCAPE.

APPLICATION FILED MAY 31, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

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INVENTOR

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ATTORNEYS.

No. 720,996.

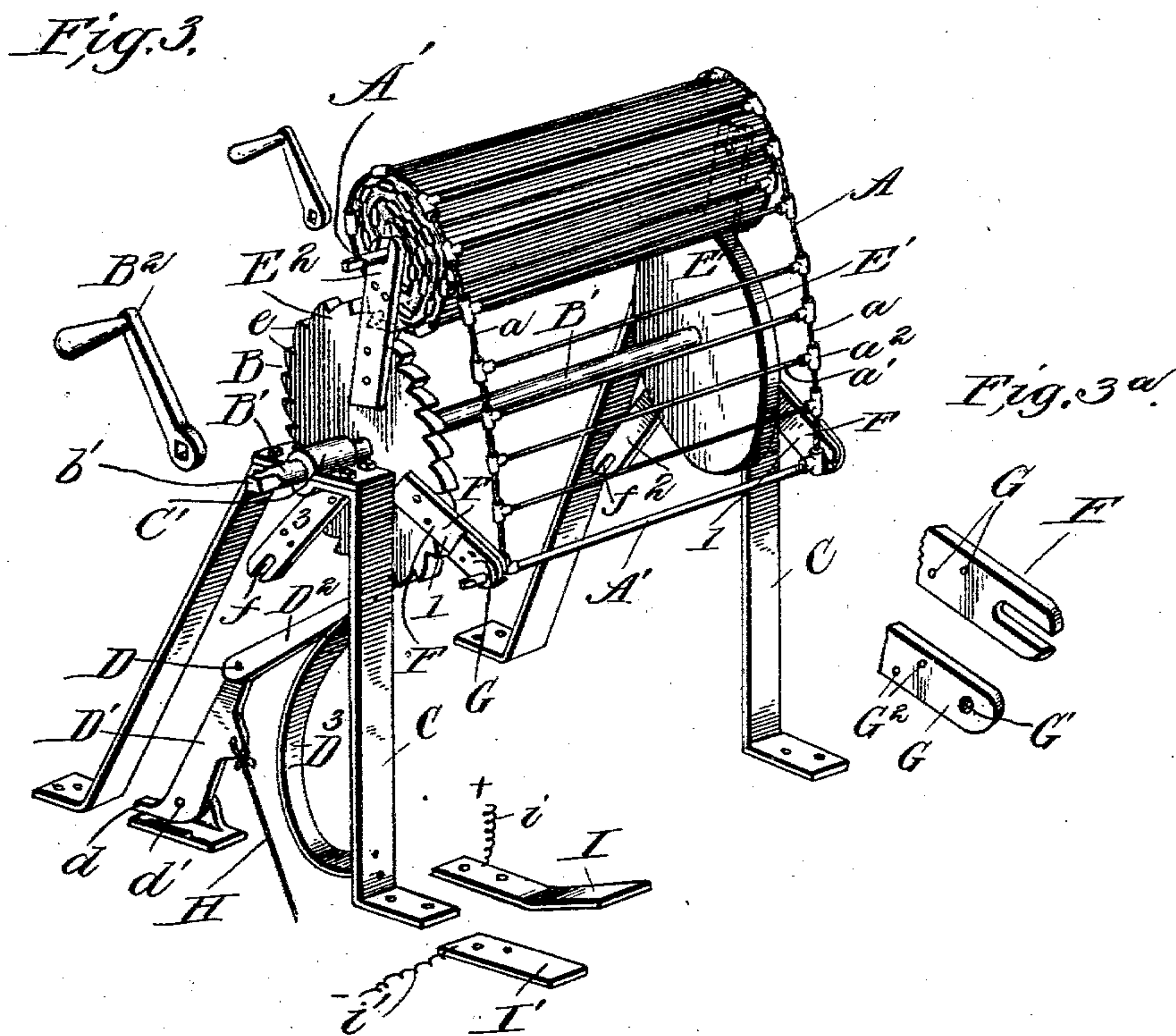
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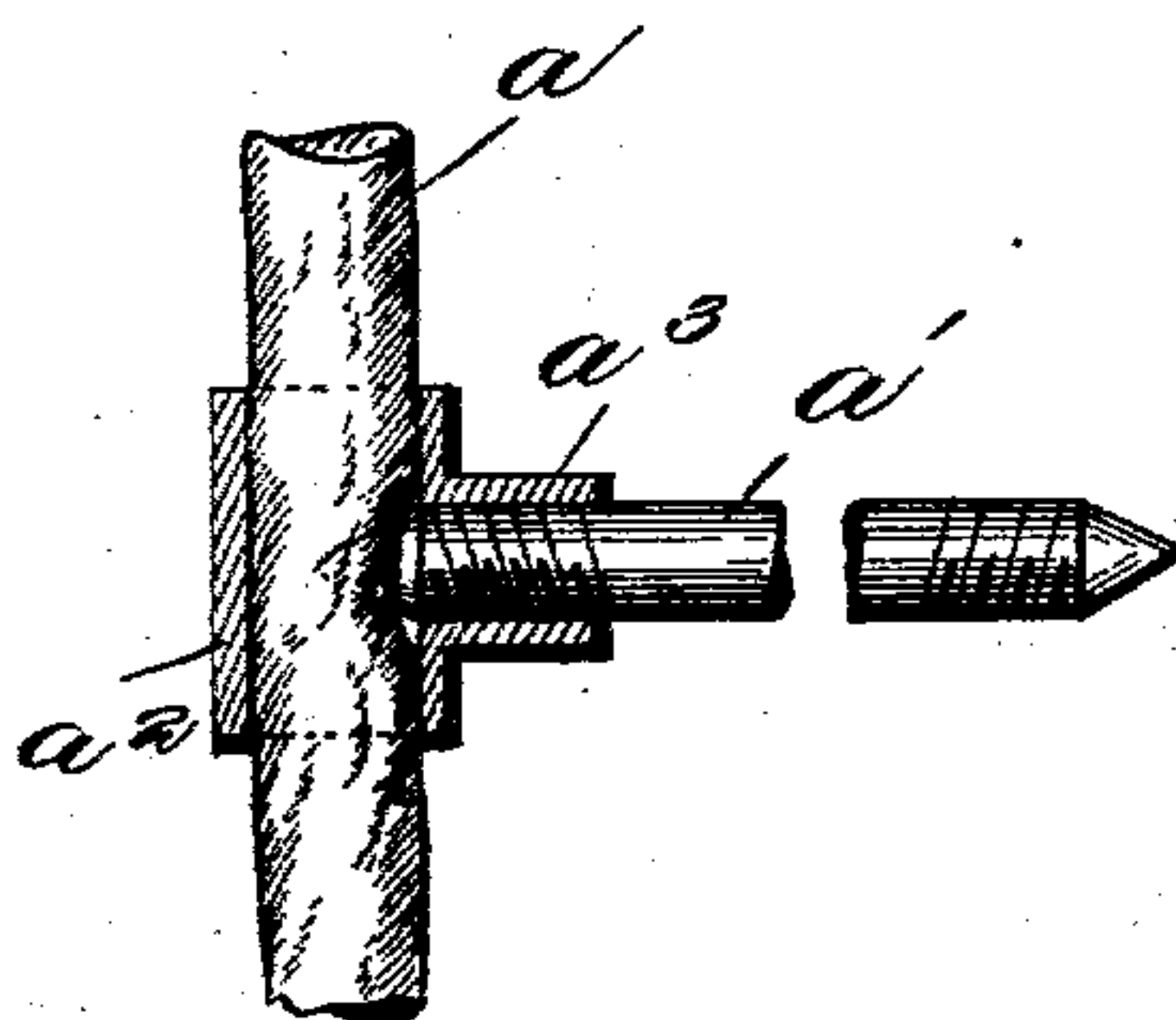
APPLICATION FILED MAY 31, 1902.

NO MODEL.

2 SHEETS—SHEET 2.



*Fig. 4.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

THURSTON B. BARBER, OF NORWICH, CONNECTICUT.

## FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 720,996, dated February 17, 1903.

Application filed May 31, 1902. Serial No. 109,711. (No model.)

*To all whom it may concern:*

Be it known that I, THURSTON B. BARBER, a citizen of the United States, residing at Norwich, in the county of New London and State of Connecticut, have made certain new and useful Improvements in Fire-Escapes, of which the following is a specification.

My invention is an improvement in fire-escapes, and has for an object to provide a simple construction which can be supported upon the top of a building and will include a ladder which can be lowered automatically by means of devices operated by an occupant of the building whenever the ladder is required; and the invention consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation of the device as in use, the ladder being elevated; and Fig. 2 is a similar view, the ladder being lowered to the ground. Fig. 3 is a detail perspective view of the devices for supporting the ladder, and Fig. 4 illustrates in detail a feature of the construction of the ladder.

In operation I support the fire-escape devices upon the top of the building or at other suitable elevated point above the locations of the persons who may desire to escape from the building in case of fire, and the improved apparatus includes a ladder A, a carrier B, a frame C, on which the carrier B journals, a detent D, and other devices, which will be described.

The carrier B has a shaft B', journaled at C' in bearings in the frame C and adapted at b' to receive the crank-handle B<sup>2</sup>. This carrier B preferably includes end plates E and E', the former being provided with ratchet-teeth e and the projections or arms F, preferably three in number, extending radially and provided at their outer ends with notches f for the shafts A' at the opposite ends of the rope ladder A.

The detent D includes the arm D', pivoted at d' and having a stop projection d, which limits its rearward movement, and the pawl D<sup>2</sup>, which engages at its point with the ratchet-teeth e and is pressed into engagement there-with by the spring D<sup>3</sup>, as best shown in Fig. 3.

The ladder A comprises the cables a, which may be of suitable wire rope, the rounds a'

and the sockets a<sup>2</sup> encircling the cable a and having threads at a<sup>3</sup>, the threads a<sup>3</sup> of the opposite sockets being one right and the other left hand, so the round a' can be turned into engagement with both said opposite sockets, as desired. The shafts A' at the opposite ends of the ladder A are fitted in notches f of adjacent projections F, and the lower end shaft A' is locked in its notches f by means of plates G, having openings G', receiving the shaft A' and bolted at G<sup>2</sup> to the arm F, (see Figs. 3 and 3<sup>a</sup>,) so the plates G may be detachably secured to the arm F in order to fasten one end of the ladder to the carrier when desired. When in the adjustment of parts shown in Fig. 3 the ladder A is rolled on its upper shaft, which may be effected by removing the crank-handle B<sup>2</sup> from the shaft B' and applying it to the upper shaft A' of the ladder, the roll of ladder is loosely held by the seating of its upper shaft A' in the open notches f of the upper projections F. (See Fig. 3.) In such position the carrier and the ladder will be held by the engagement of the pawl D<sup>2</sup> with the ratchet-teeth e of the disk E. If now the detent D be released by pulling on a line H, which may extend downwardly, preferably within the house, in convenient reach from the different windows of the building, the detent will be broken downward on its joint between the arm D' and the pawl D<sup>2</sup>, the carrier will be released and will rock forward by the weight of the roll of ladder, and such roll will drop from the arms F, supporting it, and fall to the ground, unrolling as it descends and affording a convenient means by which the occupants of the building may descend in safety to the ground.

In order to automatically sound an alarm and signal to both the fire department and the police department, I provide for sounding a signal by the adjustment of the parts to drop the ladder, this being preferably effected by the ladder as it falls and by means of a circuit-closer I, contacting with a plate I' and arranged to be pressed into such contact by the ladder as the latter falls. The wires i and i' may be suitably extended to form the circuit and include signals at any desired point. As shown the plate I' is arranged below the plate I and the latter below the carrier B, in position to be sprung



downward into contact with the plate I' by the ladder as the latter falls from the position shown in Fig. 1 to that shown in Fig. 2 of the drawings.

5 After the apparatus has been used and the ladder has been lowered to the position shown in Fig. 2 it may be readjusted to the position shown in Fig. 1, ready for subsequent use, by manipulating the pawl or detent back to the  
10 position shown in Figs. 1 and 3, then turning the carrier B to bring the arm F shown at 1 in Fig. 3 to the position of the arm F shown at 2 in said Fig. 3, when the arm F shown at 3 in Fig. 3 will assume the position of the  
15 arm F shown at 1 in Fig. 3, and the crank-handle may be applied to wind the ladder up, as shown in Fig. 3, and the locking-blocks G be applied, as shown in Fig. 3, when the device is again in position for use.

20 The construction is simple, can be readily operated, will efficiently serve its purpose, will aid persons in escaping from a burning building, will automatically sound a signal to the fire department and police department,  
25 and in case a burglar or other wrongdoer should seek to avail himself of the apparatus as a means of escape the police will be notified and would at once be called to the scene.

Having thus described my invention, what  
30 I claim as new, and desire to secure by Letters Patent, is—

1. The fire-escape herein described consisting of the carrier having projecting arms or supports for the shaft of the ladder, a support  
35 in which said carrier may rock, detent mechanism for holding the carrier from rocking, and the ladder provided at its opposite ends with shafts to seat in the projections or arms

of the carrier, and means whereby the shaft at one end of the ladder may be held when 40 the shaft at the other end of the ladder is discharged from the carrier by the rocking of the latter substantially as set forth.

2. The combination in a fire-escape of the rocking carrier having arms or projections 45 for supporting and securing the ladder, the ladder secured at one end to the carrier and detachably supported at its other end by the carrier, whereby the rocking of the carrier may discharge such end of the ladder, and a 50 circuit-closer supported below the carrier in position for operation by the ladder as the latter adjusts in position for use substantially as set forth.

3. The combination of the rocking carrier 55 having an end plate provided with ratchet-teeth, and provided with projecting arms F having notches *f* and locking-plates G for application to said arms, the detent D having arm D', pawl D<sup>2</sup> and spring D<sup>3</sup> for opera- 60 tion in connection with the ratchet-teeth of the carrier, and the ladder having the opposite end shafts for connection with the carrier, substantially as set forth.

4. A fire-escape comprising a ladder, and 65 a rocking carrier provided with devices rocking with the carrier and arranged to support the roller at end of the ladder and to discharge the same in certain adjustments and also to secure the end of the ladder opposite the 70 rolled-up end, substantially as set forth.

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Witnesses:

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