

No. 647,373.

Patented Apr. 10, 1900.

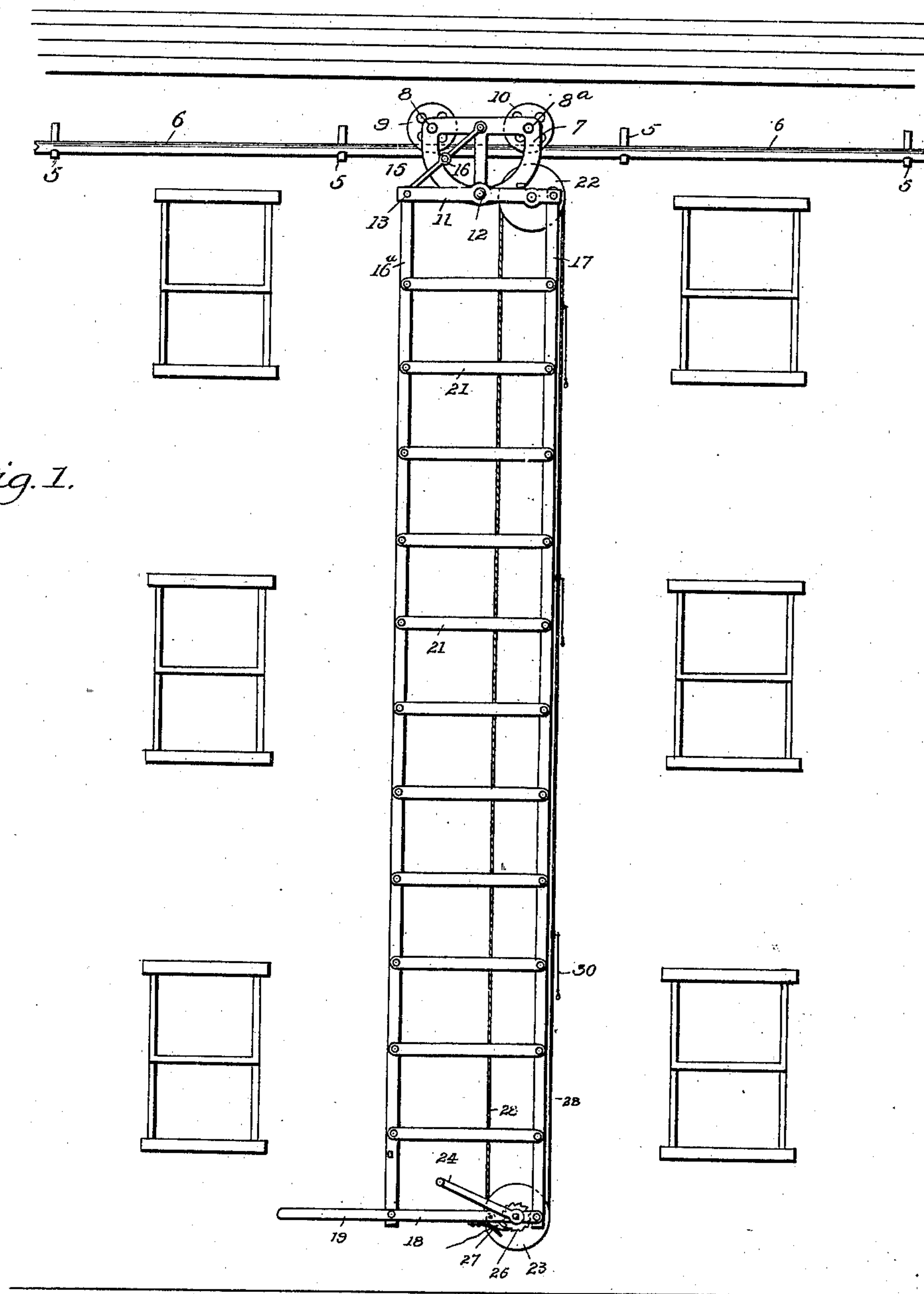
C. P. BREINING.
FIRE ESCAPE.

(Application filed Nov. 28, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



Witnesses:

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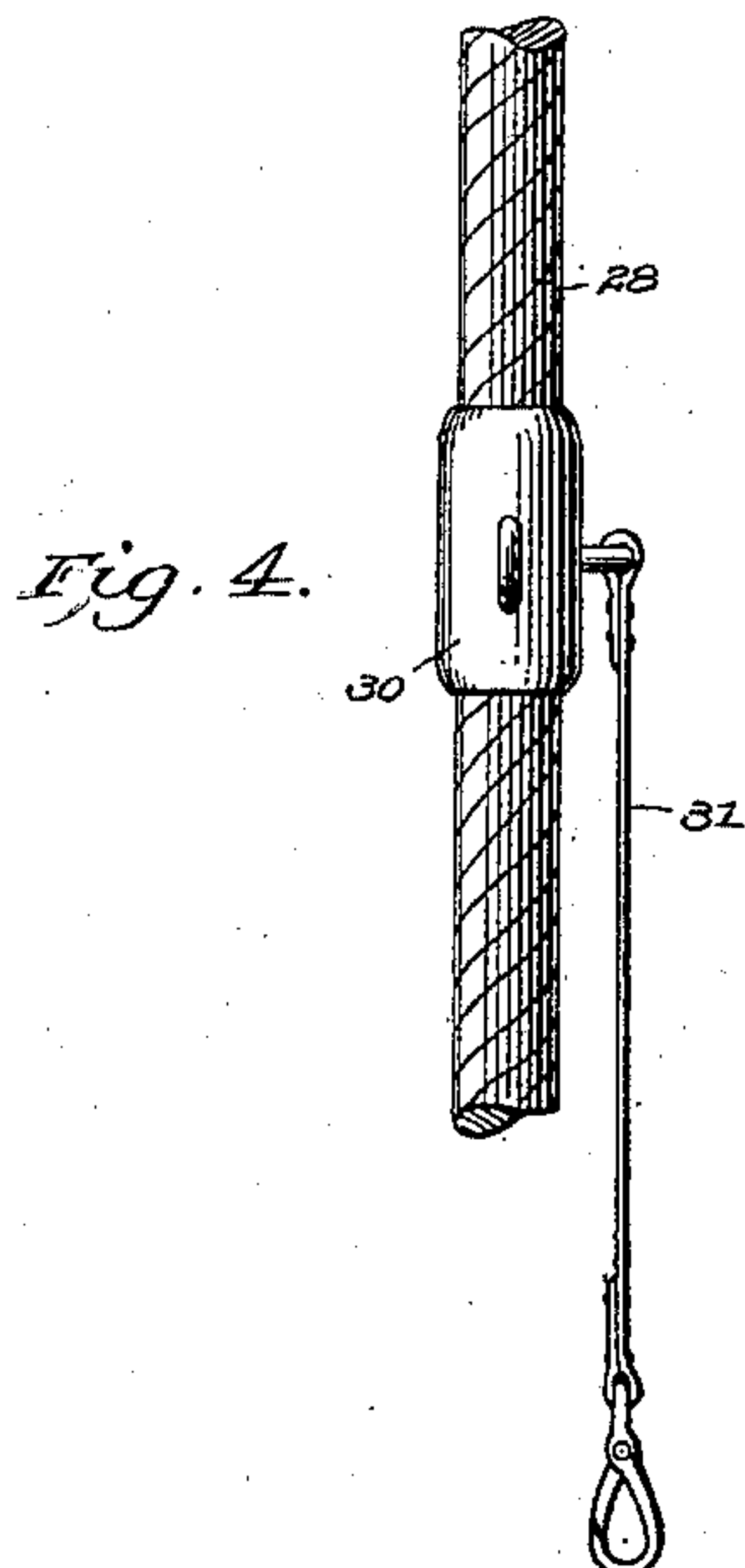
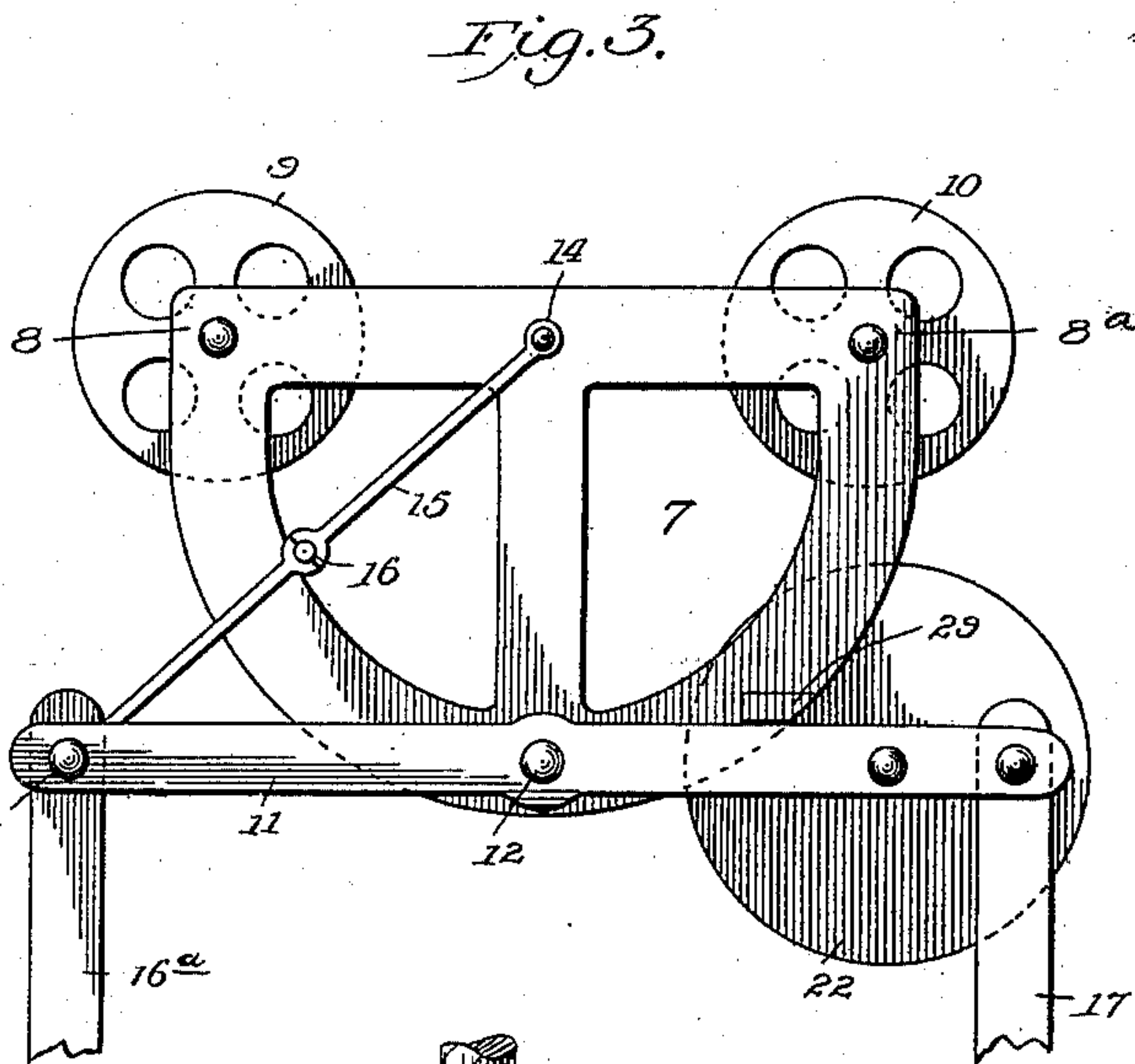
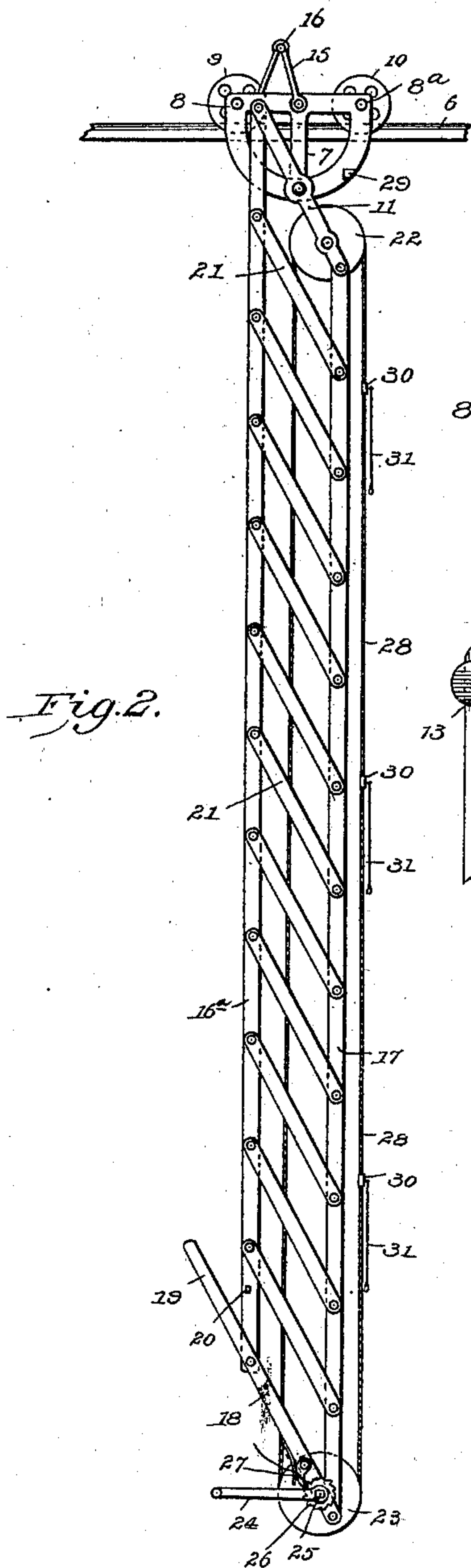
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2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

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FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 647,373, dated April 10, 1900.

Application filed November 28, 1899. Serial No. 738,566. (No model.)

To all whom it may concern:

Be it known that I, CLAYTON P. BREINING, a citizen of the United States, residing at Cogan Station, in the county of Lycoming and State of Pennsylvania, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification.

This invention relates to fire-escapes; and the object thereof is to provide a device of the character described which will be durable, simple, and easily operated and at the same time readily respond to the manipulation of the operator.

With this object in view my invention consists in certain parts and combinations of parts, all of which will be specifically described hereinafter, recited in the claims, and illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of a portion of a house to which a fire-escape has been arranged in accordance with my invention. Fig. 2 is an elevation of a portion of the track supporting the device partially collapsed. Fig. 3 is an enlarged detail view of the yoke, and Fig. 4 is a similar view of the sleeve connecting one of the belts to the cable.

Referring now to the drawings by reference-numerals, 5 indicates a series of hangers or hooks provided at predetermined intervals at or near the top of a structure and which engage and support in any suitable manner a horizontal track 6. In practice this track can be arranged on all sides of the structure continuously, or it may be supported on only one or more sides, as found convenient or desirable.

Supporting the yoke 7 and loosely mounted in journals 8 and 8^a are grooved wheels 9 and 10, which are adapted to run the entire length of the track to transport the mechanism, to be hereinafter referred to, from one portion of the building to another. This yoke is preferably semicircular in plan and will be made of light durable material, and at the lower central portion I provide a pivoted transverse bar 11, secured thereto by a pin or bolt 12. Secured to said bar 11 at 13 and to the upper portion of the yoke at 14 is a central hinged brace 15, comprising two sections pivoted at 16 in such a manner that the two sections above referred to will be slightly out of aline-

ment, so that when the brace is extended the transverse bar will be rigidly supported with relation to the yoke.

Pivotaly secured one to each end of the transverse bar 11 are downwardly-projecting side bars 16^a and 17, connected at their lower ends by a transverse lever 18, the handle 19 of which is adapted to engage with the lug or projection 20 on the face of the side bar 16^a. Intermediate the top and bottom connections of the above-referred-to side bars I provide a series of braces 21, which I will term "rounds," inasmuch as they will be spaced apart a suitable distance to enable the supported structure just described to be utilized as a ladder, although for aged persons and children I provide a separate and distinct means for aiding their descent.

Journalled to the transverse bar 11 is a pulley 22, and to the lever 18 is a pulley 23, the latter being operable by a crank 24 from the ground, and on the axle 25 of the latter pulley is a ratchet 26, engaged by a dog 27, controlled by suitable means, whereby the endless belt or cable 28, driven around said pulleys, may be held rigid when found desirable, said cable being wound around the lower pulley two or more times to prevent slipping.

29 is a lug or stop on the yoke 7 to add rigidity to the ladder when extended, and 30 are sleeves secured to the cable to provide connecting means for the life-belts 31.

In the practical embodiment of my invention the device will be collapsed or folded, the handle 19 of the lever 18 engaging the lug 20 to hold it so; but when it is desired to use the device the operator will pull on the handle 19, thus operating the brace 15, which will hold the structure suspended from the yoke rigid. The occupants of the building who are able can then utilize the rounds of the ladder to make their escape therefrom, while others may be lowered by the cable and belts in an obvious manner by operating the crank 24. It is apparent that the cable can be held and retained rigid at any predetermined point by merely throwing the dog into engagement with the ratchet carried by the axle of the lower pulley.

What I claim, and desire to secure by Letters Patent, is—

1. In a fire-escape, the combination with a

suitable support, of a carriage adapted to travel thereon, a collapsible ladder arranged on said carriage, a brace for holding the same rigid, a lever at the lower end of said ladder
5 for extending the same and folding the sides one upon another, and means for holding the lever-handle in a locked position with relation to the side thereon when the ladder is collapsed, substantially as described.
10 2. The combination with a yoke, of a ladder pivoted thereto, a brace secured to the yoke and ladder, pulleys, one at each end thereof, an endless cable mounted on said pulleys, belts arranged at predetermined distances on said cable, and means for actuat-
15 ing the pulleys and cable, substantially as described.

3. The combination with a yoke adapted to travel along a suitable support, of a foldable ladder pivoted to said yoke, a centrally- 20 hinged brace, connected to said yoke and ladder, a pulley at each end of said ladder, a cable arranged thereon, carrying means to aid persons in descending, a pawl-and-ratchet mechanism for engaging the lower pulley and 25 means for rotating the pulleys, substantially as described.

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

CLAYTON P. BREINING.

Witnesses:

C. L. RADER,
MILES MOYER.