No. 751,870. PATENTED FEB. 9, 1904.

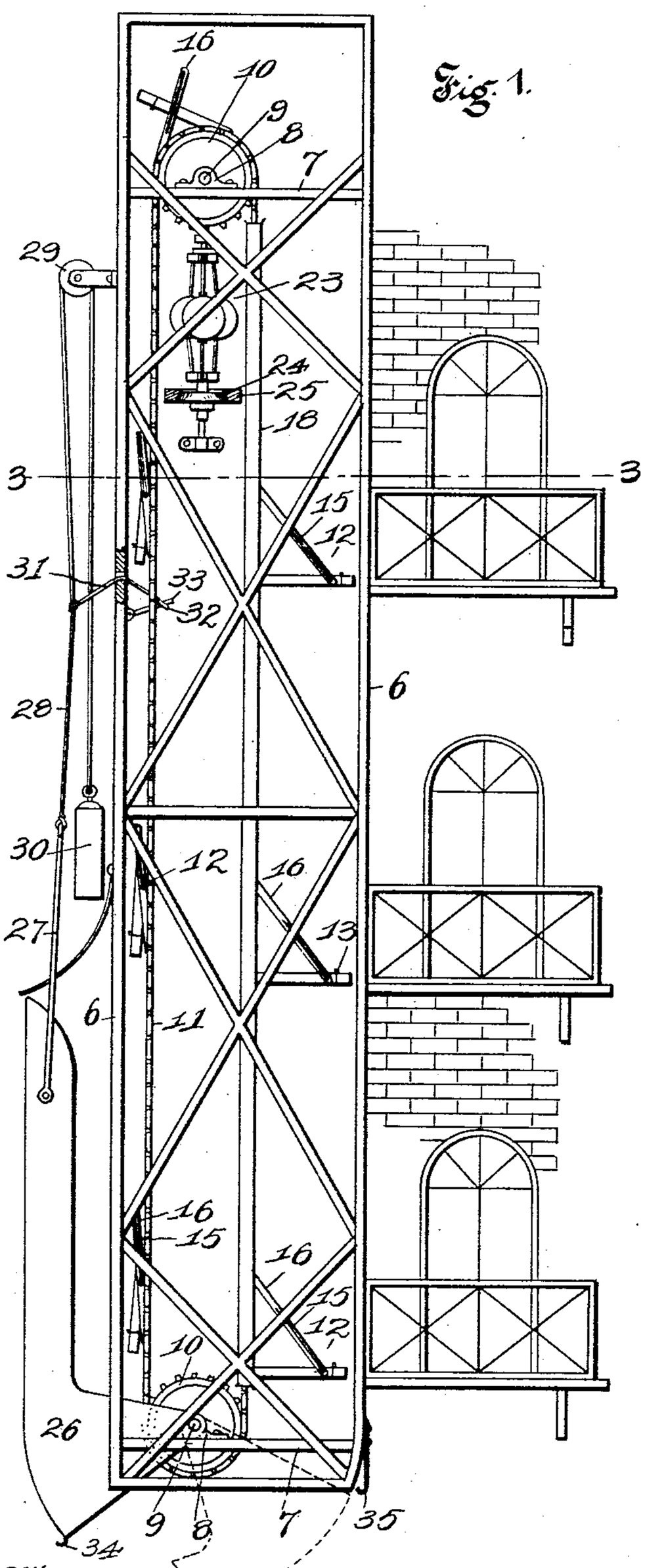
J. C. OTHER.

FIRE ESCAPE.

APPLICATION FILED JULY 20, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

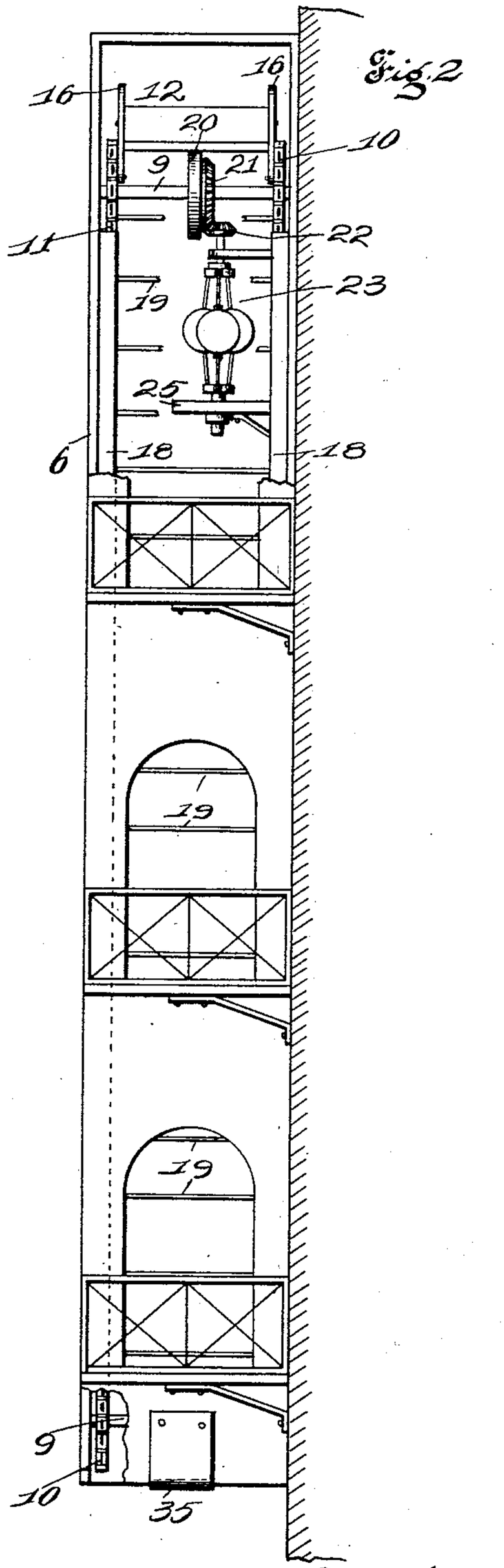


Witnesses

Alfred A. Ricks

W. L. Orion

Fig. 2.



Inventor

John C. Other.

by Higdon & Longan & Hopkins attys.

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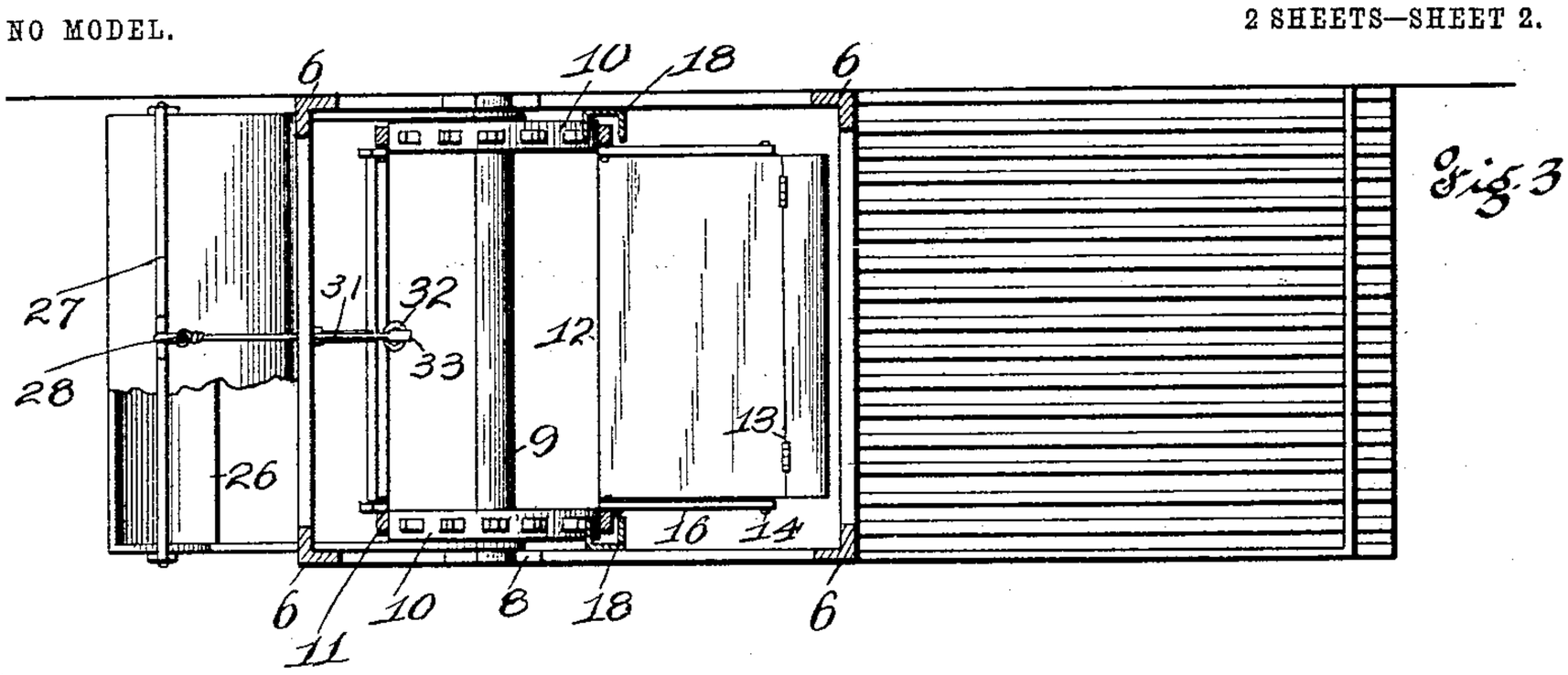

Fig. 3

Fig. 4

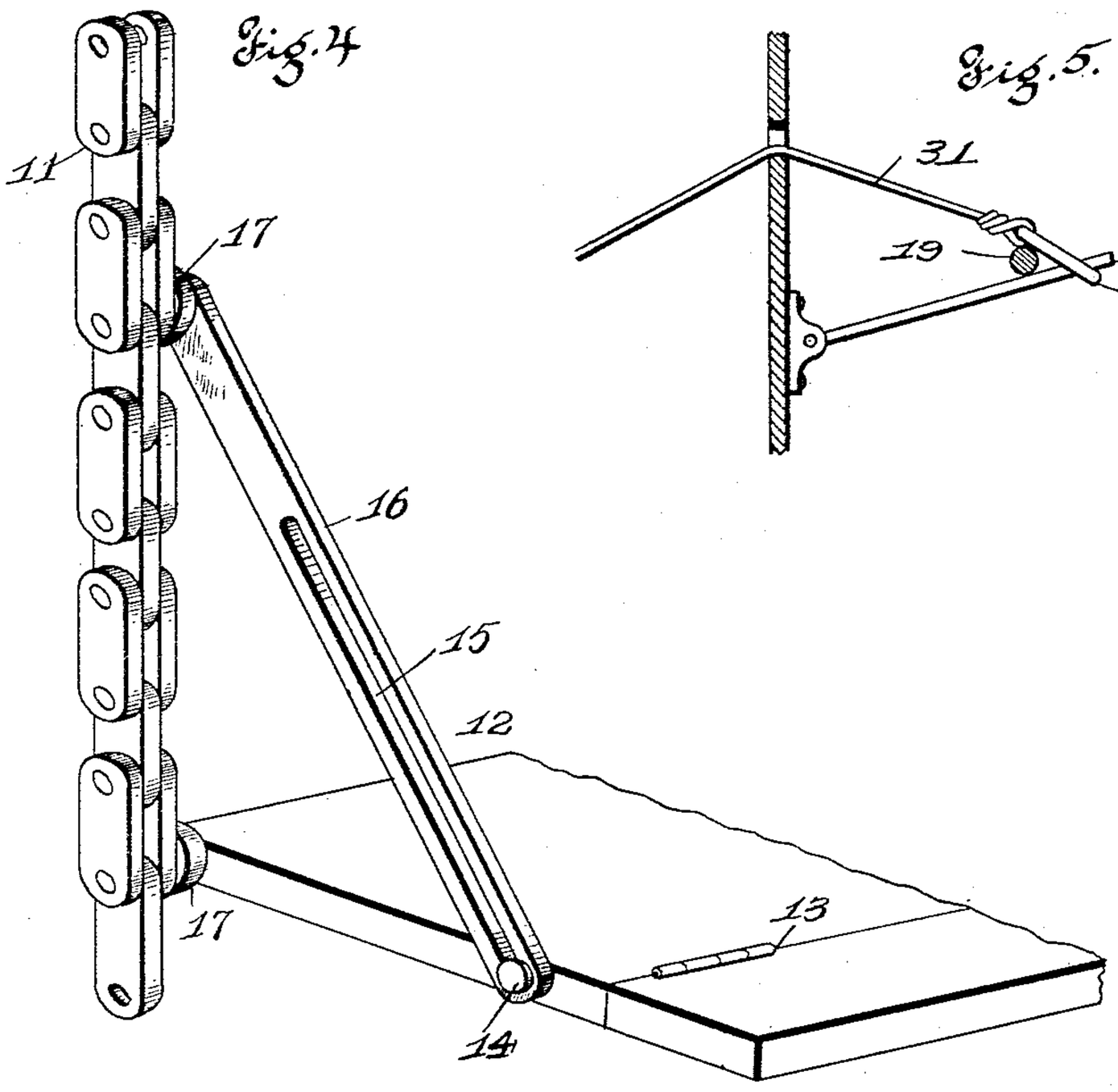

Fig. 5.

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No. 751,870. Patented February 9, 1904.

UNITED STATES PATENT OFFICE.

JOHN C. OTHER, OF ST. LOUIS, MISSOURI.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 751,870, dated February 9, 1904.

Application filed July 20, 1903. Serial No. 166,229. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. OTHER, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification containing a full, clear, and exact description, reference being had to accompanying drawings, forming a part hereof.

My invention relates to fire-escapes; and it consists of the novel construction, combination, and arrangement of parts hereinafter described and claimed.

The object of this invention is to provide an improved fire-escape to be located conveniently near the windows of a building and arranged to automatically lower persons stepping upon the platform and deliver them onto a chute conveying them safely to the street.

A further object of my invention is to provide an improved means whereby the speed of the fire-escape is regulated or equalized by the different weights of the persons using the same.

In the drawings, Figure 1 is a front view of my complete invention attached to a building, the front side of the casing being removed for clearly displaying the internal construction. Fig. 2 is a side view of the same with a part broken away, showing the construction. Fig. 3 is a horizontal sectional view taken on the line 3 3 of Fig. 1. Fig. 4 is a detail perspective view of a portion of the carrier made use of in carrying out my invention. Fig. 5 is a detail sectional view of the locking and releasing means made use of for governing the chute.

In constructing my invention I provide a frame composed of four vertical members 6, suitably supported and held together by braces arranged in a manner well known to the trade. In the upper and lower ends of the frame are located the cross-bars 7, upon which are mounted and supported the journal-bearings 8, in which the shafts 9 are retained. Upon the said shafts 9 and located near each end thereof are sprocket-wheels 10, over which the sprocket-chains 11 are guided. Pivotally secured to the sprocket-chains 11 and arranged equal distances apart are carriers 12, composed of a table having a narrow portion of its front hinged, as indicated by the numeral 13, which is for the purpose of allowing the said table to give upwardly in the case of accident by the said front coming in contact with the feet of the person stepping upon said table. At the sides of said table are arranged trunnions 14, which fit into a slot 15, formed in the side braces 16, which are pivotally secured to the sprocket-chain 11. (See Fig. 4.) At the pivotal points of the table and side braces are located rollers 17, which come in contact during the movement of the chains with the guides 18, located one on each side of the frame. Secured to the chains are cross-bars 19, arranged equal distances apart and acting as a ladder, which bars are to be used in cases of emergency whereon a person may descend without the use of the carrier.

In the center of the upper shaft 9 is located a guide-wheel 20 and a bevel-gear 21, the purpose of the guide-wheel 20 being to turn the table of the carrier and place it in a horizontal position as the chains pass over center. The carriers during their upward movement automatically fold together, as shown in Fig. 1, and, as before stated, automatically assume a position at right angles to the chain during the downward movement. The bevel-gear 21 meshes with the bevel-pinion 22, operating the common-type governor 23, which is provided with a friction-gear 24, arranged to come in contact with the stationary member 25 as the weights of the governor spread, depending upon the speed of the chain.

A chute 26 is pivotally secured to the lower shaft 9 and arranged to be normally held when out of use in a vertical position, as shown in Fig. 1, its free end being provided with the yoke 27, supported by the cable 28. The said cable passes over the pulley 29 and is provided with the counterbalance-weight 30. To the cable 28 is connected a short strand 31, its free end carrying an eye 32, which is adapted to be passed over the end of the trigger 33, pivotally attached to the inner side of the casing. In arranging the trigger to retain the chute in an elevated position the eye 32 is passed over one of the bars 19 and the trigger

31, located beneath the same. This device is automatically released by the movement of the chains, allowing the said chute 26 to fall, and as the free end comes in contact with the ground the hook 34 automatically locks with the hook 35, retaining the same in said position.

The operation of my invention is as follows: In the event of a fire those desiring to escape from the building step upon the balcony through the passage-ways formed in the side of the casing, and the moment they alight upon the carriers their weight will automatically place the device in operation, instantly releasing the trigger mechanism, causing the chute 26 to fall downwardly and lock itself, and as the object being lowered reaches the bottom it is deposited into the chute and conveyed to the ground. The governor mechanism is arranged to regulate the speed of the revolving chains and carriers, preventing said device from operating too speedily.

This device may also be used in factories for conveying goods from one floor to another without the use of power and may be so arranged that a light-weight article will place the same in operation.

I claim—

1. A fire-escape, comprising a frame, endless chains located within said frame, a plurality of folding carriers carried by said chains and having front and rear sections hinged together, and a governor mechanism whereby the speed of the chains is regulated, substantially as specified.

2. A fire-escape of the class described, comprising a frame, sprocket-wheels located within said frame, endless chains operated by said sprocket-wheels, a plurality of folding carriers carried by said chains and having front and rear sections hinged together, a governor mechanism mounted in said frame for regulating the rotation of the sprocket-chains, and an automatically-released chute carried by said frame, whereby objects are conveyed to the ground from the escape, substantially as specified.

3. A fire-escape of the class described, comprising a plurality of folding carriers mounted upon endless chains, sprocket-wheels carrying said endless chains, a governor operated by the movement of the endless chains to regulate the movement caused by an object being placed upon the carrier to be conveyed to the bottom of the escape, a chute located beneath the endless chains, and a trigger mechanism operated by the movement of said chains releasing the chute, substantially as specified.

4. A fire-escape, comprising a frame located on the side of a building near the windows, sprocket-wheels located in said frame, endless chains carried by said sprocket-wheels, a plurality of folding carriers carried by the chains and having front and rear sections hinged together, a plurality of cross-bars carried by said chains; the said carriers automatically assuming a folded position during their ascent; a guide-wheel located upon an upper shaft, said guide-wheel unfolding the carriers as they come in contact; and a governor located in said frame and operated by a gear-wheel mounted upon the upper shaft, said governor equalizing the speed of the carriers during their rotation, substantially as specified.

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

JOHN C. OTHER.

Witnesses:
ALFRED A. EICKS,
M. G. IRION.