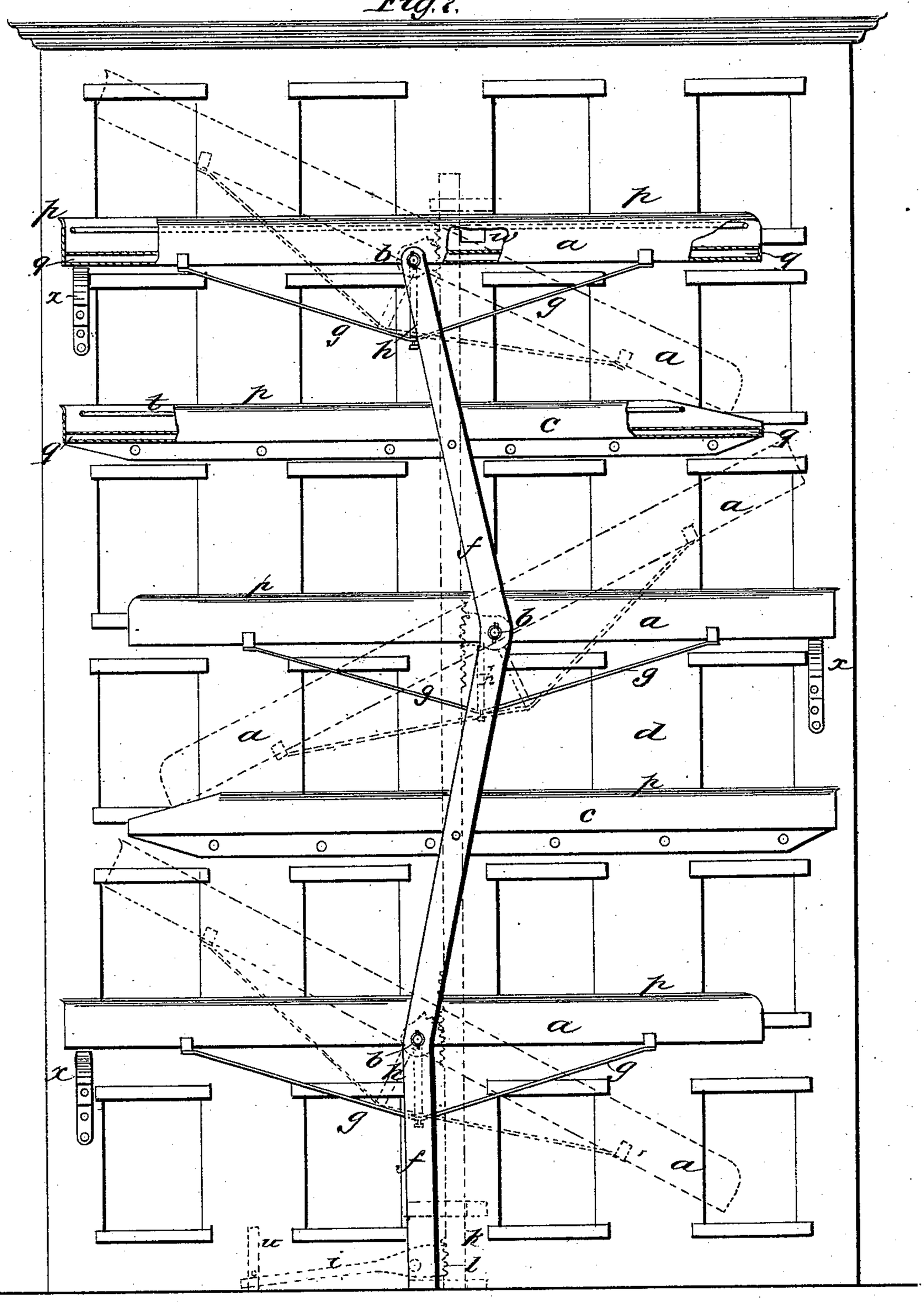
(No Model.) 2 Sheets—Sheet 1.

W. S. CASSEDY.

FIRE ESCAPE.

No. 287,233. Patented Oct. 23, 1883.

Fig. 1.



WITNESSES:

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C. Sedgwick

INVENTOR:

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ATTORNEYS.

(No Model.) 2 Sheets—Sheet 2.

W. S. CASSEDY.

FIRE ESCAPE.

No. 287,233. Patented Oct. 23, 1883.

Fig. 2.

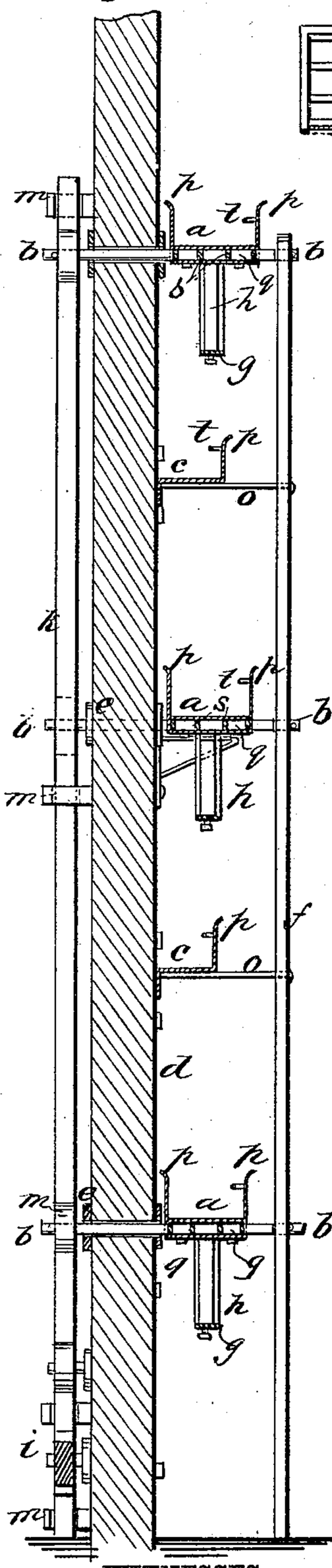


Fig. 3.

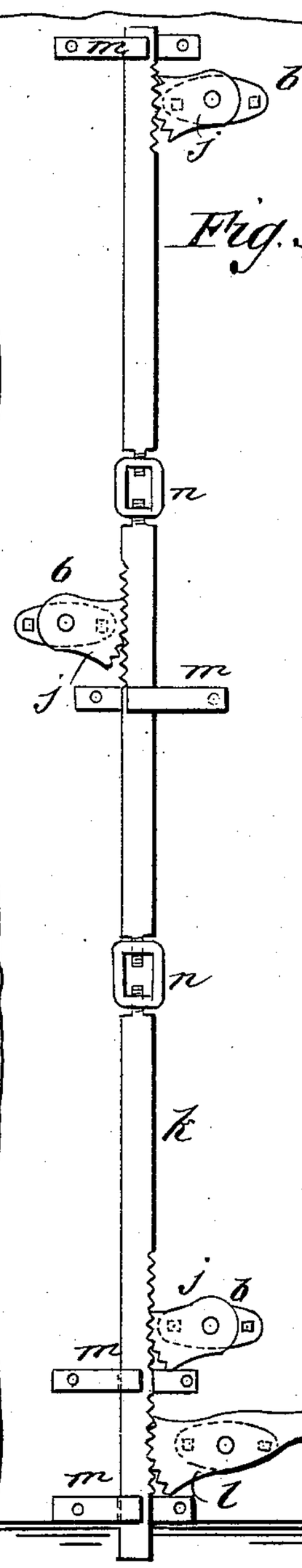


Fig. 4.

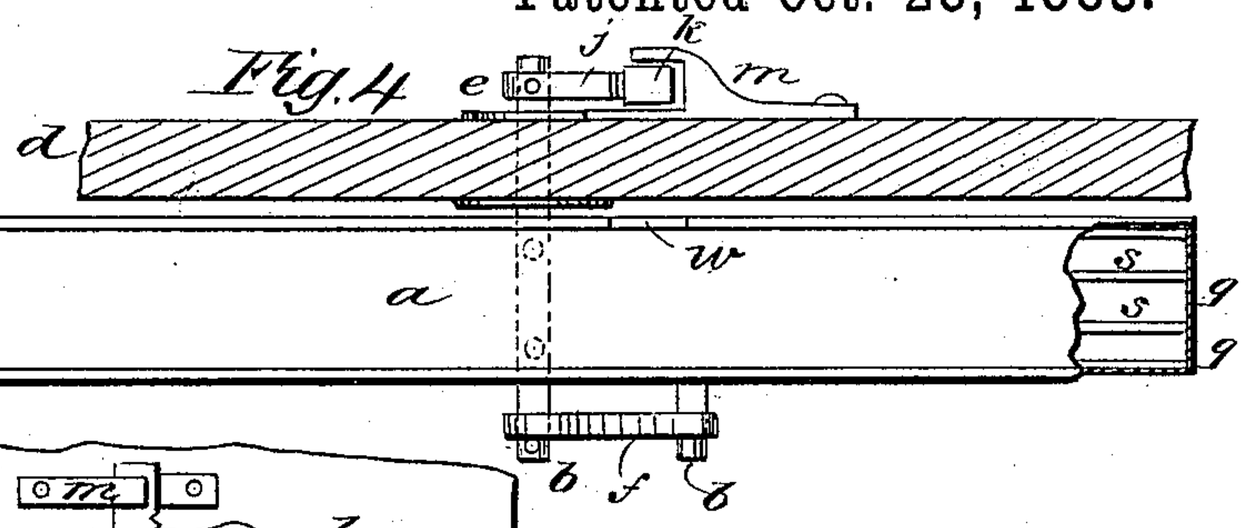


Fig. 5.

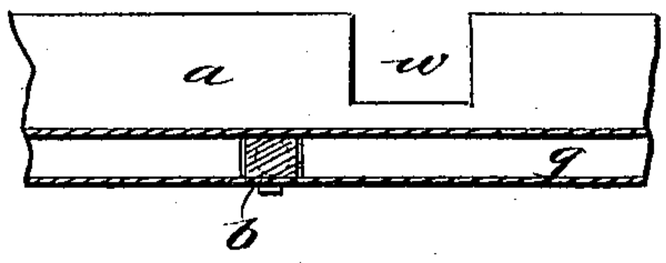
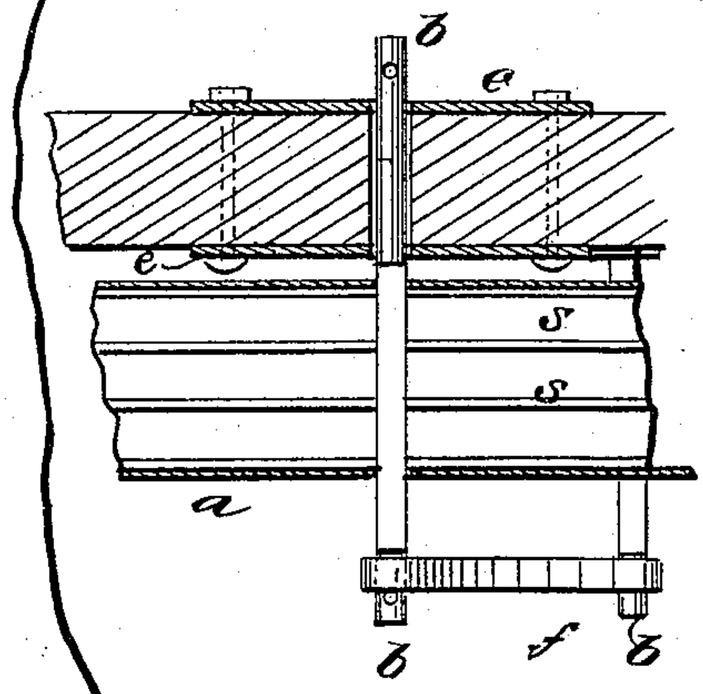


Fig. 6.



WITNESSES:

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INVENTOR:

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UNITED STATES PATENT OFFICE.

WILLIAM S. CASSEDY, OF KELLY'S STATION, PENNSYLVANIA.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 287,233, dated October 23, 1883.

Application filed June 28, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. CASSEDY, of Kelly's Station, in the county of Armstrong and State of Pennsylvania, have invented a new and Improved Fire-Escape, of which the following is a full, clear, and exact description.

My invention consists of balconies for the several stories, or for the alternate stories, of a building, arranged on pivots at the middle of their length, and provided with means whereby they may be tilted or swung on said pivots in opposite directions, so that the rising end of one will meet the lowering end of the next, to form reverse inclines or a zigzag way down which people may escape from a burning building, the means for operating the balconies being arranged so that the balconies may be worked by a lever located in the basement or at the ground-floor, where the operators may be protected from fire in a strongly-inclosed room while it is required to work the escape device. When only the alternate balconies are made to swing, the stationary balconies between will be available for the escape of people from the stories to which said stationary ones belong to the other balconies, which will meet at one end of the stationary ones, the said improved fire-escape being constructed and arranged as hereinafter fully described.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of a building provided with my improved fire-escape, some of the parts being in section. Fig. 2 is a sectional elevation of the front wall of the building and transverse section of the balconies and the working-lever by which the movable balconies are operated. Fig. 3 is an inside elevation of the wall of the building, and of the gear for operating the balconies. Fig. 4 is a horizontal section of a portion of the wall, and a plan view of one of the movable balconies, with some parts of said balcony in horizontal section. Fig. 5 is a detail of one of the balconies in longitudinal section, and Fig. 6 is a detail of the wall and a movable balcony in horizontal section.

In this example the alternate balconies *a* are mounted at their center lengthwise on the strong iron bars or shafts *b*, so as to be tilted or swung, as indicated by the dotted lines in Fig. 1, to form reverse inclines down which people may safely descend from the building to the ground. The intermediate balconies, *c*, are permanently attached to the wall *d* of the building; but they may be included in the system of tilting balconies, if desired. The balconies *a* are firmly bolted to the shafts *b*, which are square in the parts fitting the balconies, to afford firm and substantial connection, enabling the balconies to be operated by the shafts. Said shafts extend through the wall *d*, and are supported in bearing-plates *e*, strongly bolted to the respective sides of the wall. At the outer end said shafts have a bearing in the long post *f*, resting on any substantial foundation, and extending to the uppermost balcony. Besides the supporting-shafts, the balconies are stayed near each end by the braces *g* and the studs *h*, the latter being attached to the shafts. Inside of the wall of the building the shafts gear with a working-lever, *i*, by means of toothed segments *j*, and a toothed bar, *k*, gearing with the said segments, and also with the lever, which has a toothed segment, *l*. The lever is located at the base of the wall, where it may be inclosed suitably for its protection from fire and the same protection of the persons operating it, and the bar *k* extends up along the wall *d*, through suitable retaining-guides, *m*, to the uppermost shaft, said bar being made in sections of suitable length to handle, and connected by swivels *n*; or it may be any approved form of coupling. The post *f* is arranged to diverge from the vertical line, to locate the shafts *b* of the alternate balconies *a*, so that the rising end of one will project beyond the falling end of the other, to provide safe transfer from one to the other, and said post is stayed at intervals along it by rods *o*, connecting it with the wall of the building. I propose to make the balconies of sheet-iron, with outwardly-curved sides at their upper edges, *p*, to deflect flames that may rise up below them, for the protection of persons on the balconies above the flames; also to make them with double floors, to make air-passages *q* between the floors, through which air will circulate to keep the upper floors cool when flames are burning under them. The upper floors will be supported

by thin strips *s*, of metal, set edgewise between the two floors.

Along the inside of the outer side plate of each balcony I arrange a hand-rail, *t*, a suitable distance below the upper edge of such side plate, the latter being intended for protection against flames upon the outside, for aiding the descent of the persons escaping.

In order that persons may escape over the sides of the permanent balconies by dropping therefrom into the movable ones when escape may be cut off by flames inclosing the meeting ends of the balconies, I propose to make the said stationary balconies narrower than the others, so that in such cases one may climb over the side of a balcony *c* and safely drop into a balcony *a* anywhere along the same. The lever *i* swings along a plate, *u*, attached to the wall or any substantial support, and having holes in which a pin may be placed to secure the lever and the balconies in any position. In practice the lever will be geared with the bar *k*, so as to swing upward when shifting the balconies to the inclined positions, in order that the weight of the bar, which will be considerable, may aid in that direction when the balconies are being inclined so as to form them into a fire-escape. The balconies *a* will have notches *w* in the side next to the building, to facilitate the passage from the windows into them. A bracket, *x*, will be arranged under the rising end of each balcony *a*, on which it will rest when in the normal position.

I do not abandon or dedicate to the public any patentable feature set forth herein and not hereinafter claimed, but reserve the right to claim the same either in a reissue of any patent that may be granted upon this application or in other applications for Letters Patent that I may make.

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

1. A fire-escape consisting of a series of balconies pivoted to the wall of the building, and provided with means for swinging them in opposite directions, to so nearly meet at the ends as to form a continuous way of reverse inclines extending from story to story down the side of the building, substantially as described.

2. A fire-escape consisting of a series of balconies pivoted to the wall of the building, in combination with a series of permanent balconies arranged alternately with the pivoted balconies, said pivoted balconies being provided with means for swinging them in opposite directions, to nearly meet at their ends and form a continuous way of reverse inclines extending from story to story down the side of the building, substantially as described.

3. A fire-escape consisting of a series of alternate fixed and pivoted balconies, whereof the pivoted balconies are arranged to shift on their pivots to form a descending way of reverse inclines, the said pivoted balconies made wider than the fixed ones, to receive persons escaping over the sides of the fixed balconies and dropping therefrom onto the said pivoted balconies, substantially as described.

4. A fire-escape consisting of balconies *a c*, having sheet-metal sides, and being arranged substantially as described, for forming a descending way of reverse inclines, the sides of said balconies having outwardly-curved upper edges, *p*, for deflecting the flames, substantially as specified.

5. A fire-escape consisting of balconies *a c*, having sheet-metal sides, and being arranged substantially as described, for forming a descending way of reverse inclines, the sides of the balconies having a hand-rail, *t*, located below the upper and outwardly-flaring edge, *p*, substantially as specified.

6. The balconies *a c* of a fire-escape, substantially as herein shown and described, having double floors separated by metal strips *s*, and having air-passages *q*, substantially as specified.

7. A fire-escape consisting of a series of balconies, *a*, arranged to shift on central pivotal shafts, *b*, to form an inclined descending way, the said balconies mounted on the said shafts, and said shafts having bearing-supports in the post *f*, and in the plates attached to the wall of the building, and being geared with the bar *k* and operating-lever *i*, substantially as described.

WILLIAM S. CASSEDY.

Witnesses:
W. J. WRIGHT,
FINDLEY P. WOLFF.