(No Model.) 2 Sheets—Sheet 1.

G. KOSMAK.

FIRE ESCAPE.

No. 265,678. Patented Oct. 10, 1882.

Fig. 1.

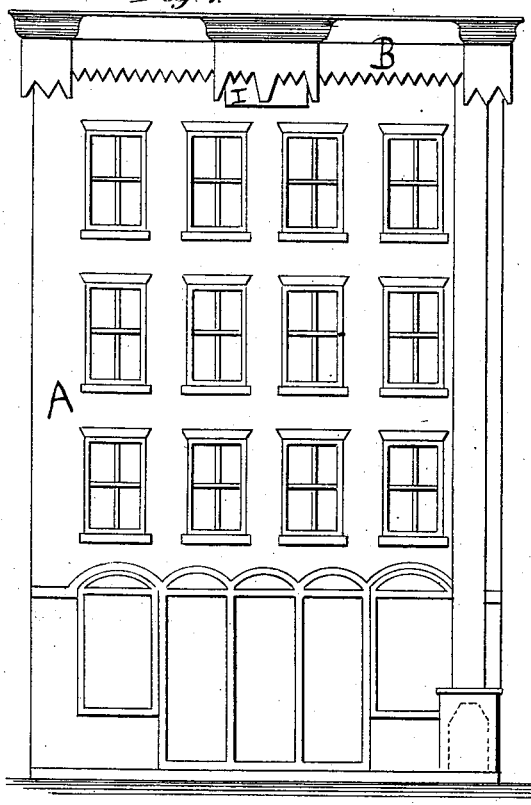


Fig. 2.

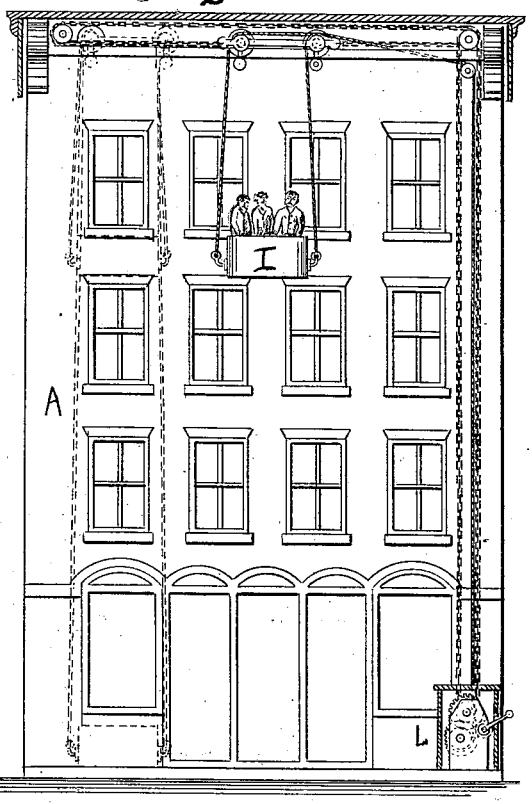
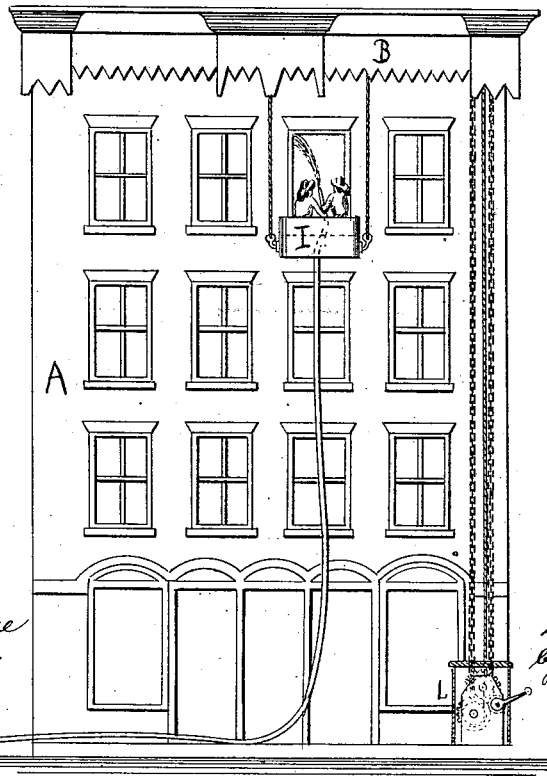


Fig. 3.



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by his attorneys
Bruesen & Bates

(No Model.)

2 Sheets—Sheet 2.

G. KOSMAK.

FIRE ESCAPE.

No. 265,678. Patented Oct. 10, 1882.

Fig: 4.

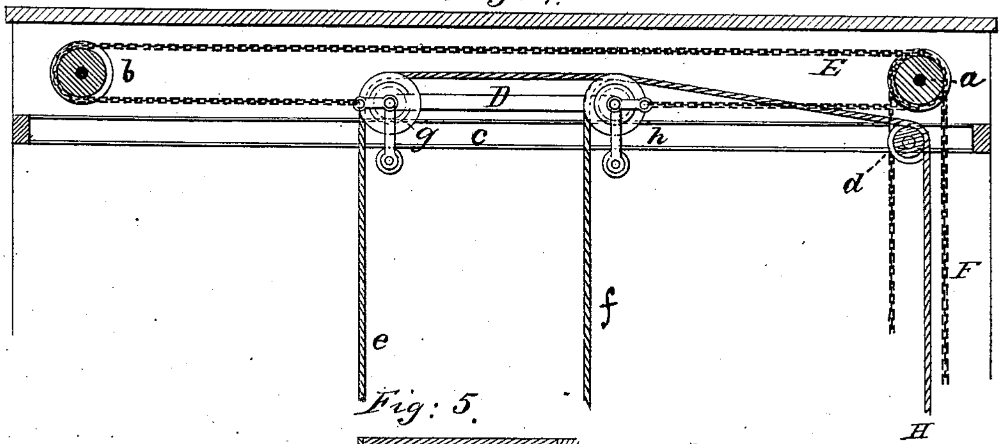


Fig: 5.

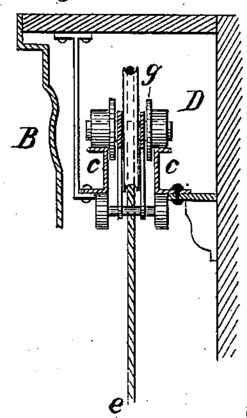


Fig: 7.

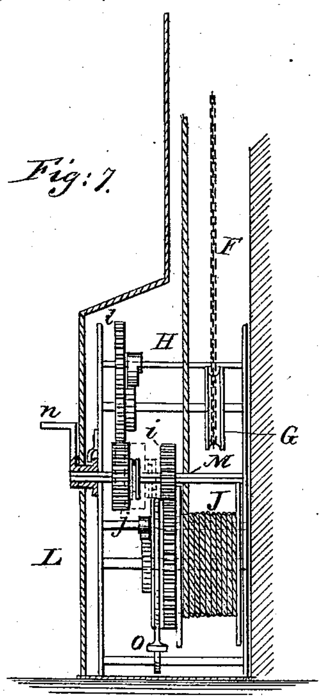


Fig: 6.

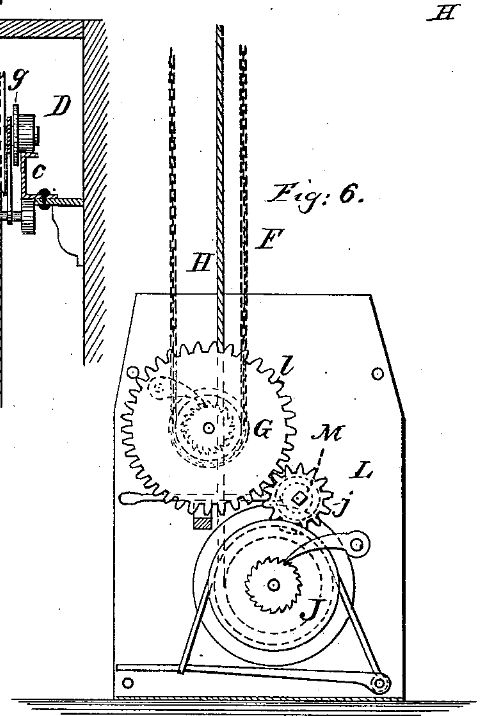
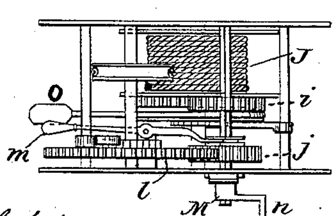


Fig: 8.



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UNITED STATES PATENT OFFICE.

GUSTAV KOSMAK, OF NEW YORK, N. Y.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 265,678, dated October 10, 1882.

Application filed May 27, 1882. (No model.)

To all whom it may concern:

Be it known that I, GUSTAV KOSMAK, of New York city, county and State of New York, have invented an Improved Fire-Escape, of which the following is a specification.

Figures 1, 2, and 3 are front views of a building provided with my improved fire-escape, showing the latter in different positions. Fig. 4 is a face view, partly in section, of the track and car beneath the cornice of the building, from which car the basket or escape-carriage is suspended. Fig. 5 is a cross-section of said cornice and track. Fig. 6 is an enlarged side view of the hoisting and shifting gear. Fig. 7 is a side view of the same, partly in section; and Fig. 8 is a top view of the same.

The object of this invention is to provide buildings with fire-escapes that are suspended below and concealed by the cornices of the buildings, and that can be brought conveniently to any particular window along the entire front of the building from which the escape is to be effected, and thence, when loaded, let down to the street.

To this end the invention principally consists in combining the suspended escape-basket with a traveling carriage placed on a rail beneath the cornice, with a rope or chain for lowering or hoisting said basket, with another rope or chain for moving the car on the rail, and thereby shifting the car horizontally and with certain mechanism conveniently accessible from the street, or, if desired, from any other portion of the building, and which will affect both said ropes at the same time, if required, as hereinafter specified.

In the drawings, A represents the front of a suitable building, and B is the overhanging cornice on top. Beneath this cornice, and hidden by it, is a set of rails, C C, rigidly secured to the building, and adapted to support the car D, that can move along the entire front of the building from end to end on said rails. This car is connected with the two ends of a rope or chain, E, that passes over friction rollers or pulleys *a* and *b*, that are respectively hung in the upper part of the building near the two ends thereof, so that by turning either one of these wheels or pulleys the rope or chain E will be moved, and the carriage D thereby moved on the rails toward either end of the building. In order to thus move the carriage D and chain E another rope or chain, F, is passed over the pulley *a* and carried down to the lower part of the building near the street, around a drum or windlass, G, so that by revolving this drum or windlass G by the means hereinafter described, or by other suitable means, the wheel or pulley *a* will also be revolved, and with it the chain E, and the carriage D thereby moved in the direction desired. In the upper part of the building, not far from the pulley *a*, is hung the friction roller or wheel *d*, over which is passed a rope or chain, H, which at its upper portion is divided into two or more branches, *e* and *f*, that are passed over rollers *g* and *h*, respectively, which rollers are hung in the car D. The lower ends of the ropes or chains *e f* connect with the cradle or basket I and hold the same suspended below the carriage D wherever that carriage may be on the rope. The rope or chain H, passing over the pulley *d*, extends down to and is wound around the drum J, which is hung near the drum G in the lower part of the building, or near the same, so that by rotating the drum J and winding the rope H upon it the basket or cradle I will be raised, and by rotating the drum J so as to unwind the rope or chain H from it, the basket or cradle will be lowered. It will thus be seen that by the means of the drum G and chain or rope F, I can shift the cradle that is suspended from the car D horizontally and bring it in front of any window in a story of the house from which the escape is to be effected, and that by the drum J and rope or chain H, I can move the same cradle or basket vertically and bring it in line with any one of the stories or floors of the building.

It remains to describe the mechanism for operating the drums G and J separately or jointly. To this end I place in the frame L, in which the two said drums have their bearings, an actuating-shaft, M, which carries two spur-wheels, *i* and *j*. The spur-wheel *i* is always in gear with a toothed wheel that is mounted upon the drum J, but the spur-wheel *j* can be thrown into or out of gear with a toothed wheel, *l*, that is fixed to the shaft of the drum G. A suitable clutch-lever, *m*, is used for shifting the pinion *j*. Now, when it

is desired only to raise or lower the cage or basket I the pinion *j* is thrown out of gear, and thereupon the shaft M is rotated by suitable crank-handle, *n*, thereby rotating also the drum J, winding or unwinding the rope or chain H, and causing the cage or basket to be raised or lowered; but when it is desired to shift the cage or basket horizontally the pinion *j* is thrown into gear with the wheel *l*, and on then rotating the shaft M both drums G and J will be revolved at the same time. The diameters of the toothed wheels on said drums should be so proportioned that the drums G, when in gear, will be moved faster than the drum J. In other words, the toothed wheel *l* must be of greater diameter than the toothed wheel on the drum J, so that when both drums are rotated simultaneously the effect will be to give a degree of motion to the car D horizontally on the track, and at the same time to only give or take up the slack of the rope H sufficiently to allow that horizontal motion without producing vertical motion of the cage or basket. When the cage or basket has been brought in line with any particular window or series of windows, vertically considered, the drum G is thrown out of gear and the car or cage lifted or lowered into line with that window of the vertical row from which the escape is to be effected. In letting down the cage the speedy descent may be regulated by suitable brake, *o*, that bears against the periphery of the drum J. The two drums carry ratchet-wheels that receive pawls for locking the drums to hold the cage locked in any desired position for the time being. For the admission of a hose when it is desired to hoist firemen by the cage, the latter should have an opening in it or guide-loops to admit the hose into the cage, as indicated.

I claim—

1. In a fire-escape, the car D, placed on the rails C, combined with the rope or chain E, rollers or pulleys *a b*, rope or chain F, and drum G, and with the rope or chain H, cage I, and drum J, and with mechanism for rotating said drums jointly or the drum J alone, substantially as described.

2. The combination of the shaft M, having fixed pinion *i* and loose pinion *j*, with the drums G and J, having toothed wheels, and with the clutch-lever *m*, and with mechanism for transmitting the motion of said drums to the cage I, substantially as described.

GUSTAV KOSMAK.

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WILLIAM H. C. SMITH.