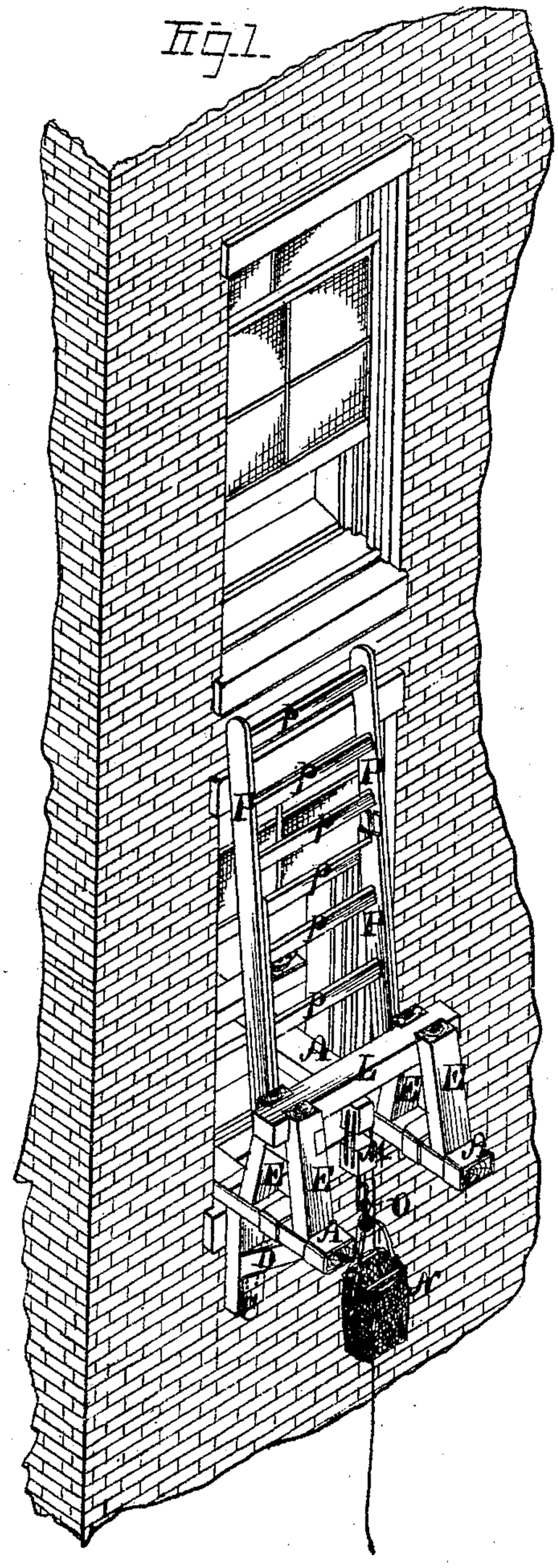
2 Sheets--Sheet 1.

S. ERBACH.

Fire-Escapes.

No. 154,658. Patented Sept. 1, 1874.

Fig. 1.



WITNESSES:

Jas. E. Hutchinson.

John R. Young

INVENTOR.

Sebastian Erbach, by

Prindle and Dean, his attys

2 Sheets--Sheet 2.

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Fig. 2

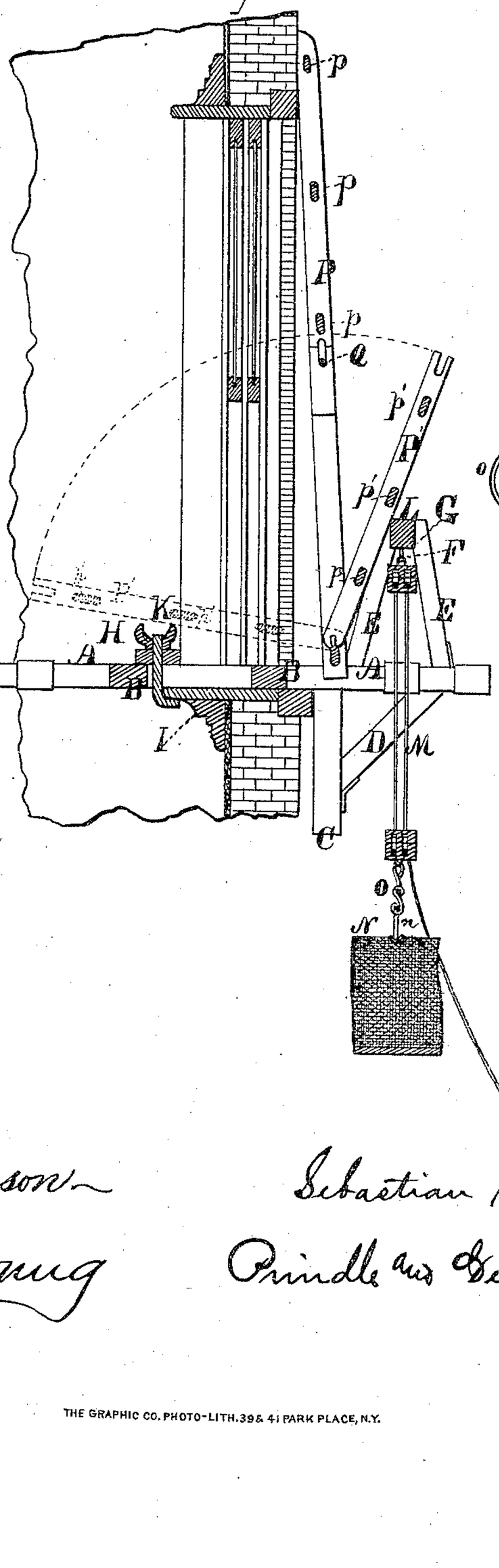


Fig. 3

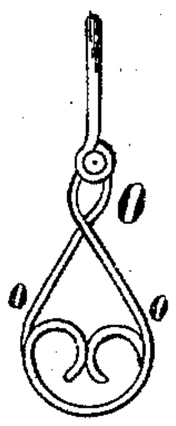
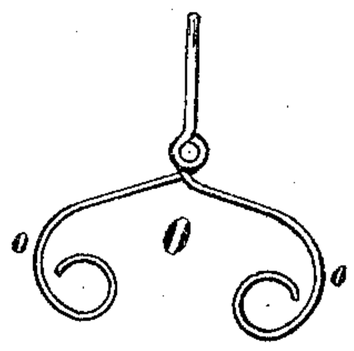


Fig. 4



WITNESSES-

Jas. E. Hutchinson

John R. Young

INVENTOR.

Sebastian Erbach, by

Prindle and Deane, his attys

UNITED STATES PATENT OFFICE.

SEBASTIAN ERBACH, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN FIRE-ESCAPES.

Specification forming part of Letters Patent No. **154,658**, dated September 1, 1874; application filed July 22, 1874.

To all whom it may concern:

Be it known that I, SEBASTIAN ERBACH, of Baltimore, in the county of Baltimore and in the State of Maryland, have invented certain new and useful Improvement in Fire-Escapes; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1 is a perspective view of my apparatus as in use. Fig. 2 is a vertical central section of the same, and Figs. 3 and 4 are plan views of my improved safety hook or clutch, showing, respectively, the same closed and open.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to furnish means whereby communication may be had, exteriorly, between the different stories of a building, and between the same and the ground; and it consists, principally, in a ladder having a hinged panel or inner section, substantially as and for the purpose hereinafter specified. It consists, further, in the construction of the window-scaffold and its combination with the ladder and the lowering devices, substantially as and for the purpose hereinafter shown. It consists, finally, in the safety hook or clutch, substantially as and for the purpose hereinafter set forth.

In the annexed drawings, A and A represent two rails secured together in parallel lines by means of two or more cross-bars, B and B, and each provided near one end with a post, C, which projects vertically downward and is secured in place by means of a brace, D, that extends between the lower end of said post and the outer end of said rail. From the upper side of each rail A, outside of the line of the post C, two posts, E and E, extend upward and toward each other and are connected together near their upper ends by means of a cross-bar, F, said parts forming a socket, G, as shown, at the upper end of the standard thus constructed. The device described constitutes a scaffolding for use in a window, the horizontal portion being passed inward through the latter until the posts C and C rest against the outer wall of the building, after which a bar, H, is placed across the upper side of the rails A and A, and is either clamped to the window-sill I by means of hooked bolts K, which pass through said bar and engage with the lower side of said sill, or said bolts are caused to engage with the lower side of said rails, so as to closely confine said bar thereon, in either case, however, the result being to secure the scaffolding in a horizontal position, so as to enable its outer projecting end to sustain all required weight. Within the sockets G and G is fitted a bar, L, that serves as a support for a fall, M, which at one end is attached to its longitudinal center, and at its opposite lower end is connected to or with a basket or other suitable receptacle, N, for persons to be lowered from the building.

While necessary that the receptacle N should be detachable from the fall M, it is important that its accidental detachment should be prevented, to which end the hook O at the lower end of said fall is formed of two scroll-shaped pieces of metal, *o* and *o*, which are pivoted together at their upper ends and capable of assuming the positions shown in Figs. 3 and 4.

To connect the handle or bail *n* of the receptacle N with the hook O, its arms *o* and *o* are separated, as shown in Fig. 2, said bail passed between and above their curved ends, said arms then closed together, and said bail then drawn downward until it rests within the curved portion of each.

For use in ascending to an upper story, I employ a ladder, P, which at one end has the ends of a rung, *p*, extended outward so as to form bearings that rest upon the side rails A and A and enable said ladder to be raised to the position shown.

When placed in front of a window, it would be difficult for persons to pass by the ladder for the purpose of reaching the basket N, or to ascend to an upper story, if said ladder were constructed in the ordinary manner. To obviate this difficulty I omit from the lower portion of my ladder a number of rungs, and within the space thus formed I place a section or panel which is formed of two side rails, P′ and P′, that are connected together by rungs *p′* and *p′*, and at their lower ends are hinged to or upon the contiguous portions of the main side rails. At the upper end of the hinged section the side rails P′ and P′ are notched so as to

permit a bar, Q, that is connected with the main ladder and has a vertical motion, to drop downward and engage with the same. When thus constructed, it will be seen that, by raising the bar Q, the hinged panel may be turned either inward or outward, as desired. A person may then pass through the opening thus formed, and afterward return said panel to place, so as to restore the ladder to its normal condition.

This apparatus is more especially useful in buildings where the stair-cases are centrally located, and are rendered impassable by fire or smoke, before the front or rear rooms are uninhabitable, in which event two persons could readily pass from one story to another until the upper rooms were reached. To accomplish this result one person would ascend the ladder, the scaffolding would then be loosened by the lower person, drawn up to the next story, and then secured in place, after which the ladder would be turned downward and suspended, by the projecting rung ends, from said scaffolding, so as to furnish means for the ascent of the person below, said operations being repeated at each story and reversed in descending.

It is, of course, expected that the operatives alone will make the use above described of the apparatus, the persons to be rescued being lowered by means of the fall and basket.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. In a fire-escape, a ladder having a hinged panel or inner section, which, when closed to place, forms an integral part of said ladder, substantially as and for the purpose specified.

2. The window-scaffold described, consisting of the rails A and A, cross-bars B and B, posts C and C, braces D and D, standards E and E, and cross-bars F and F, in combination with the bar H and hooked bolts K and K, substantially as and for the purpose shown.

3. The safety hook or clutch O, having its curved pivoted arms *o* and *o*, arranged to operate in the manner and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of July, 1874.

SEBASTIAN ERBACH.

Witnesses:

W. H. MASSON,

MOSES NORRIS.