

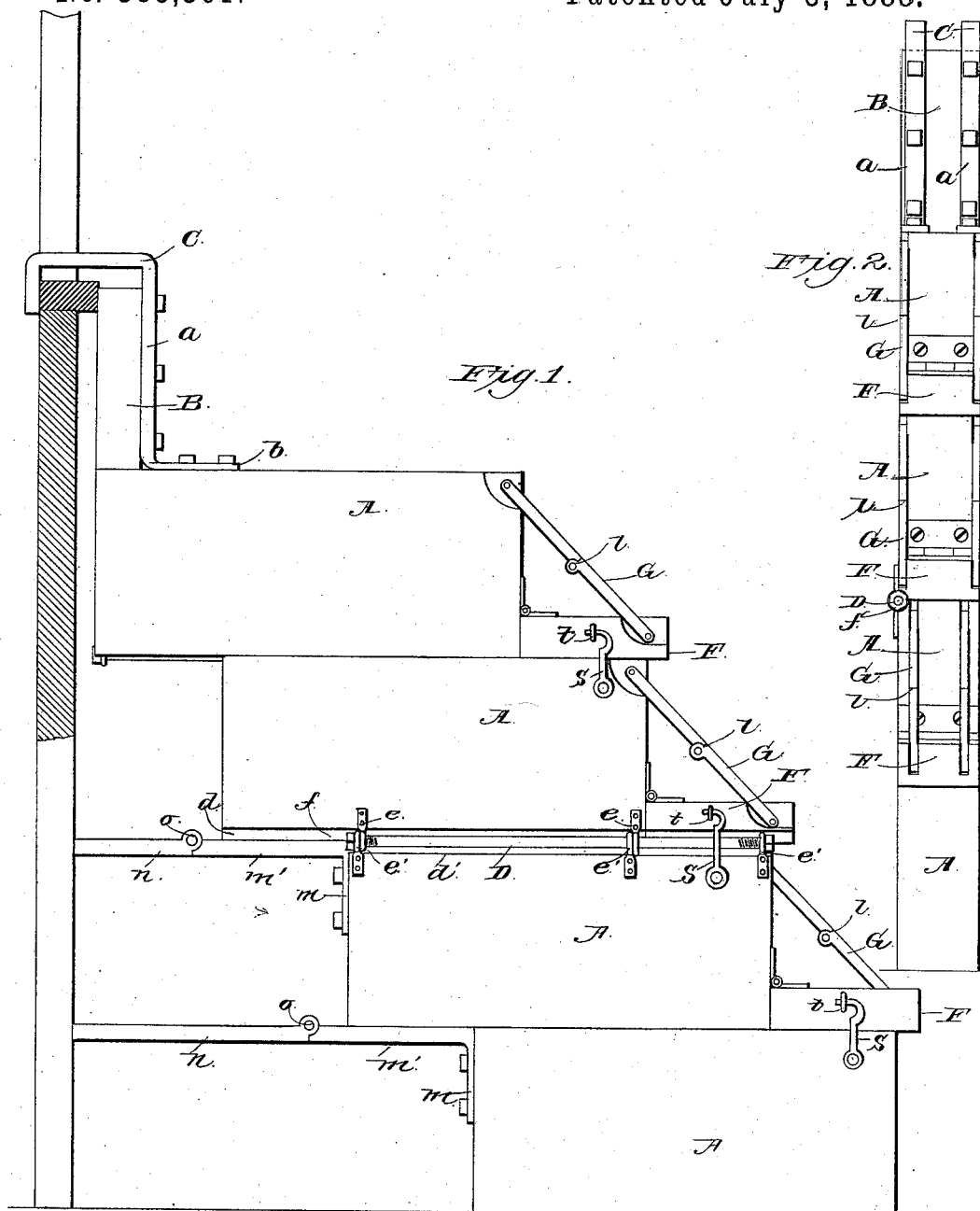
(No Model.)

2 Sheets—Sheet 1.

S. LEIVY.  
FIRE ESCAPE.

No. 385,361.

Patented July 3, 1888.



Witnesses.

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M. C. Fowler.  
E. L. Siggers.

Inventor,

*Solomon Leivy.*

by *C. Howard*  
his Attorneys

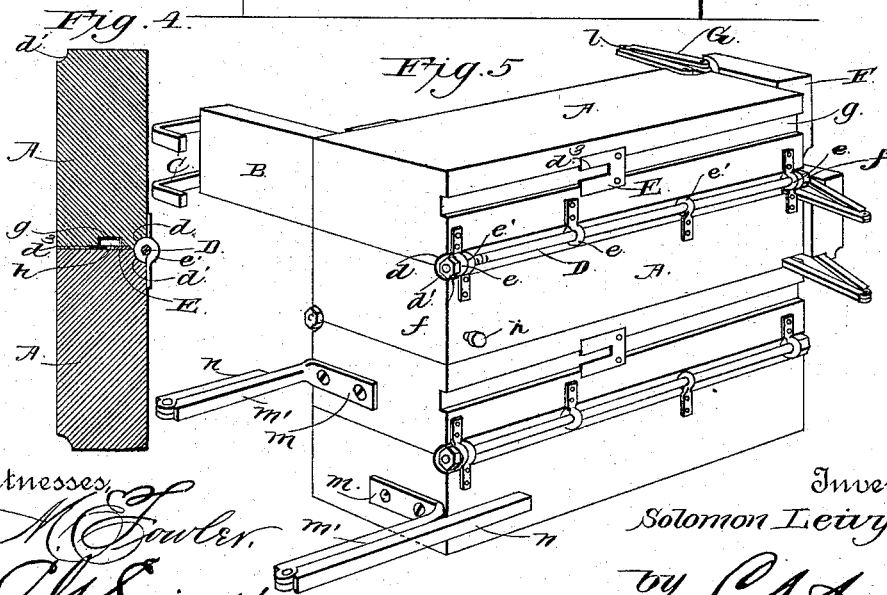
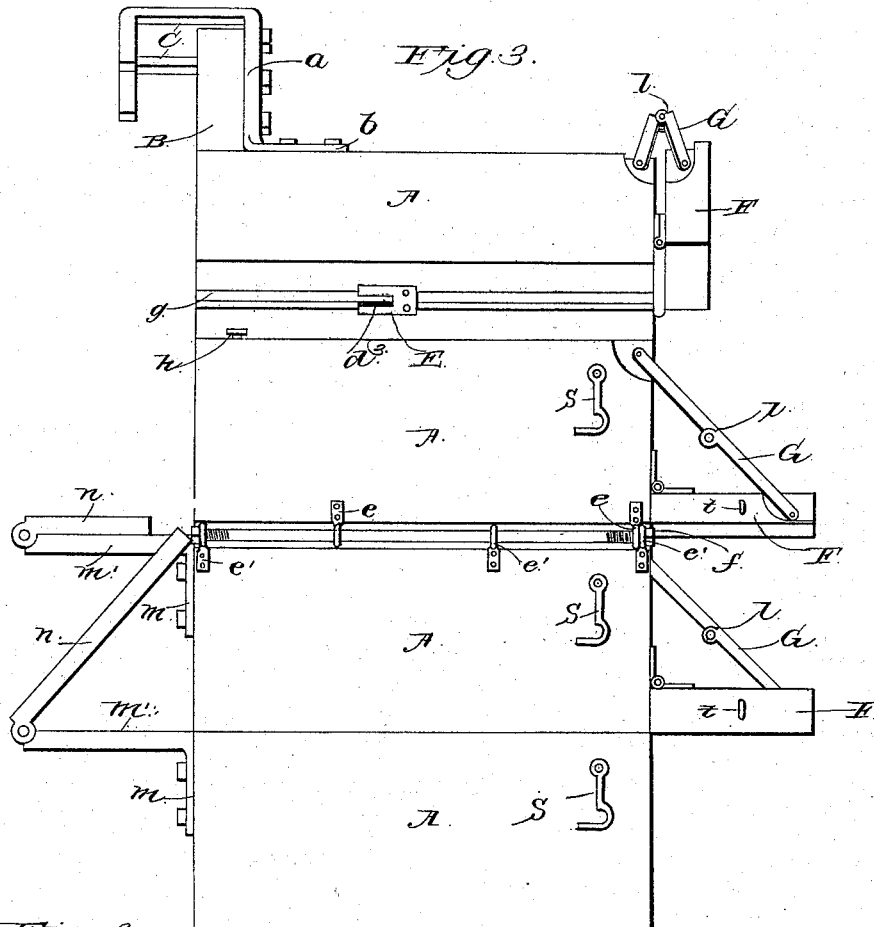
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# UNITED STATES PATENT OFFICE.

SOLOMON LEIVY, OF HARRISONVILLE, MISSOURI.

## FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 385,361, dated July 3, 1888.

Application filed March 13, 1888. Serial No. 267,109. (No model.)

*To all whom it may concern:*

Be it known that I, SOLOMON LEIVY, a citizen of the United States, residing in Harrisonville, in the county of Cass and State of Missouri, have invented a new and useful Improvement in Fire-Escapes, of which the following is a specification.

This invention relates to fire-escapes; and it consists in the device hereinafter described, whereby a light and efficient structure is provided that can be arranged in a compact form for transportation or storage and be readily unfolded and adjusted when necessary.

In the drawings, Figure 1 is a vertical elevation of my improvement, showing the same adjusted for use. Fig. 2 is an end view of the device as arranged in Fig. 1. Fig. 3 is a side view showing the device folded and out of operative adjustment, the upper section of said device being in a position to illustrate the folding of the parts. Fig. 4 is a central longitudinal section through two of the sections when the latter are arranged in operative position. Fig. 5 is a detail view showing the device folded for transportation.

The escape consists, essentially, of a series of blocks, A, which are of narrow width and of the relative height shown in Fig. 2. These blocks A may be made of wood or other suitable material, and may be formed hollow or recessed at their sides to secure lightness. On the upper edge of the top block A, at the inner end thereof, is secured a vertical block, B, which has bearing against its rear face the vertical portions *a* of metal hooks C, the lower ends, *b*, of which are secured upon the upper face of the top section, while their upper ends are extended and bent to form engaging-hooks C. One of the lower corners of the top block A is beveled at *d*, at which point is located a series of eyebolts, *e*, pivotally connected to eyebolts *e'* on the corresponding beveled upper corner, *d'*, of the block A next below, through which and the eyebolts *e* passes a rod, D, the ends of which are threaded for the engagement of securing-nuts *f*.

The bottom edge of the top block A is provided with a longitudinal groove, *g*, which, when said bottom edge and the top edge of the adjacent section are turned parallel with each other, as shown in Figs. 1 and 2, is

adapted to receive the head of a pin, *h*, projecting from the top edge of said section next below and near one end thereof. A plate, E, is secured upon the under side of the top section to span the groove therein, and said plate is provided with an open key-recess, *d''*, which communicates with said groove. The several succeeding sections A are connected together in the same manner as that described with reference to the two upper sections, with the exception that the beveled corners and eyebolt and rod connections alternate on opposite sides, as clearly shown in Fig. 1. Moreover, the adjacent edge faces are provided with the groove, pin, and key-plate arrangement already described.

Each block-section is provided at its ends with a supplemental step, F, which is hinged to the vertical end face of the block and is adapted to be swung down to a horizontal position. The block and step are each recessed at their sides for the pivotal attachment of the ends of a folding brace, G, provided at its center with a rule-joint, *l*.

The inner end faces of the blocks A have each secured thereto the vertical member *m*, the horizontal part *m'* of which has a hinged section, *n*, connected thereto by means of a rule-joint, *o*.

In operation the several blocks are swung upon their hinged connections, so that when their adjacent edges rest upon each other each block can be slid longitudinally relative to the block next below, the pin and groove serving as a guide. At the end of the sliding movement the head of the pin engages the key-slot in the plate and firmly locks said blocks upon each other against the folding tendency of their pivotal connections. This sliding adjustment of the several blocks disposes the structure in a "stair" arrangement, upon which a person can readily ascend to and descend from the window or other desirable point. The step-sections are swung down to bear upon the upper exposed edge of the block next below, and are rigidly held in such position by forcing their rule-joint braces to an inclined position, as shown in Fig. 1. These braced steps contribute to the rigidity of the structure, in that they give each block a bearing along the entire edge of

the block below, notwithstanding the fact that said block is projected for a distance beyond the block beneath. The end braces when swung to a horizontal position brace the structure against the side of the building. The threaded rod and eyebolt connections are such that any number of blocks may be added or removed, so as to vary the capacity of the structure.

When it is desired to arrange the parts for storage or transportation, so that they will occupy but little space, the inner braces are folded back and the blocks are moved back in line with each other, so that the pins will become disengaged from the key-plates. The blocks can then be turned upon their hinges to rest horizontally upon each other, so that the height of the structure is reduced to an insignificant degree. The alignment of the rule-joint braces is then broken, so that the steps can be folded parallel with the ends of the respective blocks. When in such position, the entire device can be stored out of the way, and may be quickly restored to its operative position when necessary.

The lower ends of the rule joint braces of the bottom step are pivoted in elongated slots formed in said step, to locate them out of the way and avoid possible contact or shocks in adjusting or moving the structure from plane to plane.

A hook, S, is secured on the side of each block and is adapted to engage an eye, t, on the side of the adjacent step when the latter is in a horizontal position, thus serving as an additional brace.

I claim—

1. The combination, in a fire-escape, of a series of hinged blocks having a longitudinal sliding movement relative to each other and devices for locking said sections together after such sliding movement, as set forth.

2. The combination, in a fire-escape, of a series of hinged blocks adapted to slide relative to each other and a hinged step connected to each block, as set forth.

3. The combination, in a fire-escape, of a se-

ries of blocks hinged together and having a sliding movement relative to each other, the top block being provided with grappling-hooks, as set forth.

4. The combination, in a fire-escape, of a series of pivoted blocks having a sliding hinged connection, each block having a groove and key-plate in its lower face and a pin upon the upper face, as set forth.

5. The combination, in a fire-escape, of a series of blocks having alternate-sliding hinged connections, as set forth.

6. The combination, in a fire-escape, of a series of blocks each having one of its corners beveled and located adjacent to the beveled face of the block beneath, eyebolts located at said beveled edges, and a rod passing through both sets of eyebolts, as set forth.

7. The combination, in a fire-escape, of a series of blocks having a sliding hinged connection and a hinged step connected to the end of block and connected by braces having rule-joints, as set forth.

8. The combination, with the sliding blocks, of a hinged step connected to the end of each block and connected by braces having rule-joints, and hooks located on the sides of the blocks for engaging loops on the side of the step, as set forth.

9. The combination, with the blocks, of a hinged step connected to the end of each block, the lower step being slotted, and rule-joint brace having its lower end pivoted in said slot, as set forth.

10. The combination of the series of blocks and the end braces secured thereto and consisting of a fixed and a swinging member, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

SOLOMON LEIVY.

Witnesses:

H. C. KINNARD,  
J. B. STEPHENS.