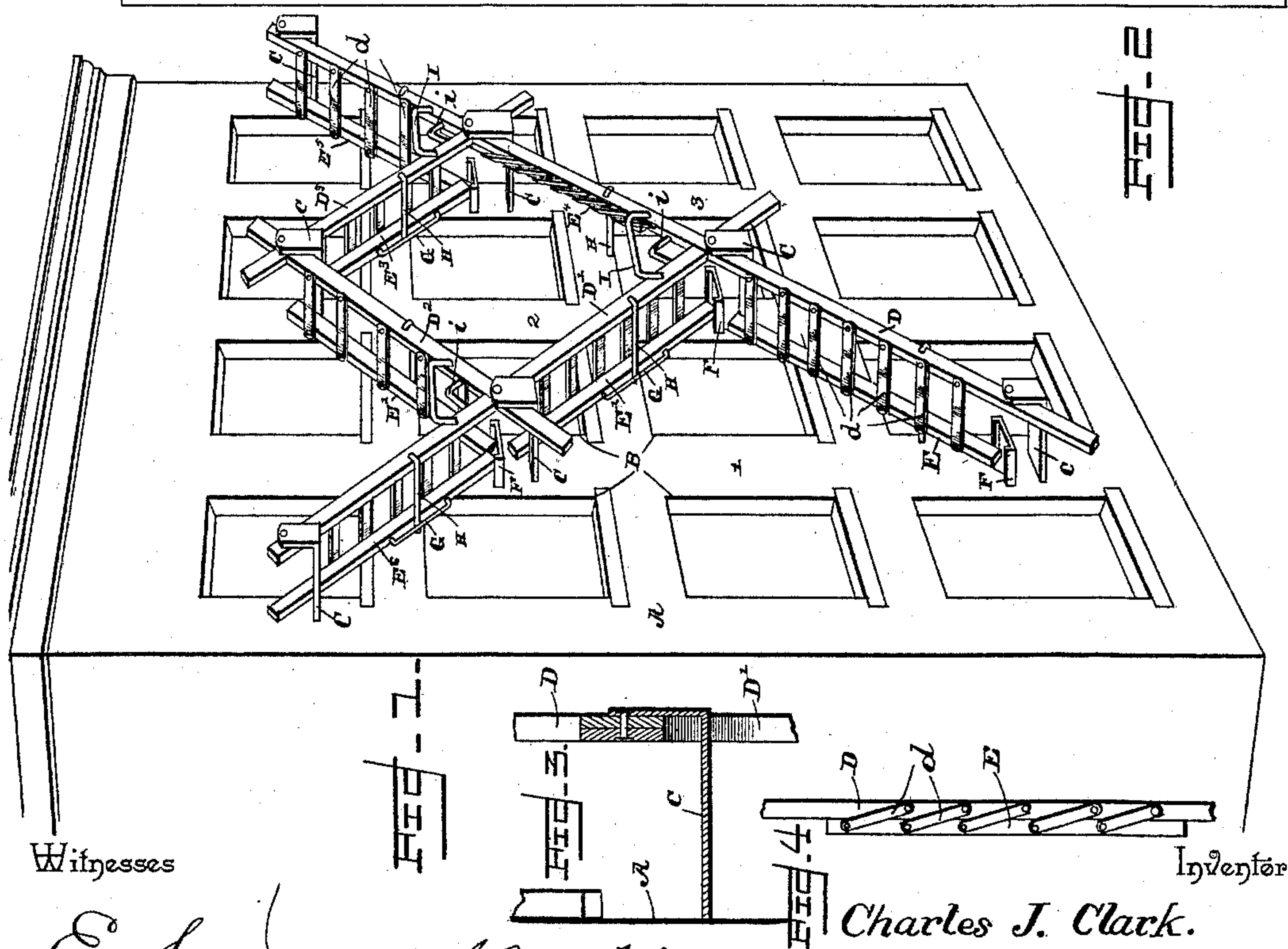
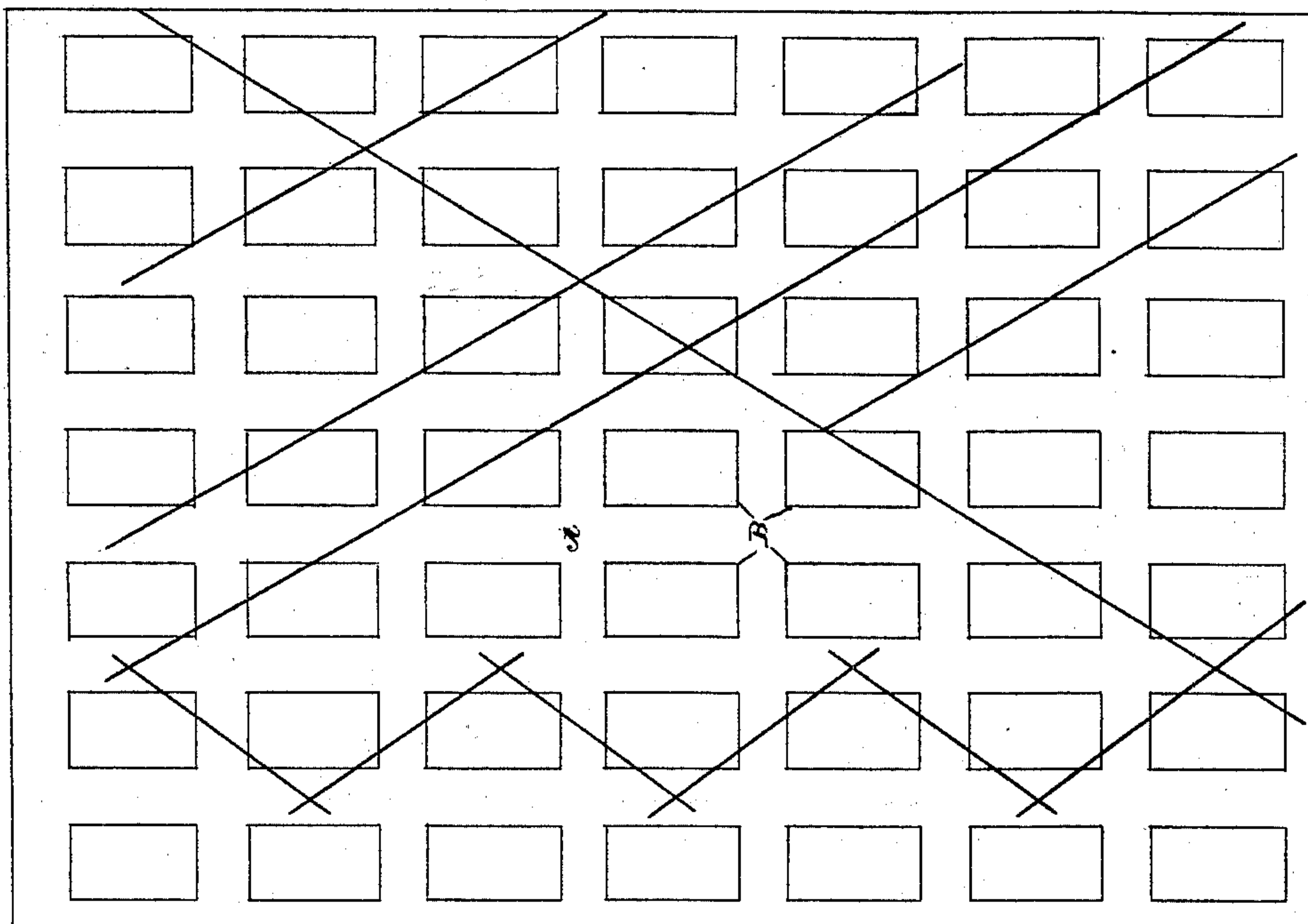


(No Model.)

C. J. CLARK.
FIRE ESCAPE.

No. 456,939.

Patented Aug. 4, 1891.



Witnesses

E. S. Luvall Jr.
J. Edgar Smith

By *his* Attorneys,

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UNITED STATES PATENT OFFICE.

CHARLES JAY CLARK, OF KEOKUK, IOWA.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 456,939, dated August 4, 1891.

Application filed April 9, 1891. Serial No. 388,237. (No model.)

To all whom it may concern:

Be it known that I, CHARLES JAY CLARK, a citizen of the United States, residing at Keokuk, in the county of Lee and State of Iowa, have invented a new and useful Fire-Escape, of which the following is a specification.

This invention is an improvement in fire-escapes, and has for its objects the simplification of such devices, the increasing of their utility, convenience, durability, and the lessening of their cost.

The invention has for further objects the construction of a fire-escape in such a manner that the parts of the escape will brace each other and the descent furnished by the escape will be of a natural, easy, and safe manner.

For a further object the invention has the arrangement of the escape-ladder in such lines and at such angles as to afford means for descending from the greatest number of windows from the fewest possible number of ladders.

With these objects in view the invention resides in the various novel details of construction and in the combination of parts hereinafter fully described, and particularly pointed out in the claims.

In the drawings, in which I have illustrated my invention and in which like letters and figures of reference indicate corresponding parts, Figure 1 is a perspective view showing my device applied to a building, and Fig. 2 is a view in the nature of a diagram showing one arrangement of the ladders upon a building. Fig. 3 is a cross-section showing the connection between the ladders. Fig. 4 is a detail perspective view of a portion of one of the ladders, showing it in its folded position.

In the drawings, the letter A designates the wall of a building, which is provided with windows B. The windows are separated from each other by the usual distance, and the sections of the building which intervene between the windows are indicated in Fig. 1 by the numbers 1, 2, and 3 for convenience. A bracket C extends outwardly from the wall at a point between two of the windows on the ground floor, the said bracket being supported by section 1. In section 2 between the windows in the second story of the building is another

bracket C, corresponding with the bracket C just mentioned, and a similar bracket C is placed between the windows in the third story in section 3, and still another bracket to the right of the window in the fourth story. All these brackets C are in line with each other and with a line diagonally connecting the right-hand lower corners of the first window in the first story, the second window in the second story, the third window in the third story, the fourth window in the fourth story, and so on. Brackets C are also placed in section 1 in the third story, and in section 2 of the fourth story, and to the left of the first window to the left in the fourth story. All these brackets are united by bars $D D' D^2 D^3$, and it is for the purpose of supporting these bars that the brackets C are provided. To the bars $D D' D^2 D^3$ are pivoted the rungs d , which extend inwardly toward the building and are pivoted at their inner ends to bars $E E' E^2 E^3 E^4 E^5 E^6$. The bars D, with the rungs d and the inner bars E, thus form a series of ladders capable of folding against the outer bars D and of opening inwardly toward the wall.

To provide a rest or stop for the lower ends of the bars E, small brackets F are provided in line with and above the brackets C. The ends of the bars E resting on these brackets, the ladders, of which the bars E are parts, will only be capable of fully opening in a downward direction, and only capable of folding against the bars D in an upward direction.

In order to render the ladders more firm and to restrain their movements to the plane of the bars D and E, guides G are secured to the under side of each of the bars E, and the said guides are of sufficient length to permit the bars E to be moved toward the wall and toward the bars D, guide pins H extending from the outer bars D through said guides G and into the wall.

It will be evident from what has been said that the ladders formed by uniting the bars D, D' , D^2 , and D^3 with the bars E, E' , E^2 , E^3 , E^4 , E^5 , and E^6 by means of the rungs d will be at such angles with each other that the greatest number of windows may be reached with the least expenditure of material. Above the brackets C guard-rests I are provided ex-

tending from one bar of the D or outer-series to the other, and below these guard-rests are foot-rests *i*, also spanning the angle between the meeting-bars. The brackets C afford small platforms connecting the ladders, and above these brackets C at the ends of each section of the ladders the rungs are omitted, in order to permit the passage of a man's body between the ends of the meeting-ladders, the guards I and foot-rests *i* enabling the passage through such spaces to be made with great ease.

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

1. In a fire-escape, the combination, with brackets extending outwardly from the wall of a house, the said brackets being arranged between the windows of the house in a diagonal line, bars fastened to said brackets and connecting them, and bars parallel thereto and pivotally connected thereto by means of rungs, substantially as and for the purpose set forth.

2. In a fire-escape, the combination, with diagonally-intersecting folding ladders, of brackets C and guards I and foot-rests *i*, spanning the angle made by the ladders above the

brackets C, substantially as and for the purpose set forth.

3. In a fire-escape, the combination, with the folding ladders, of brackets F, adapted to receive and support the bars thereof, and the guides G and the guide-pins H, substantially as and for the purpose set forth.

4. In a fire-escape, the series of ladders rigidly mounted on the exterior of a building and arranged in opposite diagonal line, so as to intersect each other and mutually brace one another, substantially as described.

5. In a fire-escape, the series of ladders rigidly mounted on the exterior of a building and arranged in opposite diagonal lines, so as to intersect each other and mutually brace one another, the inner side bar of each ladder being pivotally connected to the outer side bar by means of the rungs, substantially as described.

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

CHARLES JAY CLARK.

Witnesses:

JOHN KERR,
JOHN S. MCCOY.