W. K. Marvin,

Burglar Proof Safe.

No. 98,608. Patented Jan. 4. 1870.

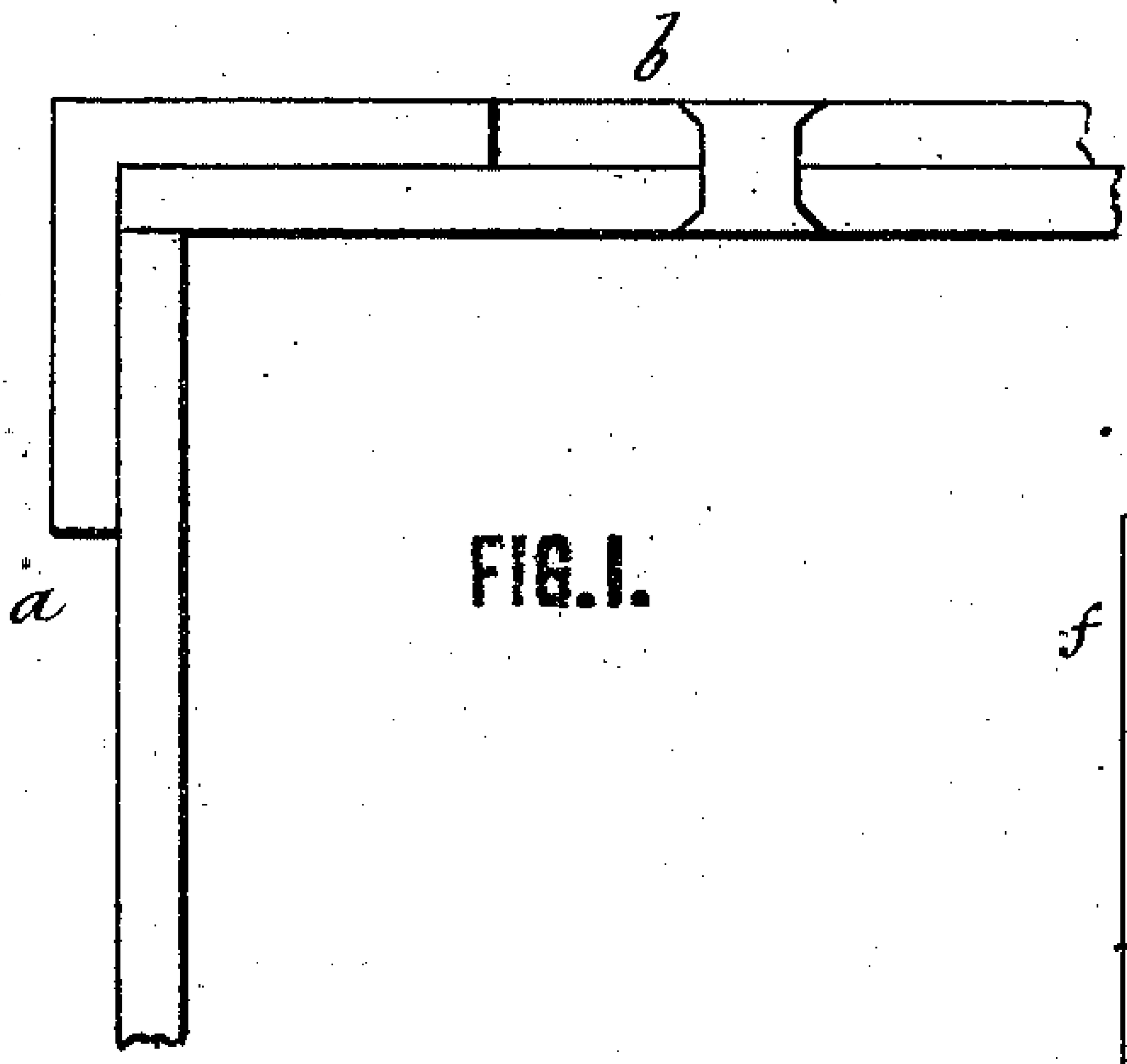


FIG. 1.

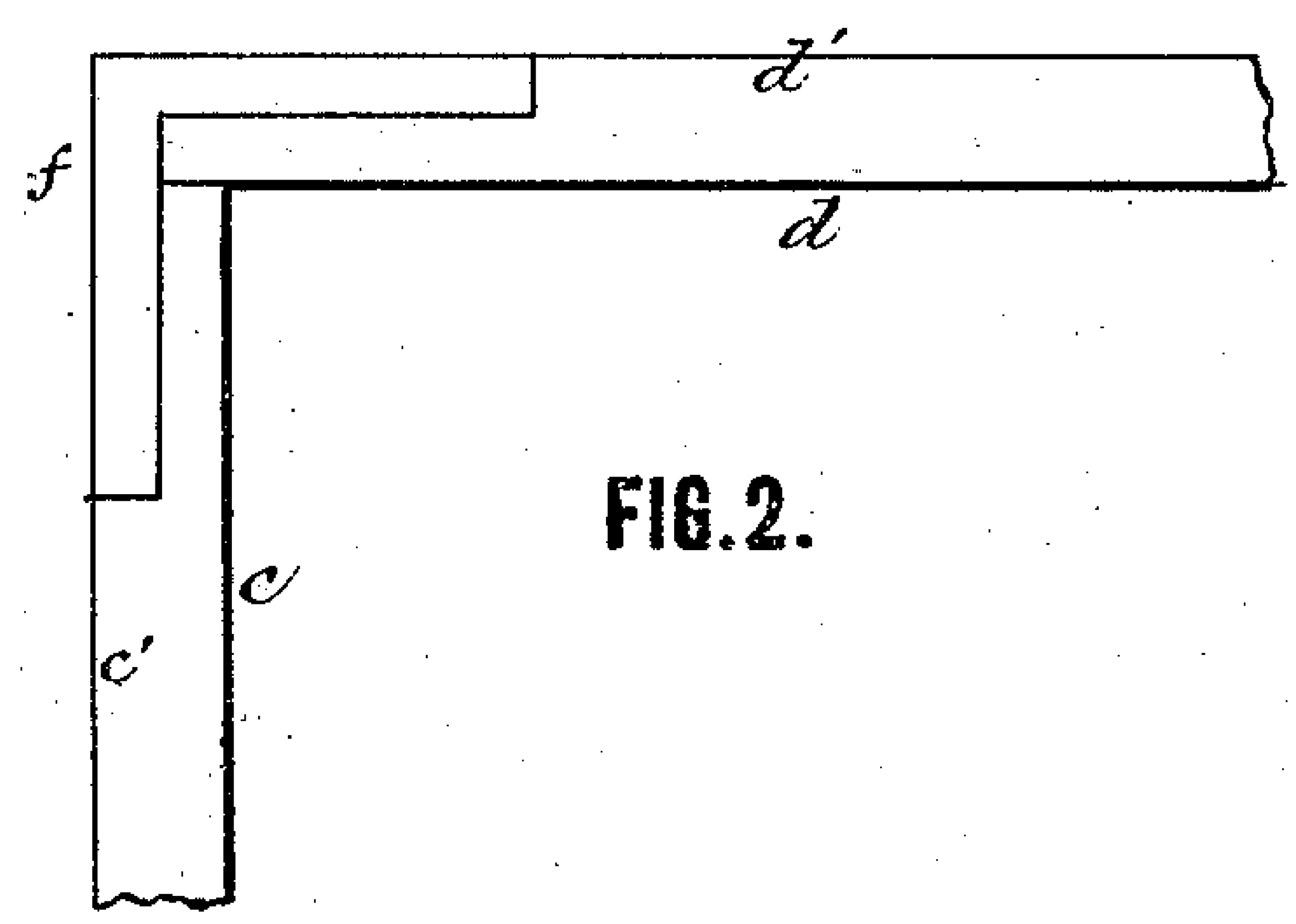


FIG. 2.

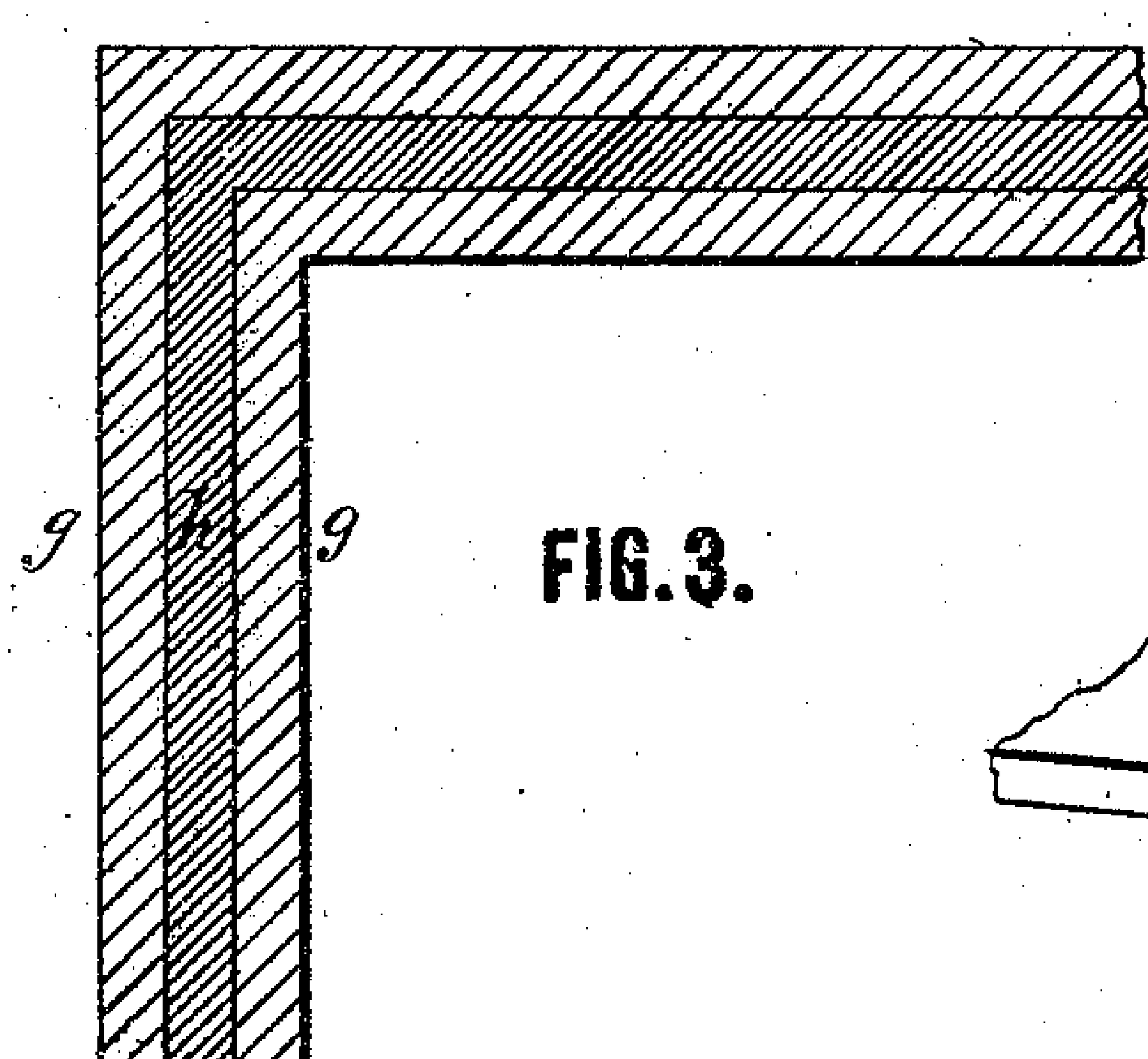
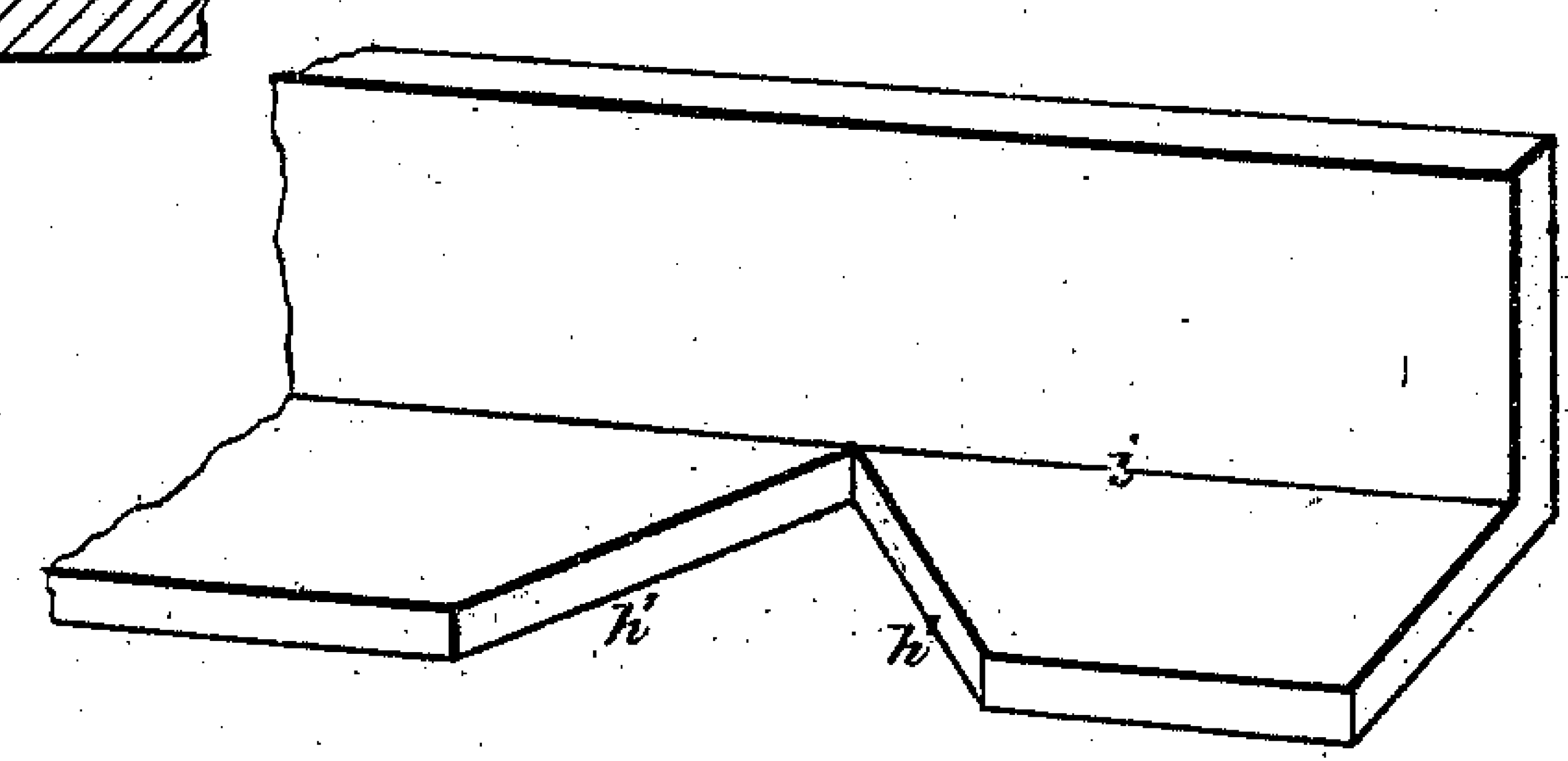


FIG. 3.

FIG. 4.



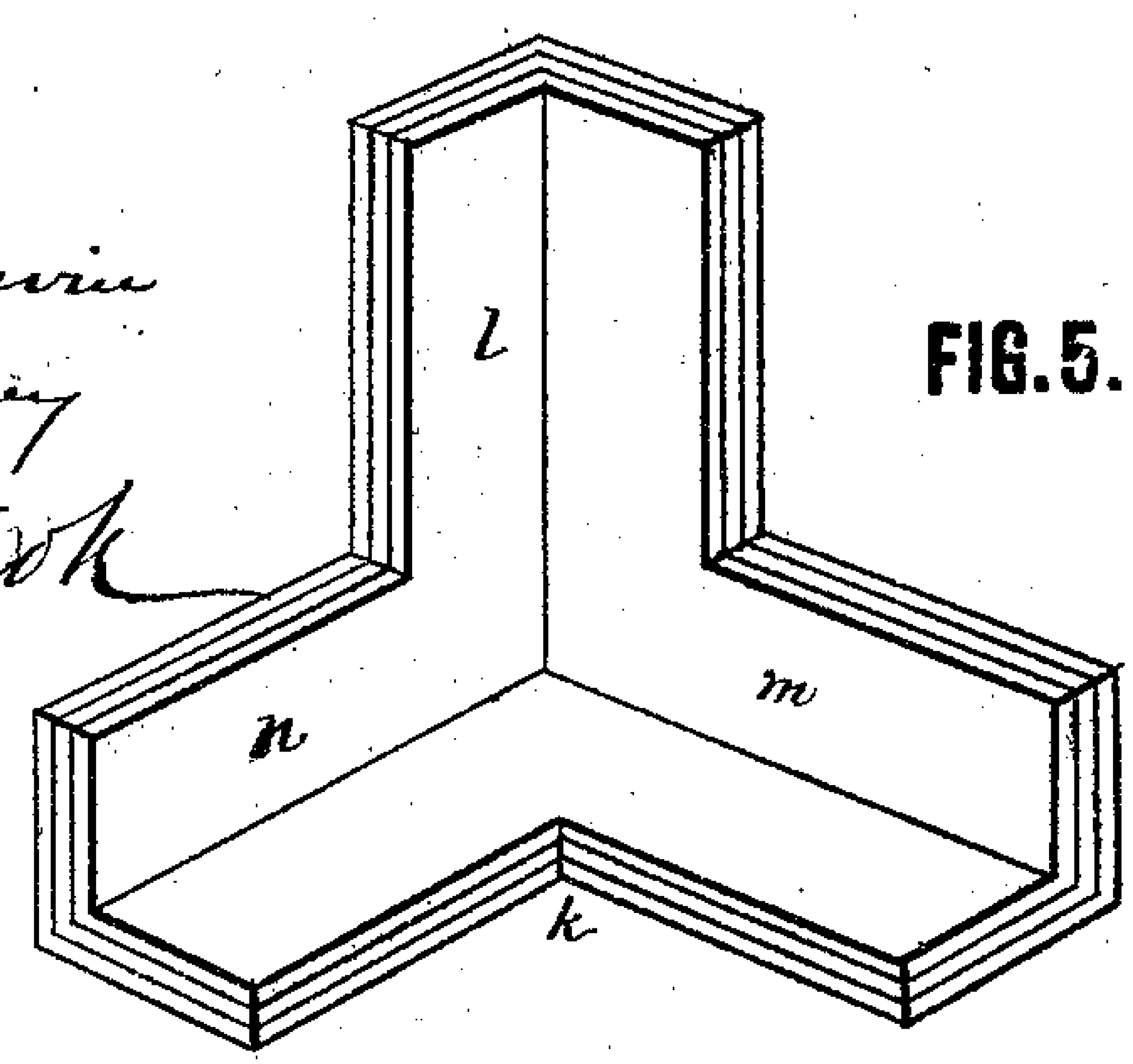


FIG. 5.

Walter K. Marvin
by his attorney
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WITNESSES.

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UNITED STATES PATENT OFFICE.

WALTER K. MARVIN, OF NEW YORK, N. Y.

IMPROVEMENT IN SAFES.

Specification forming part of Letters Patent No. **98,608**, dated January 4, 1870.

To all whom it may concern:

Be it known that I, WALTER K. MARVIN, of the city, county, and State of New York, have invented certain new and useful Improvements in Safes; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings.

My invention is directed, first, to the mode of attaching to safes the angle-irons, by which their edges and corners are protected; and, secondly, to the construction of the angle-irons themselves.

It has been usual to place angle-irons upon the edges of safes in order to protect the joints formed at the junction of the sides; but when such irons were first so placed their edges were left unprotected, as shown at *a*, Fig. 1, so that by inserting tools under them the angle-irons could be forced off with comparative ease, thus leaving the joints of the safe uncovered. To remedy this difficulty the panels formed by the angle-irons were filled up by plates, which were made flush with the irons, and then riveted to the walls of the safe, as shown at *b*, Fig. 1; but this arrangement, also, is defective, for experience has shown that by means of a punch or drill rivets can be removed, thus enabling the burglars to take off the panel-plate and pry off, as before, the angle-irons.

My object, therefore, is to obviate this difficulty, and I do so by making the exterior plates of the safe of the full thickness of the main plates and panel-plates under the old arrangement, and then planing down, or otherwise reducing, the safe at the edges, so as to form angular recesses, in which the angle-irons have their seats. Thus the spaces formerly filled by the riveted panel-plates are filled by metal, which is in one and the same piece with the safe body.

My invention further consists of a solid corner for safes, composed of iron or steel, or of iron and steel welded together, and showing no joint whatever, as will be hereinafter described.

In the drawings, Figure 1 represents the old methods of arranging the angle-irons and panel-plates, as above mentioned. Fig. 2 represents the angle-iron and sides of the safe, combined in accordance with my invention. Fig. 3 is a representation in cross-section of one form of my improved angle-iron. Fig. 4 is a perspective view of one portion of the angle-iron, which is used to form the solid corner before it has been bent into its ultimate shape. Fig. 5 is a like view of a finished corner.

In Fig. 2, *c d* are the solid exterior plates of a safe, which, at their junction, are planed down, or otherwise reduced, so as to form the angular recess, in which the joint-protecting angle-iron *f* has its seat. The angle-iron is secured to the safe-body by means of rivets or conical bolts, which are put in about four inches apart, and in ordinary safes have a diameter of at least one inch at the head. It will be seen that the solid wall *c' d'* occupies the spaces between the angle-irons formerly filled by the riveted panel-plates *b*, as shown in Fig. 1, and that, therefore, the edges of the angle-iron are fully and completely and permanently protected.

The angle-iron I prefer to employ is represented in Fig. 3. It is composed of the two exterior layers of irons *g* and central layer of steel *h*, all welded and rolled together into the proper angular shape.

The angle-iron may, however, be composed of two or three or more layers of welded iron and steel, and the order in which the layers are placed may be varied as circumstances require. A very strong and durable iron is thus produced, which is admirably adapted to protect the edges of the safe.

The construction of the solid corner is shown clearly in Figs. 4 and 5. The material of which it is formed may be either iron, steel, or iron and steel in welded layers, as above described. The corner is formed of a strip of angle-iron, from one side of which, at the point at which the corner is to be formed, a triangular piece is cut out, the apex of the triangle being an angle of ninety degrees, if the corner is to be square, and each side *h'* of the cut making an angle of forty-five degrees with the line of bend *i* of the iron. After this is done the iron is bent by suitable means, so as to bring the two sides *h'* in contact, which are welded together, as indicated at *k*, and a solid corner is thus formed. To this corner is welded, in any suitable manner, the angle-iron *l*, which is to protect the edge of the safe not protected by the two angle-iron strips *m n*, so that from

the solid corner radiate the three angle-irons which cover and shield the three edges of the safe which meet at the corner.

Having now described my invention, and the manner in which the same is or may be carried into effect, what I claim, and desire to secure by Letters Patent, is—

1. The combination, in a safe, of the angle-irons, with the solid exterior plates planed down or otherwise reduced at the edges of the safe, so as to form recesses in the solid metal for the reception of said angle-irons, as shown and set forth.

2. A safe having the angle-irons, which meet at the corners upon its exterior formed and united substantially as described, so as to constitute solid corners, as set forth.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

WALTER K. MARVIN.

Witnesses:
H. A. Cook,
L. C. Wilson.