

(No Model.)

2 Sheets—Sheet 1.

J. FITZBERGER.
SKYLIGHT.

No. 463,963.

Patented Nov. 24, 1891.

FIG. 1.

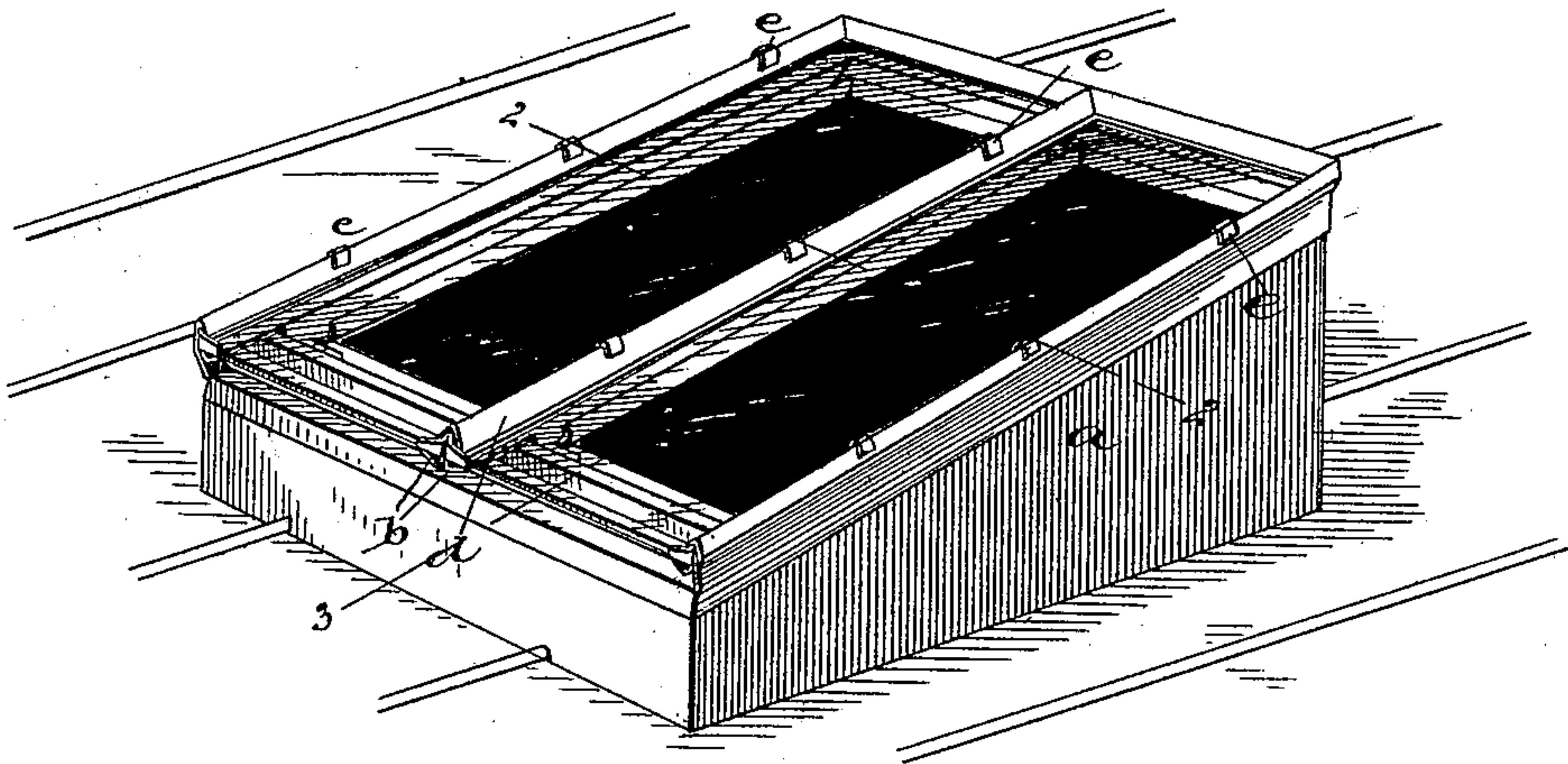


FIG. 2.

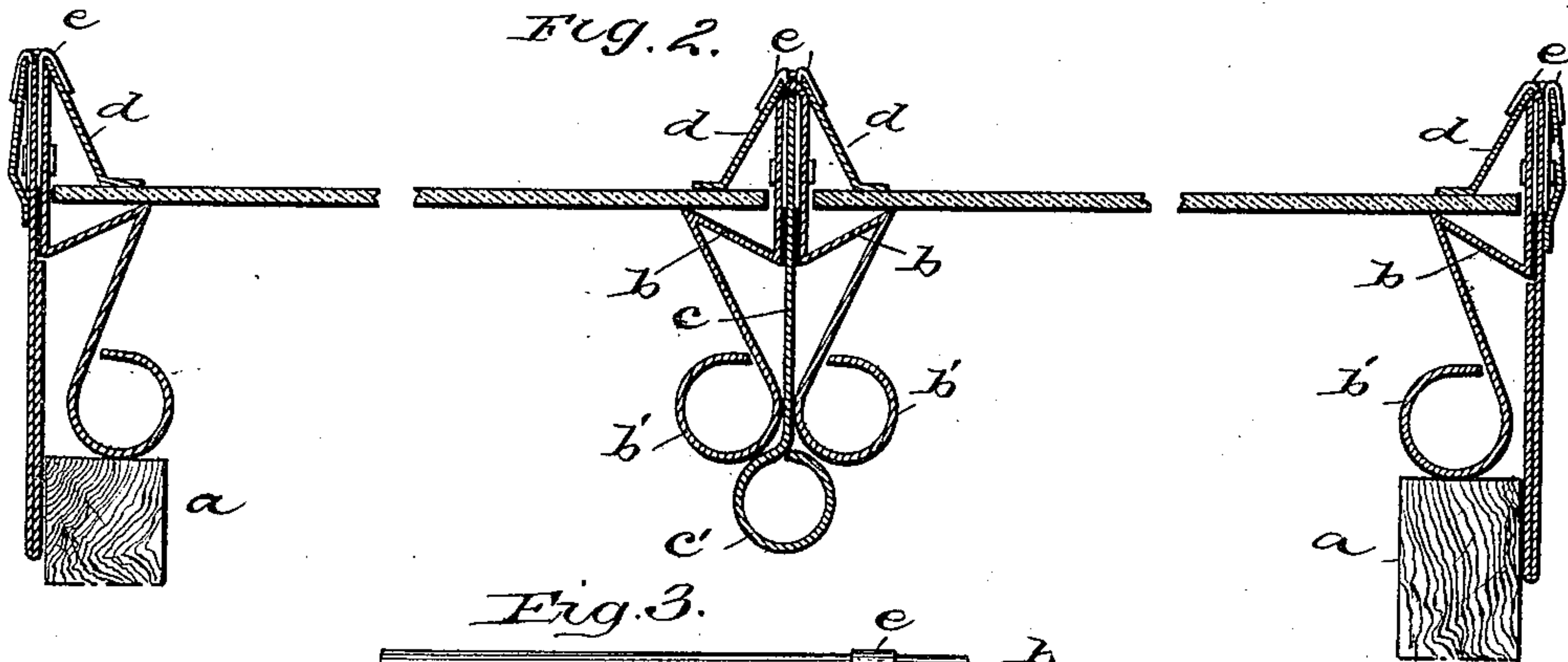
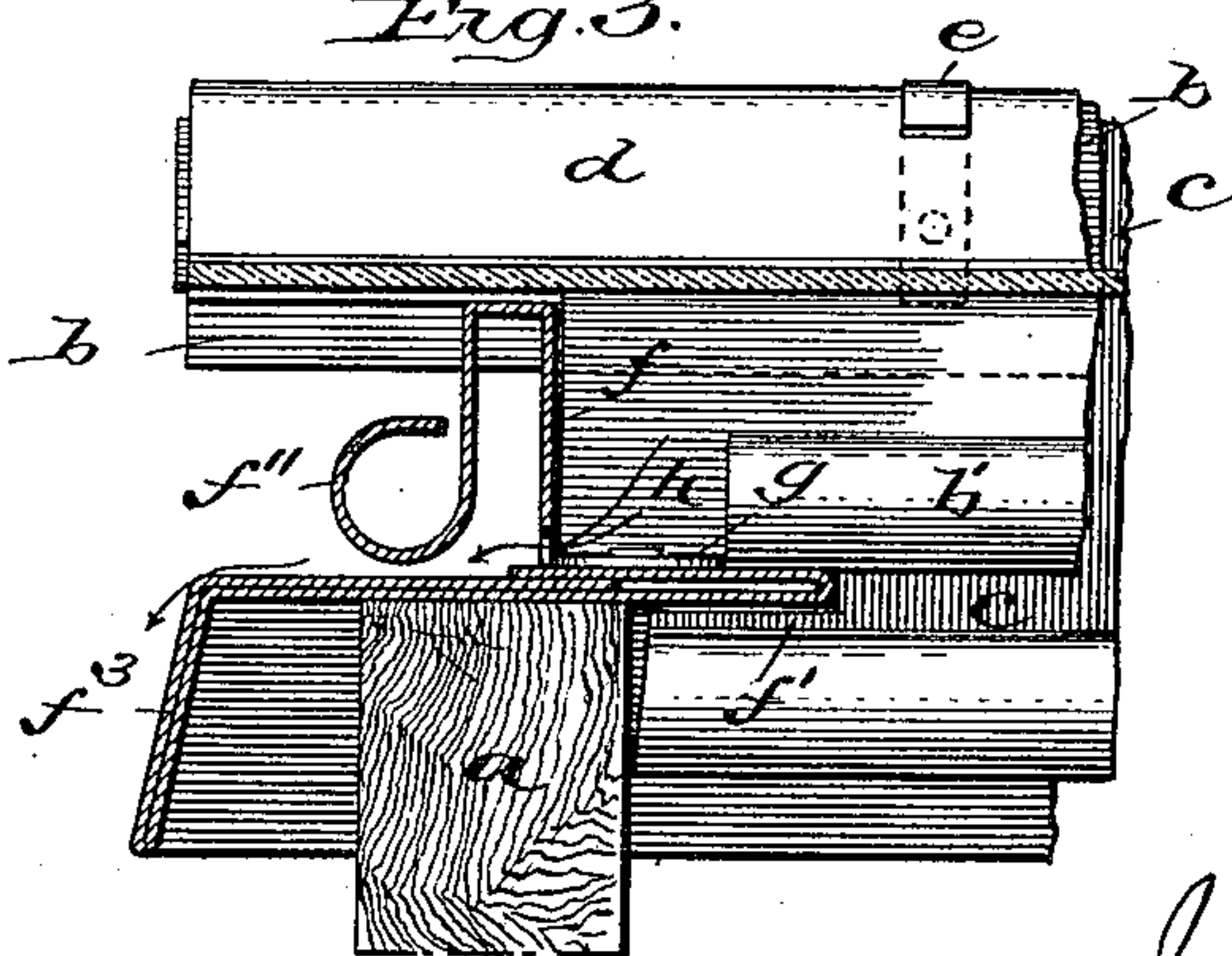


FIG. 3.



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(No Model.)

2 Sheets—Sheet 2.

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Fig. 4.

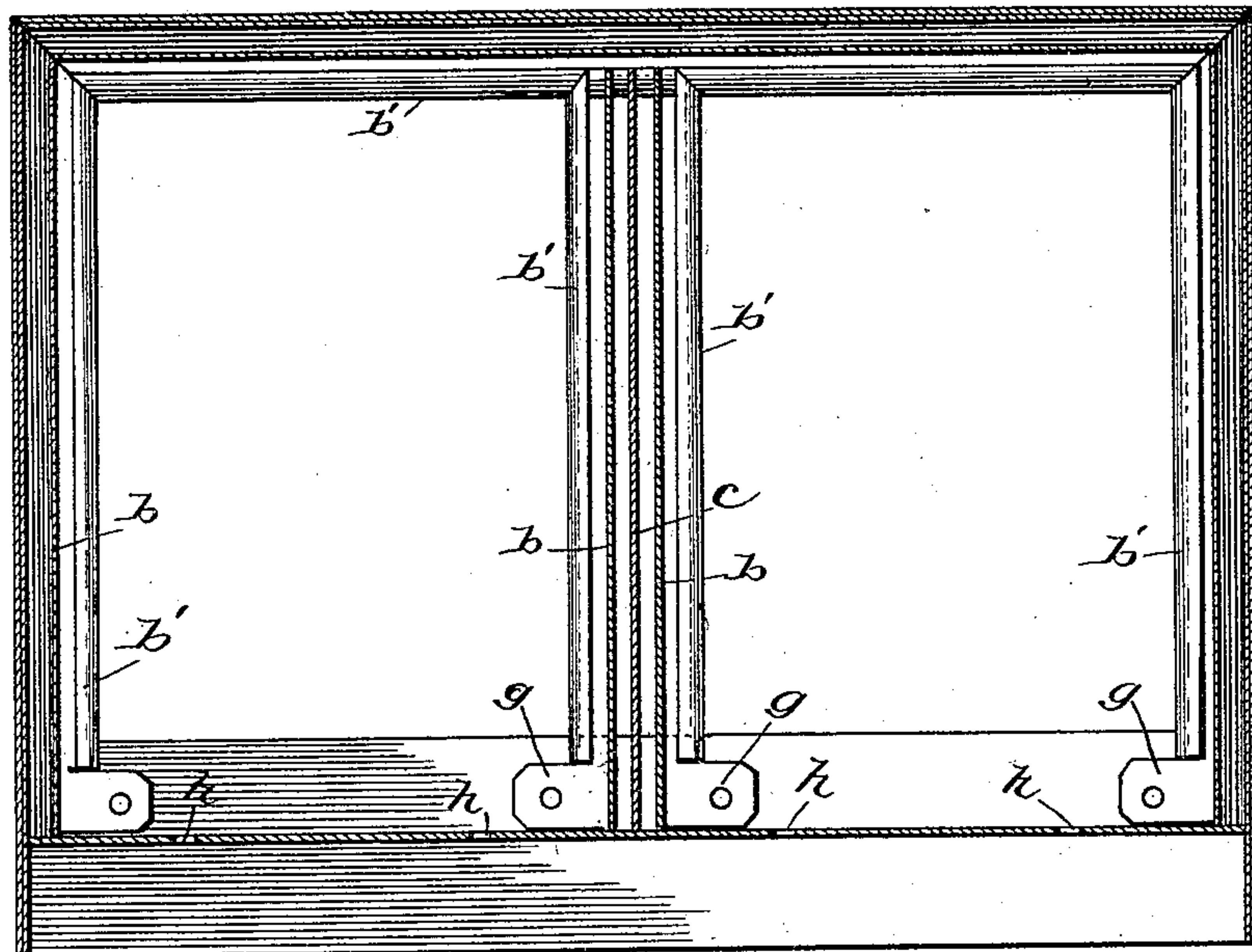


Fig. 5.

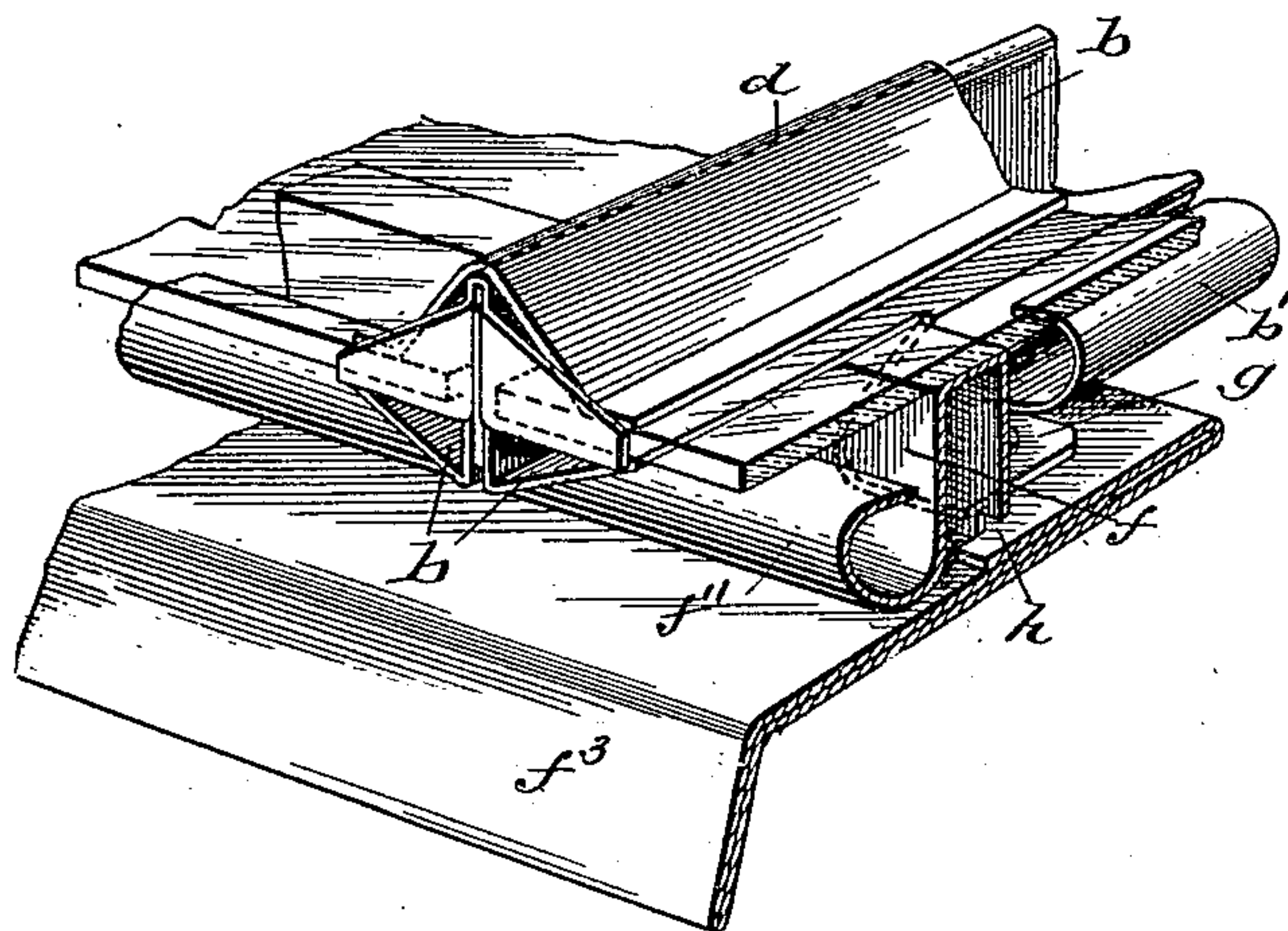
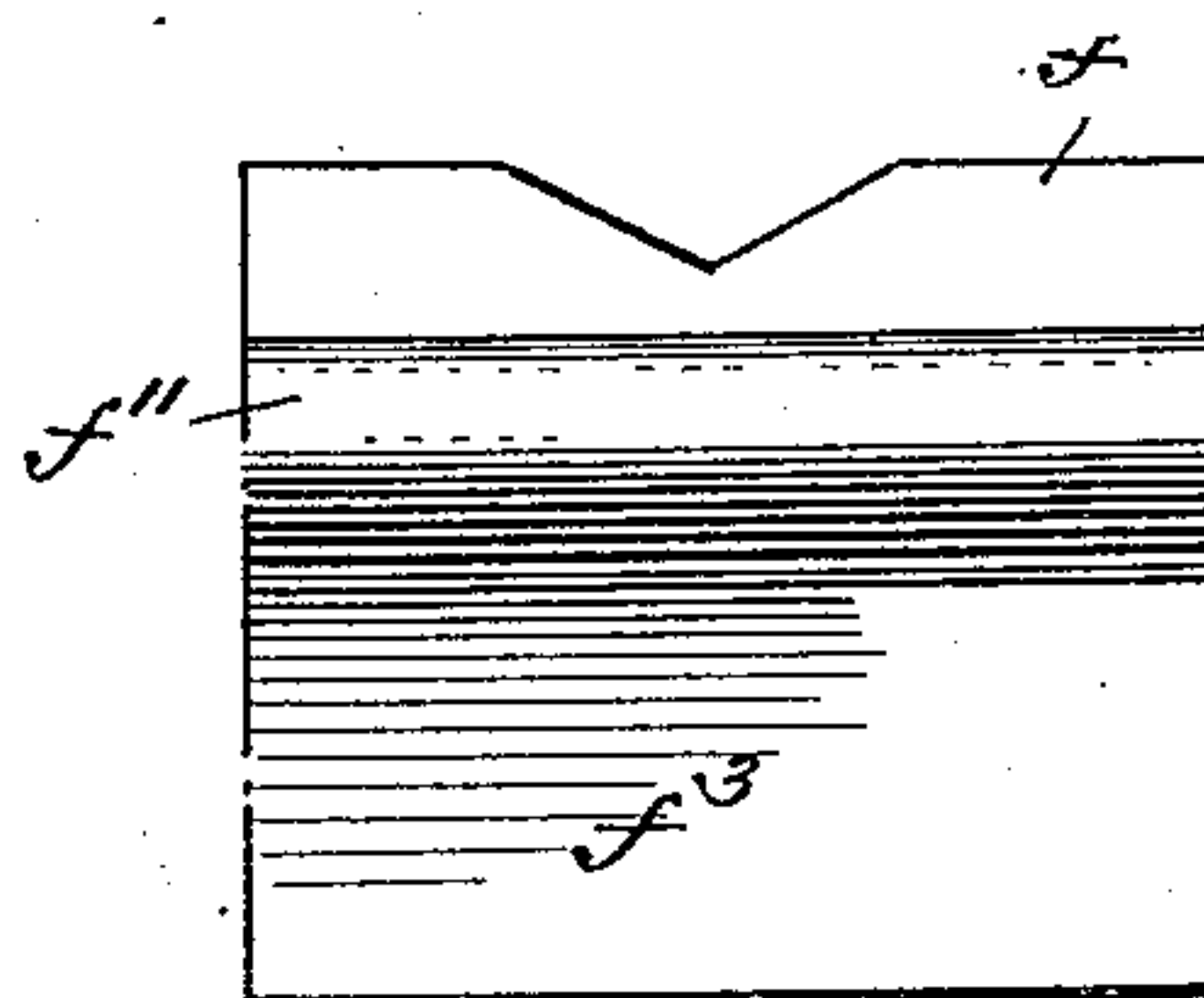


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOHN FITZBERGER, OF BALTIMORE, MARYLAND.

SKYLIGHT.

SPECIFICATION forming part of Letters Patent No. 463,963, dated November 24, 1891.

Application filed June 11, 1891. Serial No. 395,878. (No model.)

To all whom it may concern:

Be it known that I, JOHN FITZBERGER, a citizen of the United States, residing at Baltimore, Maryland, have invented certain new and useful Improvements in Skylights, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 represents a perspective view of my improved skylight complete and applied to a roof of a building. Fig. 2 is a transverse vertical sectional view of the same. Fig. 3 is a transverse sectional view of the lower end of the skylight. Fig. 4 is a horizontal sectional view of the same. Fig. 5 is a detail perspective and sectional view of a portion of the lower end of the skylight. Fig. 6 is a detail view of a portion of the lower bar.

This invention will be fully understood and appreciated from the following description when taken in connection with the accompanying drawings; and it consists of certain novel features of construction that will be fully hereinafter described, and particularly pointed out in the claims appended.

In the drawings, *a* designates the rectangular wooden box or frame, upon which the inclined metallic frame for holding the glass is secured. This metallic frame consists of end and side bars and a central longitudinal bar, which are constructed as shown in the sectional views. The central bar is formed, as shown in Fig. 2, by first folding or bending a strip or plate of sheet metal, preferably galvanized iron, longitudinally upon itself, the two folded portions of the strip lying closely together a portion of their width and then turned upwardly and outwardly in opposite directions to form longitudinal gutters *b b* to catch and carry off any water that may leak in under the glass, these gutters extending the full length of the skylight. The upper outer edges of these gutters are formed Λ -shaped and serve to firmly support the inner edges of the glass plates which rest upon them, the inner edges of the glasses extending entirely over the gutter and terminating close to the vertical folded portion of the bar. The free depending portions of the strip forming the bar are then pressed inwardly toward each other and then curled outwardly and upwardly to form suitable longitudinal open

gutters or beads *b' b'*. If desired, a longitudinal stiffening-strip *c* may be clamped between the folded parts of the bar, this strip preferably having its lower longitudinal edge formed into an open tube *c'*, conforming in shape to the gutters *b'* between and below which it is located. A longitudinal cap-piece *d*, having inclined flanged sides that bear firmly upon the upper surface of the glass, is clamped over the upper folded edge of the central strip, this cap being clamped down over this strip by means of the usual bent copper strips *e*, which are clamped between the folded parts of the central strip and extend up through openings in the cap-piece. The advantages of this bar are its extreme simplicity and rigidity and also the effectual manner in which it disposes of leakage water and water of condensation. It will be observed that whatever water forms or condenses upon the under surface of the glass will flow against the sharp supporting-shoulders formed by the gutters *b* and immediately run down the inwardly-inclined sides of the strip into the lower gutters *b' b'*, by which it is readily conducted off, while any water that may leak in under the flanges of the cap and around the edges of the glass will be deposited in the upper gutters *b* and be thereby carried off.

The side bars and upper end bar are constructed of folded sheet-metal strips in a manner similar to the central bar, except that they are made single instead of double—that is to say, they are only provided with one upper gutter and one lower gutter—inasmuch as they only have to support one edge of the glass, as is evident. The caps and bars are firmly soldered together at their juncture, and the longitudinal gutters communicate with the gutters of the upper bar.

The skylight is inclined as usual to throw the water toward its lower end and discharge it upon the adjacent roof.

The lower transverse bar of the skylight-frame, as shown most clearly in Figs. 3 and 5, is constructed of a horizontal strip of longitudinally-folded sheet metal, the upper portion of which is pressed or bent up longitudinally to form a supporting-ridge *f* for the lower edges of the glass panes which rest upon and project considerably beyond it, the edge

of this upper portion being turned outwardly and suitably curled, as at f'' , to strengthen it. The folded portion f' of this lower bar extends horizontally inwardly a suitable distance beyond the wooden supporting-frame a to form a ledge or gutter to receive the water of condensation from the lower longitudinal gutters b' . To secure the parts together and facilitate the discharge of the water from the gutters b' upon the ledge f' , the lower ends of the curled part of the gutters are cut inwardly and flattened to form ears g , which are firmly riveted and soldered down to the said ledge, as shown most clearly in Fig. 4.

The lower part of the folded lower bar is extended outwardly a suitable distance and turned downwardly, as at f^3 , to stiffen the frame and to throw the water upon the roof, the free edge of this portion being folded over upon the main portion and carried inwardly beyond the ridge f and clamped between the folded portions of the ledge f' , as shown in Figs. 3 and 5. To allow the water to pass through the ridge and escape, openings h are formed through the same at intervals.

As will be observed from Figs. 1, 3, and 5, the lower ends of the lower gutters b' terminate inside of the ridge and discharge their contents upon the inwardly-projecting ledge, while the upper gutters are extended outwardly over the top of the ridge, so as to carry their waters beyond the same and discharge them upon the roof, the ridge being notched for the passage of these gutters, as shown in Fig. 6.

To hold the glass in place—that is, to prevent them slipping downward—extensions or ears k are formed integral with the lower ends of the bars, these ears being bent over against the lower edges of the glass and firmly soldered to the lower ends of the caps d .

In this skylight, it will be observed, no lead or other packing need be employed, inasmuch as the system of gutters is so efficient that even if leakage does occur it will be readily conducted off and discharged upon the roof. By the construction of bars shown and

described great rigidity and strength is obtained, and an eminently practical skylight is produced.

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

1. A bar for skylights, consisting of an imperforated strip of sheet metal folded upon itself longitudinally, its two parts being first bent outwardly and upwardly to form gutters and supporting-ledges b and then abruptly downwardly and inwardly and brought in close proximity to each other, their lower edges being curled outwardly and formed into gutters b' , a stiffening-strip c , clamped between the folded portions of the main bar and having its lower edge curled, and a flanged cap-piece d , secured upon the upper folded edge of the main bar, substantially as described.

2. A skylight-frame consisting of inclined longitudinal bars for supporting the glass, the central bar being formed into upper supporting-gutters $b b$ and lower gutters $b' b'$, the lower end of this central bar being extended to form ears which are bent over against the lower edges of the glass, substantially as described.

3. The combination of the inclined longitudinal bars, the central bar being formed of sheet metal and folded so as to form oppositely-projecting upper gutters $b b$ and lower gutters $b' b'$ and the lower cross-bar formed of sheet metal folded upon itself and bent into a ridge f , extending across the lower end of the skylight, the said upper gutters of the central bar extending out over this ridge and the lower gutters terminating inside thereof, so as to discharge the water of condensation on the ledge formed by the folded portion of the lower bar, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN FITZBERGER.

Witnesses:

C. D. DAVIS,
ALEX. S. STEUART.