

(No Model.)

3 Sheets—Sheet 1.

E. TOTMAN.

MODE OF CONSTRUCTING FRAME HOUSES.

No. 299,598.

Patented June 3, 1884.

Fig 1.

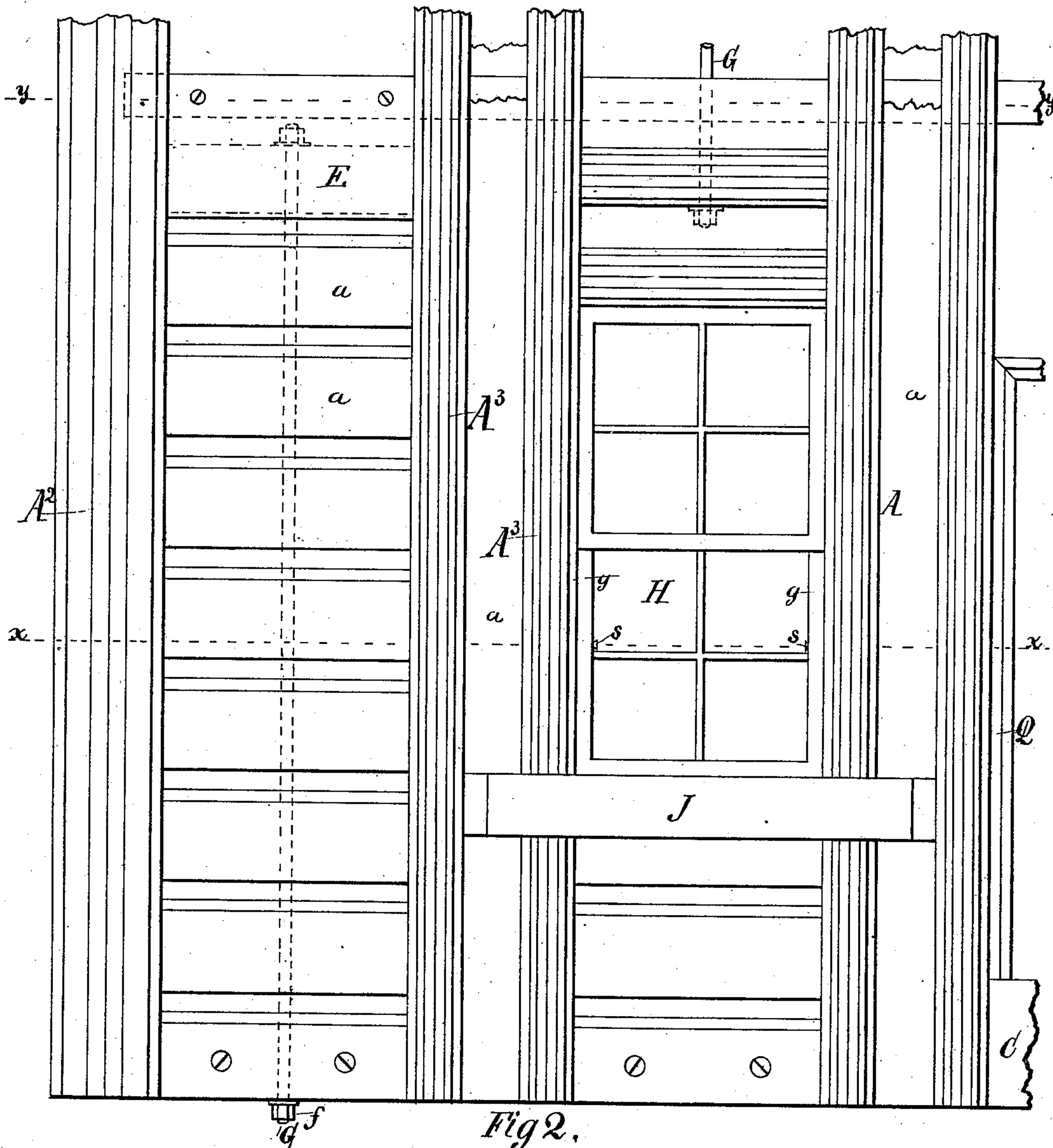
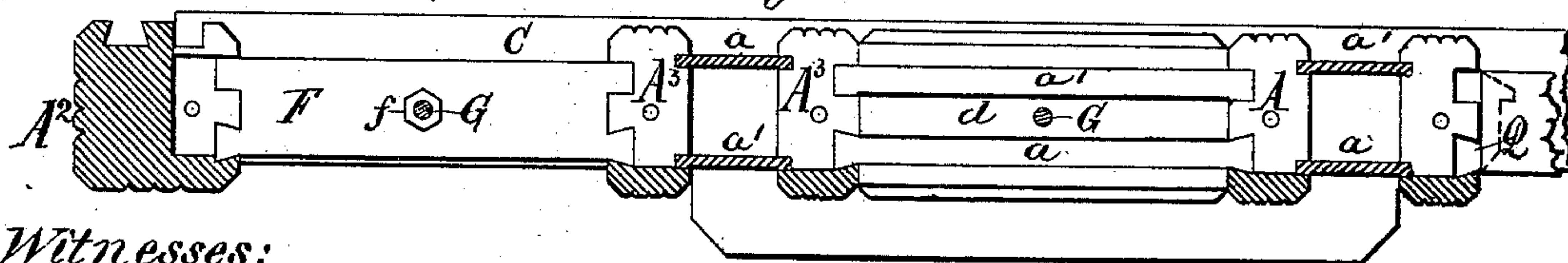


Fig 2.



Witnesses:

J. P. Theo. Lang.

Robt. L. Fenwick.

Inventor:

Edsall Totman
by his attys
Fenwick & Lawrence

(No Model.)

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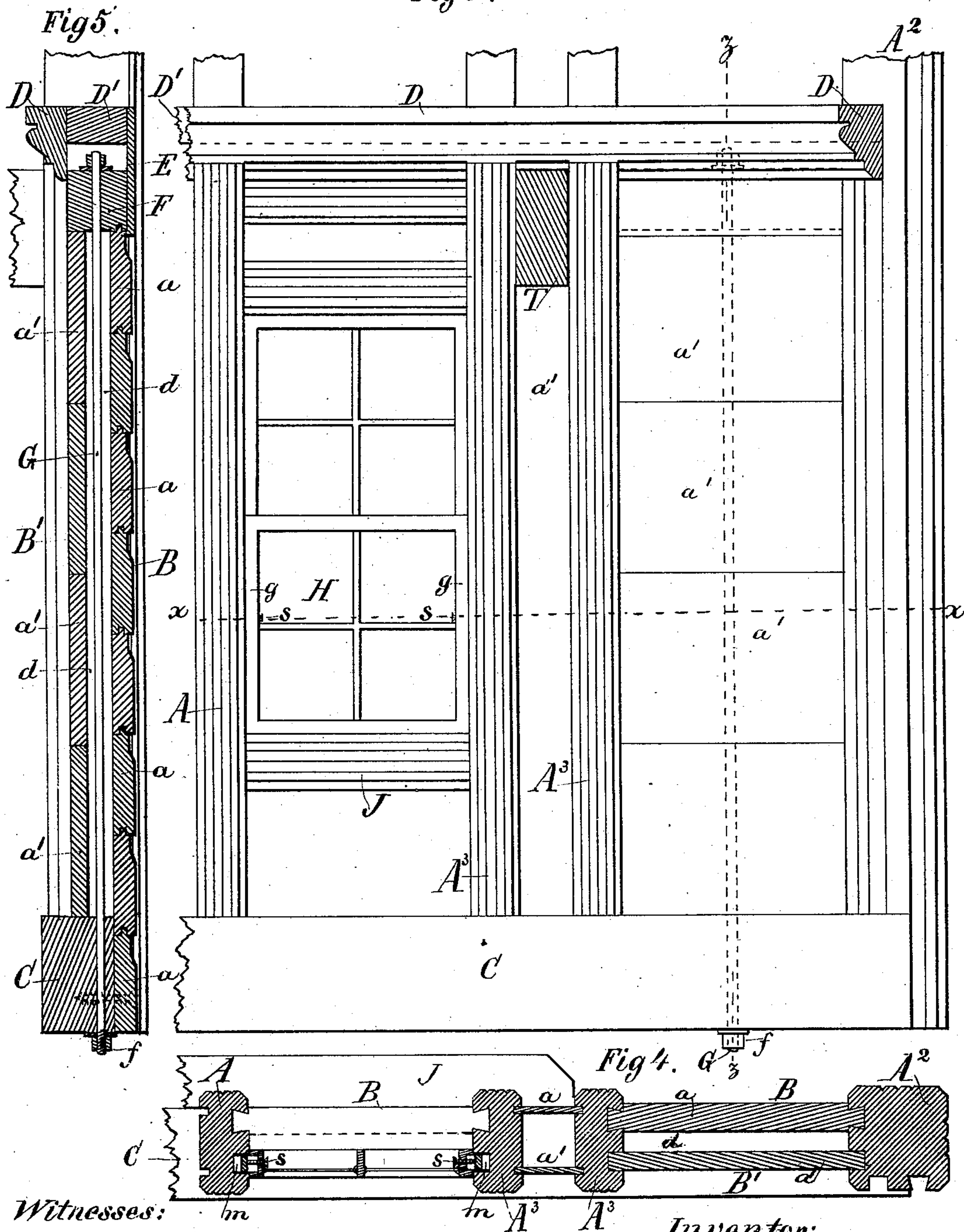
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Fig 3.



Witnesses:

J. P. Theo. Lang

Robt. S. Fenwick.

Inventor:
Edsall Totman
by his attys.
Fenwick and Lawrence

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Fig 6.

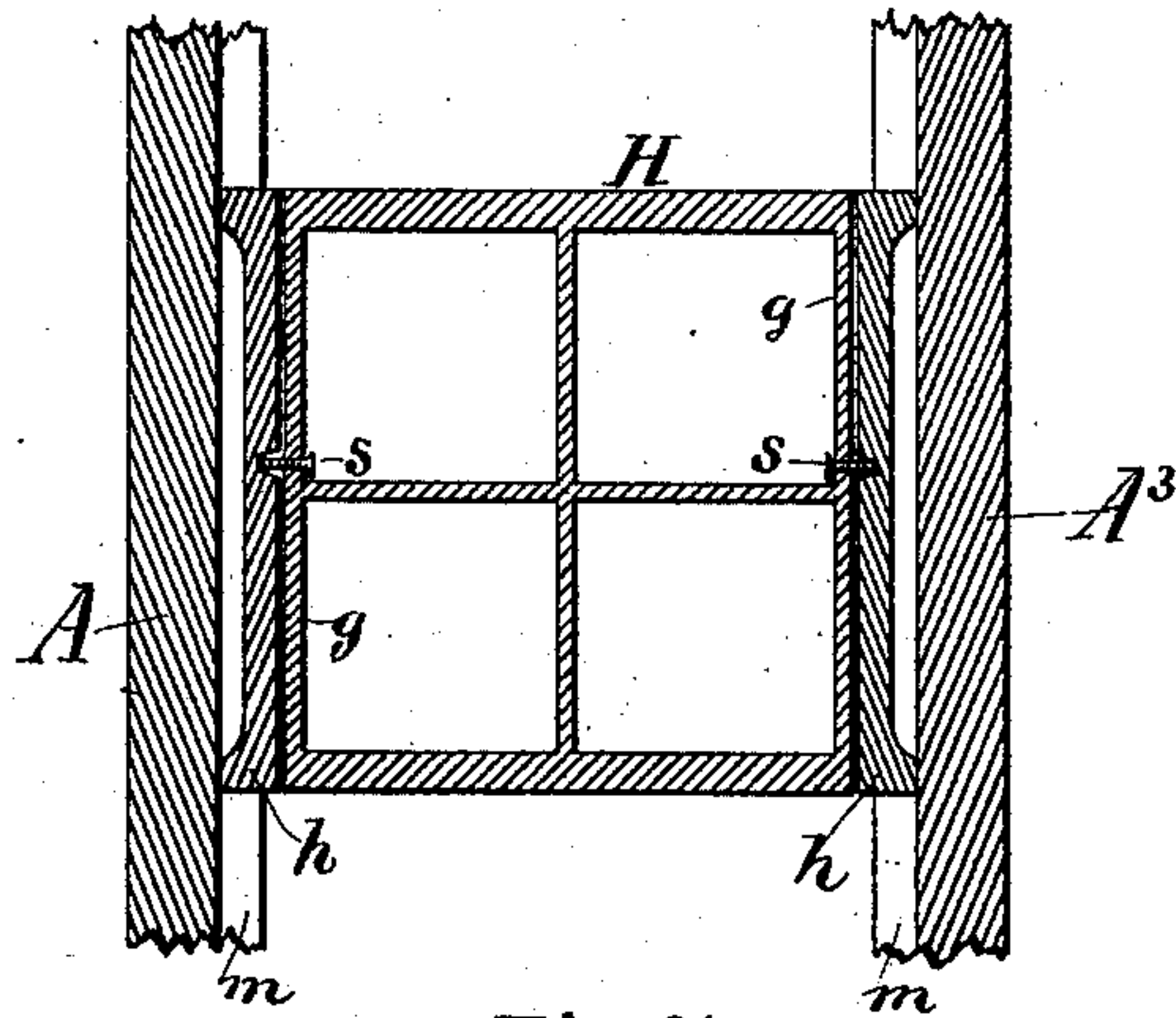


Fig 7.

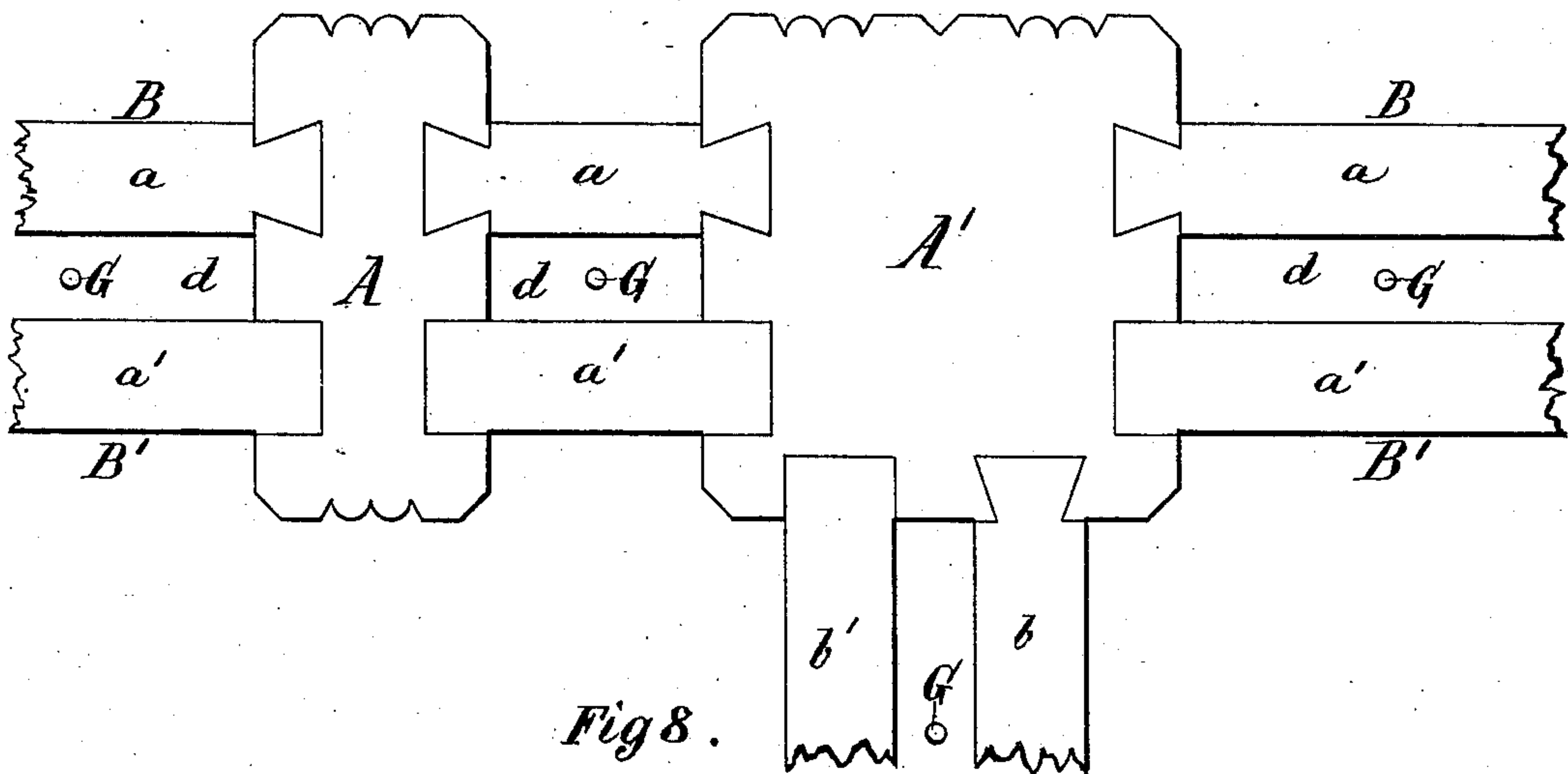
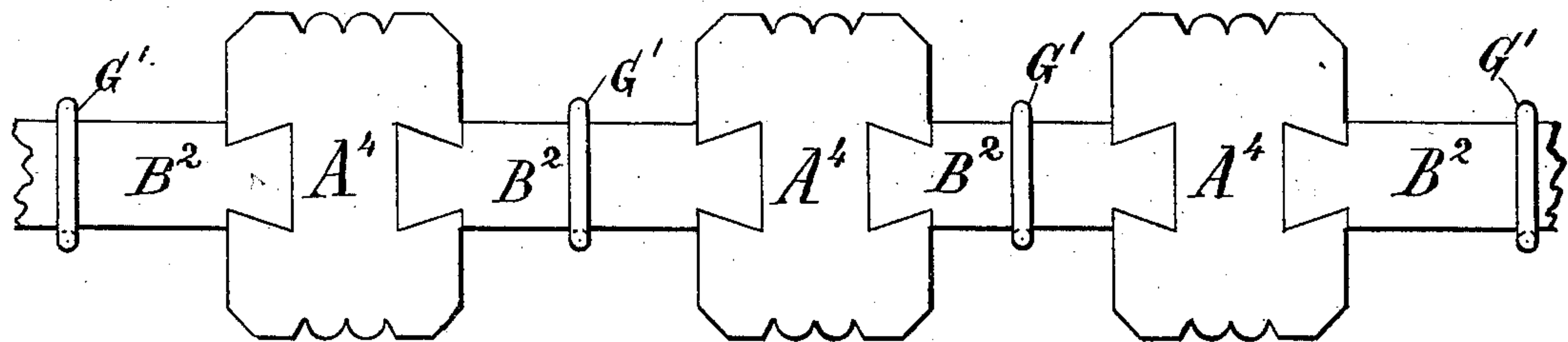


Fig 8.



Witnesses:

J. P. Theo. Lang

Robt. S. Fenwick.

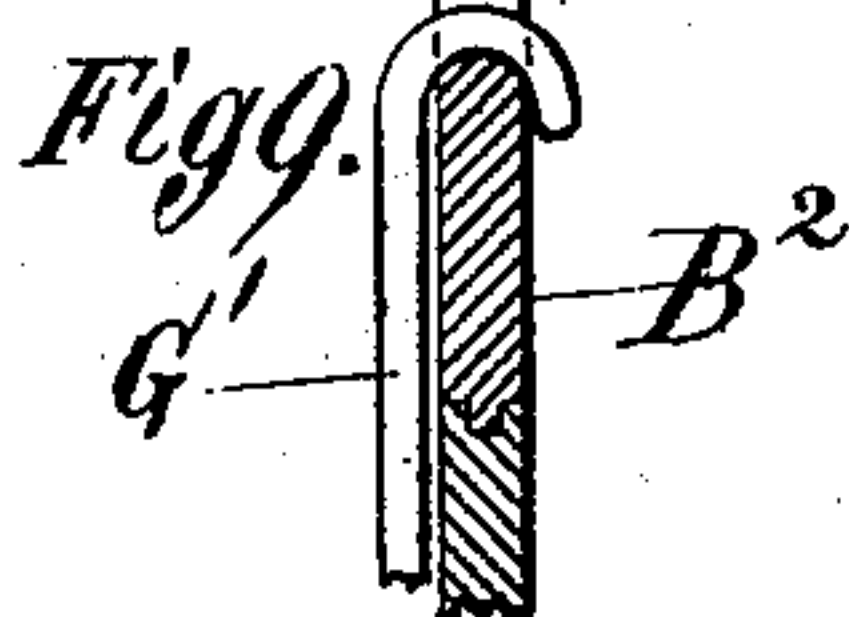


Fig 9.

Inventor:
Edule Totman
by his attys
Fenwick & Lawrence

UNITED STATES PATENT OFFICE.

EDSELL TOTMAN, OF HINSDALE, ILLINOIS.

MODE OF CONSTRUCTING FRAME HOUSES.

SPECIFICATION forming part of Letters Patent No. 299,598, dated June 3, 1884.

Application filed March 8, 1884. (No model.)

To all whom it may concern:

Be it known that I, EDSELL TOTMAN, a citizen of the United States, residing at Hinsdale, in the county of Du Page and State of Illinois, have invented a new and Improved Mode of Constructing Frame Houses, of which the following is a specification.

In the accompanying drawings, Figure 1 is an elevation of a portion of the outside of a house constructed in accordance with my invention. Fig. 2 is a horizontal section in the line *yy* of Fig. 1. Fig. 3 is an elevation and partial section illustrating a portion of the inside of a house constructed in accordance with my invention. Fig. 4 is a horizontal section in the line *xx* of Figs. 1 and 3. Fig. 5 is a vertical section in the line *zz* of Fig. 3. Fig. 6 is a detail section through one of the window-frames and one of the window-sashes. Fig. 7 is a diagram illustrating my invention, the same showing an outer, inner, and cross walls as constructed in accordance with my invention. Fig. 8 is a diagram showing a modification of my invention as applied in the construction of a house having a single solid wall, and Fig. 9 is a detail vertical section of a portion of Fig. 8.

The object of my invention is to increase the strength of frame houses which have heretofore been constructed with their timbers dovetailed together, and so united as to either form a hollow or a solid wall or walls; also, to provide for "tightening up" both the inner and outer walls without liability of leaving wind and water cracks leading into the interior of the house; also, to provide houses constructed in accordance with my invention with self-binding sashes, which dispense with the use of removable bead-strips, and yet are conveniently removable when necessary.

In Fig. 7, A indicates one of the upright studs which I use in the spaces between the doors and windows when such space is of a width greater than three feet, and B B' the outer and inner walls, which are composed of planks or boards, as *a* and *a'*. A' indicates one of the studs used, constructed as shown, which is set into the wall of the house at such points where it is necessary to form a partition, as indicated at *b* and *b'*. As shown in Fig. 7, the outer wall may connect with the

upright studs A and A' by a dovetail connection, and thus sufficiently bind the walls in place, while the inner wall may be simply let into a square longitudinal groove in said studs.

In Fig. 5 the mode of constructing the two walls from short plank is indicated, the outer wall, B, having its planks connected together with a tongue and groove, while the planks composing the inner wall, B', are only matched on their edges and let into the square groove of the studs, as seen in Figs. 2, 4, and 7.

Having reference to Figs. 3, 4, and 5, C indicates one of the foundation-timbers to be used in the construction of a house in accordance with my invention, which timbers may be bolted to foundation-walls beneath in any proper manner, and on these timbers C the double walls, as shown, are erected, leaving a dead-air space, *d*, between them from the top to the bottom of the double wall.

Having reference to Figs. 3 and 5, D indicates a molding, which extends along the inner walls of the house, as shown, and is permanently attached to a beam, D', which is supported upon the upright studs and dovetailed therewith, so as to hold the beam in a permanent position. E is a frieze-board attached to the beam D', extending down a considerable distance, and far enough to reach down to the top of the planking of the outer wall, B, said outer wall as well as inner wall, B', having their upper planks let into a groove on the under side of a movable beam, F, which, by a long bolt, G, is connected, as shown, with the base or foundation timber C, whereby, as the walls shrink, they can be tightened up, the beam F during such act being drawn down below the lower edge of the frieze-board E, and the frieze-board serving to close up all ingress of air or weather at the top of the walls. Thus, by tightening up bolts G, which are provided for all the walls which are between the upright studs, the shrinkage of the walls will not be observed, since the volume of shrinkage will always be compensated by the descent of the movable beam F in rear of the frieze-board E; and in this manner all cracks, both in the outer and inner wall, will be remedied simply by tightening the rod G by turning the screw-nut *f*, access to which may be provided in any proper manner.

In constructing a house by my improved mode upright studding, as A or A' in Fig. 7, or as A A² A³ in Fig. 4, will be employed on each side of the windows and doors, leaving a space between them sufficient to receive joists T for the upper floor, the same resting, for example, upon the walls *a a'* between the studs A³ A³, as in Fig. 4.

In Fig. 6 I have shown in vertical section a window. (Represented in cross-section in Fig. 4 and in elevation in Fig. 3.) In this window the rails *g g* of the sash H are grooved, and receive therein wood springs *h h*, constructed as shown, which move up and down with the sash, and in grooves *m m* of the studs A' A³. (Shown in Figs. 4 and 6.) A set-screw, *s*, passed through the rails *g g* of the sash, is made to press against the springs *h h*, whereby the window may be made to retain a given elevated position by the pressure of the springs against the said studs A A³. By turning far enough back the set-screws *s s*, the sash H may be removed from between the springs by either raising or lowering the sash far enough to clear the upper or lower ends of the springs.

As shown in Fig. 4, A² is a stud adapted for use at the corner of a house, and in Fig. 8 studs, as A⁴, of a modified form, and adapted for a single-wall house, are shown. The single wall, B², shown in this figure may have its shrinkage tightened up by a rod, as G', hooked over the top of the wall, as shown in Fig. 9, and extending down and connected to a foundation-timber, C, as hereinbefore described. In this case a cornice, as D, and frieze-board, as E, attached on either side of a fixed timber, D', as hereinbefore described, will be provided in connection with such single wall and for the same purpose.

In Figs. 1 and 2 part of a doorway-casing is shown, the door-jamb being made by using a molding, as at Q in Fig. 2, and fitting it into the grooves of one of the studs to which the door is to be hung.

It will thus be seen that a house constructed in this manner can be papered and have the appearance of a plastered house after allowing the walls to shrink sufficiently before paper-

ing; that by means of tightening-up bolts all the cracks can be made perfectly tight, leaving no chance for the walls to shrink and crack the paper, as is the case when the ceiling is nailed to ordinary studding, and, further, that by my mode of tightening the shrinkage of the walls I at the same time afford the means for anchoring the house, so to speak, to the foundation below the ground, thus affording security against storms, which otherwise might blow the house to pieces or wrench it from its foundation.

As shown in Figs. 1 and 2, J indicates a window-sill, which may be made of a single piece of wood, and be inserted through the double walls and between adjacent studs, as shown.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A frame house having wooden walls provided with vertical tie and tightening rods, boarding E, and foundation C, whereby wind and water cracks are closed, substantially as described.

2. The combination of the walls B B', foundation C, movable beam F, screw-bar G, and means for tightening the same, substantially as and for the purpose described.

3. The frieze-board E, in combination with the movable beam F, walls B B', and foundation C, substantially as and for the purpose described.

4. A frame house provided with upright studs having longitudinal dovetail grooves to receive the planking which constitutes the walls of the house, and with vertical tightening-rods G, movable beam F, and frieze-board E, substantially as and for the purpose described.

5. The combination of upright studs A A³, sash H, wooden springs *h h*, and tightening-screws *s s*, substantially as and for the purpose described.

EDSELL TOTMAN.

Witnesses:

C. P. BLODGETT,
CHAS. TOTMAN.