

No. 890,859.

PATENTED JUNE 16, 1908.

T. F. HARRIS.
CONVERTIBLE BED SEAT.
APPLICATION FILED AUG. 19, 1907.

4 SHEETS—SHEET 1.

Fig. 1.

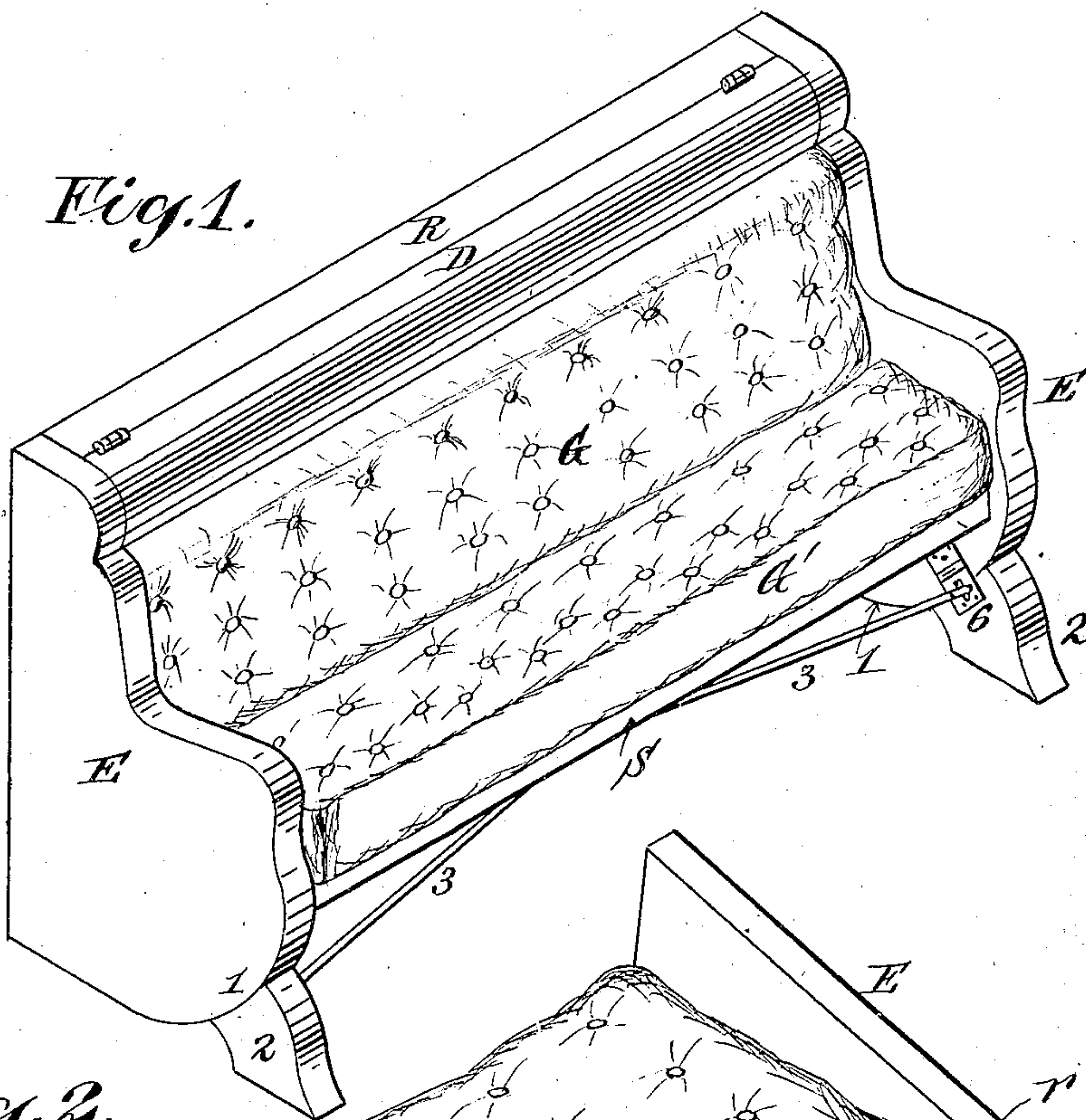
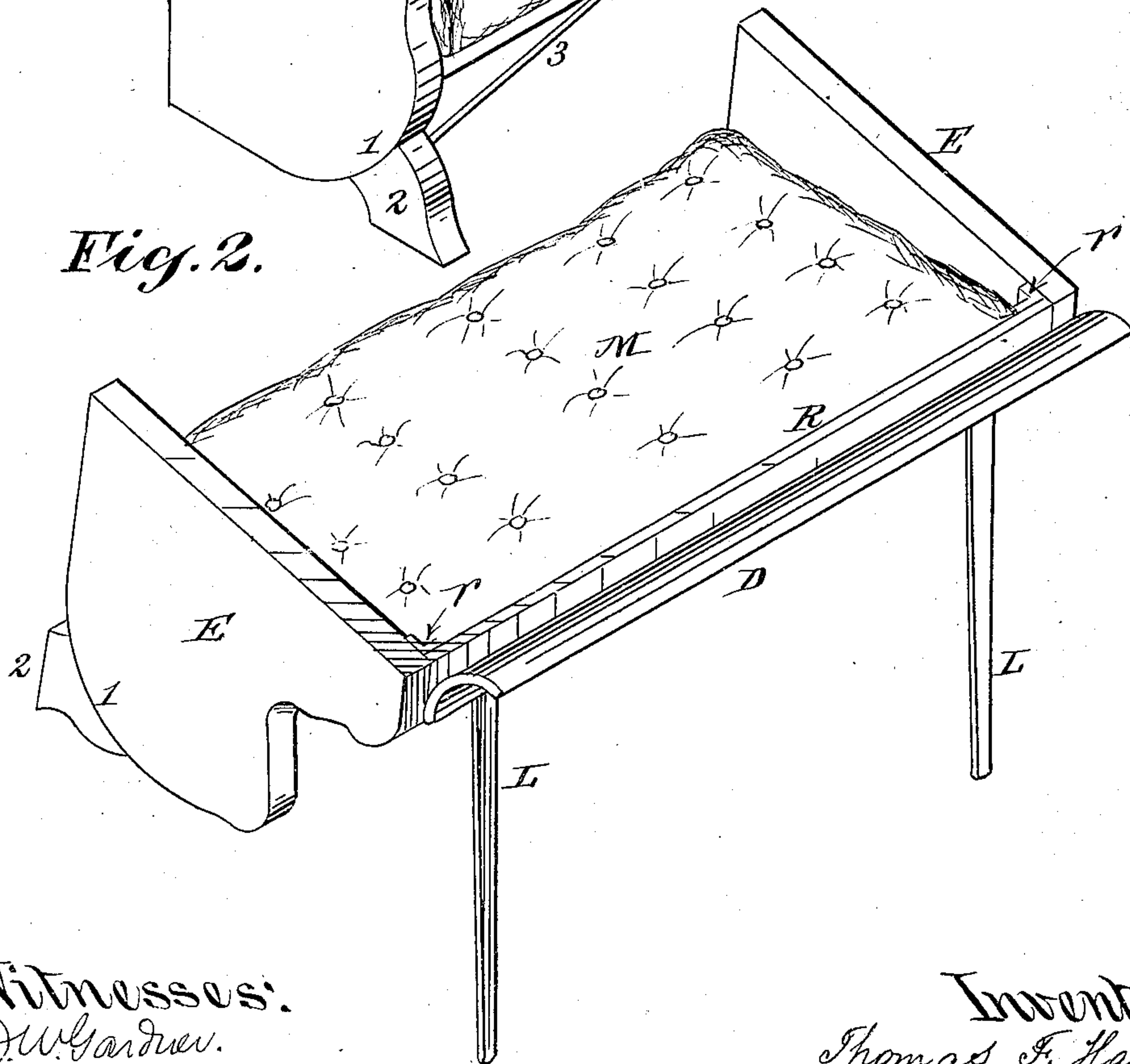


Fig. 2.



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I. Lake

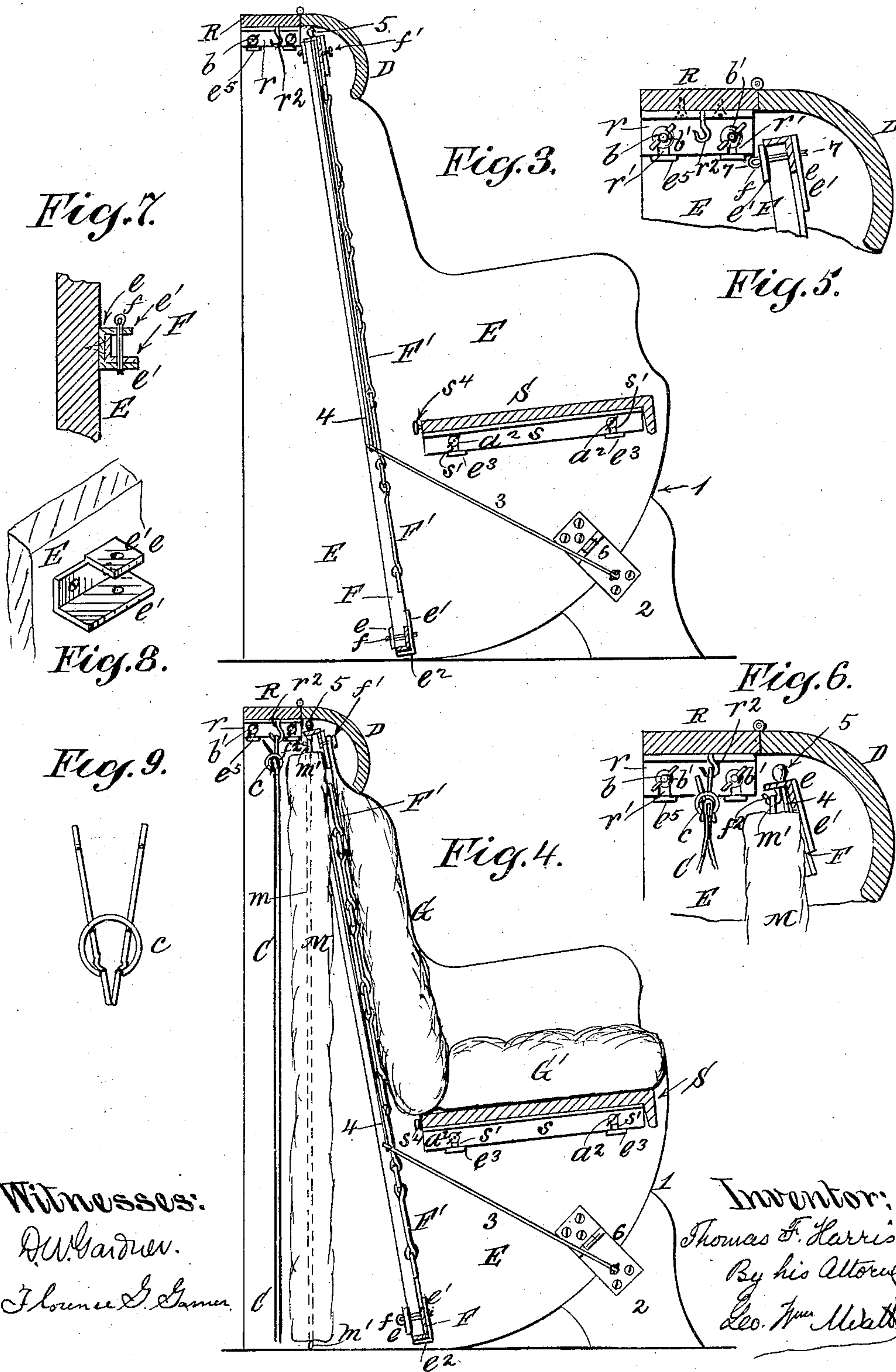
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4 SHEETS—SHEET 2.



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4 SHEETS—SHEET 3.

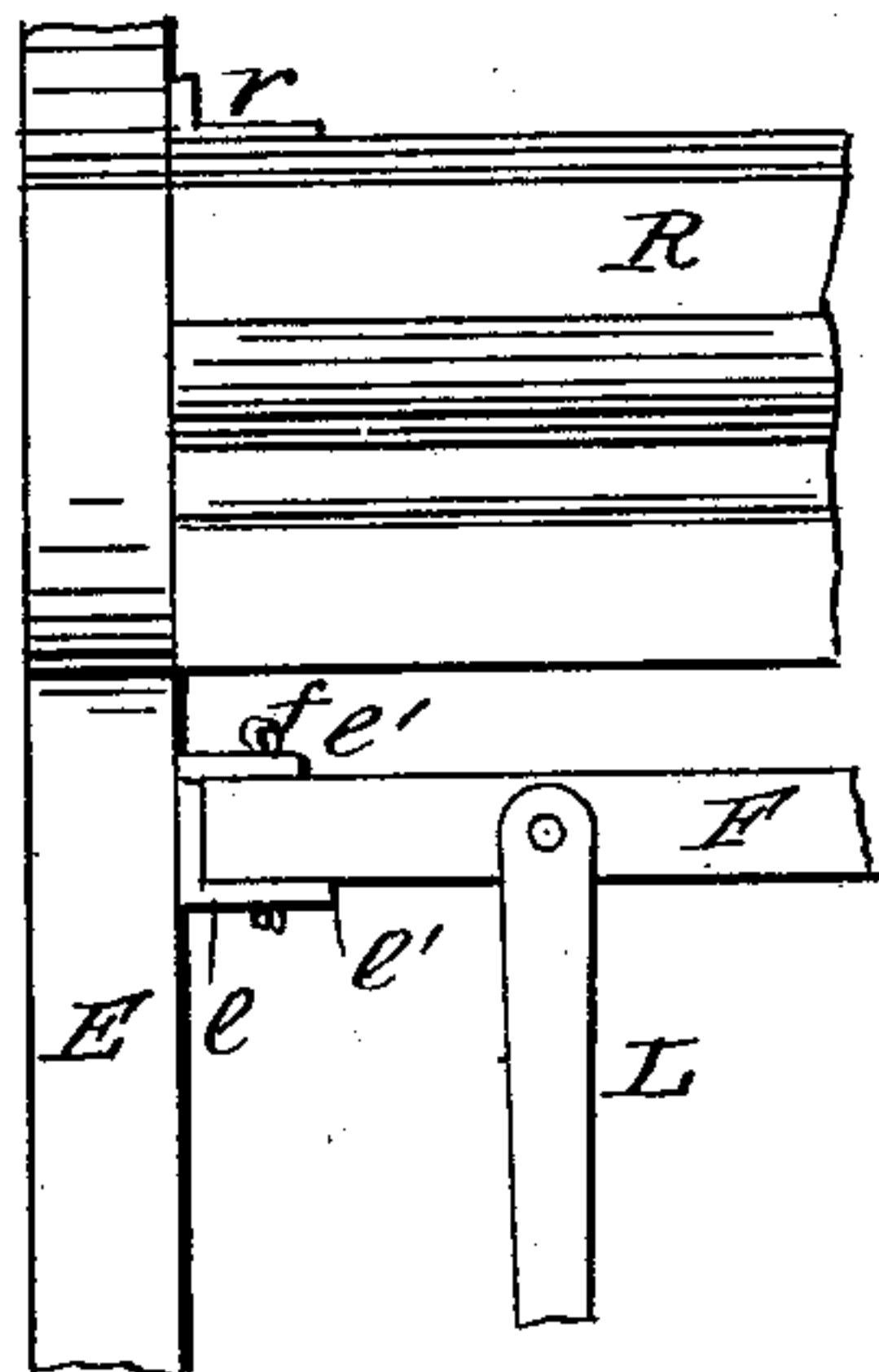
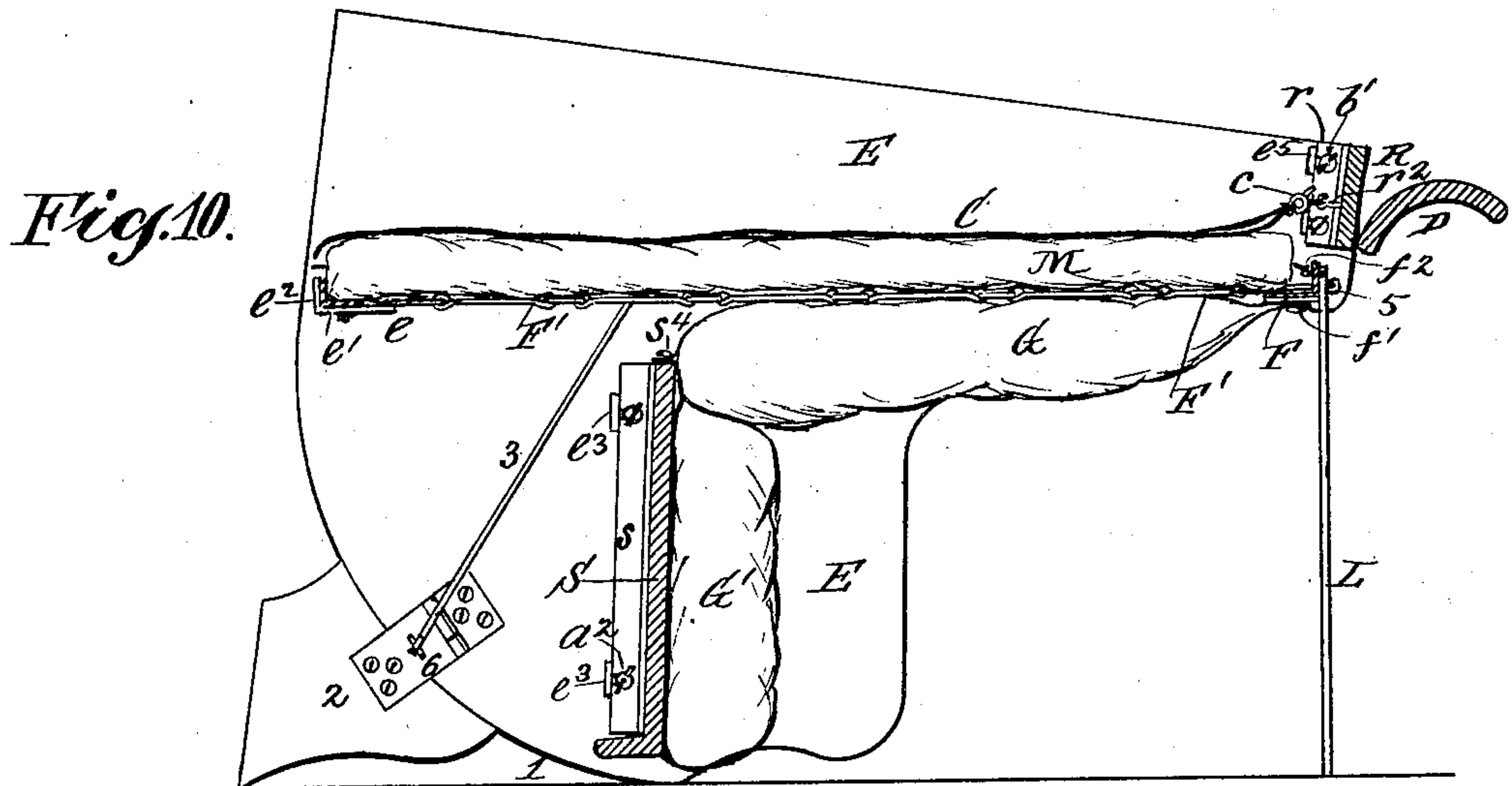


Fig. 11.

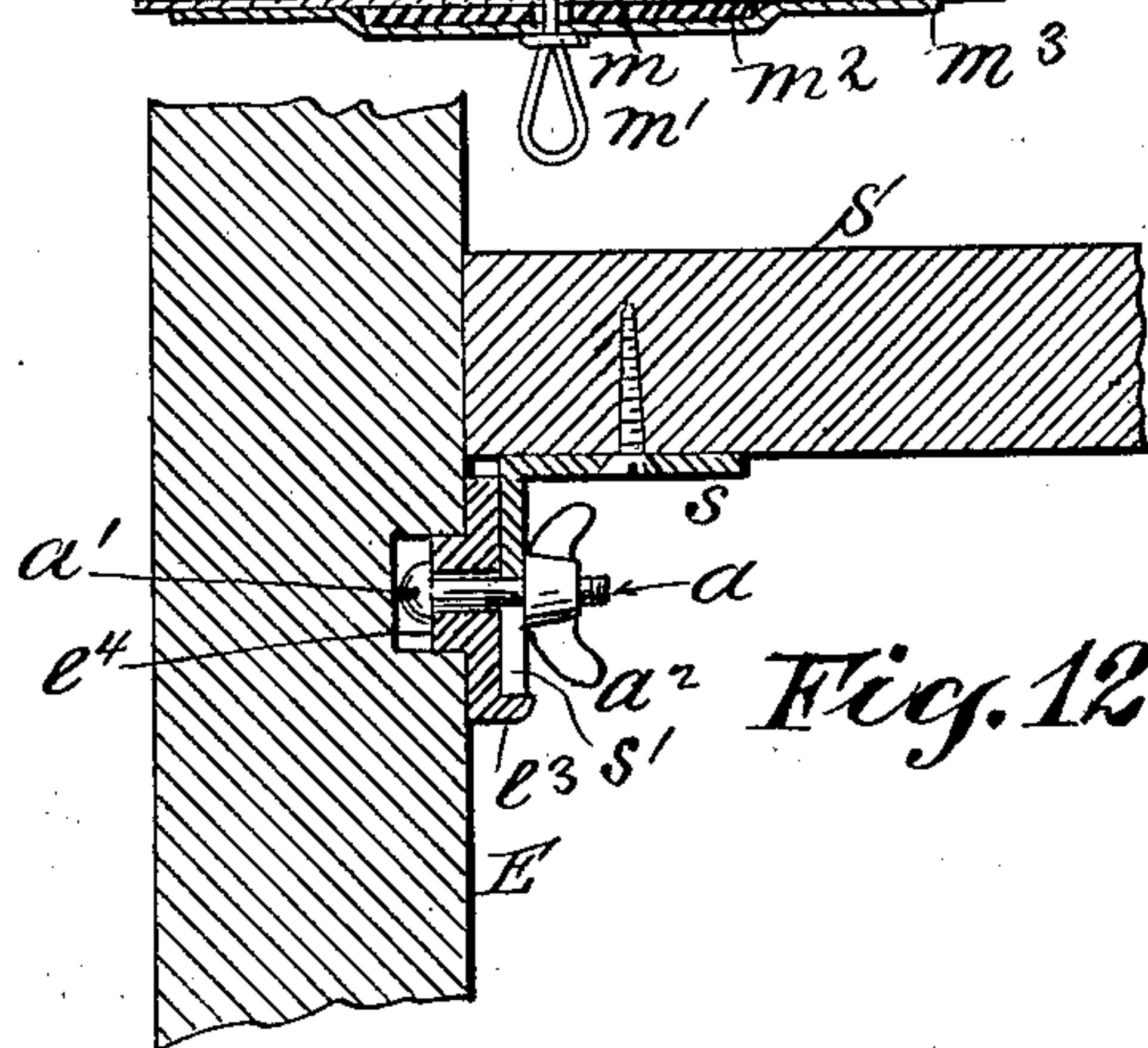
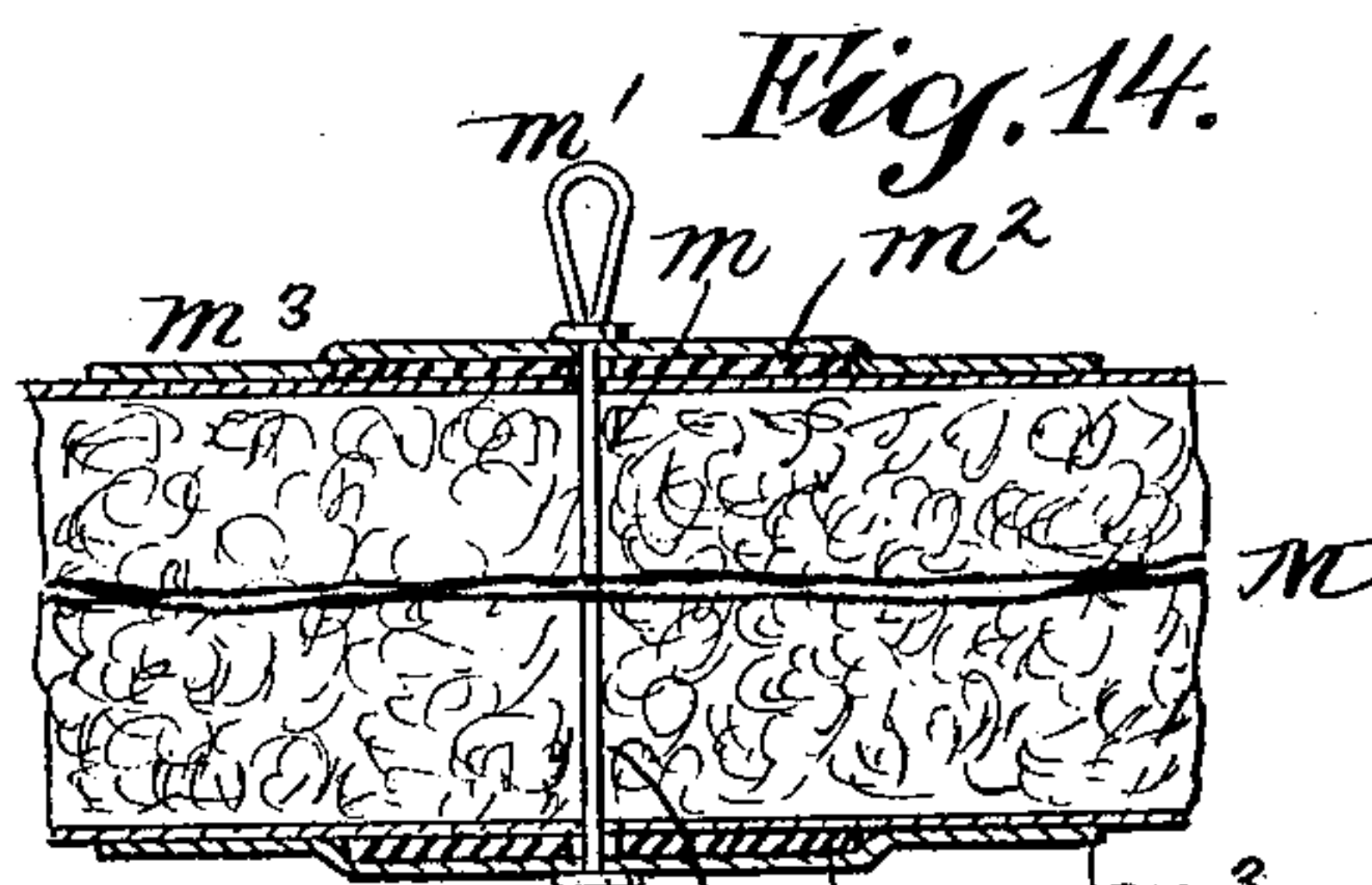
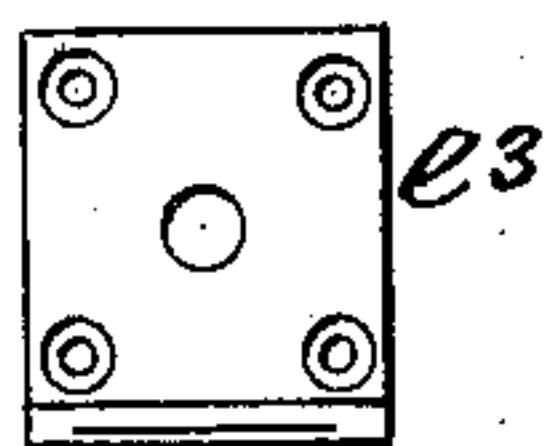


Fig. 12.

Fig. 13.



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4 SHEETS—SHEET 4.

Fig. 15.

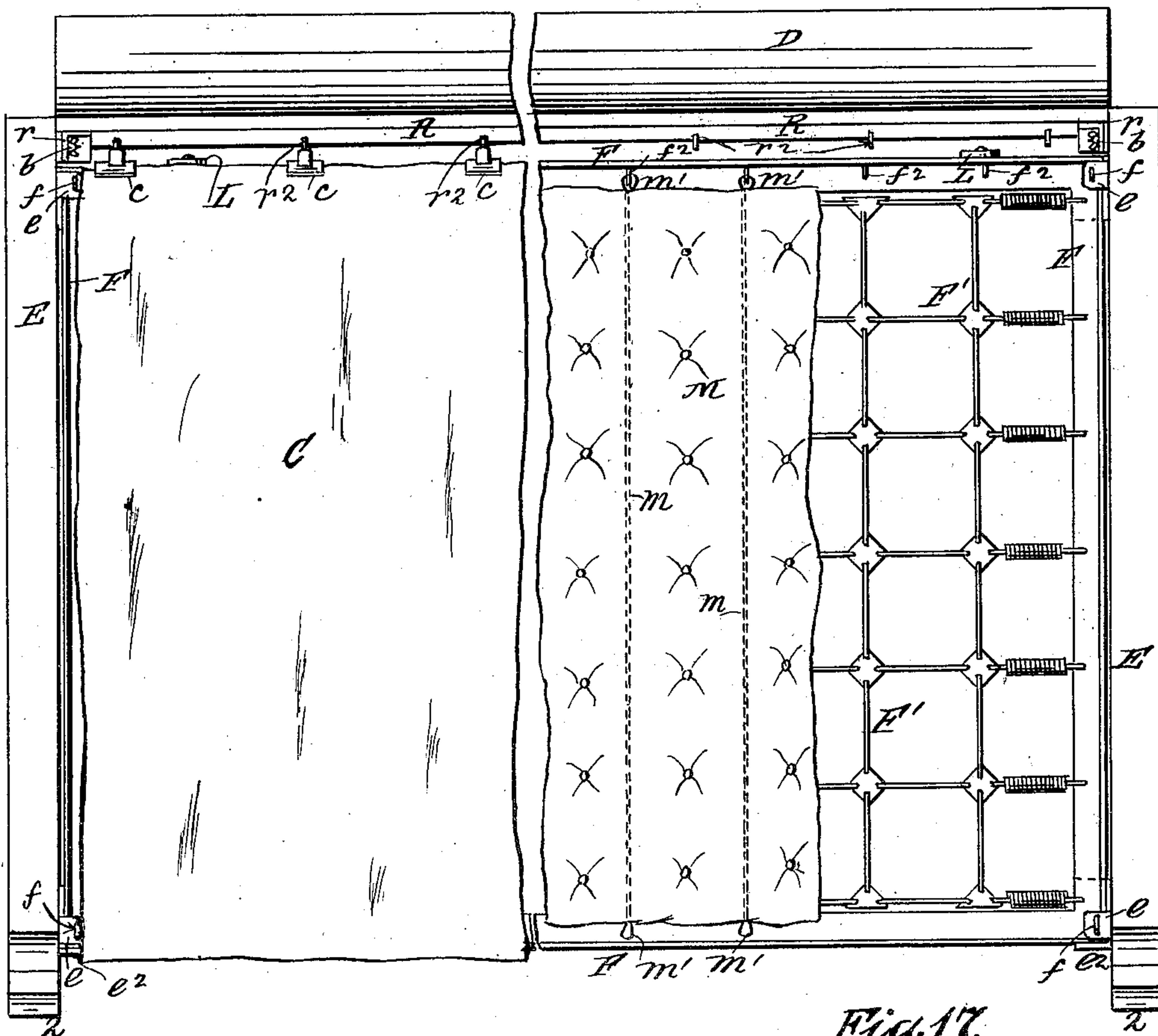


Fig. 17.

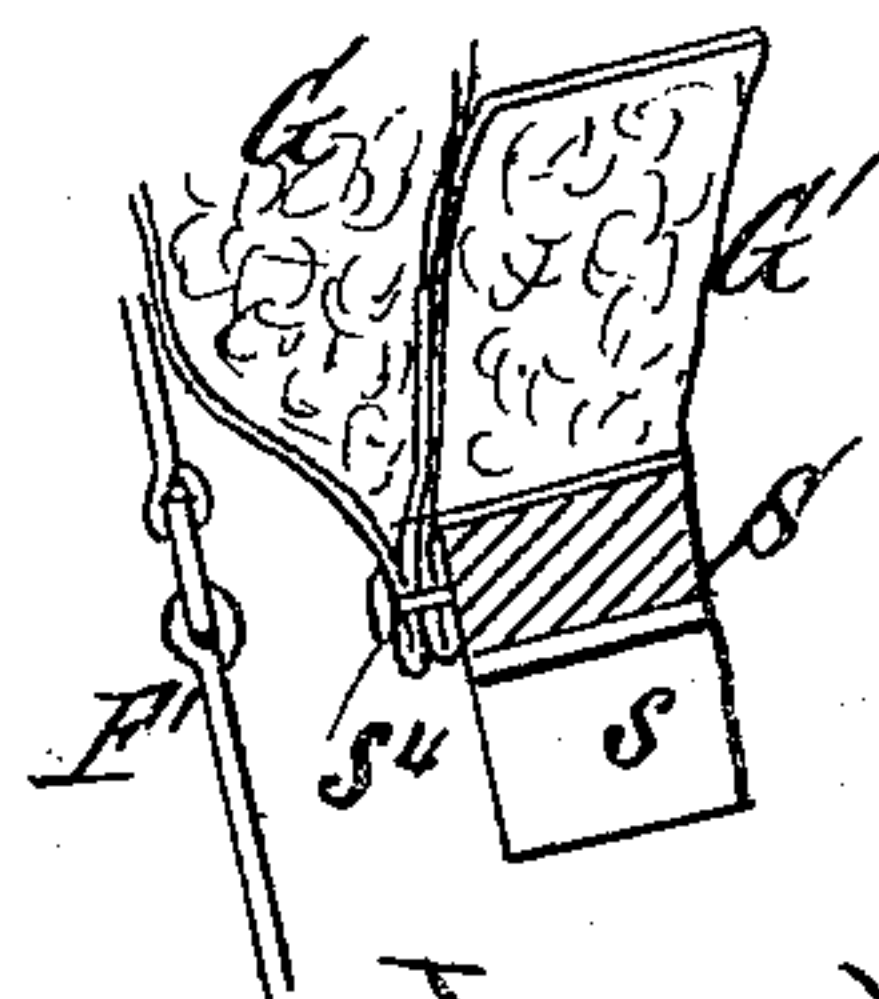
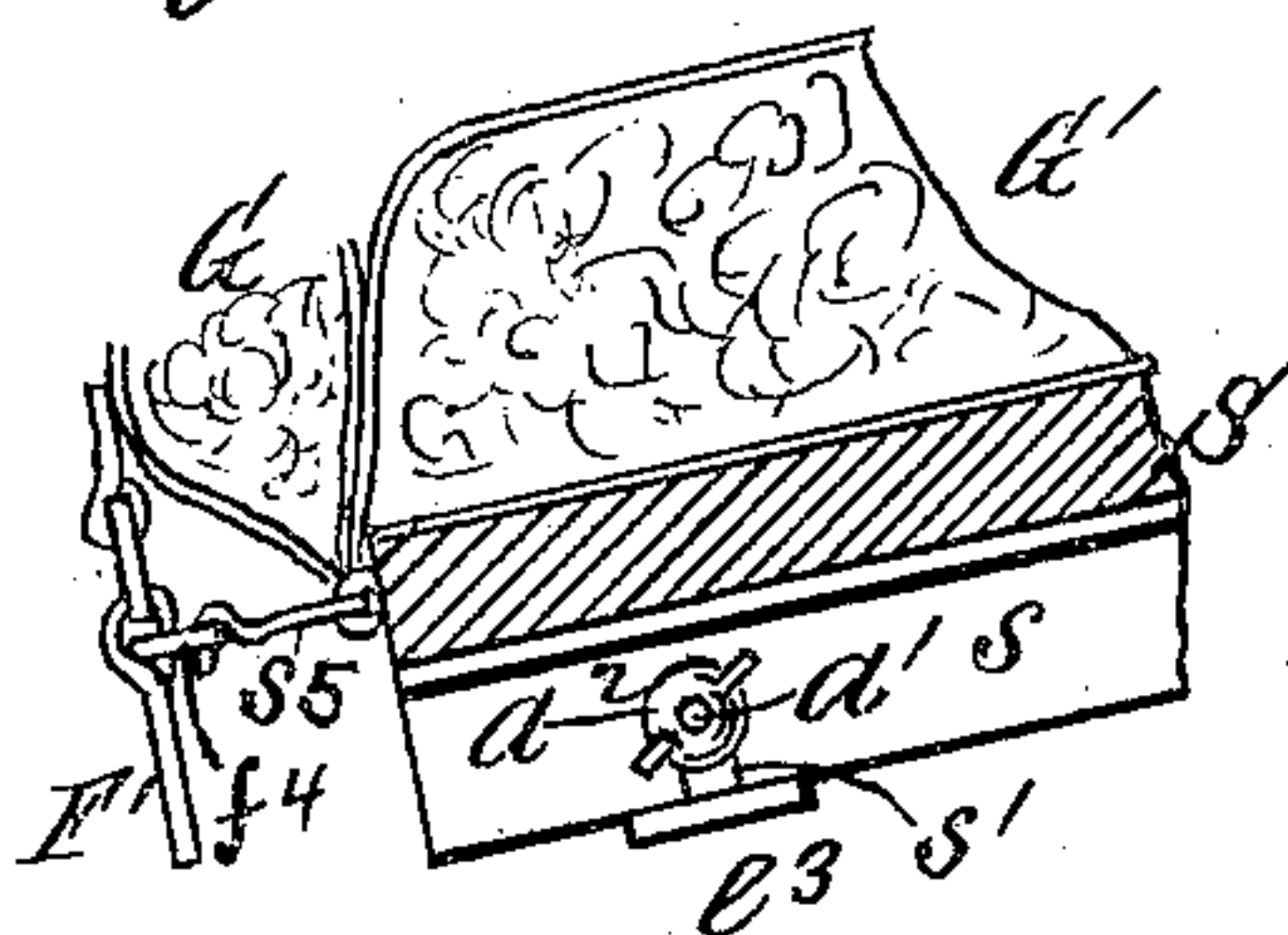


Fig. 16.



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UNITED STATES PATENT OFFICE.

THOMAS F. HARRIS, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND ROBERT A. EIFERT,
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CONVERTIBLE BED-SEAT.

No. 890,859.

Specification of Letters Patent.

Patented June 16, 1908.

Application filed August 19, 1907. Serial No. 389,302.

To all whom it may concern:

Be it known that I, THOMAS F. HARRIS, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Convertible Bed-Seats, of which the following is a specification.

My improvements are designed to afford a simple compact inexpensive but substantial structure which may be quickly and conveniently converted from a settee into a bed, or vice versa, to meet the requirements of use; and the invention consists in the construction and arrangement of parts hereinafter described and claimed specifically.

In the accompanying drawings, Figure 1, is an isometrical perspective of my improved device arranged as a settee; Fig. 2, is a similar view illustrating its use as a bed; Fig. 3, is a transverse sectional elevation, the cushions and bedding being omitted; Fig. 4, is a like view with the cushions and bedding included; Fig. 5, is an enlarged view of the top of Fig. 3; Fig. 6, a similar view of the top of Fig. 4; Fig. 7, a section on line 7—7—Fig. 5; Fig. 8, is an isometrical view of one of the brackets for supporting the spring bed; Fig. 9, is a detail view of one of the clothes clips; Fig. 10, is a sectional elevation of the device arranged as a bed; Fig. 11, is an elevation in part, showing the attachment of one of the legs to the bed spring frame; Fig. 12, is a sectional elevation showing the means of attaching the seat to an end member; Fig. 13, is an elevation of the bracket piece shown in Fig. 12; Fig. 14, is a section of portions of the upper and lower edges of the mattress; Fig. 15, is a rear elevation of the device in its erect position partly broken away; Fig. 16, is a detail view illustrating the coupling of the spring to the seat; Fig. 17, a similar view showing the attachment of the cushions to the seat.

The end members E, E, are united by the rigid rectangular frame F on which the bed spring F' is mounted, by the longitudinal member or top rail R, and by the seat S,—the several parts being secured to the end members E by devices which render them readily detachable therefrom when desired. Thus, the bed spring frame F at or near each of its rectangular corners, is coupled by a split pin f, to a flanged bracket e, secured to the adjacent end members E. Each of these brackets is formed with parallel flanges e', e',

forming a recess or socket into which the edge of the spring frame fits, as will be seen by reference particularly to Figs. 5, 7 and 8. What may be designated (when the end members are upright) as the lower brackets e, are each formed with an additional flange e²,—said flanges e², supporting the weight of the spring frame and relieving the coupling pins f, from unnecessary strain when the device is used as a settee, as will be understood by reference to Figs. 3 and 4. It is to be noted in this connection that the spring frame F is so mounted upon and between the end members E, E, that when the latter are in the upright position, the frame F and spring F', will be inclined from the perpendicular,—the inclination being downward toward the front or seat S, so as to create a space back of the springs F', in which the mattress M and the bed clothing C, may be suspended vertically as hereinafter described.

The seat S near each extremity is provided on its underside with transverse flanges s, s, which fit upon brackets e³, e³, screwed to the adjacent inner side of an end member E, which is recessed to receive and accommodate a boss e⁴, on each bracket as well as the head a', of a screw bolt a, which passes through the bracket e³, and through a slot s', in the flange s, the outer end of the said screw engaging with a thumb nut a², as shown in Fig. 12. The longitudinal top rail R is in like manner formed with transverse end flanges r, r, engaging with brackets e⁵, like unto the brackets e³, above described, bolts b, and thumb nuts b' being used to secure the parts together,—the open ended flange slots s' and r', in both cases admitting of the lifting off and removal of the seat S and of the top rail R from the end members E, E, when the thumb nuts a², and d', are respectively sufficiently loosened for the purpose.

In addition to its function as a brace between the end pieces E, E, the longitudinal rail R affords support to the folding cover D which is hinged to said rail R, and normally, when the device is in use as a settee, covers and incloses the upper end of the spring frame F and adjacent parts as well as the upper edge of the back cushion G, which latter is suspended upon buttons f', or other suitable means, upon the spring frame F. The lower end of the back cushion G is also secured to buttons s⁴, or equivalent devices on the inner edge of the seat S as is likewise the

inner edge of the seat cushion G', (see Fig. 17).

The mattress M is attached to the upper rim of the spring frame F by means of suspenders m, m , consisting preferably of flexible cords or wires passing transversely through the body of the mattress M and formed with external loops m', m' , at either end by which the mattress may be hung on hooks f^2 , attached to said upper rim of the spring frame F.

In order to protect the edges of the mattress M and distribute the strain exerted by the suspenders m , rigid washers m^2, m^2 , are interposed between the loops m', m' , and the adjacent edges of the mattress. These washers may be held in place by straps m^3 , secured to the mattress, as indicated in Fig. 14. By providing the suspenders m, m , with loops m', m' , at each end, the mattress may be reversed or turned in any way desired upon and with relation to the spring frame. These suspenders enable me to hang the mattress vertically free from contact with the spring, without injury to the latter.

Owing to the inclination of the spring frame F, when in the upright position, the suspenders m , sustain the mattress in a vertical position, away from the spring F', as indicated in Fig. 4. The bed clothes C are suspended in like position out of direct contact with the mattress M, by means of clips c , or similar mechanical expedients, suspended on hooks r^2, r^2 , on the under side of the rail R. Thus when the bedding is not in use it is hung in such manner that the air is free to circulate through and around the same. In order to further insure this result by preventing the rearward sagging of the spring F under pressure exerted against the back cushion G, when the device is used as a settee, I provide means for coupling the spring F', temporarily to the rear edge of the seat S, as by the use of hooks s^5 , on said seat engaging with eyes f^4 , attached to the spring, as shown by way of illustration in Fig. 16.

Each end member E is formed with a curved rocking edge 1, related to which is arranged a hinged foot 2, adapted to be swung inward as by means of a cord or flexible connection 3, preferably attached to a central cord or flexible connection 4, extending to and through the top rim of the spring frame F, where it is formed with a knob or handle 5 to facilitate manipulation. The inner edge of each foot 2 conforms in curvature to the curved rocking edge 1 of the end member F, to which it is secured, preferably by a leaf hinge 6. These feet 2, are used in both the upright and the recumbent positions of the device as will be seen in the drawings,—being folded inward only for the purpose of allowing the device to be turned from one position to the other upon the rocking edges 1, 1, and then turned back into aline-

ment with their respective end members E, E, to lock and sustain them stationary in the prescribed position.

When the device is to be used as a bed, legs L, L, pivotally attached to the upper edge of the spring frame F, (see Fig. 11) are swung down into contact with the floor. When the device is to be used as a settee, these legs L, L, are folded into alinement with said edge of the spring frame, and are hidden by the cover D.

My convertible device is essentially "knock down" in character,—detachability of all the parts being a distinguishing feature of my construction. Thus, the bedding, cushions, longitudinal rail, seat and spring frame may be severally separated and removed from between the end members for convenience in transportation or storage, or to give access to all parts for cleaning and like purposes.

It will be noted that the inclination of the spring frame not only creates a space in which the bedding may be suspended vertically, but also adapts the spring to act as a support for the back cushion when the device is used as a settee, as will be seen by reference to Fig. 4. By allowing the bedding to hang free and clear in a suitable space in which the air is free to circulate, the bedding is not only aired, but the mattress is free to expand and become loose and soft during the day, or when not in use.

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

1. In a convertible bedseat of the character designated, the combination of vertical end members coupled together by intervening horizontal members and formed with curved parallel edges, and hinged feet, one on each of said end members, adapted to support the same in either an upright or recumbent position, for the purpose described.

2. In a convertible bed seat of the character designated, the combination of vertical end members coupled together by intervening horizontal members and formed with curved parallel edges, hinged feet, one on each of said end members, adapted to support the same in either an upright or recumbent position, and a flexible connection attached to each of said hinged feet, whereby the latter may be simultaneously drawn inward to allow the said end members to be turned on their curved edges, for the purpose described.

3. In a convertible bed seat of the character designated, the combination of vertical end members coupled together by horizontal members and formed with curved parallel edges, hinged feet, one on each end member, adapted to support the same in either an upright or a recumbent position, a spring bed frame attached to and between the said end members in such relation there-

to that when in the recumbent position the bed spring frame will occupy a horizontal plane and when in the upright position it will occupy a plane inclined upward toward the rear of the device, for the purpose described.

4. In a convertible bed seat of the character designated, the combination of vertical end members coupled together by horizontal members and formed with curved parallel edges, hinged feet, one on each end member, adapted to support the same in either an upright or recumbent position, a spring bed frame attached to and between the said end members in such relation thereto that when in the recumbent position the bed spring frame will occupy a horizontal plane and when in the upright position it will occupy a plane inclined upward toward the rear of the device, and means for suspending bedding vertically in the space behind said bed spring frame when the device is in its upright position, for the purpose described.

5. In a convertible bed seat of the character designated, the combination of the vertical end members formed with parallel curved edges, hinged feet, one on each end member, adapted to support the same in either an upright or recumbent position, a horizontal member detachably mounted upon and between said end members, a spring bed frame detachably mounted upon and between said end members, and a seat also detachably mounted upon and between said end members, whereby the parts of the device may be readily separated and assembled for the purpose described.

6. In a convertible bed seat of the character designated, the combination of the vertical end members formed with parallel

curved edges, hinged feet, one on each of said members, adapted to support the same in either an upright or recumbent position, a horizontal top rail attached to and between said end members, foldable legs on a horizontal member for supporting the device in the recumbent position, a spring bed frame attached to and between said end members in such relation thereto that when in the recumbent position the spring bed frame will occupy a horizontal plane and when in the upright position it will occupy a plane inclined upward toward the rear of the device, and a seat attached to and between said end members and approximately at right angles to the plane of the bed spring frame, for the purpose described.

7. In a convertible bed seat of the character designated, the combination of the vertical end members coupled together by horizontal members and formed with parallel curved edges, hinged feet, one on each end member, adapted to support the same in either an upright or a recumbent position, a spring bed frame attached to and between the said end members in such relation thereto that when in the recumbent position the bed spring frame will occupy a horizontal plane and when in the upright position it will occupy a plane inclined upward toward the rear of the device, a seat attached to and between said end members and approximately at right angles to the plane of the bed spring frame, and means for coupling the bed spring frame to the seat, for the purpose described.

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