

(No Model.)

2 Sheets—Sheet 1.

M. GINNA.

SOFA BED.

No. 338,949.

Patented Mar. 30, 1886.

Fig. 1.

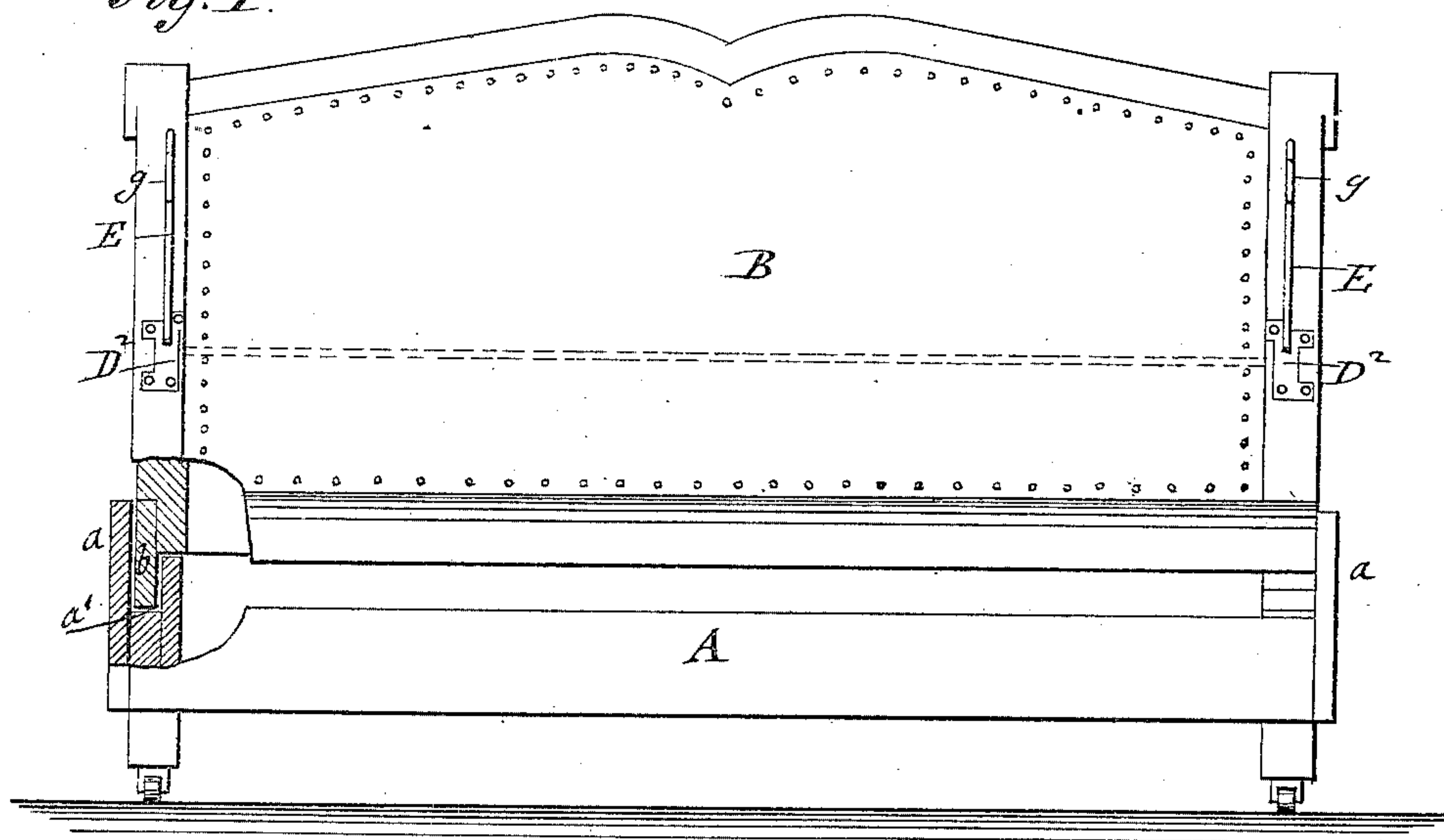


Fig. 2.

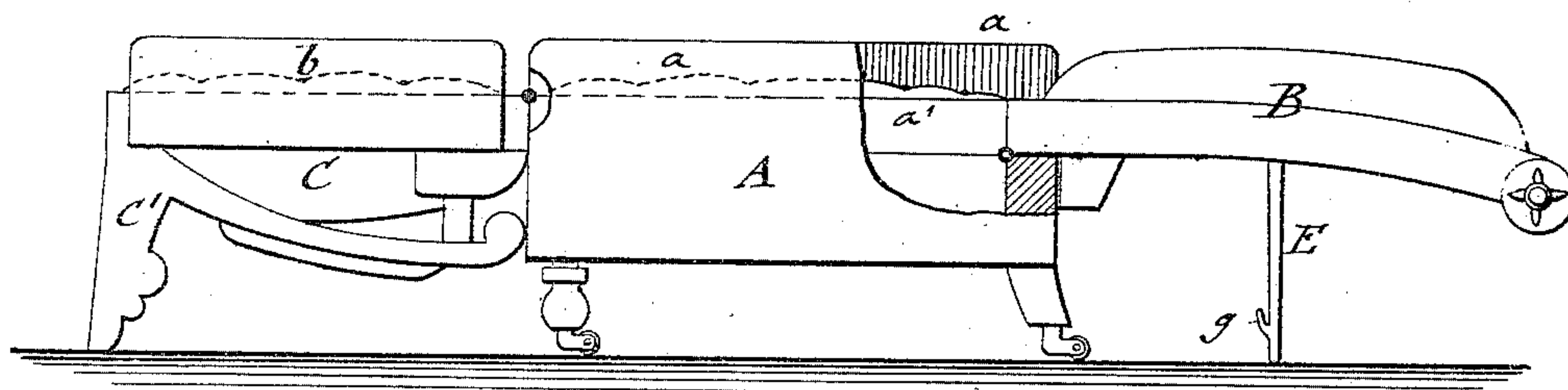
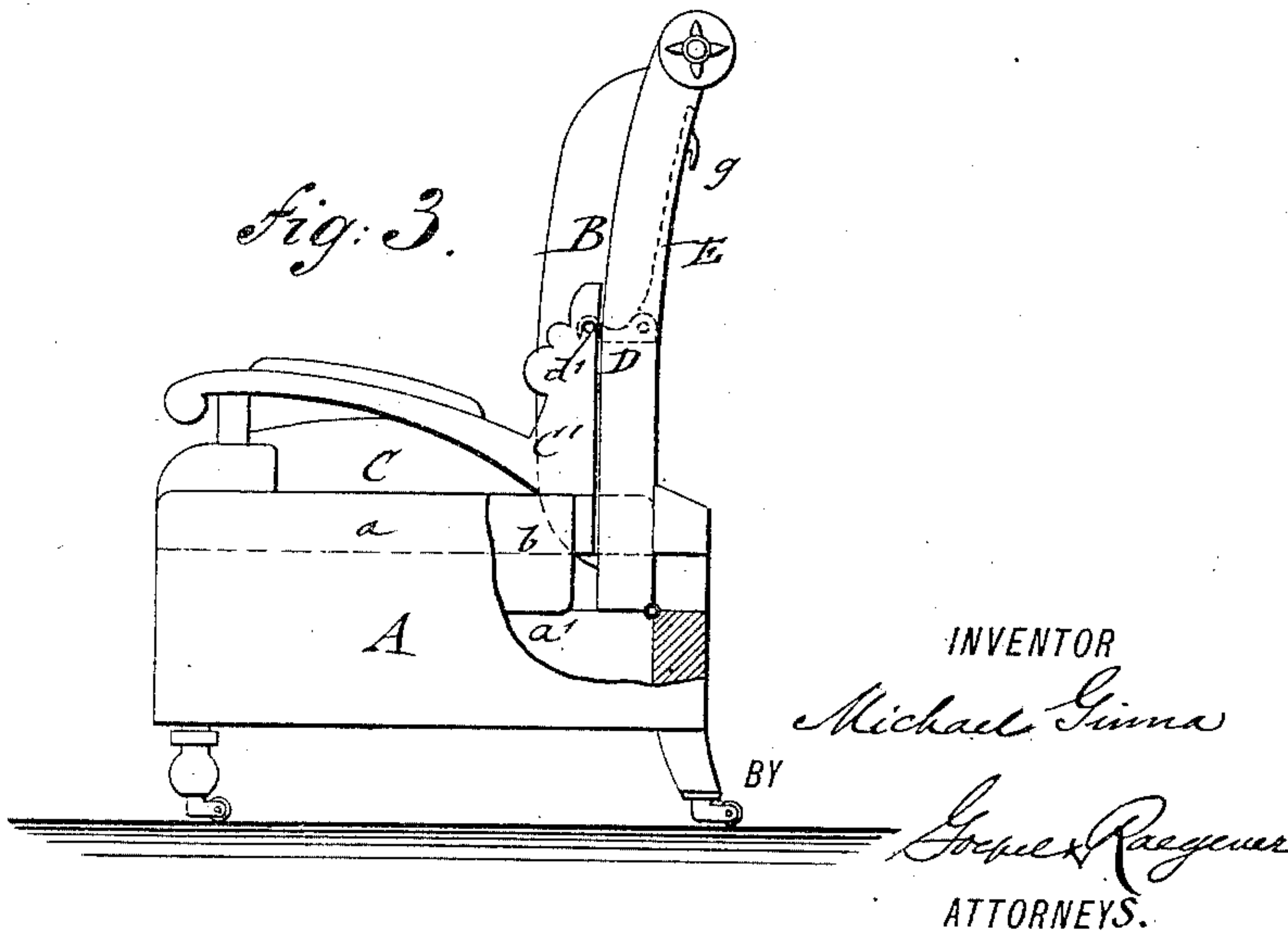


Fig. 3.



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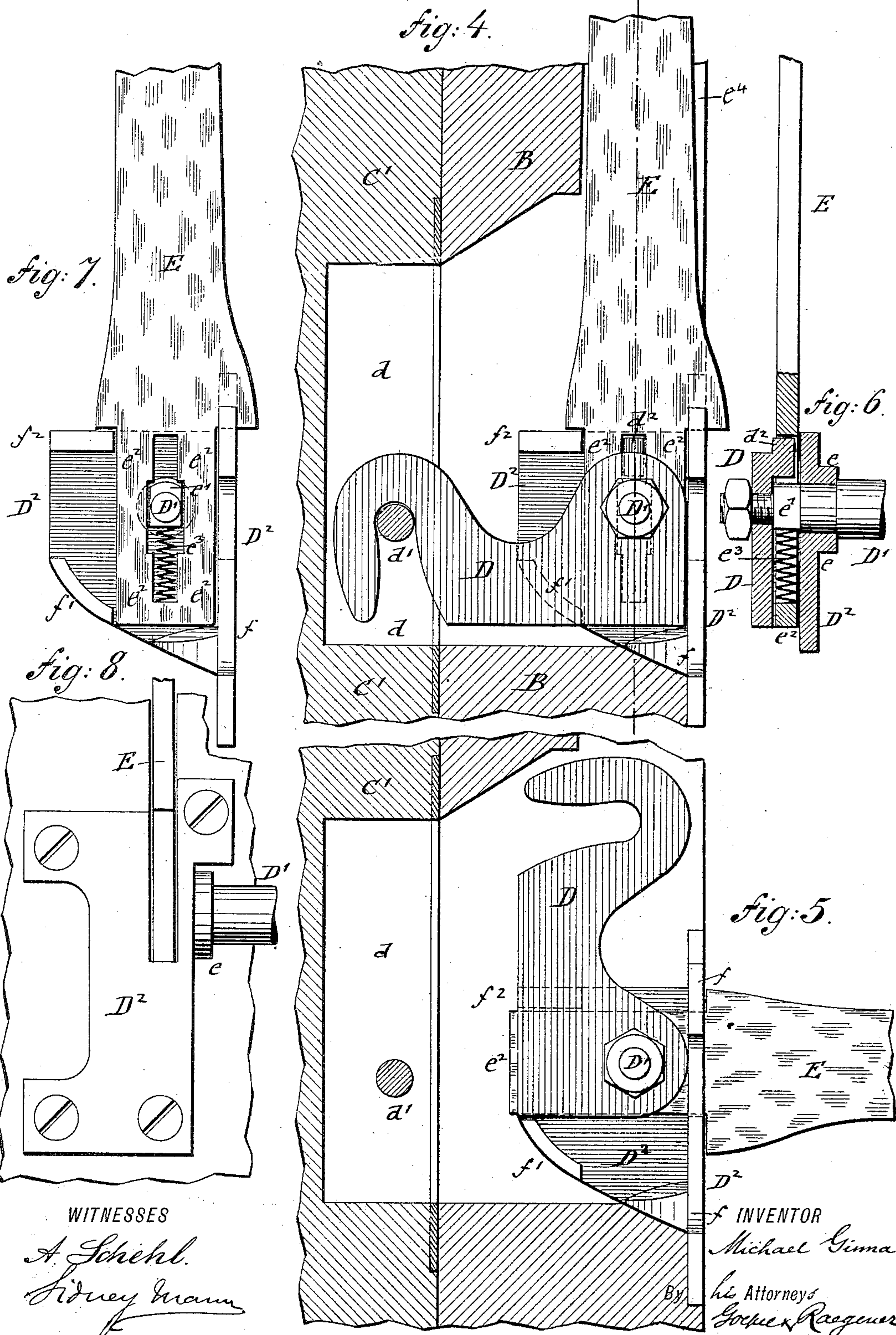
2 Sheets—Sheet 2.

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Patented Mar. 30, 1886.



UNITED STATES PATENT OFFICE.

MICHAEL GINNA, OF NEW YORK, N. Y.

SOFA-BED.

SPECIFICATION forming part of Letters Patent No. 338,949, dated March 30, 1886.

Application filed November 30, 1885. Serial No. 184,241. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL GINNA, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Sofa-Beds, of which the following is a specification.

This invention relates to an improved construction of sofa-bed which can be changed with great facility from a sofa to a bed, and, vice versa, from a bed to a sofa; and the invention consists of a sofa-bed composed of a main section and hinged back and seat sections, the back-section being connected to the arms of the seat-section by locking-hooks, which are operated by pivot-legs of the back-section, so as to lock or release the latter.

The invention consists, further, of certain details of construction and combination of parts, which will be more fully described hereinafter, and finally pointed out in the claims.

In the accompanying drawings, Figure 1 represents a rear elevation of my improved sofa-bed, partly in section. Fig. 2 is a side elevation with a part broken away, showing the sofa-bed in position as a bed. Fig. 3 is a side elevation, also partly in section, showing it as a sofa; and Figs. 4, 5, 6, 7, and 8 are details, drawn on a larger scale, of the locking device and supporting-leg of the back-section.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents the main section, B the back-section, and C the seat-section, of my improved sofa-bed. The back-section B is hinged to the rear part of the main section, and the seat-section C to the front part of the same, as shown in Fig. 2. The main section A is provided at both ends with transverse side boards *a*, and adjoining the same with transverse recesses *a'*. The hinged seat-section C is also provided at both ends with transverse side boards *b*, which are of smaller length than the side boards *a* of the main section A, and adapted to be stored away in the recesses *a'* when the seat-section C is folded over on the main section, as shown in Figs. 1 and 3. When the seat-section C is moved on its hinges in outward position, as shown in Fig. 2, it is supported by its fixed arms C', while the side boards, *a* and *b*, of the

main and seat sections are in line with each other and form side boards of the bed. When the seat-section C is folded on the main section A, the back-section B abuts against the fixed arms C' of the seat-section C and is locked thereto, as shown in Fig. 3. For this purpose the arms C' of the seat-section are provided with recesses *d* and transverse pins *d'*, which latter are engaged by two locking-hooks, D—one at each end of the back-section B—said locking-hooks being rigidly attached to the ends of the pivot-rod D', that extends longitudinally through the back-section B, as shown in dotted lines in Fig. 1. The pivot-rod D' turns in bearings *e* of metal plates D², that are secured to recesses of the frame of the back-section B. The pivot-rod D' is further provided at one end with a rectangular portion, *e'*, on which is guided the slotted shank *e*² of one leg, E, while a second leg, E', is keyed to the opposite end of the pivot-rod D'. A spiral spring, *e*³, is interposed between the lower end of the slot of the shank *e*² and the rectangular portion *e'* of the pivot-rod E'. The supporting-plate D² is provided with locking-flanges *f f' f*², by which the slotted shank *e*² of the leg E is rigidly retained either in recesses *e*⁴ of the frame of the back-section B or at right angles thereto, as shown, respectively, in Figs. 4 and 5. The hook D engages, by a lug, *d*², made integral therewith, the slot of the shank *e*², as shown in Figs. 4 and 6, so that the leg E, on being turned, can take the hook D along. The outer end of the leg E is provided with a hook or catch, *g*, by which the leg E can be taken hold of and pulled in upward direction, whereby the spring *e*³ is compressed and the slotted shank *e*² is released from the lower locking-flange, *f f'*, of the plate D², so that the leg E can be turned with the pivot-rod D' and hook D. The leg E is thereby moved along the arc-shaped flange *f'* of the plate D² until it arrives at right angles to the back-section B, when the slotted shank *e* of the leg E is forced by the spring *e*³ in a position between the stop-flanges *f'* and *f*², as shown in Fig. 5, and the leg E rigidly locked again to the plate D². The back-section is by this motion of the legs E and hook D released from the arms of the seat-section and supported in

horizontal position by the legs E, as shown in Fig. 2. The seat-section C is then moved on its hinges into horizontal position and supported by its arms C', which act then as legs, the sections A, B, and C forming thus a bed. When it is desired to change the bed back into a sofa, the seat-section C is first folded over the main section A and the back-section B raised until it abuts against the arms C' of the seat-section. While the back-section is held in this position by one hand, the leg E is taken hold of by the other hand and pulled in outward direction against the tension of the spring e^3 , so that the shank e^2 is released from the flanges $f^2 f'$. The leg E can then be turned and folded up into the recess of the back-section B, while the slotted shank arrives in line with the stop-flanges $f' f$, and is locked by the same and the action of the spring e^3 , as shown in Figs. 4 and 7. The hooks D are turned at the same time, so as to lock the transverse pin d' of the arms C', and connect thereby the back and seat sections in a strong and reliable manner. The locking mechanism of the legs E is arranged only at one end of the pivot-rod, the other end being simply provided with a folding leg, E, and a locking-hook, D, which are both applied rigidly to the pivot-rod.

The locking mechanism serves for securing not only the reliable interlocking of the back-section with the arms of the seat-section, so as to prevent any accidental disconnection and dropping of the same, but also for locking the legs rigidly at right angles to the back-section for supporting the same in lowered position, so as to prevent the accidental displacing of the legs and the resulting strain and injury to the hinges connecting the back and seat sections. A sofa-bed is thus obtained which is easily manipulated and quickly changed from a sofa into a bed, and vice versa.

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

1. The combination of a main section, a

hinged seat-section having fixed arms, a hinged back-section provided with folding legs, a pivot-rod connecting said legs, and locking-hooks attached to said pivot-rod, and adapted to be locked to or released from the arms of the seat-section, substantially as set forth.

2. The combination of a main section, a hinged seat-section having fixed arms, a hinged back-section provided with folding legs, a pivot-rod connecting said legs, locking-hooks applied to said pivot-rods, and mechanism for locking said legs and hooks in line with or at right angles to the back-section, so as to either lock it to the arms of the seat-section or support it in a horizontal position, substantially as set forth.

3. The combination of the fixed arms C', having recesses d and pins d' , the back-section B, supporting-plates D^2 , having stop-flanges $f f' f^2$, a pivot-rod, D' , having a rectangular portion, e' , a locking-hook, D, having a lug, d^2 , a sliding leg, E, applied to one end of the pivot-rod, and having a slotted shank, e^2 , and spring e^3 , and a fixed leg, E, at the other end of the pivot-rod, substantially as set forth.

4. The combination of the back-section B, having a recess, e^4 , supporting-plates D^2 , having locking-flanges $f f' f^2$ and bearings e , a folding leg, E, having a slotted shank, e^2 , a pivot-rod, D' , having a rectangular portion, e' , a spring, e^3 , a locking-hook, D, having a lug, d^2 , engaging the slotted shank, and the fixed arms C', provided with the recesses d and the transverse pins d' , which can be engaged with the locking-hooks D, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

MICHAEL GINNA.

Witnesses:

PAUL GOEPEL,
SIDNEY MANN.