

(No Model.)

A. G. PHILLIPS.
SOFA BED.

No. 446,603.

Patented Feb. 17, 1891.

FIG. 1--

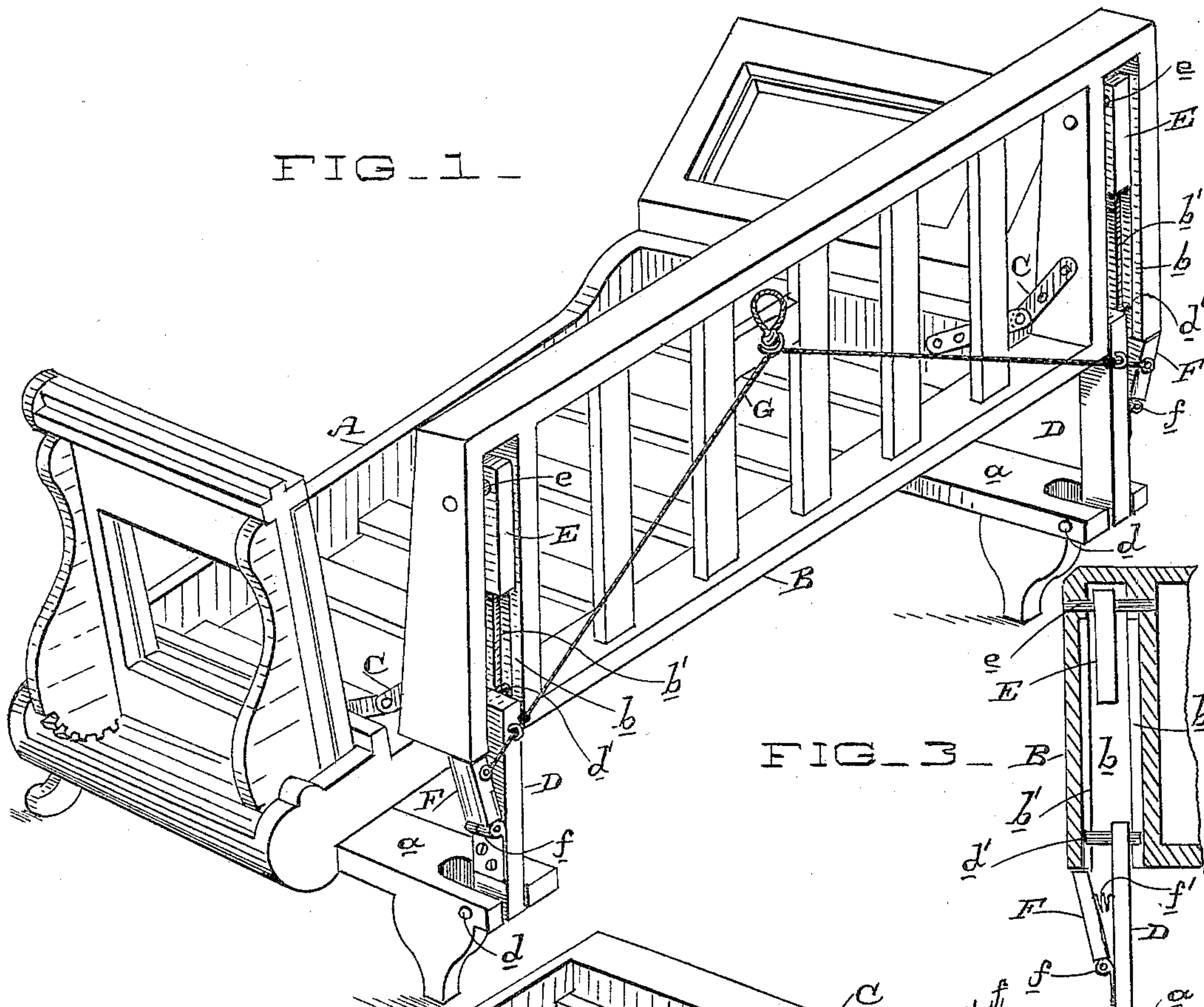


FIG. 2--

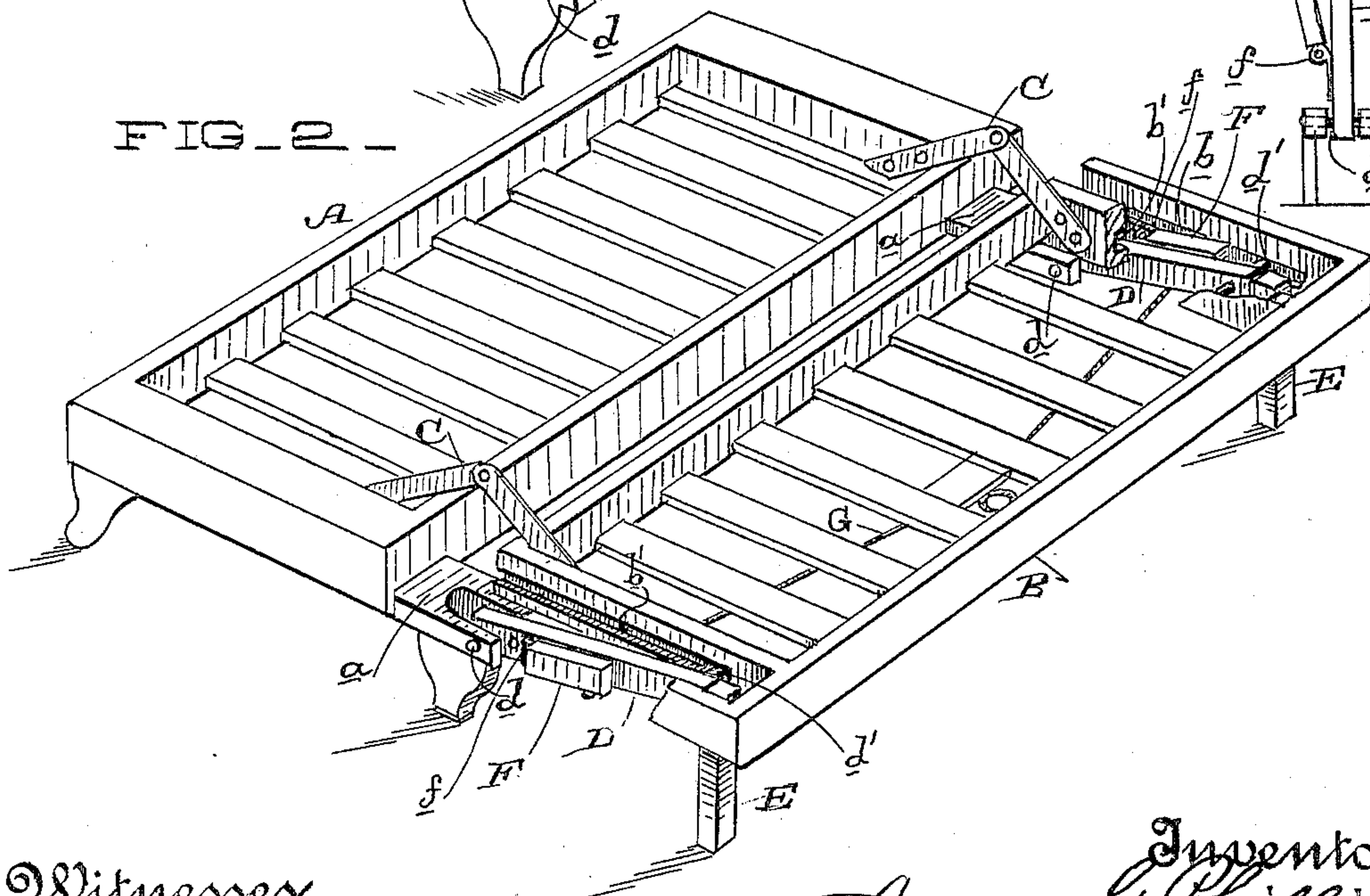
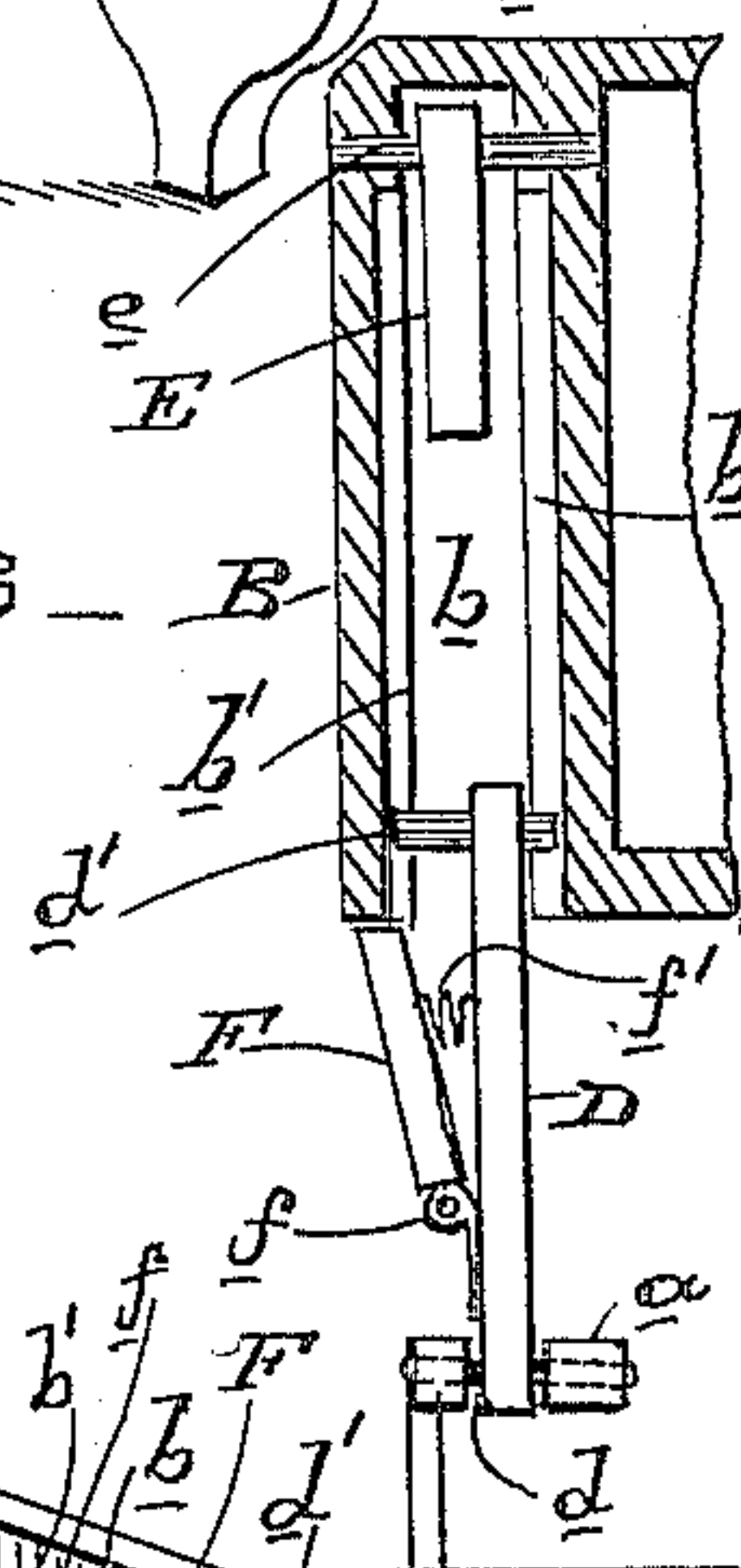


FIG. 3--



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UNITED STATES PATENT OFFICE.

ANDREW G. PHILLIPS, OF SAN FRANCISCO, CALIFORNIA.

SOFA-BED.

SPECIFICATION forming part of Letters Patent No. 446,603, dated February 17, 1891.

Application filed August 25, 1890. Serial No. 363,030. (No model.)

To all whom it may concern:

Be it known that I, ANDREW G. PHILLIPS, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Sofa-Beds; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to the general class of sofa-beds or bed-lounges.

It consists of the novel locks for holding the hinged or swinging back in an upright position for use as a sofa or lounge and for releasing it so that it may be turned down to a horizontal position for use as a bed.

It further consists, in combination with said locks, of the swinging supporting-bars of the back, their sliding connection with the back, and the gravity-legs of said back, which when extended are held securely by the ends of the supporting-bars.

The object of my invention is to simplify and cheapen the construction of this class of furniture.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a perspective view showing the back raised. Fig. 2 is a view showing it lowered. Fig. 3 is a detail section.

A is the seat frame or portion, and B is the back. They are connected by the hinges C, whereby the back may swing from an upright position, in which it serves as the back of a sofa, to a horizontal position, in which it serves as a part of the bed.

D are bars, which serve the double purpose of supports for the back when in an upright position and of holders or stops for the outer legs of the back when in a horizontal position. These bars are pivoted at their lower ends, as shown at *d*, in the leg-extensions *a* of the seat-frame A.

In each end of the back B, between parallel strips or bars, is formed a recess *b*, extending the entire width of the back and having grooves *b'* formed on the inner surfaces of its side walls. Into these recesses the upper ends of the supporting-bars D extend and are secured therein by a sliding connection formed by a cross-pin *d'*, the ends of which fit and travel in the grooves. In the upper ends of the recesses *b* are pivoted at *e* the swinging

gravity-legs E, which when the back is in an upright position hang perpendicularly within the recesses, and which when the back is lowered to a horizontal position swing out of said recesses and serve their function as legs to support the outer end of the back.

F are the locking-cleats. They are carried by the bars D, one on each bar. They are hinged at *f* by their lower ends to bars D, and by means of springs *f'* their upper ends are normally held out in the vertical plane of and under the lower end of the end pieces of the back B, and when drawn in their upper ends pass from under said end pieces, and said cleats then lie close to and parallel with the bars D and are in line with the lower ends of the recesses *b*, which are wide enough to receive the bars D and the cleats.

G is a suitable cord connected at each end with one of the locking-cleats F and suitably guided so that it can be readily reached.

The operation is as follows: When the back is in an upright position, serving as a sofa-back, it is supported by the bars D through the locking-cleats F, carried by said bars and having their upper ends lying under the lower ends of the end pieces of the back. The back is also locked in this position by said cleats, for it cannot be turned on its hinges while the cleats and its end pieces are in contact. In this position the upper ends of the bars D extend into the lower ends of the recesses *b* and the gravity-legs E hang in the upper portion of said recesses. Now to lower the back to a horizontal position, in which it shall serve as the inner portion of the bed, the cord G is pulled upon, whereby the hinged locking-cleats F are swung inwardly, removing their upper ends from under the end pieces of the back, and bringing them up close against the bars D and in line with the recesses *b*. The back can now swing about its hinges C to a horizontal position. In this movement two operations take place, first, the gravity-legs E swing out of the recesses and, still maintaining their perpendicular, support when they reach the floor the inner end of the back; second, on account of the pivoted lower connection of bars D and the position of this pivotal center relatively to the hinge center of the back, said back slides over said bars, which are thus projected into

the recesses *b* until their upper or outer ends come in direct contact with the upper pivoted ends of the gravity-legs *E* and securely hold said legs, preventing them from slipping.
5 This intermovement of the back and bars takes place freely and accurately because of the pin-and-groove connection between them, which truly guides the bars to the legs. The locking-cleats follow the bars in the recesses,
10 which are wide enough for them both. When the back is lifted again, the parts assume their first position, and when the locking-cleats *F* are free of the recesses they spring outwardly under the back ends and support and lock
15 said back.

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

1. In a sofa-bed, the combination of the
20 swinging back having the end recesses, the bars *D*, pivoted to the seat-frame fitting in said recesses, and the swinging cleats carried by the bars and adapted to enter said recesses and to fit their upper ends under and to be
25 removed from the lower ends of the back to lock and relieve said back, substantially as herein described.

2. In a sofa-bed, the combination of the
30 swinging back having the end recesses, the bars *D*, pivoted to the seat-frame and adapted to slide in said recesses, the swinging cleats, also adapted to enter said recesses and hinged to said bars for locking and relieving said

back, springs between the bars and cleats for throwing said cleats out, and a cord for draw- 35 ing them in, substantially as herein described.

3. In a sofa-bed, the combination of the swinging back having the end recesses with interior side grooves, the bars *D*, pivoted to the seat-frame and having their upper ends 40 seated in said recesses and adjustably connected therewith by pins traveling in their grooves, the swinging locking-cleats carried by the bars for locking and relieving the back, and the pivoted gravity-legs in the upper ends 45 of said recesses adapted to be held by bars *D*, substantially as herein described.

4. In a sofa-bed, the combination of the seat-frame having the leg-extensions, the swinging back having the end recesses with interior 50 side grooves, the bars *D*, pivoted to the leg-extensions and fitting in the grooved recesses by means of a sliding connection, the gravity-legs in the upper ends of the recesses, the cleats hinged to the bars *D*, the springs for 55 throwing the upper ends of said cleats outwardly under the ends of the back, and the cord for drawing them inwardly, substantially as herein described.

In witness whereof I have hereunto set my 60 hand.

ANDREW G. PHILLIPS.

Witnesses:

S. H. NOURSE,

H. C. LEE.