

No. 855,412.

PATENTED MAY 28, 1907.

D. T. OWEN.  
COMBINED BED AND COUCH.

APPLICATION FILED AUG. 25, 1905.

3 SHEETS—SHEET 1.

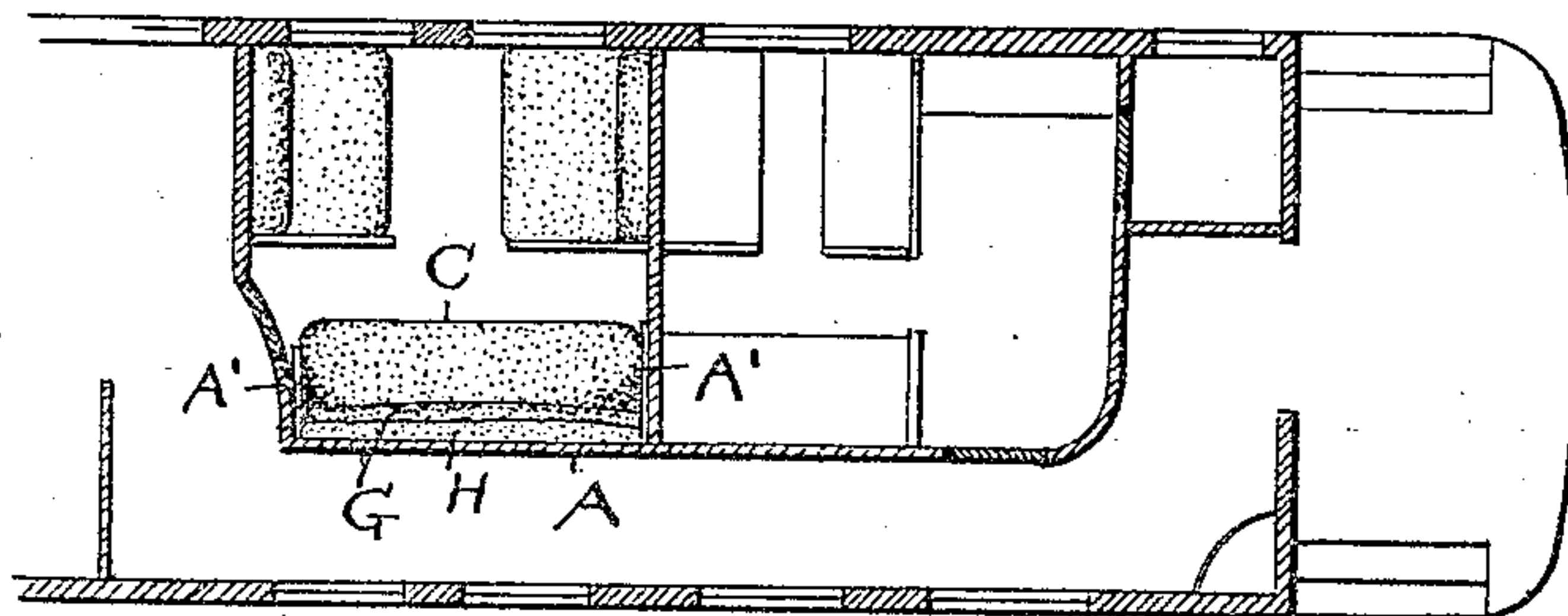


Fig. 1.

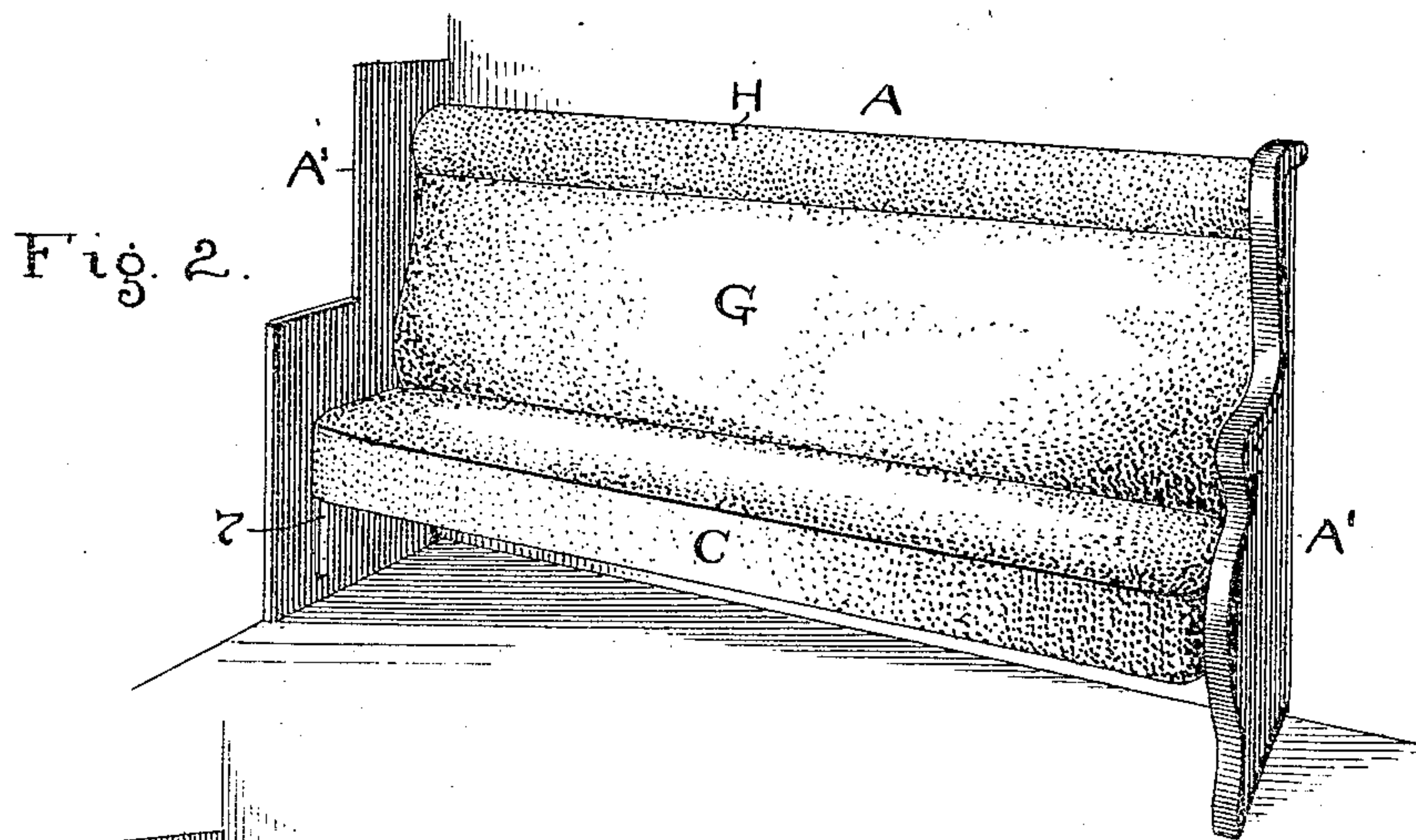


Fig. 2.

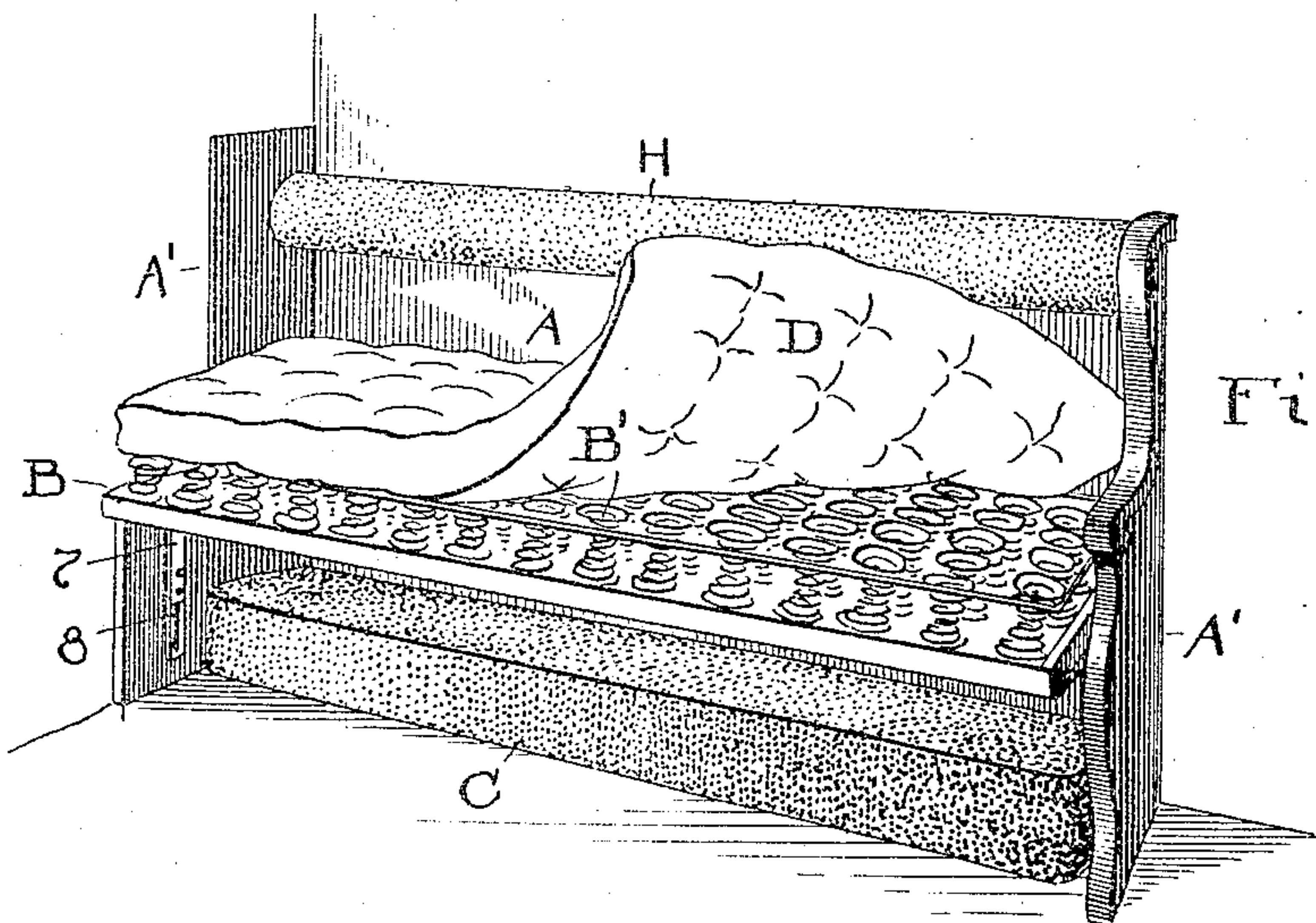


Fig. 3.

ATTEST

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INVENTOR.

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By *H. J. Fisher* ATTY

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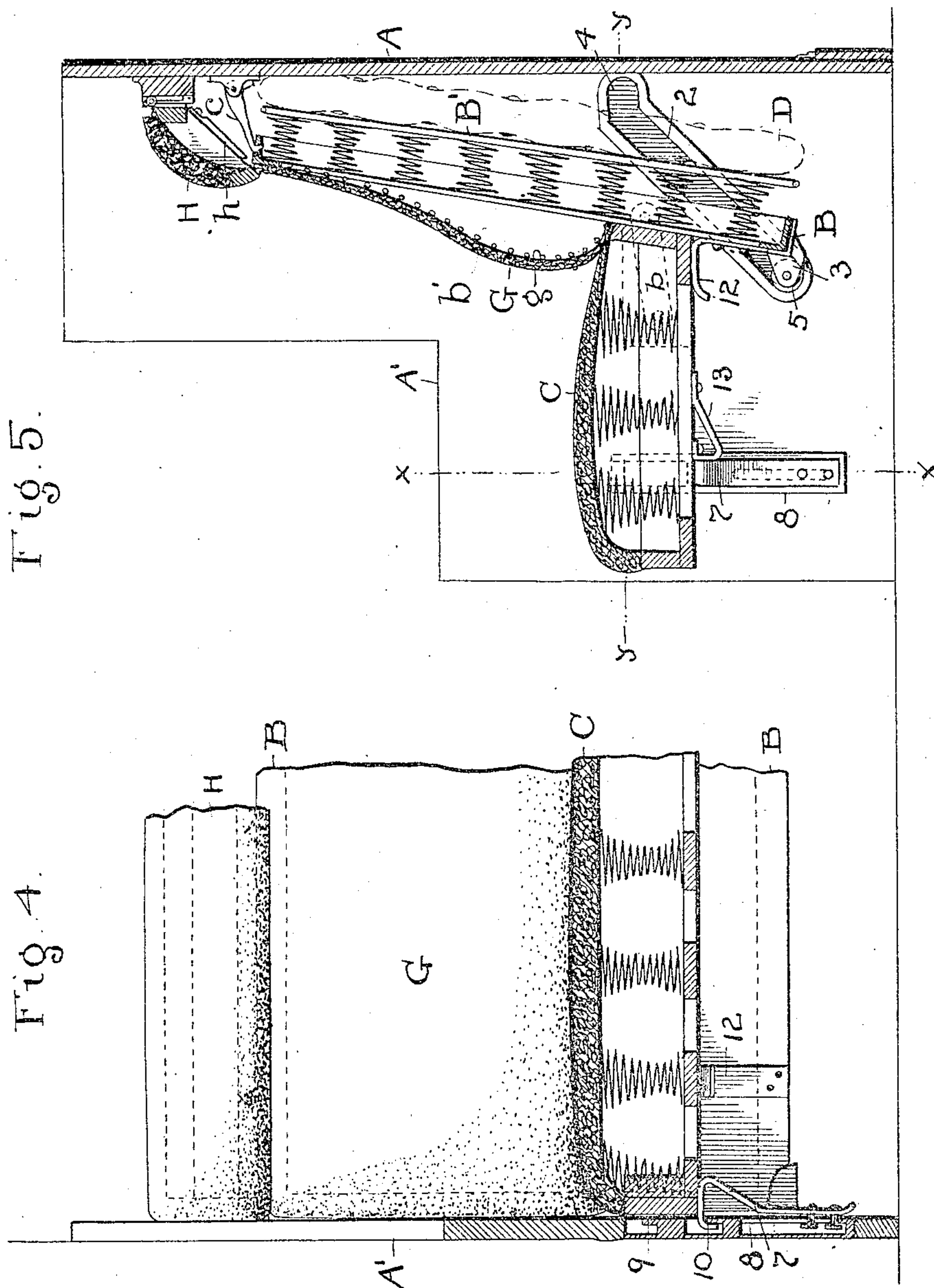
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3 SHEETS—SHEET 2.



ATTEST.

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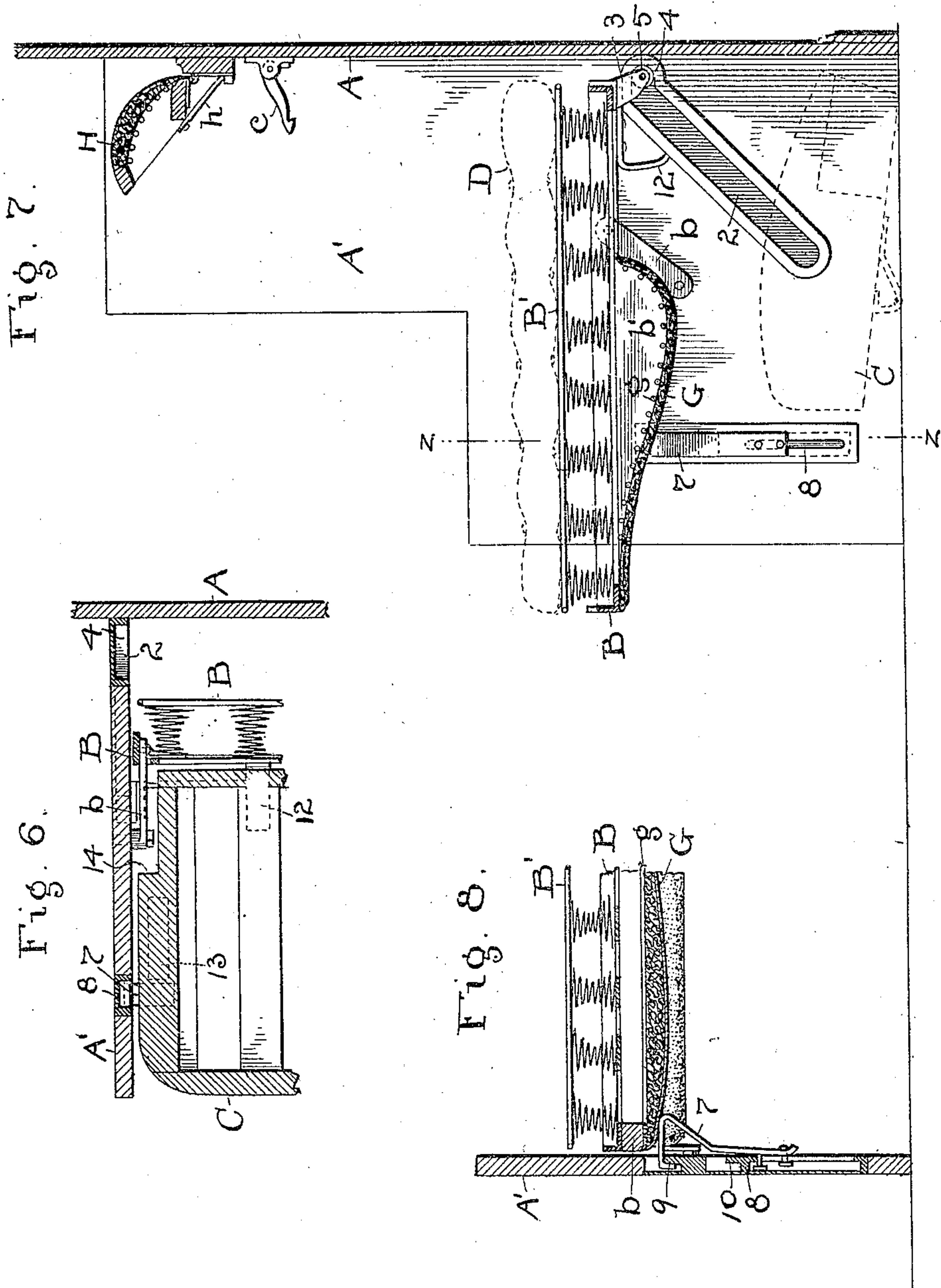


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3 SHEETS—SHEET 3.



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# UNITED STATES PATENT OFFICE.

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## COMBINED BED AND COUCH.

No. 855,412.

Specification of Letters Patent.

Patented May 28, 1907.

Application filed August 25, 1905. Serial No. 275,763.

*To all whom it may concern:*

Be it known that I, DAVID T. OWEN, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in a Combined Bed and Couch; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in a combined bed and couch, with especial adaptation, in this instance, to railway sleeping cars, but not necessarily limited to such use, and the invention more particularly pertains to an improvement in a combined couch or seat and bed adapted to be used at one side of a state-room opposite the usual double or upper and lower berths, all as hereinafter described and more particularly pointed out in the claims.

In the accompanying drawings Figure 1 is a diagrammatic view of a state-room in which my improved couch and bed is arranged to occupy a position alone at one side of the room, and where there is generally a single bed made up from the long seat therein. Fig. 2 is a front perspective view of the invention converted into a couch or seat, and Fig. 3 is a perspective front view of the invention converted in to a bed, the top mattress being thrown back at the near corner to disclose the spring mattress beneath. Fig. 4 is a front elevation in section of one end of the bed seen in Fig. 3 and on a line corresponding to *x, x*, Fig. 5. Fig. 5 is a cross section of the parts made up as a couch or seat and with the bed retired. Fig. 6 is a horizontal sectional plan view corresponding to line *y, y*, Fig. 5, and at one end and corner of the structure shown therein. Fig. 7 is a cross section of the invention as a bed, and Fig. 8 is a vertical section on line *z, z*, Fig. 7.

The invention as thus disclosed has to do with a single seat and a single bed, the seat and bed having the same length and the construction of the parts such as to make them readily convertible from one use to the other as may be desired, but in such manner that when used as a seat or couch the bed is concealed, and when used as a bed the couch is concealed. To these ends A represents the back or rear wall of a presumably but not

necessarily permanent structure, whatever it may be, whether the wall of a state-room in a sleeping car or other upright support, and A' represents the ends of the couch and providing arms therefor as well as serving as end supports for the bed frame.

B is the bed-frame proper, and C is the couch seat, which includes the frame and springs and all that appertains to the seat, as such, and frame B and seat C are of the same length, as shown.

D represents the hair or top mattress, which is separate from spring mattress B', as here shown, but which may be temporarily attached thereto if desired. Or mattress D might be built permanently in or upon the mattress B', but for purposes of cleanliness and convenience this is not desirable.

G represents the back proper of the couch, which has its own spring fabric or structure *g* shaped to give the most comfort and upon which the upholstering is supported, and the ends of said fabric or back are secured upon the separate end pieces *b'* fixed to the frame B as well as being secured to the spring mattress frame along its upper and lower edges. This makes the mattress frame B practically the back frame for the couch, but for the purposes of this description, especially, frame B will be referred to as the mattress or bed-frame. It is also to be noticed that frame B and seat C are distinct and separate parts, and provided each with their own supports according as they are disposed here or there when the structure is used as a couch or as a bed. Thus, in Fig. 5, we see the bed retired behind the couch-seat and back and wholly out of view, as is also apparent in Fig. 2, while in Figs. 3 and 7 the couch has disappeared and there is distinctly visible only a bed. Now, for the conversion of these forms, and referring first to the bed, it will be noticed that the said bed has a fulcrum link *b* at each end, pivoted at one end upon the bed frame and at the other upon end support A', and holding a decidedly backwardly inclined position at its top when the bed is down, so as to brace or carry the bed back to wall A, and in nearly horizontal position when the bed is up or folded, Fig. 5, so as to serve also as a backward brace for the bed at this time. In this connection, and for the purpose of raising and lowering the bed, I provide inclined grooves, channels, or guide



ways 2 in the end supports A', and rigid projections 3 upon the rear and ends of the couch and preferably carrying rollers 5 adapted to run in the said grooves, channels or guide-ways 2. These guide-ways are positioned and fashioned to form suitable supports and stops for the bed at their respective ends according as it is raised or lowered, as well as forming means for guiding the ends of the bed in its traveling movements from one position to the other. Thus, in Fig. 5, it will be noticed that the upper ends of the said guide channels 2 are provided with a horizontal recess 4 at their rear adapted to rest the roller 5 on the bed frame therein when the bed is down, and braces b are in position both to support the bed, in part, and to exert a backward pressure to keep the bed back against the wall. Thus, there is made both a firm and secure lodgment for the rear of the bed when it is down, and positive means for its guidance when tilted or turned out of use as in Fig. 5.

At its front the bed is adapted to rest on bracket 7, which is an interchangeable rest therefor and for seat C, and said brackets are movably supported on special supports 8 set into ends A', said brackets having the form substantially of a figure 7, so as to rest the bed and seat down upon the top portion thereof, as plainly shown. The inset piece or plate 8 has a vertical slot engaged by heads of confining rivets on the stem of said bracket, and is further provided with catches 9 and 10, respectively, one above the other. When said bracket is to carry the bed it is engaged on the higher catch 9, and when it carries the seat it is engaged on catch 10. These or any other equivalent means for supporting the bed and seat may be adopted.

The ends of the seat frame are recessed at 14, Fig. 6, to make room for links or braces b, and when the bed is to be used the seat C is bodily lifted out and placed beneath, as seen in Fig. 3, and in dotted lines Fig. 7. Thus the bed frame is provided with its own independent means of support and travel from one position to the other, and the entire structure is so disposed with respect to wall A that there is room behind the couch back for both mattresses. A catch c at the top engages the top of the bed frame and positively holds it back to the wall A, and hood H overlaps the top of said frame and comes down to form an ornamental head rest for the back of the couch. Brace h holds said hood or rest up out of the way when the bed is used.

The couch seat is supported at its rear upon brackets 12, fixed upon the bottom of the bed frame inward from the ends thereof in this instance, but it might be otherwise supported and serve the same purpose as, in any event, the weight comes mostly upon the end supports 7, which are back from the

front edge of the seat, and stops 13, Fig. 5, prevent the seat from sliding forward.

When the bed is raised it is thrown into a somewhat inclined position, with its top back of its bottom and having guide channel 2 at an inclination, also, with the bed resting in the bottom thereof and fulcrum links b almost horizontal, the bed is practically locked back and cannot possibly come open of its own accord. However, this still leaves the bed free to be turned down by drawing forward upon its top edge after catch c has been released. This inverts the couch back, bringing it beneath the bed, Fig. 7.

By making the guide channels or ways 2 straight and placing them at an angle of about 45 degrees to the wall A I am enabled to get a quick clearance for the bed with the mattress on the rear thereof when it is raised from position Fig. 7, to be folded away. This carries the frame and its mattress sharply forward away from wall A as soon as room is required for them. This also provides abundant room for turning the bed in the opposite direction from Fig. 5. In this case the springs of bed bottom B are built directly upon the frame thereof, but a separate spring mattress may be removably supported on said frame and such mattress may have the upper hair mattress D built directly thereupon or as a separate part. But in any case it is designed to fold both mattresses together behind the bed substantially as shown.

My improved bed and couch is especially adapted for railway car state rooms, because it may be easily operated within a limited space and is economical as to room when used either as a bed or a couch.

What I claim is:—

1. In a combined bed and couch, a main frame providing end supports, a bed frame, straight inclined guide ways in said end supports for the rear of said bed frame and horizontal extensions at the top of said guide ways, and fulcrum links pivotally engaged with said end supports and the bed frame above its rear and lower edge, and rollers on said bed frame adapted to ride in said guide ways, in combination with a removable seat.

2. In a combined bed and couch, a main frame, and straight guide ways for the bed in the ends of said frame at an angle of substantially 45 degrees inclination terminating at its top in a horizontal extension, and fulcrum links for the bed in front of said guide way and rollers for the bed engaged within said guide ways, in combination with a removable seat in front of said bed, and means to support said bed and seat at their front when used independently.

3. In a combined bed and couch, end supports and means on said supports adapted



to rest the bed and the couch seat at different elevations at their front, in combination with a bed and a seat of the same length, and brackets on said bed adapted to support  
5 the rear of said seat.

4. In a combined bed and couch, a bed frame adapted to rest in both a vertical and a horizontal position, and a removable couch seat of the same length adapted to  
10 rest at its rear upon the bottom of the bed frame, and a common support for both couch seat and bed frame at their front.

5. In a combined bed and couch, a tilting bed frame and a separate removable couch  
15 seat and self determining means adapted to move the bed bodily forward and then backward when lowering same, in combination with vertically adjustable rests adapted

to support the bed frame and the couch seat at different elevations.

6. In a combined bed and couch, a couch seat and a bed of equal length and supports for both said seat and bed adapted to be  
20 changed as to elevation according as whether the seat or the bed is to rest thereon.

7. In a combined bed and couch, a couch seat and a bed of the same length, end supports therefor and vertically adjustable  
25 rests on said supports for the front of said bed and seat respectively.

In testimony whereof I sign this specification in the presence of two witnesses.  
30

DAVID T. OWEN.

Witnesses:

R. B. MOSER,  
C. A. SELL.