

No. 743,344.

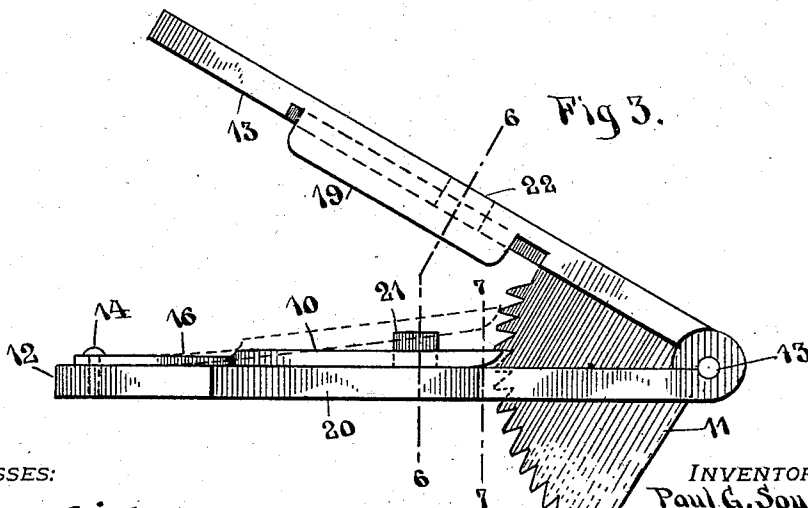
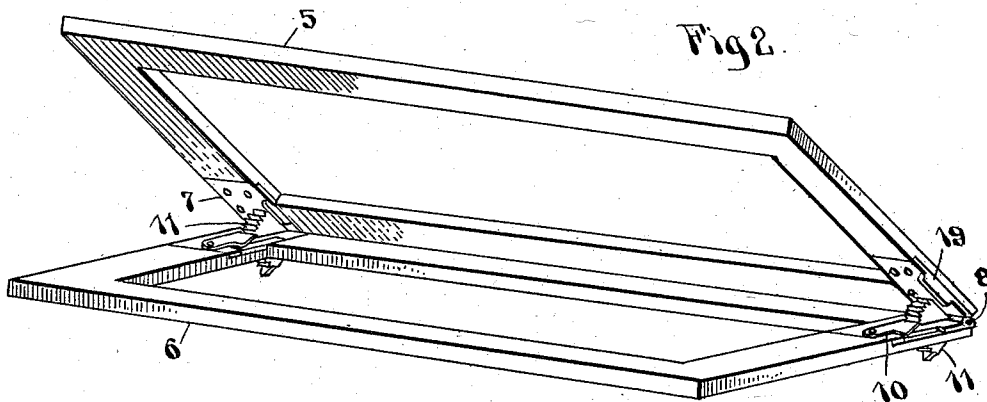
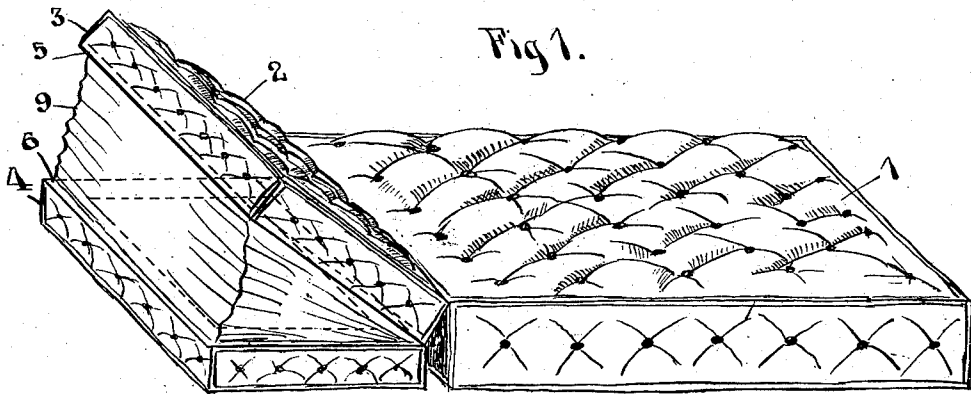
PATENTED NOV. 3, 1903.

P. G. SOUDER, J. BITTNER & O. BERGER.
ADJUSTABLE MATTRESS SECTION.

APPLICATION FILED DEC. 16, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

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2 SHEETS—SHEET 2.

Fig 4.

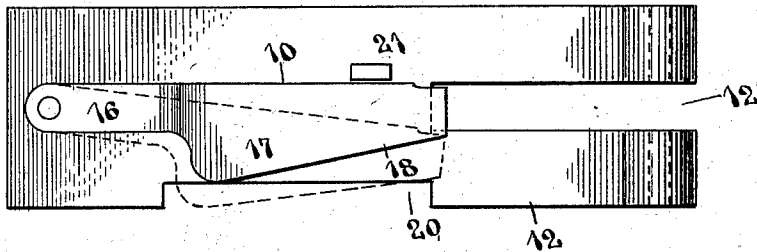


Fig 5.

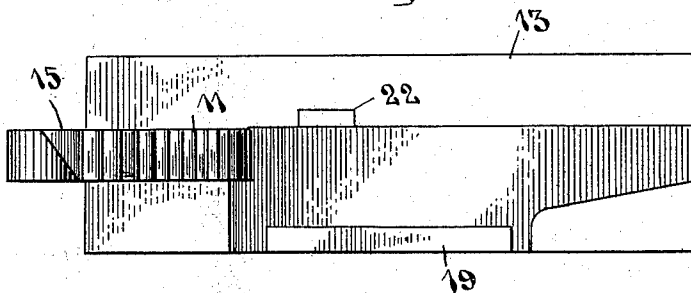


Fig 7.

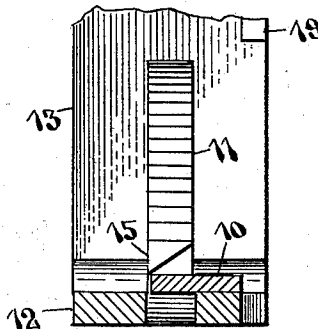
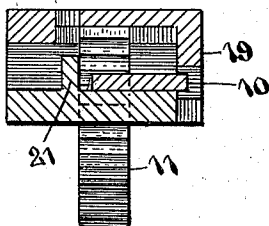


Fig 6.



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UNITED STATES PATENT OFFICE.

PAUL G. SOUDER, JULIUS BITTNER, AND OSWALD BERGER, OF
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ADJUSTABLE MATTRESS-SECTION.

SPECIFICATION forming part of Letters Patent No. 743,344, dated November 3, 1903.

Application filed December 16, 1902. Serial No. 135,360. (No model.)

To all whom it may concern:

Be it known that we, PAUL G. SOUDER, JULIUS BITTNER, and OSWALD BERGER, all citizens of the United States, and residents of the city of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Adjustable Mattress-Sections, of which the following is a full, clear, and complete disclosure.

The object of our invention is to provide such a construction in those sections of mattresses which are usually placed near the head of beds or couches that said sections may be used as head-rests or back-supports, whereby the occupant of the bed may be more easily placed in a reclining or sitting position, and at the same time may be reversible.

Broadly, our invention consists in dividing the portion of the mattress which is placed near the head of the bed and providing means whereby the two portions of said divisions may be adjusted at different relative angles to each other to obtain the position desired, said means being automatic in their action.

For a full, clear, and exact description of our invention reference may be had to the following specification and to the accompanying drawings, forming a part thereof, in which—

Figure 1 is a perspective view of a mattress having our adjustable section in use in connection therewith. Fig. 2 is a perspective view of the frames used in supporting the two portions of a mattress-section and showing the means for adjustment attached thereto. Fig. 3 is a side elevation of one of the frame-hinges, showing the adjusting means in connection therewith. Fig. 4 is a plan view of one half of the hinge. Fig. 5 is a plan view of the other corresponding half of the hinge. Fig. 6 is a sectional view taken substantially on the lines 6-6, Fig. 3, and showing the pawl of the adjusting device being forced into its operative position; and Fig. 7 is a view taken substantially upon the line 7-7, Fig. 3, and showing the operation of the means for rendering the pawl inactive.

The reference-numeral 1 indicates a section of a tufted or stuffed mattress, which is made in the usual shape and which is somewhat larger than the head portion 2, which in our

invention is made adjustable and at the same time reversible, so as to serve as a head-rest or back-support. The head portion 2 is also of the tufted or stuffed kind and is divided horizontally, so as to form two sections 3 and 4, which are together of substantially the same thickness as the mattress. The sections 3 and 4 are soft and yielding and are attached to suitable frames 5 and 6, which are hinged along two longitudinal edges, as indicated at 7 and 8. The mattress-sections 3 and 4 are attached to these frames in any suitable way known to those skilled in the art of upholstery or mattress-making. An accordion-like piece of fabric 9 may be attached to the two frames between the two sections of the mattress to cover up the opening which would otherwise be made when the sections of the mattress are separated or adjusted in relation to each other.

Our improved automatic adjusting device consists of a pawl-and-ratchet mechanism in which 10 indicates the pawl and 11 its corresponding ratchet or segment. These are attached, respectively, to the two halves of the hinge 12 and 13, the pawl 10 being pivoted to the part 12 by a pin or screw 14. A pin 13' unites the two halves of the hinge in the usual way. The part 12 is provided with a slot 12', within which the ratchet-segment 11 is adapted to work. The ratchet-segment 11 extends through an arc of about ninety degrees and is preferably integral with the part 13. This pawl-and-ratchet device is so constructed that as the sections are separated the pawl will engage successive notches of the ratchet, and when the pawl has reached the end of the segment the former may be rendered inoperative by the following means: The end of the segment 11 is provided with an angular tooth or knife-edge 15, which is adapted to enter the space between one side of the pawl and the edge of the slot within which the segment moves, so as to push said pawl to one side out of alinement with the teeth of the segment. In order to accomplish this, the two sections of the frame and therefore of the hinges must be brought to a relative position to include a little more than a right angle between them, as will be evident from a con-

sideration of Figs. 3 and 7. The pawl 10 is provided with a thin spring portion 16, which enables its outer end to be moved away from the section 12 of the hinge and to spring from one tooth of the ratchet to another until the desired point of adjustment is reached, as clearly illustrated in Fig. 3 in dotted lines. To return the pawl 10 to its operative position after the halves of the adjustable portion of the mattress have been returned to their normal position, we provide an extension 17 upon one side of the pawl 10, said extension having an inclined edge 18, which is adapted to project beyond the edge of the section 12 of the hinge. Upon the section 13 of the hinge we provide a longitudinal rib 19 at one edge thereof, which is adapted when the parts of the hinge are approaching each other to engage with the inclined side of the projection 17 of the pawl 10 to force the same inward or into its operative position in relation to the teeth of the ratchet-segment 11. A recess 20 is provided in the section 12 of the hinge to accommodate the projection 19 when the parts of the hinge are in their closed position. A lug or stop 21 is also provided for limiting the inward movement of the pawl 10, and a recess 22 in the part 13 of the hinge accommodates said stop 21 when the parts are in their closed position.

The operation of our device is as follows: Suppose the two sections of the mattress 3 and 4 to be in their closed or normal position. When it is necessary to adjust the section 3, the same is raised to the desired angle. While said section 3 is being raised, the pawl 10 will move from one tooth to another upon the ratchet-segment 11 and will enter a notch between the teeth when said section 3 is released. When it is desired to replace the section 3 of the mattress head-rest to its normal position, said section is raised to a position slightly beyond the vertical and then is allowed to fall back into its normal position adjacent the section 4. It will be seen that when the said section 3 is raised to the position described the pawl 10 will be rendered inoperative by the wedge portion 15 of the segment 11, and the two sections of the mattress may approach each other until they rest in contact. However, just before this position is reached the projection 19 will come in contact with the projection 17 of the pawl 10 and force the same inwardly into its operative position, so that when the sections of the mattress are again separated the pawl will immediately act.

It will thus be made evident that in our improved mattress no manipulation of the adjusting mechanism is necessary beyond that required to bring the section or divisions of the head portion into the required positions. All parts of the adjusting mechanism are concealed and require little space, besides be-

ing not liable to become broken owing to their simple and efficient construction.

We prefer to make the portions of the hinges and their attached parts of malleable iron, although other metals may be used which are strong and durable in character.

By the use of two hinged frames with a mattress-section of the tufted or stuffed form we are enabled to make said section reversible, so that the whole mattress may be turned over and both sides used, since the two sides of the divided section are exactly alike.

Our improved mattress-section is especially adapted for the use of invalids and also may be used in place of bolsters in ordinary beds. Our adjustable sections are not limited to use with beds, but may be easily applied to couches, lounges, sofas, easy-chairs, and, in fact, may be employed in any capacity where upholstered cushions are used.

By our improvements the use of cumbersome frames, supports, and braces heretofore known in the art is obviated, the parts made self-contained, and the adjustable section made reversible, as in the ordinary mattress or other cushion.

Having thus described our invention, what we claim, and desire to protect by Letters Patent of the United States, is—

1. An adjustable section for mattresses comprising two soft tufted, reversible and relatively adjustable portions, supports for said portions, hinges for connecting said supports and means in connection with said hinges for retaining the supports in angular positions relative to each other and means for automatically rendering said retaining means operative and inoperative.

2. An adjustable section for mattresses, comprising two relatively adjustable portions, rigid supports for said portions, hinges connecting said supports, means carried by said hinges for holding said adjustable portions in angular positions relatively, and means also carried by said hinges for positively and automatically rendering said holding means operative and inoperative.

3. An adjustable section for stuffed mattresses, comprising two relatively adjustable portions, frames for said portions, hinges for connecting said frames, means for retaining said frames in different relative positions and positively operative means for rendering said retaining means operative and inoperative.

In witness whereof we have hereunto set our hands this 13th day of December, A. D. 1902.

PAUL G. SOUDER.
JULIUS BITTNER.
OSWALD BERGER.

Witnesses:

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