

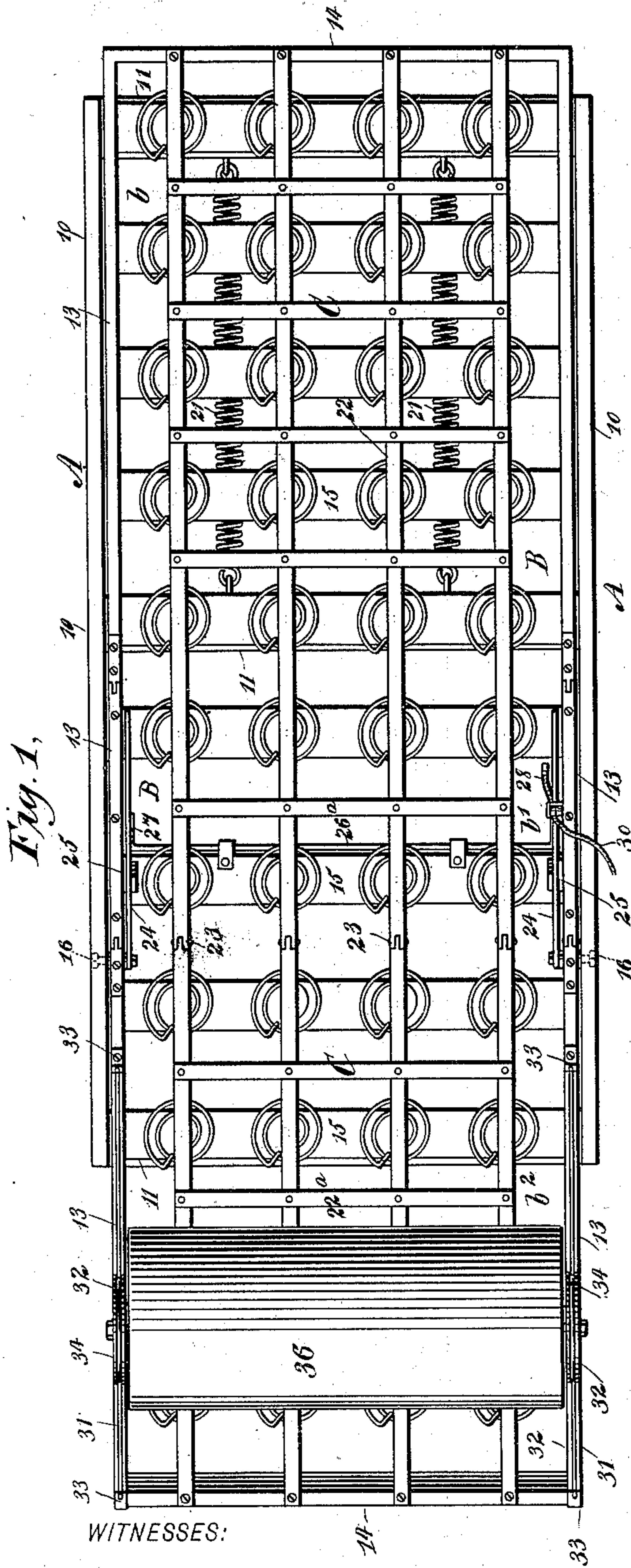
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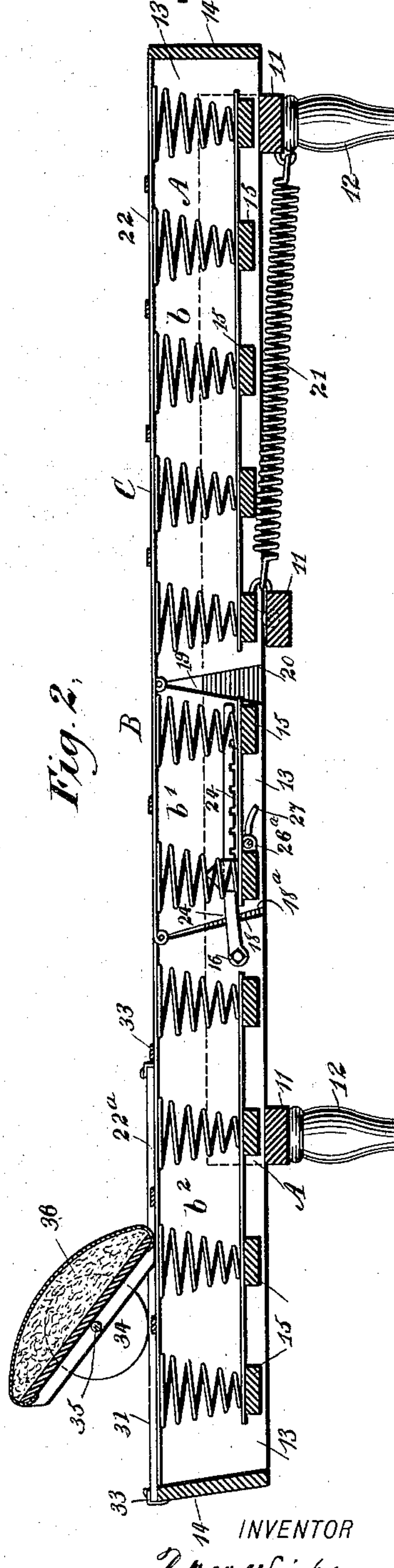
R. VAN W. WICKS.
COUCH.

No. 559,242.

Patented Apr. 28, 1896.



Edward Thorpe.
J. H. Aker.



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2 Sheets—Sheet 2.

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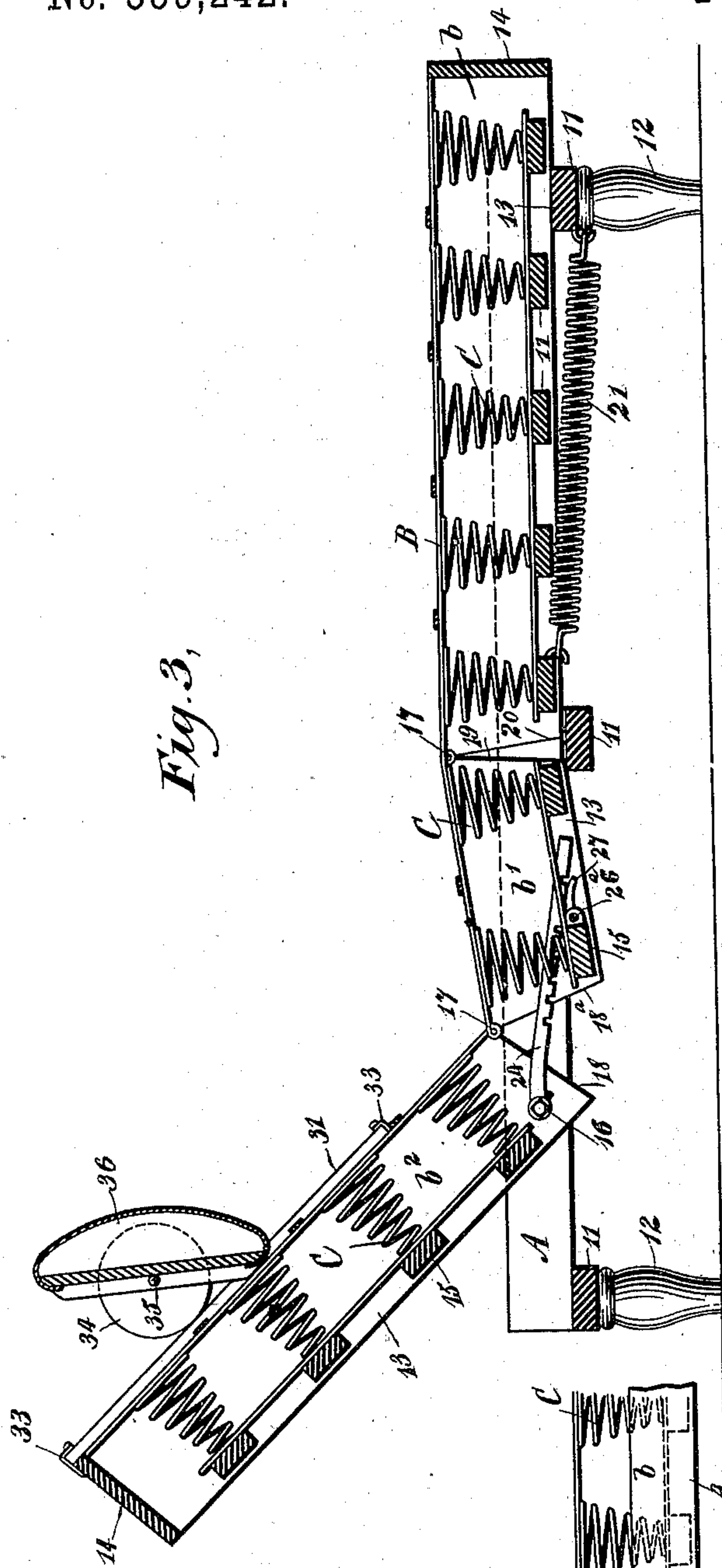


Fig. 3,

Fig. 6.

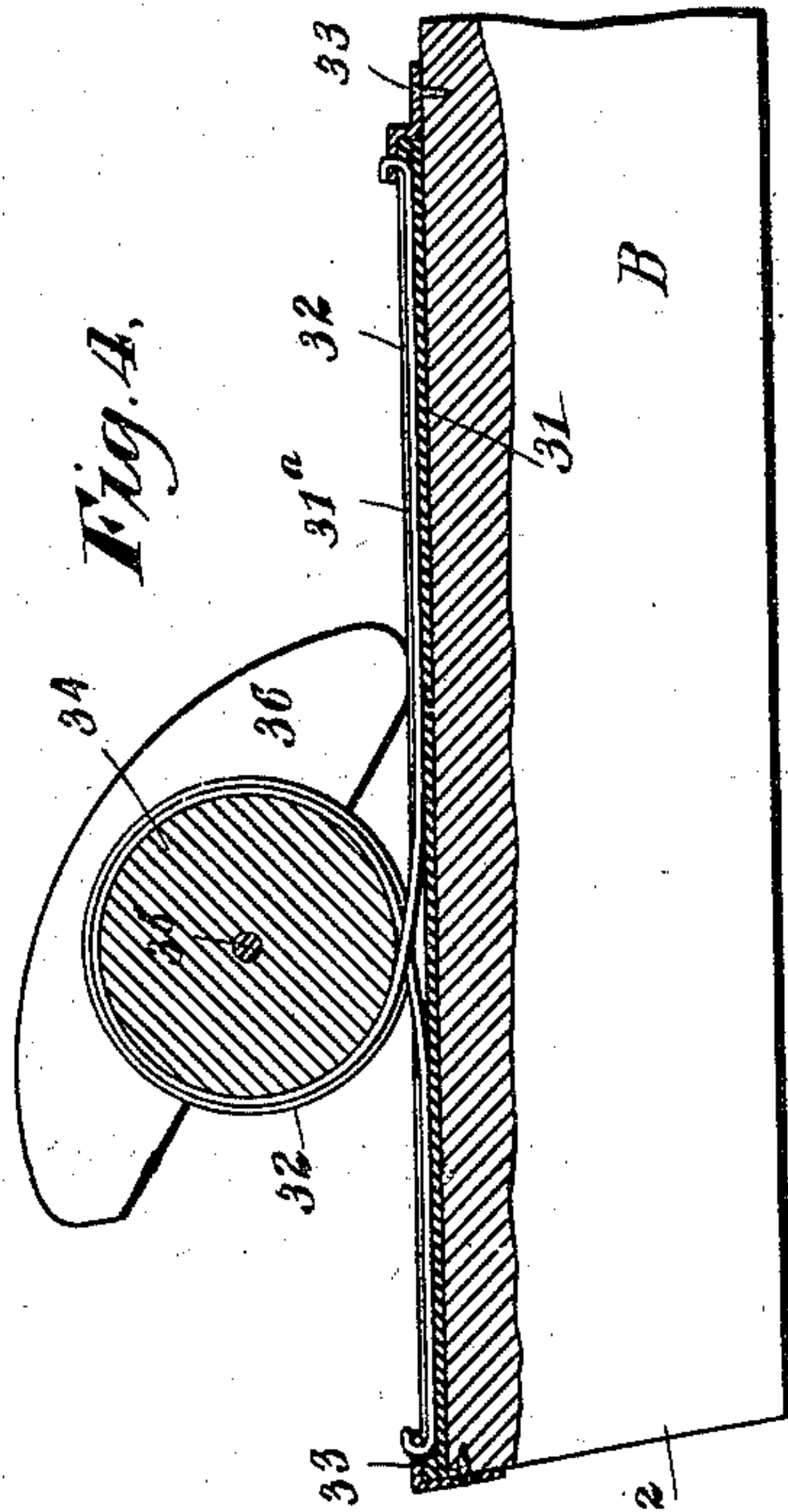
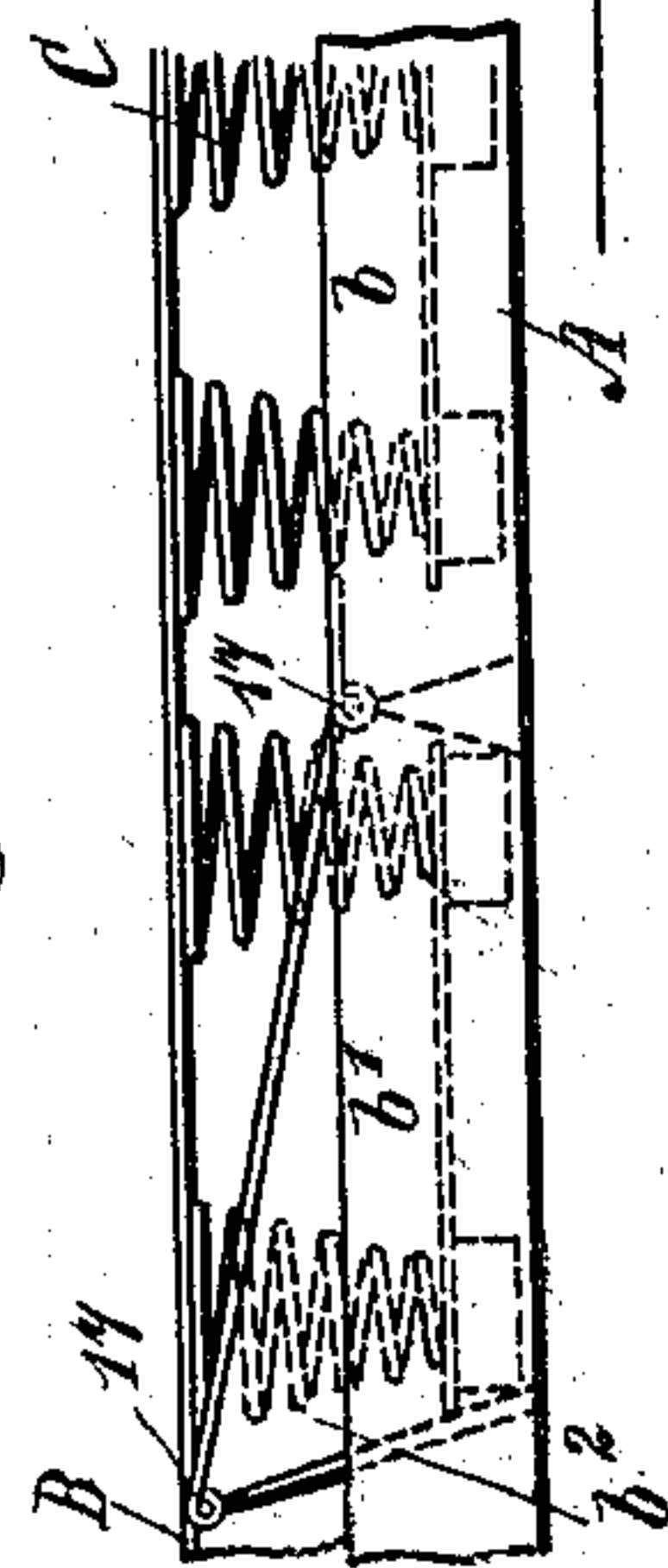
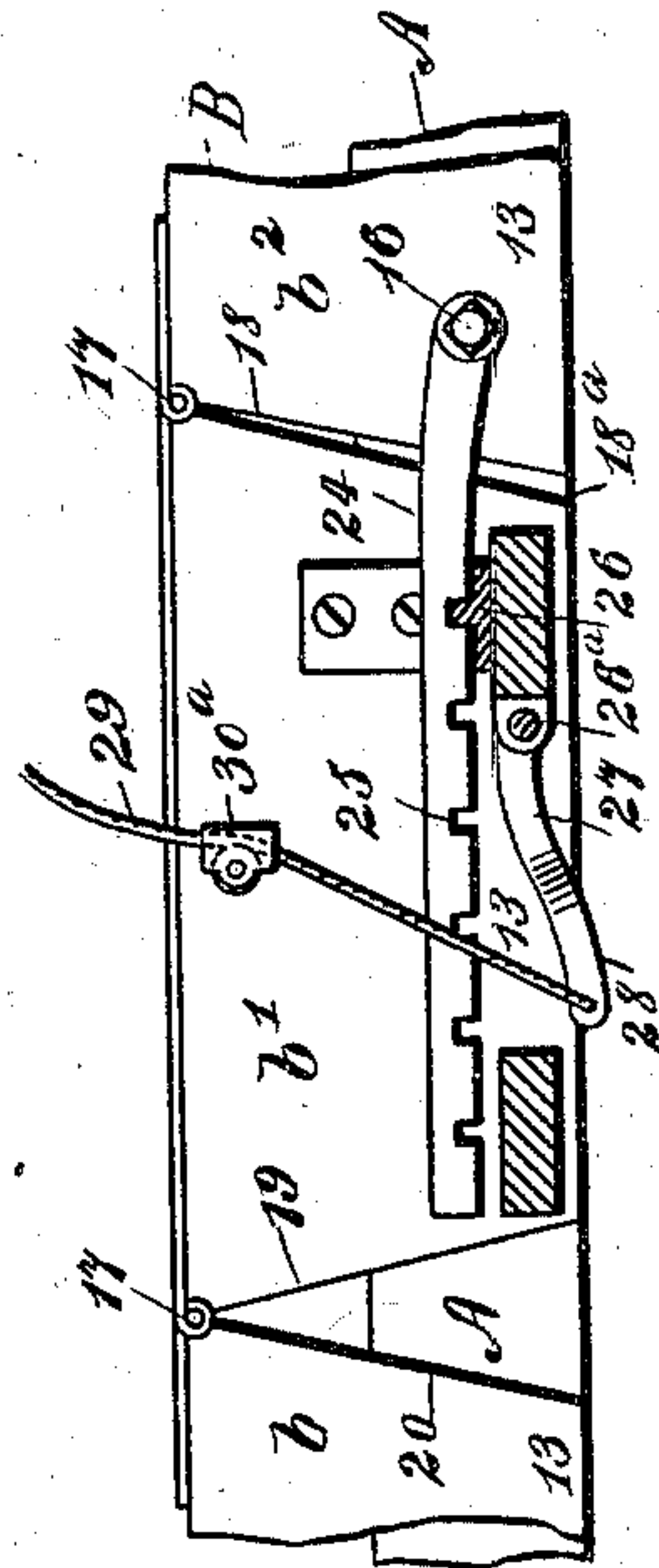


Fig. 4,

Fig. 5,



WITNESSES:

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UNITED STATES PATENT OFFICE.

RICHARD VAN WIKE WICKS, OF BROOKLYN, NEW YORK.

COUCH.

SPECIFICATION forming part of Letters Patent No. 559,242, dated April 28, 1896.

Application filed June 29, 1895. Serial No. 554,435. (No model.)

To all whom it may concern:

Be it known that I, RICHARD VAN WIKE WICKS, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Couches, of which the following is a full, clear, and exact description.

My invention relates to an improvement in couches, and especially to that class of couches capable of being manipulated to place the body in a reclining, an upright, or a partially-upright position; and the object of this invention is to so construct the couch that it will require but slight exertion on the part of the occupant to assume any position desired, and whereby when the couch has been placed in the desired position it will be firmly locked, the locking being automatically accomplished, and whereby also when the couch is in a reclining position the mattress will be under tension, as will likewise be the case when the head-section is in an elevated position.

Another object of this invention is to construct a couch of the above character in an exceedingly simple and economic manner, and to provide the couch with a head-rest or pillow which will so follow the position of the head-section of the couch when raised or lowered as to accommodate the head of the occupant in an exceedingly comfortable manner, the pillow being practically self-adjusting.

Another object of the invention is to construct the bed-frame of the couch in such a way that in breaking the frame or elevating the head-section the fulcrum will be above and to the rear of the pivot of the said section, the tension devices drawing from the fulcrum and not from the pivot, thus enabling the intermediate section of the couch-frame to drop where it connects with the head-section and form a cavity in which the body may comfortably rest.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the improved

couch, illustrating it in horizontal position. Fig. 2 is a central longitudinal section through the couch when in horizontal position. Fig. 3 is a longitudinal vertical section of the couch, showing the head-section elevated. Fig. 4 is a detail sectional view of a portion of the head-section and the pillow applied thereto. Fig. 5 is a detail view of that portion of the bed-frame where the members are hinged together, illustrating the operation of the latch; and Fig. 6 is an outside view of that portion shown in Fig. 5, illustrating a slight modification in the bed-frame.

In carrying out the invention a base-frame A is provided, which may be of any desired shape and comprises side pieces 10, connected usually at the ends and at the center by cross-bars 11, placed at the bottom of the frame, and the frame is supported by legs 12 or their equivalents. The base-frame is open at its ends and is intended to support what may be termed the "bed-frame" B. This frame is of greater length than the base-frame and is made in three sections—a foot-section *b*, an intermediate or seat section *b'*, and a head-section *b''*, the intermediate section being shorter than either of the others. Each section of the bed-frame comprises side pieces 13, connected at the bottom by cross-bars 15, and at the outer extremity of the head and the foot sections end boards or bars 14 are provided.

The head-section at the lower portion of its inner end is connected with the base-frame by pivots 16, upon which the said head-section rocks, enabling it to be carried from a horizontal to practically a vertical position or any point between these two, and the intermediate section *b'* of the bed-frame is connected at its ends by hinges 17 with both the foot and the head sections of the said bed-frame. The inner end 18 of the head-section is beveled preferably downwardly in direction of the foot-section, and the forward or head end 18^a of the intermediate bed-section is correspondingly beveled, as illustrated best in Figs. 2 and 5, while the opposing ends 19 and 20 of the intermediate and the foot sections of the bed-frame are beveled downwardly in opposite directions, so as to form a much wider space between them than between the ends 18 and 18^a. Thus the intermediate section

is somewhat wedge-shaped, and since its rear end is located over the central cross-bar of the base-frame, when in the position shown in Fig. 3, its front end is unsupported at the bottom, enabling this portion of the intermediate section to drop, assuming a downwardly and forwardly inclined position when the head-section is raised from the horizontal, as shown in Fig 3.

The hinged connection between the upper forward end of the intermediate or seat section of the bed-frame and the upper inner end of the head-section of the said frame is rearward and above the pivot 16 of the head-section, and the said hinge 17 virtually becomes the fulcrum when the head-section is raised, and the sections are placed under proper tension in a horizontal or in other positions in which they may be placed by means of springs 21, which are secured to the rear bottom portion of the base-frame and to the forward or inner bottom portion of the foot-section of the bed-frame. It will be observed that by placing the forward hinge in the position heretofore described the said springs draw from said hinge and not from the pivot 16 of the head-section. Thus when the sections of the bed-frame are in a horizontal position the springs 21 will be placed under their utmost tension and the sections will be held in this position, especially when a lock is provided, to be hereinafter described, and when this lock is removed from locking engagement with abutting sections the spring 21 will serve to elevate the head-section, depressing the forward end of the intermediate or seat section of the bed-frame, being assisted by the movement of the body, since the pivot-point of the body will be immediately over the forward hinge 17.

A mattress C, of spring-supported slats, woven wire, or of any well-known construction, is secured firmly at its ends to the end portions of the bed-frame, and this mattress is made practically in two sections 22 and 22^a, as shown in Fig. 1, the section 22^a extending from the foot-board of the foot-section of the bed-frame to the forward hinge in the said frame, and the other section 22 extends from the head-board of the head-section to the said hinge, and at this point the two sections of the mattress are connected by hinges 23, or are pivotally connected in any approved manner, causing the mattress to readily break at the point where the head-section rises at an angle to the intermediate section of the bed-frame.

The locking device heretofore referred to preferably consists of latch-bars 24, which are pivoted on the pivot-pin 16, pivoting the head-section of the bed-frame to the base-frame, and each latch-bar is provided, as shown particularly in Fig. 5, with a series of notches or recesses 25 in its under edge, the said recesses or notches being adapted to receive lugs or keepers 26, secured upon one of the cross-bars of the intermediate bed-frame section b'.

These latches serve to hold the bed-frame in any position in which its sections may be placed relatively to one another, and it may here be stated that the foot-section always remains horizontal and that both the foot and the intermediate sections of the bed-frame have sliding movement in the base-frame. The latches will drop through gravity, and are preferably raised by journaling on the forward cross-bar of the intermediate bed-frame section a shaft 26^a, having crank-arms 27 at its ends, adapted to extend beneath the free ends of the latch-bars 24, and one of these crank-arms, preferably the right-hand one, is given an inward curve 28 at its free end, so as to clear the latch-bar with which it is to engage, and a cord 29, or its equivalent, is attached to this curved extremity and carried up from suitable friction-rollers 30^a within convenient reach of the occupant of the couch, being usually led up along the side of the head-section of the bed-frame.

The head-section of the bed-frame is provided with an automatically-operated pillow, adapted to follow the movement of the body and place itself in position to comfortably support the head, no matter at what angle the head-section is raised or whether or not it be in a horizontal plane. In providing for the adjustable pillow a track 31 is secured upon the upper surface of the side bars of the head-section of the bed-frame, being provided with a longitudinal groove 31^a, and in the groove of each track a slack wire 32 or its equivalent is placed, and the ends of the wire, together with the ends of the track, are secured on the bed-frame by clips 33, of any approved construction. Each wire is crossed upon itself and made to enter a peripheral groove in a wheel 34, one of these wheels being held to travel upon each track 31, and these wheels are securely connected to a shaft 35, upon which shaft a pillow 36, of any approved construction, is pivoted. Therefore it will be observed that, the head of the occupant being on this pillow, if the head-section is raised or lowered the pillow will naturally follow the head of the occupant, rolling upward or downward on the said head-section, as required, and thus enabling the occupant to keep the head always on the pillow, which is of great importance when the couch is occupied by an invalid. The dropping of the intermediate section of the bed-frame forms a somewhat rounded or inclined surface at the rear hinge 17 in the bed-frame, and conforms, therefore, to a comfortable position of the limbs.

It is evident that by simply manipulating the cord 29 to release or to drop the latches the springs 21, in conjunction with the weight of the body over the fulcrum 17, will bring about a quick response on the part of the intermediate and head sections of the bed-frame to assume any position sought to be attained by the occupant of the couch.

In Fig. 6 I have illustrated a slight modifi-

cation in the construction of the bed-frame, in which the side bars are of practically the same height as the side bars of the base-frame. In the other form heretofore described these side bars are shown wider. This narrowing of the side bars of the bed-frame is carried out in the foot-section only and partially in the intermediate section, the latter being inclined upward to meet the head-section, in which the wide side bars are retained. Therefore the spring-mattress under this construction will be above the major portion of the bed-frame and will serve as a cushion at the sides thereof.

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

1. In a couch, a base-frame, and a bed-frame consisting of a head, a foot and an intermediate section, the sides of the head-section being pivoted near their lower rear portions to the sides of the base-frame, the intermediate section being hinged at the upper portion of its ends to both the head and the foot sections, the hinged connection between the intermediate section and the head-section being located at the upper part of the opposing ends of the said sections and above the pivot-point of the head-section, as and for the purpose set forth.

2. In a couch, a base-frame, a bed-frame constructed in sections, the head-section being pivoted to the base-frame and the other sections having sliding spring-controlled movement upon the base-frame, all the sections having a hinged connection, and the hinged connection between the intermediate and head sections being above the pivot of the latter and serving as a fulcrum in the operation of the head-section, as and for the purpose specified.

3. In a couch, a base-frame, a bed-frame consisting of an intermediate, a foot and a head section, the head-section having pivotal engagement with the base-frame, the sections being hinged together at the upper portion of their abutting ends, the hinge between the intermediate and head sections being above the pivot of the head-section, the said intermediate section being capable of dropping at its forward end when the head-section is elevated, and a spring connected with the base-frame and the bed-frame, as and for the purpose set forth.

4. In a couch, a base-frame, a bed-frame comprising a head, a foot and an interme-

mediate section, the head-section being pivoted to the base-frame and all of the sections having a hinged connection at the upper portion of their abutting ends, the intermediate and the foot sections of the bed-frame having sliding movement in the base-frame, a tension device having draft from the forward hinge in the bed-frame, and means, substantially as described, for locking the sections against movement, as and for the purpose set forth.

5. In a couch, a base-frame, a bed-frame carried thereby and spring-controlled, said bed-frame being constructed in sections, the head-section having pivotal engagement with the base-frame and the other sections having sliding movement in the said frame, the end of the intermediate section opposed to the head-section being capable of dropping downwardly, a hinged connection between the upper abutting portions of the bed-frame sections, the hinges being above and to the rear of the pivot of the head-section, the spring controlling the bed-frame drawing from the forward hinge which serves as a fulcrum, and a locking device, substantially as described, for maintaining the sections in the desired position, as and for the purpose specified.

6. In a couch, a pivoted head-section, wheels held to travel on the said section, cables attached at their ends to the sections and passed around the wheels, and a pillow supported between the said wheels, as and for the purpose specified.

7. In a couch, a pivoted head-section, wheels held to travel on the said section, cables attached at their ends to the sections and passed around the wheels, and a connection between the wheels and a pillow pivoted on the said connecting medium, as and for the purpose specified.

8. In a couch, a pivoted head-section, a pillow, and a rolling support upon which the said pillow is pivoted, as and for the purpose set forth.

9. In a couch, the combination with a supporting-frame, and the pivoted head-section of the bed-frame, of a pillow, a rolling support to which the said pillow is pivoted, and guides for the said rolling support, the said guides serving likewise as tension devices, as and for the purpose specified.

RICHARD VAN WIKE WICKS.

Witnesses:

FRED. ACKER,
JNO. M. RITTER.