

J. P. HURLEY.
 SPRING SEAT.
 APPLICATION FILED FEB. 10, 1915.

1,167,074.

Patented Jan. 4, 1916.
 2 SHEETS—SHEET 1.

Fig. 1.

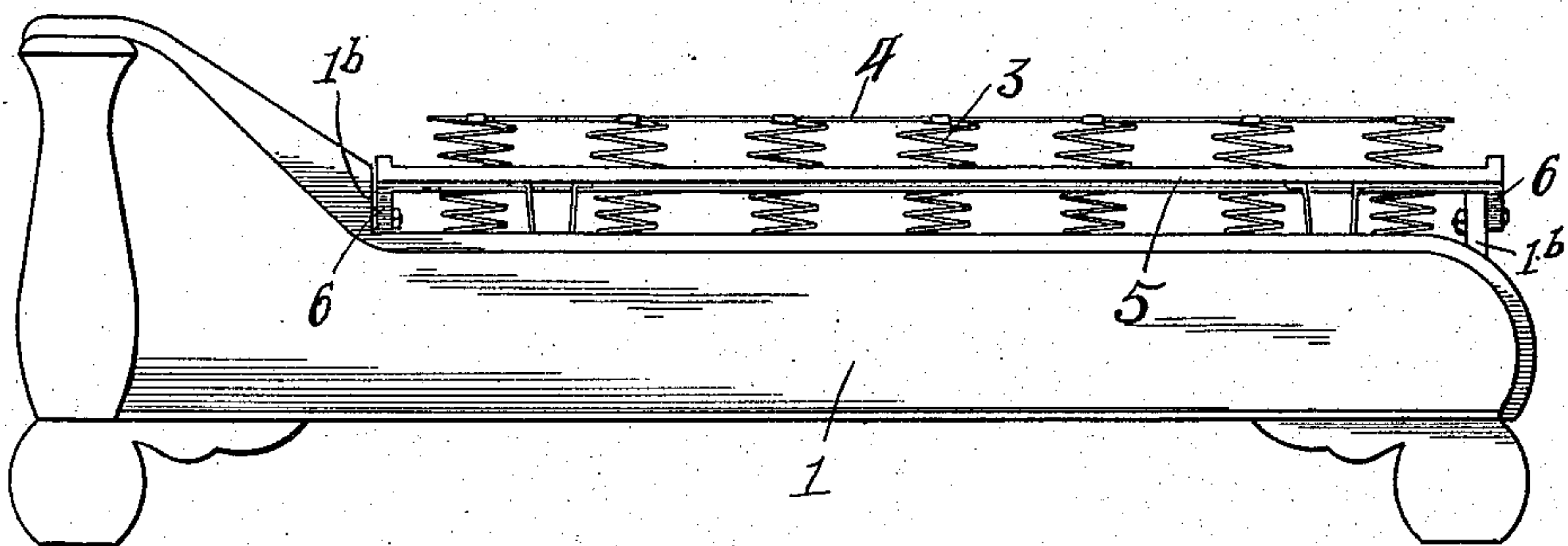


Fig. 2.

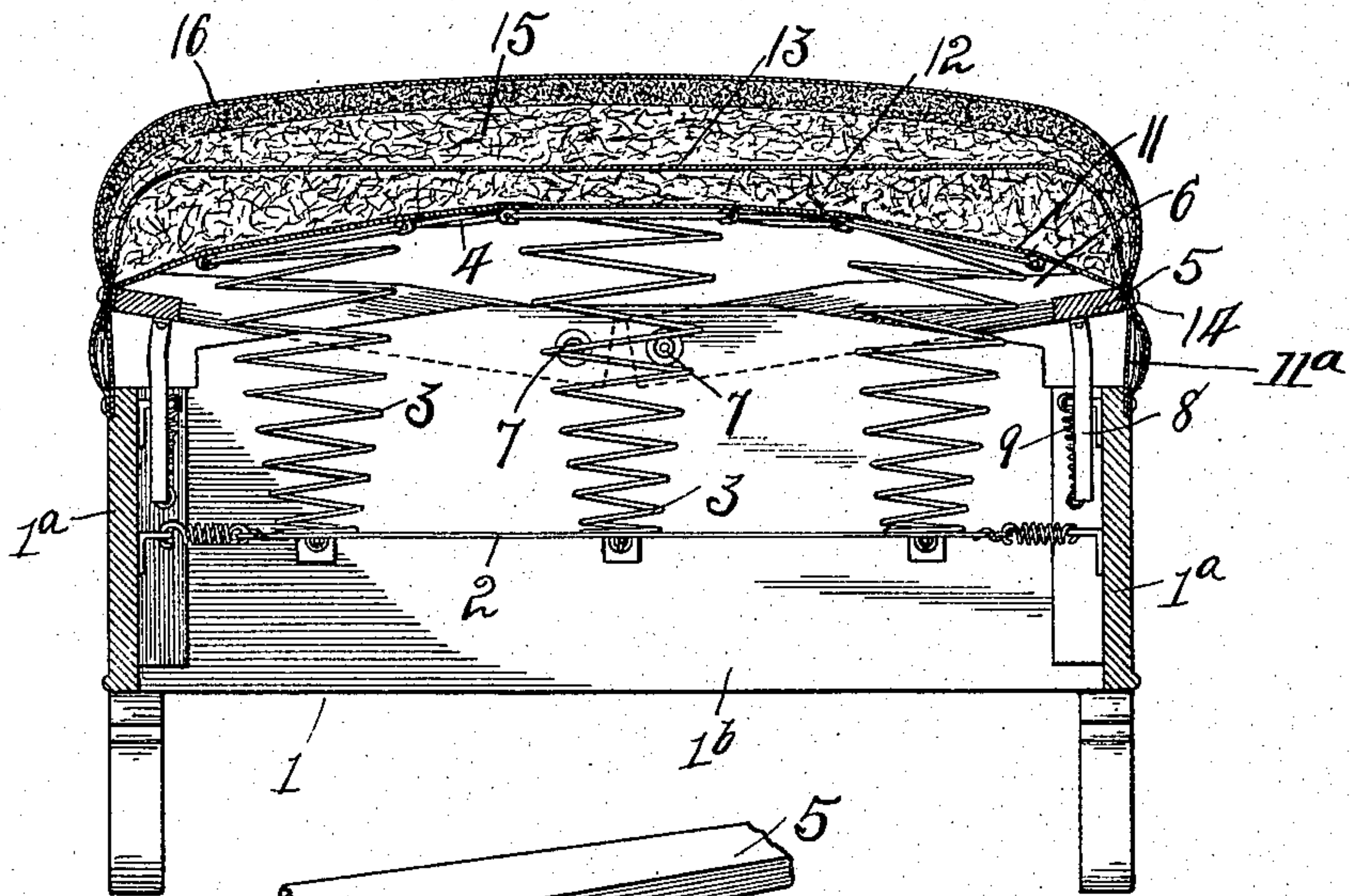
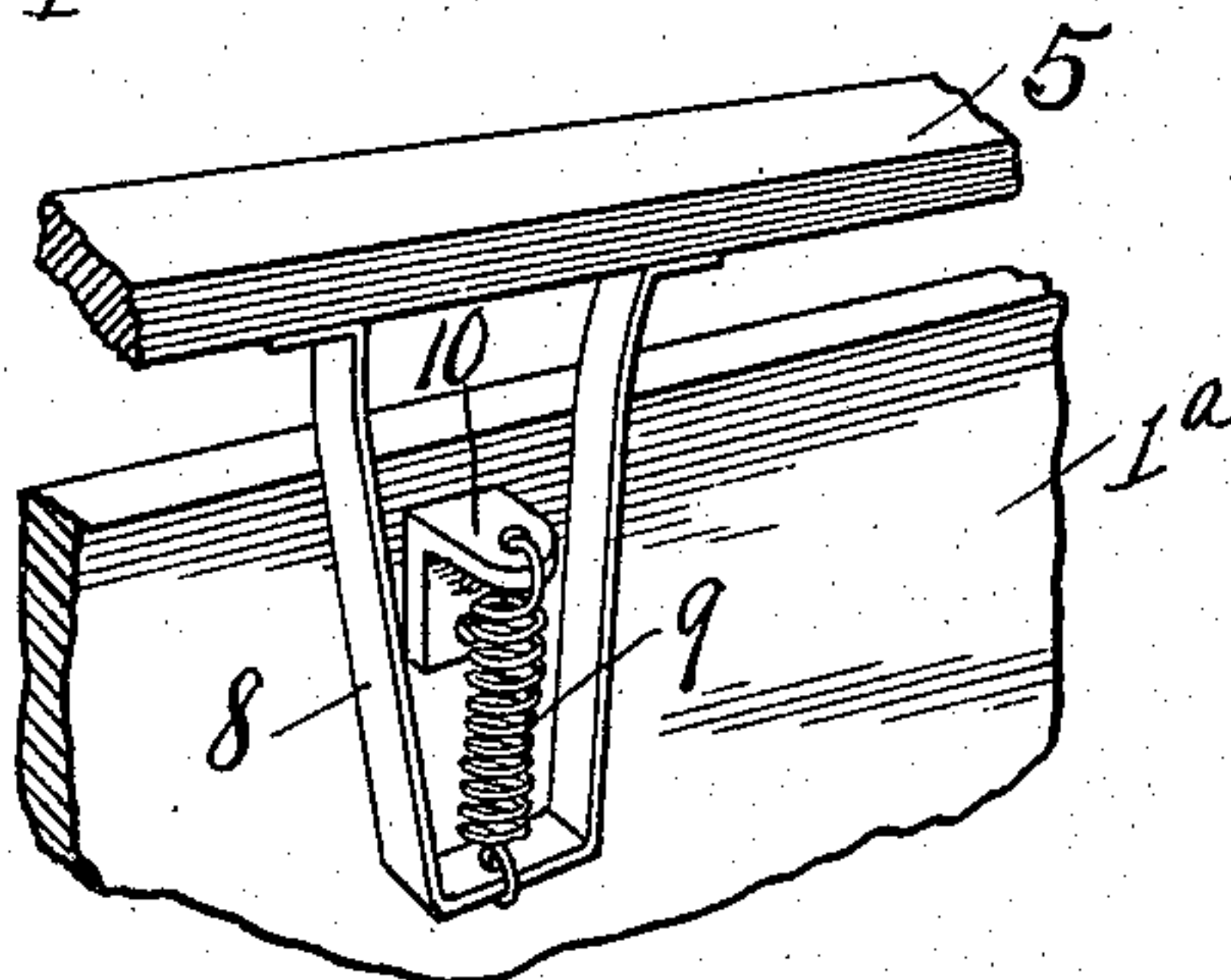


Fig. 3.



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Fig. 4.

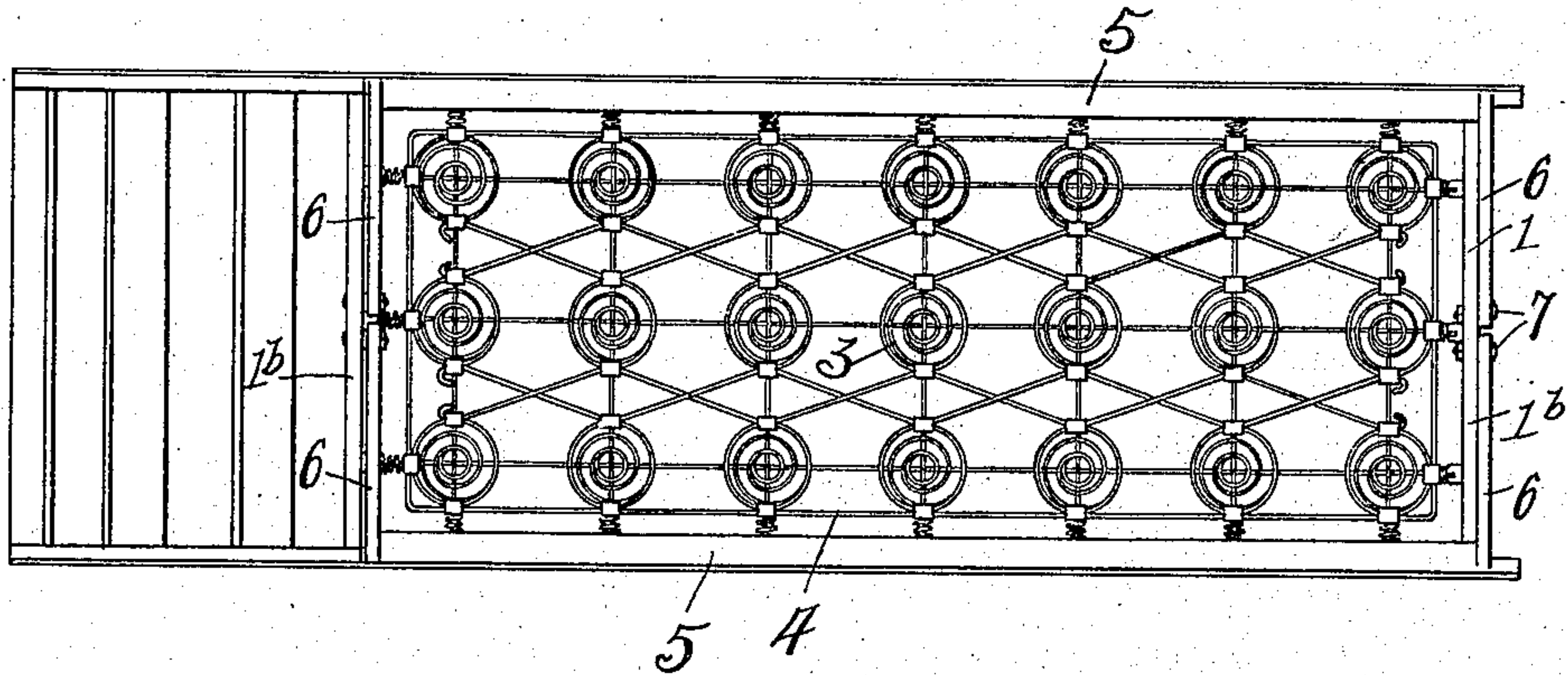


Fig. 5.

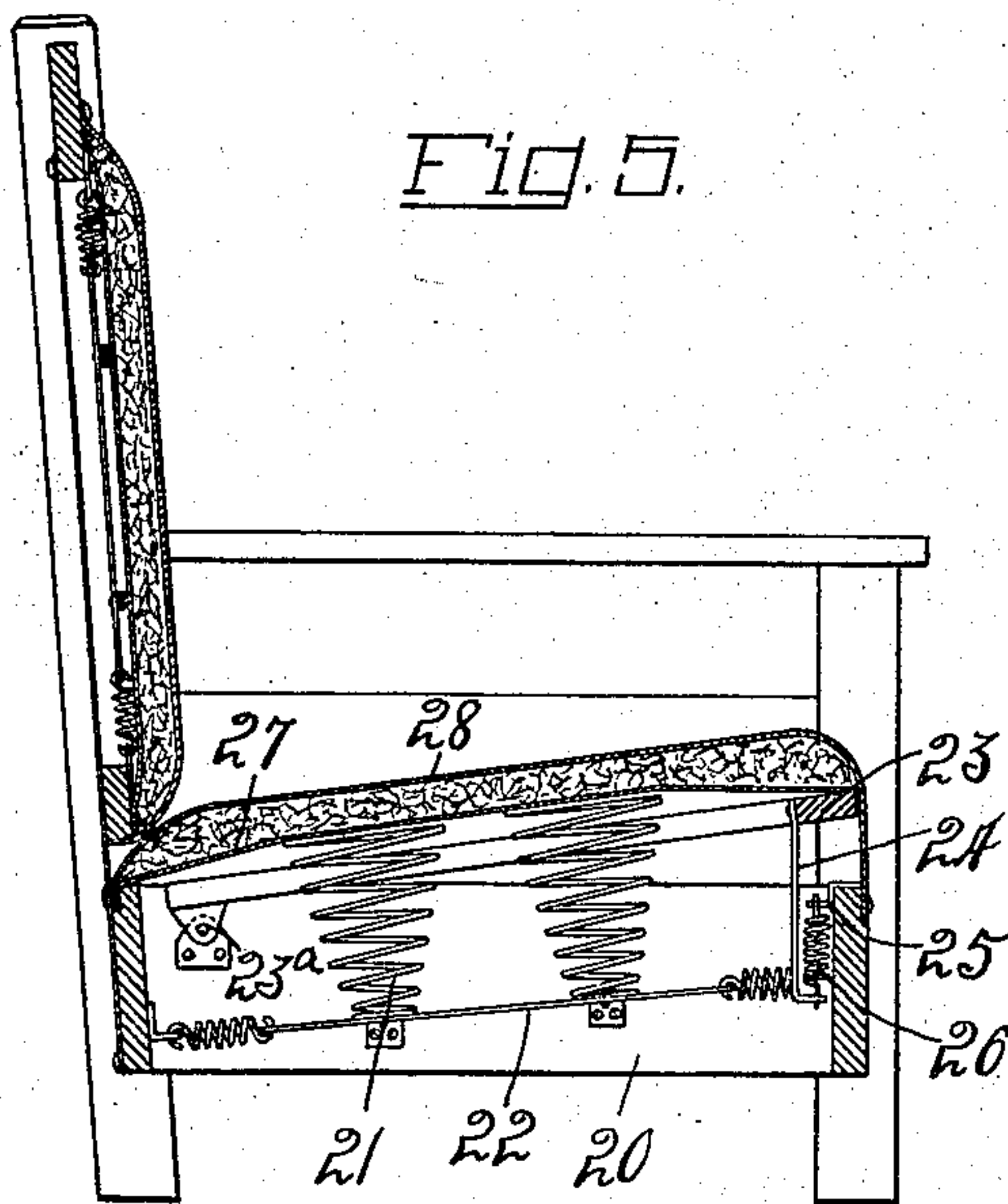
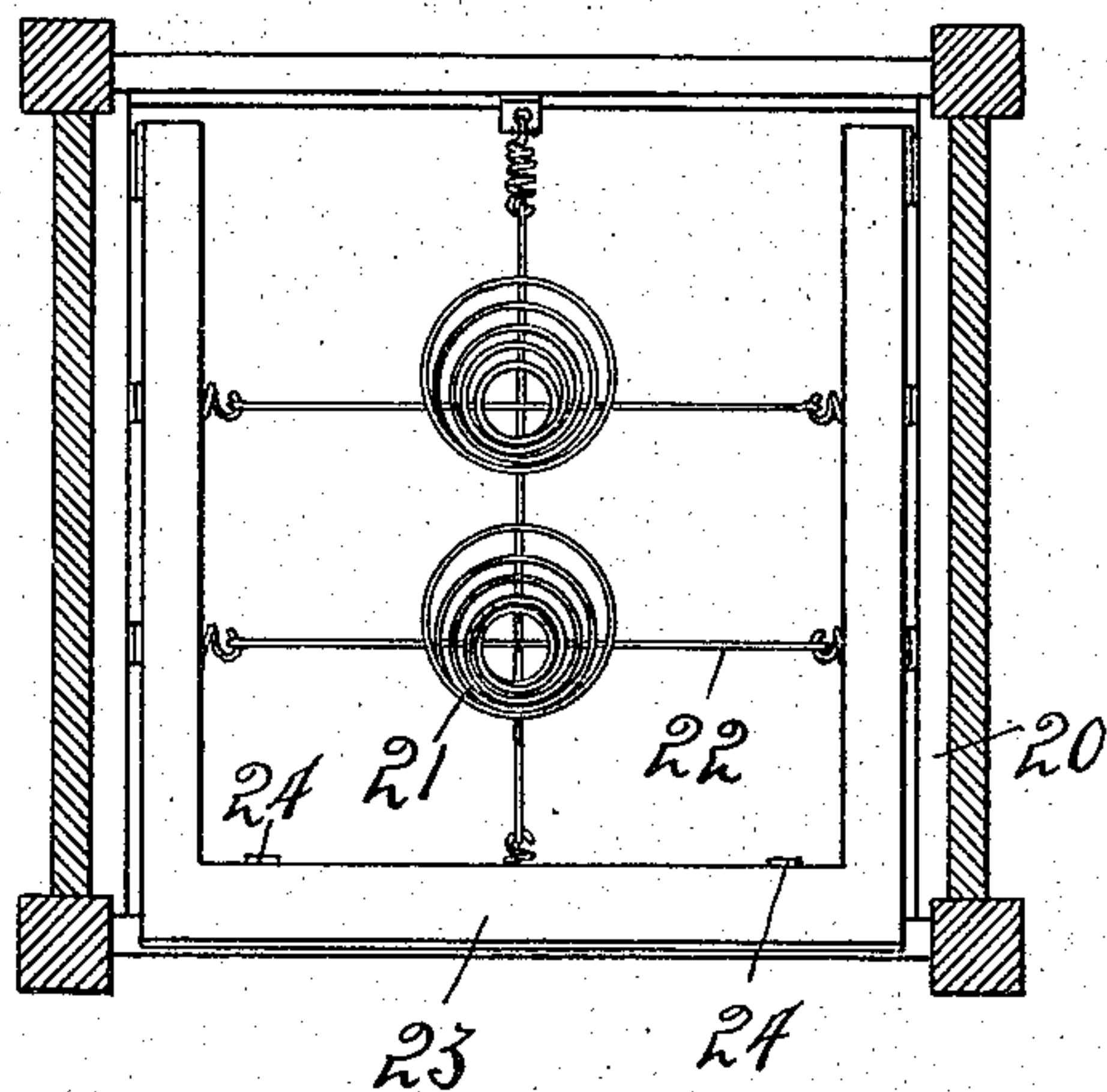


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOHN P. HURLEY, OF TOLEDO, OHIO.

SPRING-SEAT.

1,167,074.

Specification of Letters Patent.

Patented Jan. 4, 1916.

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To all whom it may concern:

Be it known that I, JOHN P. HURLEY, a citizen of the United States, and a resident of Toledo, in the county of Lucas and State of Ohio, have invented a certain new and useful Spring-Seat; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as it appertains to make and use the same, reference being had to the accompany drawings and to the characters of reference marked thereon, which form a part of this specification.

This invention relates particularly to articles of furniture of the spring seat type.

The primary object of my invention is the provision in articles of the character described of a spring seat which has its edges reinforced to prevent an inward collapsing or sagging thereof after being used a short time, and which also very materially lessens the labor and expense incident to upholstering such articles, thereby enhancing the practicability and commercial value thereof.

Further objects and advantages of the invention will be apparent from the following detailed description thereof.

The invention is fully described in the following specification, and while, in its broader aspect, it is capable of embodiment in numerous forms, a preferred embodiment thereof is illustrated in the accompanying drawings, in which,—

Figure 1 is a side elevation of a couch embodying my invention with the upholstering removed therefrom. Fig. 2 is an enlarged cross-sectional view thereof in upholstered form. Fig. 3 is an enlarged perspective view of a portion of the feature embodying the present form of the invention. Fig. 4 is a top plan view of Fig. 1. Fig. 5 is a central vertical section of a chair embodying the invention, and Fig. 6 is a cross-section thereof showing the seat in plan with the upholstering removed.

Referring to Figs. 1 to 4 of the drawings, 1 designates the seat frame of a couch, said frame having the sides 1^a, 1^a and the ends 1^b, 1^b. A fabric 2, preferably of spring character, is secured within the frame, being attached to the respective sides and ends thereof below its upper edge, as shown in Fig. 2, and mounted on this fabric is a set of coiled springs 3, with the springs thereof connected together at their upper ends by a

frame 4, preferably of wire. The spring set 2, 3, 4 of the article is of any suitable type or construction as desired, the upper part thereof being free relative to the couch frame to permit it to have limited floating or gyrating movements relative thereto.

At each of opposite sides of the couch is disposed a U-shaped frame having the longitudinally extending bar 5 and inwardly projecting legs 6 at the ends of such bar, which legs project toward the inwardly projecting legs of the other U-frame and are pivoted to the respective end members 1^b of the couch, as at 7, in adjacent relation to the pivot 7 of the other U-frame, as shown in Figs. 2 and 4. The pivots 7 for the U-frames are disposed near the center of the end members 1^b. The opening formed by the two U-frames 5—6, which opening, in the present instance, is of rectangular form, is of suitable size to permit the upper portion of the spring set 2, 3, 4 to work freely there-through, and the outer edges of the bars 5 of the U-frames are disposed substantially in vertical register with the outer side edges of the sides 1^a of the couch frame. It is thus evident that the spring set 2, 3, 4 and the U-frames may have movements relative to each other and that the downward movements of the U-frames are limited, in the present instance, by the upper edges of the sides 1^a of the couch frame. Depending from each U-frame bar 5 near each end thereof and within the couch frame, is a U-shaped yoke or bracket member 8, which has its lower or looped end connected by a coiled contractile spring 9 with a superposed bracket 10 that is fixed to the adjacent side of the couch frame, as best shown in Fig. 3. The spring 9 coöperates with the yokes or bracket members 8 to yieldingly support the outer portions of the U-frames 5—6 in raised or vertically spaced relation to the couch frame.

In upholstering the couch it is preferable to first place limit gages or blocks (not shown) between the top edge of the couch frame and the bars 5 of the U-frames, thereby allowing for any distance required for the spring edge, which distance depends on the size of the springs 3 used and the desired spacing of the top edges of the bars 5 from the top plane of the springs when distended. At any event the top edges of the bars 5 are preferably disposed a distance below the top of the spring set, as shown in Figs.

1 and 2. The normal spacing of the bars 5 with respect to the couch frame edge having been gaged, the mechanic draws a fabric 11, of burlap or other suitable material, over the top of the spring set 2, 3, 4 and attaches the edges of this burlap preferably by tacking, to the respective bars 5 of the U-frames. This having been done, the bars 5 are drawn down to the gage blocks, thus drawing the burlap 11 taut over the spring set, and separate strap members or the projecting edge portions of the burlap 11, as shown at 11^a, are tacked to the couch frame to prevent a raising of the outer edge portions of the U-frames above the gaged position. The stuffing material is then placed over the top of the burlap, such material being shown in the present instance as comprising the sections 12, 15 and intermediate burlap 13, and over this stuffing is drawn the covering 16, which is attached at its edges to the edge bars 5 of the respective U-frames, as at 14. It is apparent that the stuffing for the seat may be of any form and material and composed of one or more layers as desired. The cover 16 may be expanded at its edges below the bars 5 to and attached to the upper side edges of the couch frame to form a border strip.

While I have shown and described a preferable form of upholstering it will be understood that this form is merely illustrative of the idea and that any suitable form of upholstering may be used as desired. It will also be understood that the U-frames 5—6, while of a vertically yielding nature, serve to strengthen or reinforce the upholstering against lateral or transverse movements with respect to the couch frame and prevents the inward collapsing or sagging of the edge portions of the spring seat, which is an objectionable feature in connection with upholstered seats of this character. It is evident that the connection between the U-frames and the top portion of the spring set, which is effected by the upholstering, prevents relative horizontal gyratory movements of the upholstering.

The separating of the spring set 2, 3, 4 from the yielding side bars 5 and the normal positioning of the top of the spring set above said side bars enables the central portion of the couch to have yielding movements relative to the bars 5 for substantially the full depth of the springs, and permits the edges of the couch to remain intact and not to be drawn inward or displaced by a downward compressing strain on the central portion of the spring set. On the other hand, if a person sits on the edge of the couch, such edge portion will have a free, yielding action and at the same time be braced against transverse movements. The separating of the spring set from the yielding bars 5, except through the medium of

the upholstering, causes the springs to always exert an upward pressure against the upholstering relative to the bars 5 so that as soon as the top of the upholstering is relieved of a downward pressure, the springs will act to straighten it out and draw the cover taut across the couch top, the edge always remaining intact. These are all important features, and features which are incident to the arrangement illustrated.

While I have shown and described the U-frames 5—6 as being yieldingly supported by the coiled contractile springs 9 in conjunction with the yoke members 8, it will be understood that the use of such supporting means is not necessary as the upholstering itself, in conjunction with the spring set 2, 3, 4, tends to yieldingly support the U-frames when attached thereto. It is preferable, however, to use the independent supporting means 8—9 for the U-frames, as the assembling or applying of the upholstering is thereby facilitated and the action of the springs 3 of the spring set augmented.

In Figs. 5 and 6 the invention is shown as applied to a chair, in which 20 designates the customary rectangular seat frame, in which the coiled springs 21 and supporting fabric or means 22 are mounted in the customary or any suitable manner. In the case of a chair a single U-frame 23 is provided, which has its cross-bar disposed over the front edge of the seat frame and its side bars or legs extending rearward therefrom and pivoted, as at 23^a, to the respective sides of the seat frame near the rear ends thereof. A finger 24 projects downward from the front bar of the U-frame near each end thereof and is connected at its lower end to a superposed bracket 25 on the seat frame by a coiled contractile spring 26, which serves to yieldingly support the front end of the U-frame in vertically spaced relation to the seat frame. The inner fabric 27 of the upholstering is drawn over the springs 21 and attached to the front edge portion of the U-frame 23 and also to the rear and sides of the seat frame 20. The outer fabric strip 28 of the upholstering incloses the entire upper portion of the seat and is attached at its edges to the seat frame, the front edge portions thereof serving to limit the upward spring influenced movements of the U-frame 23, as will be understood by reference to the drawings.

I wish it understood that my invention is not limited to any specific construction or arrangements of the parts, as it is capable of numerous modifications without departing from the spirit of the claims.

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

1. In combination, a seat frame, a second frame vertically movable relative to the seat

frame and forming an edge bar over an edge portion of the seat frame, a spring set mounted within said seat and second frames in disconnected relation to the latter and
 5 having coiled springs projecting thereabove, and means fixed to the seat and second frames and drawn over the spring set and also over said second frame and cooperating with the spring set to normally retain the edge bar of
 10 said second frame in vertically spaced relation to the seat frame.

2. In combination, a seat frame, a spring set mounted therein and having coiled springs extending above the upper edge of
 15 said frame, upholstering means drawn over said spring set and secured at its edges to said seat frame, and means vertically movable relative to the seat frame and holding the front edge portions of the upholstering
 20 against rearward collapsing movements, said means being disposed below the top of the spring set and disconnected therefrom except through the upholstering.

3. In combination, a seat frame, a spring set mounted within said frame and having
 25 coiled springs rising above the upper edge of the frame, a frame having a cross-bar at the front edge of the seat and legs projecting rearward from the ends thereof and piv-
 30 oted to the seat frame, said pivoted frame being free from said springs and vertically spaced from the top thereof, and means attached to the edges of said seat frame and extending over said springs and said piv-
 35 oted frame and cooperating with the seat frame to limit the movements of said pivoted frame and connecting said springs and the pivoted frame for relative movements.

4. In combination, a seat frame, a second frame pivotally carried by said seat
 40 frame and having its free edge portion disposed at the front edge of the seat frame in normally vertical spaced relation thereto, means yieldingly spacing the free edge of
 45 said second frame above the seat frame, spring means carried by the said frame and having coiled springs disconnected from and rising above the second frame and transversely spaced therefrom, and up-
 50 holstering secured at its edges to the seat frame and extending over said springs and said second frame and cooperating with the second frame to confine said springs and co-
 55 operating with the seat frame to limit the movements of said second frame.

5. In combination, a seat frame, U-frames

pivotally carried at the free ends of their legs by said seat frame and projecting outward in opposed relation, a spring set carried by said seat frame and having springs
 60 rising above the U-frames, and upholstering secured at its edges to said seat frame and being drawn over said springs and U-frames to cooperate with the U-frames to
 65 confine the upward movements of the springs and cooperating with the said frame to limit the movements of the U-frames relative thereto, said U-frames serving to hold the opposite edge portions of the upholster-
 70 ing against inward collapsing, the springs being disconnected from the U-frames whereby the spring set may collapse and expands independently thereof.

6. In combination, a seat frame, edge bars mounted for limited vertical movements
 75 above side edges of said seat frame, a set of coiled springs carried within the seat frame and rising above said edge bars, means connecting each edge bar and the respective
 80 side of the seat frame to limit the upward movements of said bars, a fabric drawn over said springs and fixed at its side edges to said edge bars, and upholstering disposed
 85 over said fabric and connected at its side edges to said edge bars, the spring set being free from the edge bars so that it may collapse and expand independently thereof.

7. In combination, a seat frame, an edge bar pivotally carried by the frame for limited vertical movements over a side edge
 90 thereof, pliant means limiting the upward movement of said edge bar relative to the frame, a set of coiled compression springs carried by and rising from within said seat
 95 frame in transversely spaced and free relation to said edge bar and rising above the same, a fabric drawn taut over said springs and downward at one edge to said edge bar
 100 and fixed thereto, said fabric forming the connection between said springs and edge bar, and upholstering material mounted over said fabric, said springs being free to exert an upward stress against the under side of said fabric relative to said edge bar.

In testimony whereof, I have hereunto
 105 signed my name to this specification in the presence of two subscribing witnesses.

JOHN P. HURLEY.

Witnesses:

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 M. H. MAYERS.