H. A. & C. W. WHEELER.

BENCH.

APPLICATION FILED NOV. 4, 1911.

1,032,792.

Patented July 16, 1912.

3 SHEETS—SHEET 1.

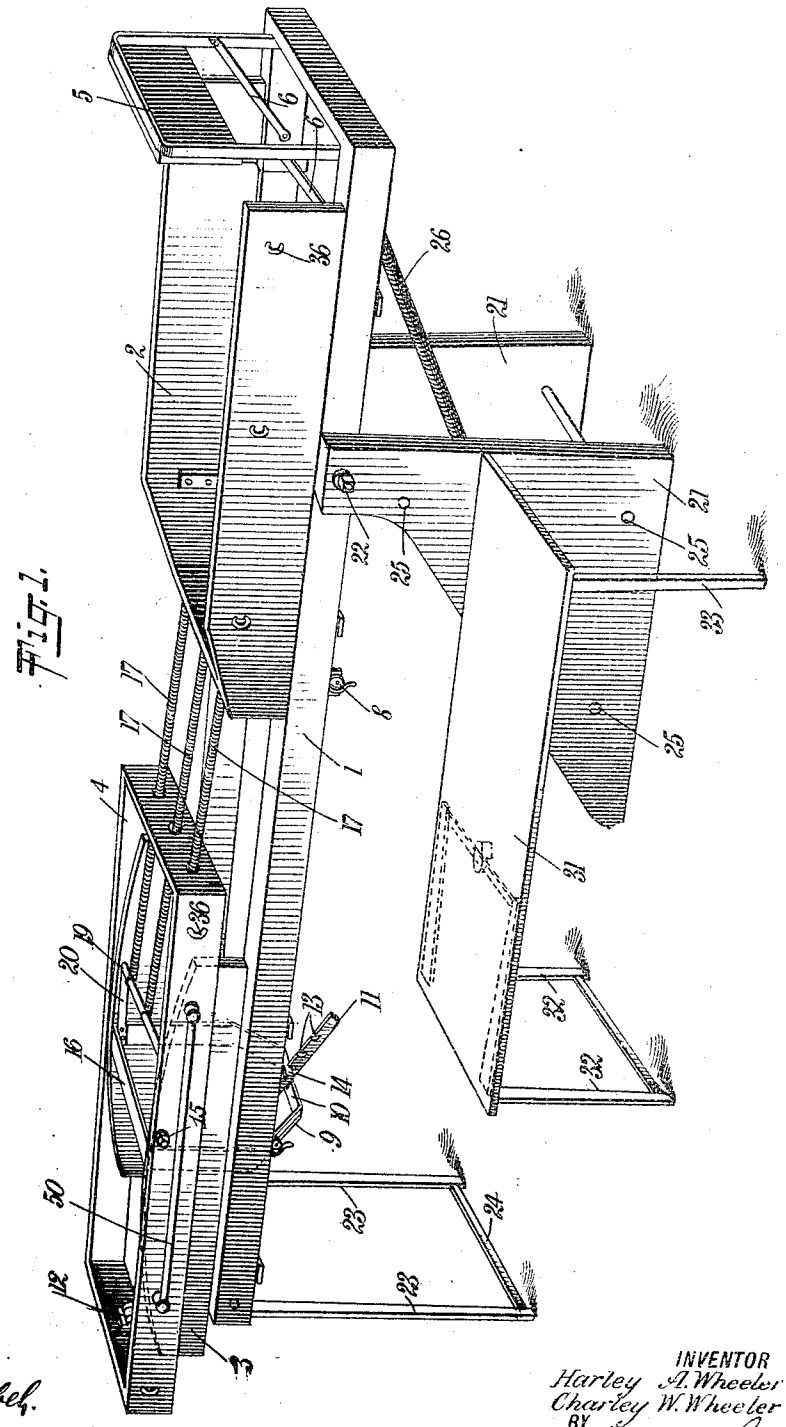

Fig. 1.

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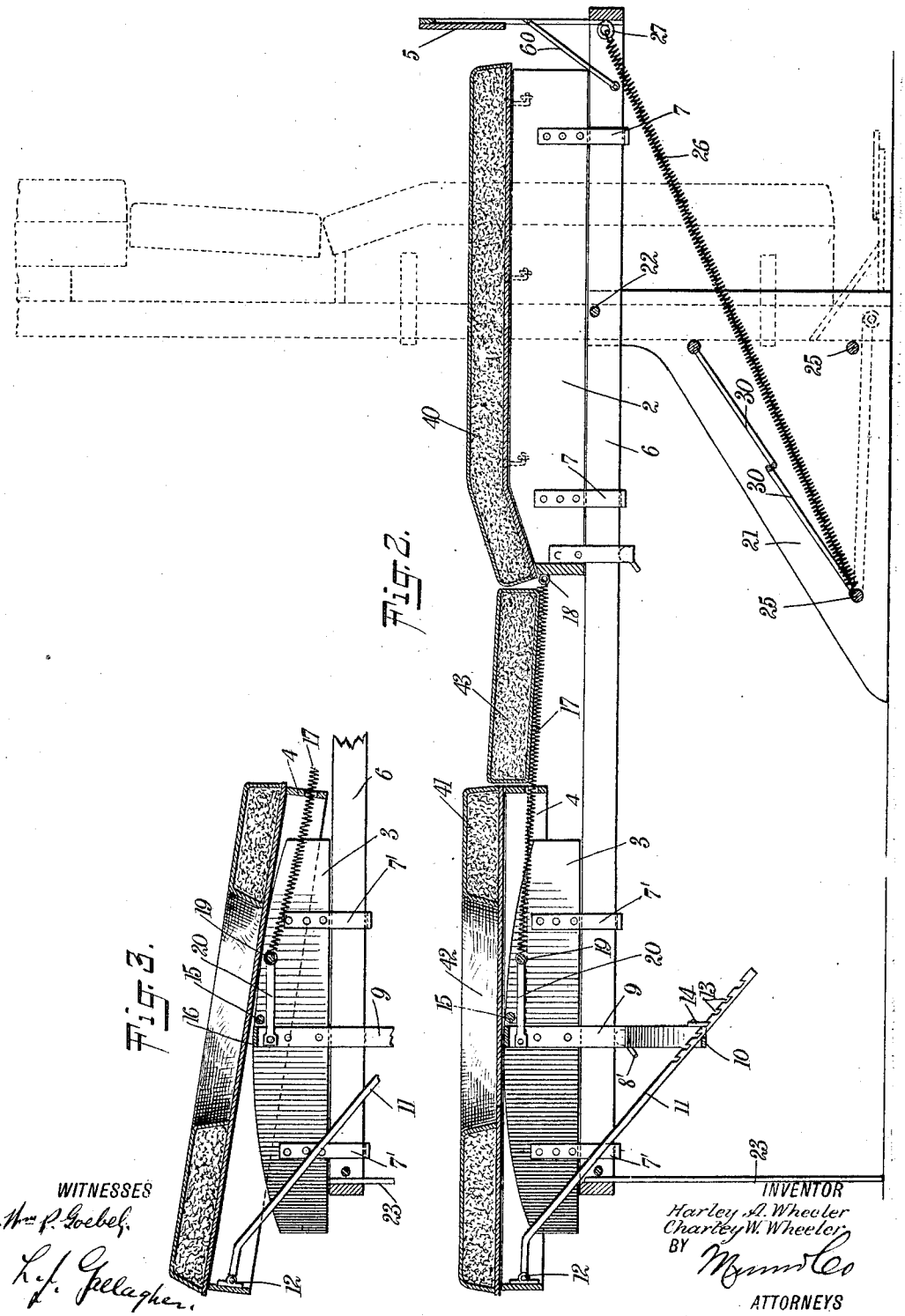
3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

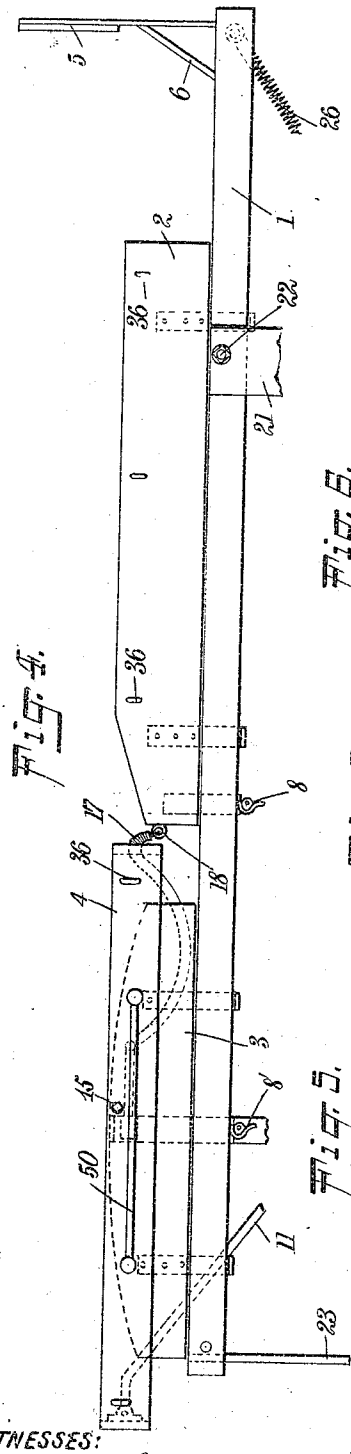

Fig. 4.

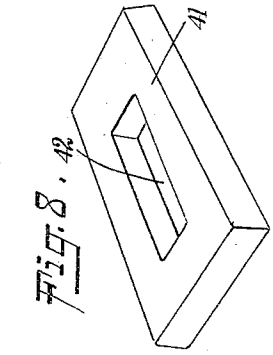

Fig. 8.

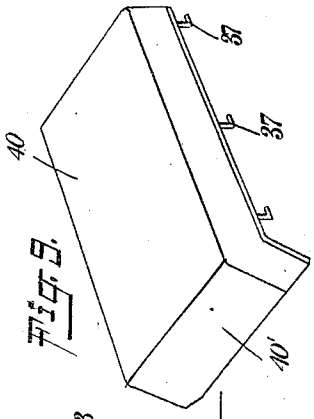

Fig. 9.

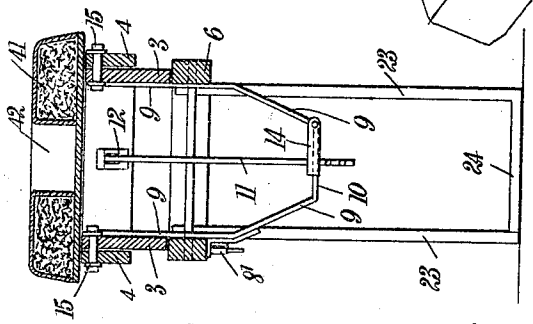

Fig. 6.

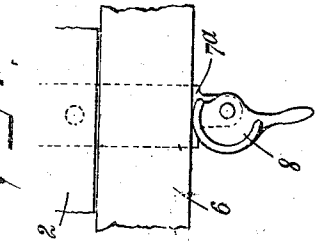

Fig. 7.

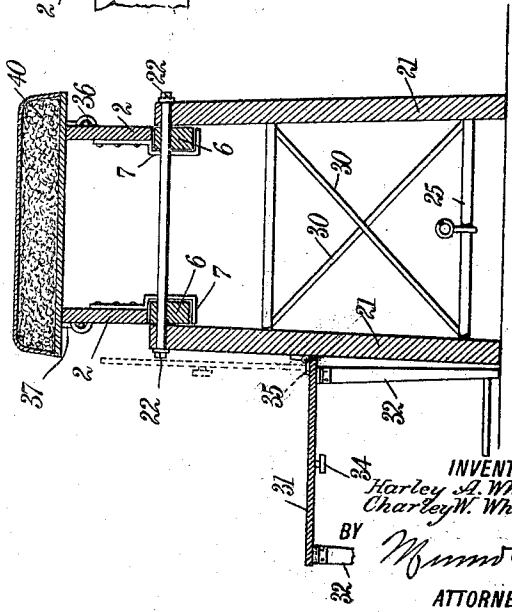

Fig. 5.

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BENCH.

1,032,792. Specification of Letters Patent. Patented July 16, 1912.

Application filed November 4, 1911. Serial No. 658,491.

To all whom it may concern:

Be it known that we, HARLEY A. WHEELER and CHARLEY W. WHEELER, citizens of the United States, and residents of Eddyville, in the county of Dawson and State of Nebraska, have invented a new and Improved Bench, of which the following is a full, clear, and exact description.

Our invention relates generally to benches and more particularly is directed to a construction adapted to meet the needs of those practising osteopathy and chiropractics.

The principal object of our invention is to provide a convertible bench adapted to a variety of uses, the construction and arrangement being such that the parts are movable relatively one to the other, whereby the outfit is capable of manifold application.

A further object of our invention is to provide a bench adapted to hold cushions thereon, the cushions being adjustable and the frame which holds the cushions being also adjustable whereby the parts may be moved to a plurality of positions in order to enable a practitioner to place a patient in any desired position.

A further object of our invention is to provide a device of the class described which, although of simple outline, is capable of efficient use, the construction being capable of production at a low cost.

A further object of our invention is to provide new and improved cushions especially adapted for use with the bench herein described and claimed, the cushions being adapted to be disposed of independently of the bench.

Other objects and advantages of the invention will appear as the description thereof proceeds, all of which is particularly pointed out and included in the appended claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference denote corresponding parts in all the views, and in which—

Figure 1 is a perspective view of the bench in normal position, the cushions being removed; Fig. 2 is a longitudinal sectional view of the bench showing the cushions in position thereon, one adjusted position of the parts being shown in dotted lines; Fig. 3 is a vertical sectional view of the rear end of the bench showing one adjustment of the cushions thereon; Fig. 4 is a partial side view of the bench showing the adjustability of the front cushion frame; Fig. 5 is a vertical sectional view of the front end of the bench at right angles to the section shown in Fig. 2; Fig. 6 is a vertical sectional view similar to Fig. 5 but showing the rear end of the bench; Fig. 7 is a detail view showing the particular means for securing the rear carriage in position on the frame; Fig. 8 is a perspective view of one form of cushion especially adapted for use on our bench; Fig. 9 is a perspective view of another form of cushion especially adapted for chiropractic work.

Referring particularly to Fig. 1, the bench is made up of a main frame 1 having a front cushion frame 2 movably mounted thereon, there being a carriage 3 movably supported adjacent the rear of the frame 1, this carriage supporting a rear cushion frame 4. Adjacent the front of the frame is a foot board 5 suitably secured in position and braced by means of straps 60.

Referring particularly to Fig. 5, it will be noted that the sides of the frame 2 rest on the top of the longitudinally extending supports 6 carried by the main frame 1, these sides of the cushion frame being provided with guides 7, preferably in the form of integral straps, whereby the engagement of the straps with the supports insures the relation of the cushion frame on the main frame. In order to hold the cushion frame 2 secured in position on the main frame 1, any convenient means may be used but preferably such means consists of the sash locks 8 carried by the cushion frame, turning of the locks bringing them into frictional engagement with the main frame 1, thereby holding the parts together.

As shown particularly in Figs. 2 and 6, the inner sides of the carriage 3 adjacent the rear of the bench are also provided with straps 7′ which engage the supports 6 of the main frame, being also provided with other downwardly extending elements 9 having on their outer sides sash locks 8′ similar to those already described and which engage the supports 6 in order to hold the carriage positioned thereon.

Each of the downwardly extending ele-

ments 9 is connected on its lower end by means of a piece of metal 10, preferably integral with the elements 9, this piece acting as a support for the tilting rod 11 pivotally secured at 12 to one end of the rear cushion frame 4, the lower end of the rod on one face being provided with a series of notches or serrations 13 adapted to be engaged by a movable lever 14 carried by one of the downwardly extending members 9 whereby the rear cushion frame may be held in any desired position, as shown particularly in Fig. 3. It will be noted that the sides of the carriage 3 are curved and that the rear cushion frame 4 extends beyond the ends of these sides, thereby inclosing them, the frame being pivotally mounted on the carriage by any suitable means, such as pins 15, the curvature of the sides of the carriage permitting the frame to be adjusted transversely of the main frame, as shown in Fig. 3, the engagement of the notches in the lower end of the tilting rod with the pivoted member 14 holding the frame in adjusted position. If so desired in order to suitably brace the carriage the upper ends of the downwardly extending members 9 may be cross-connected by means of a suitable brace 16, shown particularly in Fig. 1.

Referring particularly to Fig. 2 it will be noted that the front cushion frame 2 is a separate part from the rear cushion frame 4, the two frames, however, being resiliently connected by means of a plurality of helical springs 17, one end of each of which is suitably secured at 18 to the front frame 2, the springs extending through suitable openings in the rear frame 4 and being positioned on a rod or equivalent supporting structure 19, preferably engaged in bearings 20 secured at their ends to the downwardly extending members 9 carried by the carriage 3.

The bench 1 is designed to be supported on a suitable base, preferably composed of the members 21, which are in pivotal engagement with the sides of the bench adjacent the front end thereof, preferably by means of bolts or nuts 22, the rear end of the bench being supported by legs 23 secured together at their lower ends, if so desired, by a brace 4, the legs being designed to fall into the main frame 1 for purposes of packing or storing. Each of the base members 21 may be suitably held in position relatively to each other by any suitable means, such as transversely extending rods 25 and downwardly extending members 30; in order to assist in moving the main frame with the cushion frames thereon from the full line position of Fig. 2 to that shown in dotted lines and to maintain it in such position, we use a suitable device, preferably a helical spring 26, one end thereof being secured to the main frame adjacent its front end 27, the other end being secured to one of the transversely extending rods 25 carried by the base members 21.

In order to make access to the bench easy we provide a folding foot board 31 having legs 32 at the rear end thereof which are designed to be folded in the position shown in dotted lines in Fig. 1, there being a folding leg 33 adjacent the forward end of this board. In order to hold the legs 32 in folded position a suitable catch or spring 34 positioned on the under side of the board 31 may be conveniently used. The foot board 31 is foldable with respect to the base members 21 and to this end is provided with suitable hinges 35, as shown particularly in Fig. 5 whereby the board may be moved into the position shown in dotted lines.

As shown particularly in Figs. 2 and 3, each of the frames 2, 4, is designed to support a suitable cushion especially adapted for chiropractic work, and in order to secure these cushions in position, the outside of each of the frames may be provided with suitable hooks or notches 36 adapted to be engaged by co-acting catches 37 carried by the cushions.

Referring particularly to Fig. 9, a cushion 40 is illustrated particularly adapted for use on the front cushion frame 2. This cushion is provided with the downwardly extending portion 40′ whereby it, together with the intermediate cushion 43, is particularly adapted to the shape of the body, it being noted that the front cushion frame 2 is similarly shaped.

In Fig. 8 we have shown a cushion 41 having an intermediate opening 42 therein, this cushion being especially adapted for use on the rear frame 4. It is obvious that cushions of different sizes and forms may be used on these frames, the idea being to provide a means for holding suitable cushions which are in themselves new.

Since the cushion frames are adjustable with respect to each other, and since they are resiliently connected through the medium of the helical springs 17, we design to use a third cushion 43 supported by these helical springs (shown particularly in Fig. 2); it will be noted from this figure that the relative positions of the planes in which the different cushions lie so disposed these cushions that they are especially adapted to receive the body, the foot board 5 offering a suitable support for the body when the parts are in the dotted line position of Fig. 2.

As shown particularly in Fig. 4, the frames 2 and 4 may be brought closely adjacent, thereby adapting the outfit for certain kinds of work, in which event the intermediate cushion 43 will be removed, the helical springs 17, however, permitting this arrangement of the cushion frames since these springs will fall into different curved

positions when the frames are moved adjacent each other. In order to provide a suitable hold for a person lying on the cushions, we have shown hand rails 50 on opposite sides of the rear cushion frame 4, these rails being of any convenient length and being in such position that they may be easily grasped by the patient.

From the above description taken in connection with the accompanying drawings it will be observed that we have provided a bench of new and improved design having a plurality of cushions thereon adjustable with respect to each other, the bench and the cushions being mounted on a suitable supporting base, the construction and arrangement of the whole tending to a new and improved device especially adapted for the uses which we have mentioned.

Of course, it is obvious that various changes may be made in the shape and size of our device and in the material of which it is made without departing from the spirit and scope of the appended claims.

Having thus described our invention, we claim as new, and desire to secure by Letters Patent:—

1. A construction of the class described comprising a main frame, a plurality of movable frames mounted thereon, each frame being adapted to hold a cushion, one of the frames being adjustable longitudinally of the said main frame, and the other cushion frame being adjustable transversely of the said main frame.

2. A construction of the class described comprising a main frame, a plurality of cushion frames thereon, a supporting base for the main frame and in which the main frame is movable, one of the cushion frames being adjustable longitudinally of the main frame, the other cushion frame being adapted to be moved toward or away from the main frame.

3. A construction of the class described comprising a main frame, a supporting means therefor, a cushion frame adjacent one end of the main frame and adjustable thereon, a carriage adjacent the other end of the main frame, a cushion frame mounted on the carriage, together with means for moving the said frame on the carriage and holding it in different positions.

4. A construction of the class described comprising a main frame, supporting means at one end thereof, a base in engagement with the main frame for supporting the other end thereof, the main frame being movable with respect to the base, resilient means between the base and the frame for assisting in the movement of the parts, a plurality of cushion frames on the main frame, and means for holding each of the frames secured in whatever position the main frame may be.

5. A construction of the class described comprising a main frame, supporting means at one end thereof, a base at the opposite end of the main frame for supporting it, pivotal engaging means between the base and the main frame whereby the frame may be moved relatively to the base, a spring engaging one end of the main frame and the base, the spring being extended when the parts are in one position, the combination of the spring assisting in moving one of the parts to another position, together with a plurality of cushion frames on the main frame, and independent means for holding the cushion frames secured in whatever position the main frame may be.

6. The combination of a main frame, a cushion frame movable along the main frame, means for securing the cushion frame in position, one end of the cushion frame being inclined, together with a cushion positioned on top of the cushion frame, the end of the cushion being inclined whereby it is supported by the said frame.

7. The combination of a main frame, a cushion frame adjustably mounted thereon, means for securing the cushion frame in adjusted position, one end portion of the cushion frame being inclined, a cushion resting on the cushion frame, one end of the cushion being also inclined whereby the cushion is supported by the frame, together with means engaging the frame and the cushion for holding the cushion in position thereon.

8. The combination of a main frame having a foot board thereon, means for mounting the main frame in position, a cushion frame movable longitudinally of the main frame, devices carried by the sides of the cushion frame for fixing it in position on the main frame, a carriage longitudinally movable of the main frame, means for securing it in position, and a second cushion frame pivotally supported on the said carriage, together with means for supporting the second cushion frame in different positions with respect to the pivotal supporting means, each of the cushion frames being adapted to support a cushion.

9. The combination of a main frame, means for mounting it in position, a cushion frame carried thereby and longitudinally movable thereon, means for securing the cushion frame in any position, a carriage longitudinally movable of the main frame and carried thereby, means for securing the carriage in position, a second cushion frame pivotally mounted on the carriage, cooperating means between the carriage and the second cushion frame whereby it may be moved about its pivotal support and maintained in removed position.

10. The combination of a main frame, means for supporting it in position, a cush-

ion frame adjustable longitudinally of the main frame, means for holding it in adjusted position, a carriage movable longitudinally of the main frame, means for holding it in position, a second cushion frame on the carriage, pivotal means between the carriage and the frame whereby the frame may be adjusted transversely of the main frame, together with a tilting rod in engagement with the second frame, and coöperating means carried by the carriage for engagement with the rod whereby the adjustment of the second frame on the carriage may be secured.

11. A construction of the class described comprising a main frame, a plurality of movable frames mounted thereon, each frame being adapted to hold a cushion, one of the said frames being also adjustable transversely of the main frame, there being suitable means for holding the frame in such transversely adjusted position.

12. A construction of the class described comprising a main frame, a plurality of cushion frames therein, a supporting base for the main frame in which the main frame is movably mounted, one of the cushion frames being adjustable longitudinally of the main frame and also transversely thereof, there being means for securing the said frame in any transversely adjusted position.

13. A construction of the class described comprising a main frame, a plurality of cushion frames thereon, one of the cushion frames being movable longitudinally of the main frame, means for holding it in position, a carriage between the other cushion frame and main frame, the carriage being movable longitudinally of the main frame, and the cushion frame being pivotally mounted on the carriage whereby this frame may be adjusted longitudinally and transversely of the main frame.

14. The combination of a main frame with a plurality of cushion frames thereon, one of the cushion frames being adjustable longitudinally of the main frame, means for holding it in adjusted position, a carriage in pivotal engagement with the other cushion frame, the carriage and frame being movable longitudinally of the main frame, there being suitable means for securing the carriage in adjusted position, the frame being pivotally mounted on the carriage whereby this frame is adjustable transversely of the main frame, together with coöperating parts between the carriage and the frame whereby the frame may be held in transversely adjusted position.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

HARLEY ALONZO WHEELER.
CHARLEY WILLIAM WHEELER.

Witnesses:
ARTHUR L. EDMISTEN,
PETER M. CUNNINGHAM.