

No. 731,205.

PATENTED JUNE 16, 1903.

E. T. MCKAIG.

CAR SEAT MOVEMENT.

APPLICATION FILED JUNE 18, 1902.

NO MODEL.

2 SHEETS--SHEET 1.

Fig. 1.

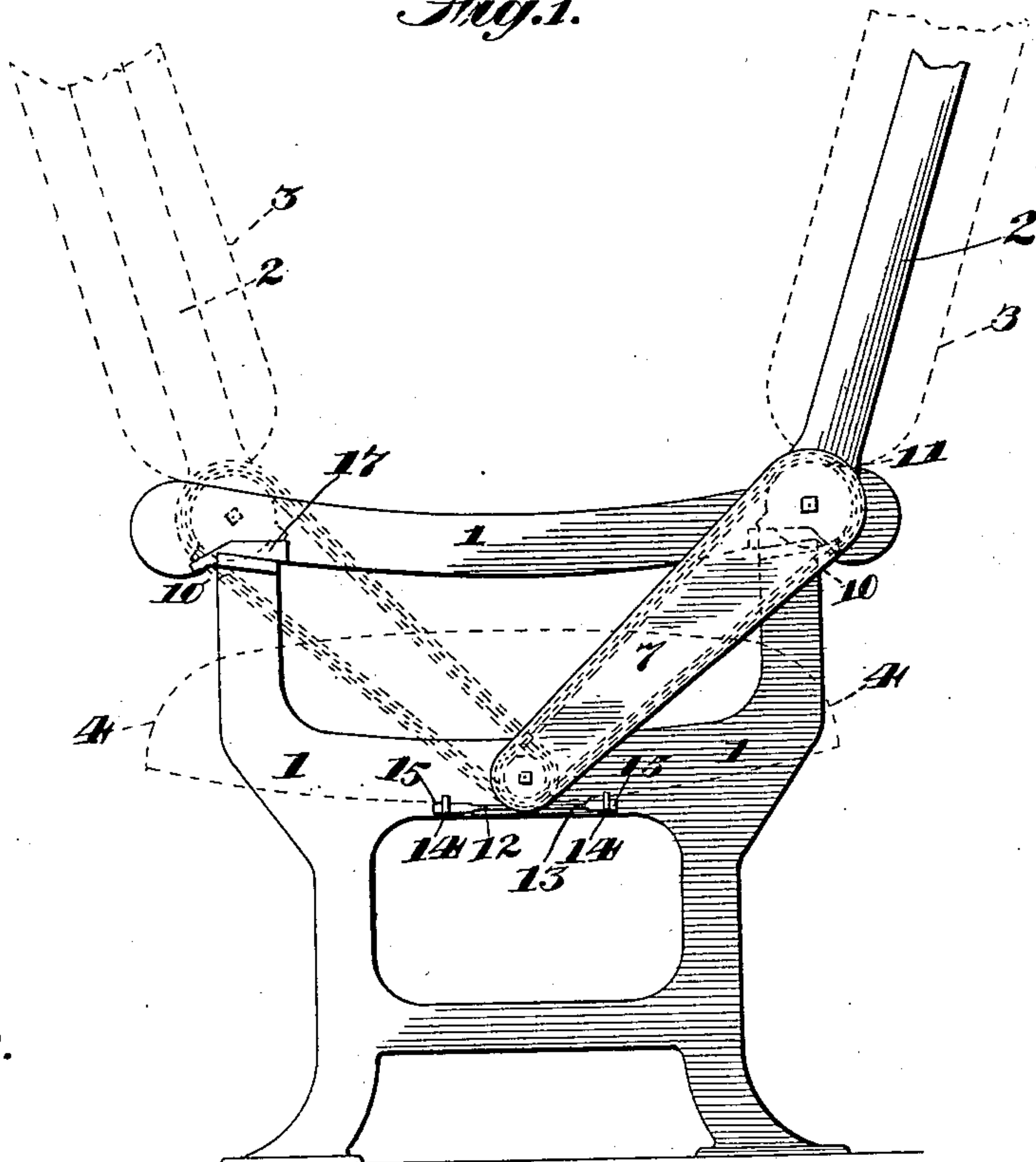


Fig. 2.

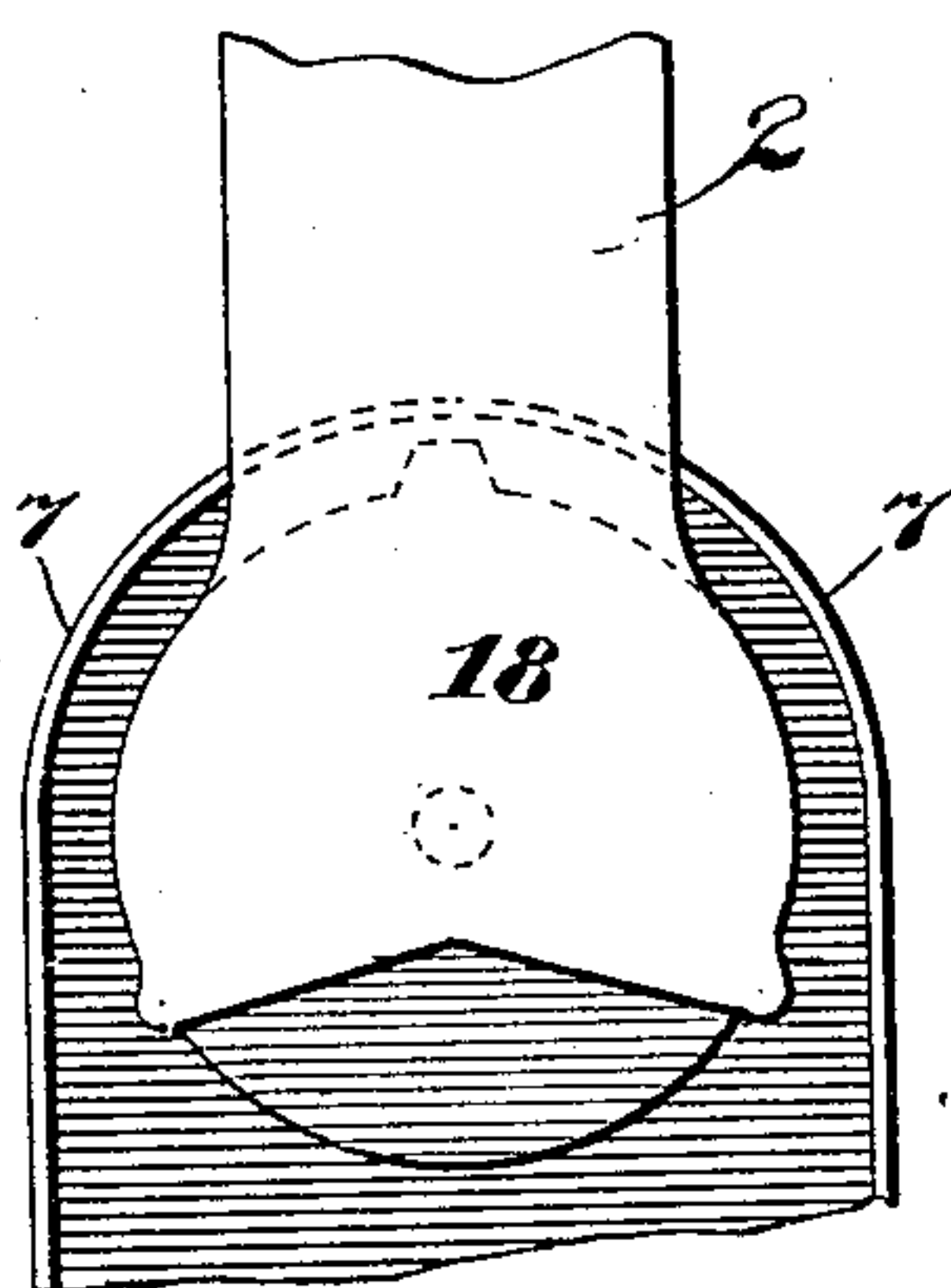
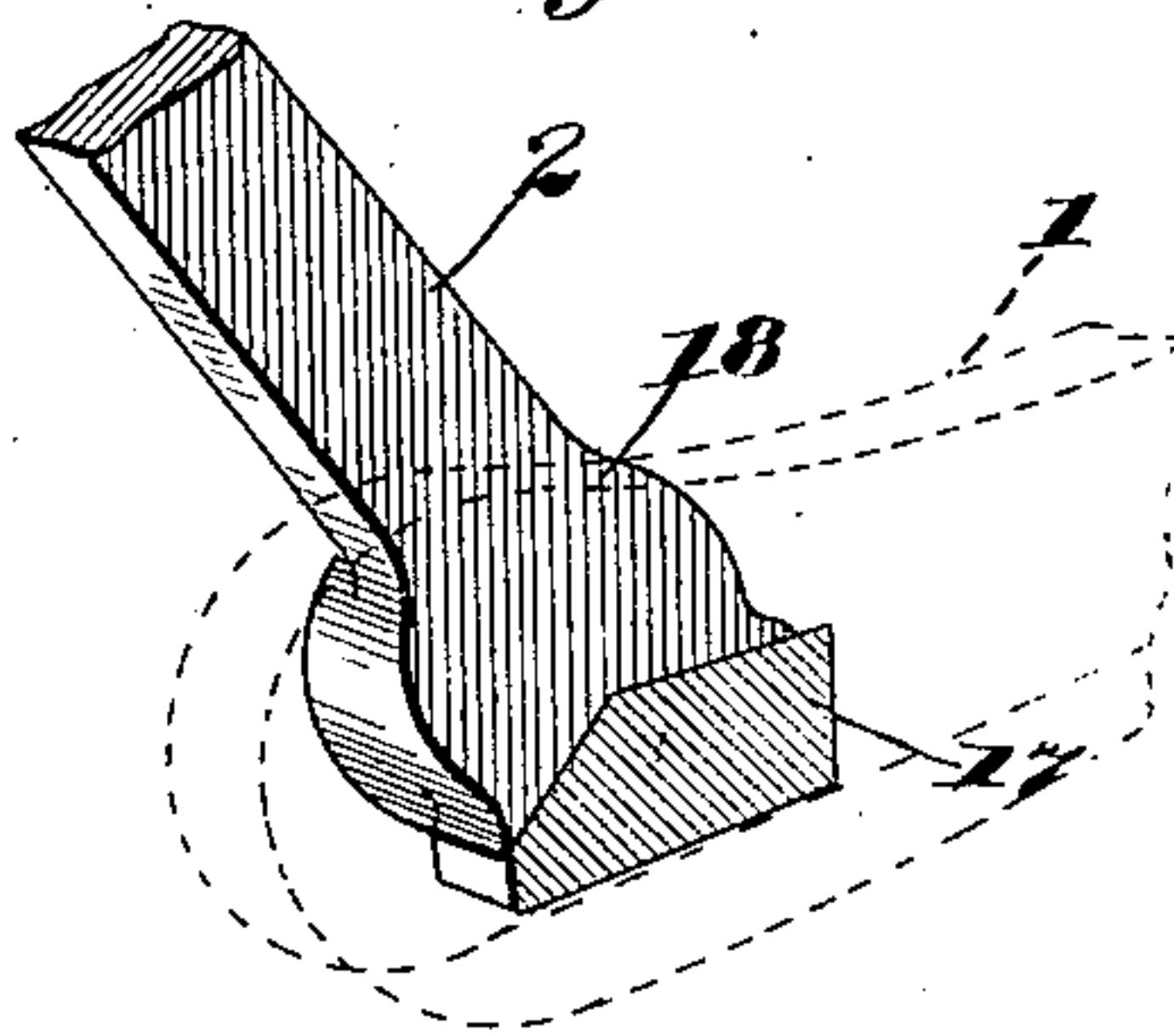


Fig. 3.



Witnesses:

JB Weir
Chas. Vermich.

Inventor:

E. J. McKaig
by Edw. H. Noyes

Wm.

No. 731,205.

PATENTED JUNE 16, 1903.

E. T. McKAIG.
CAR SEAT MOVEMENT.
APPLICATION FILED JUNE 18, 1902.

NO MODEL.

2 SHEETS—SHEET 2.

Fig. 4.

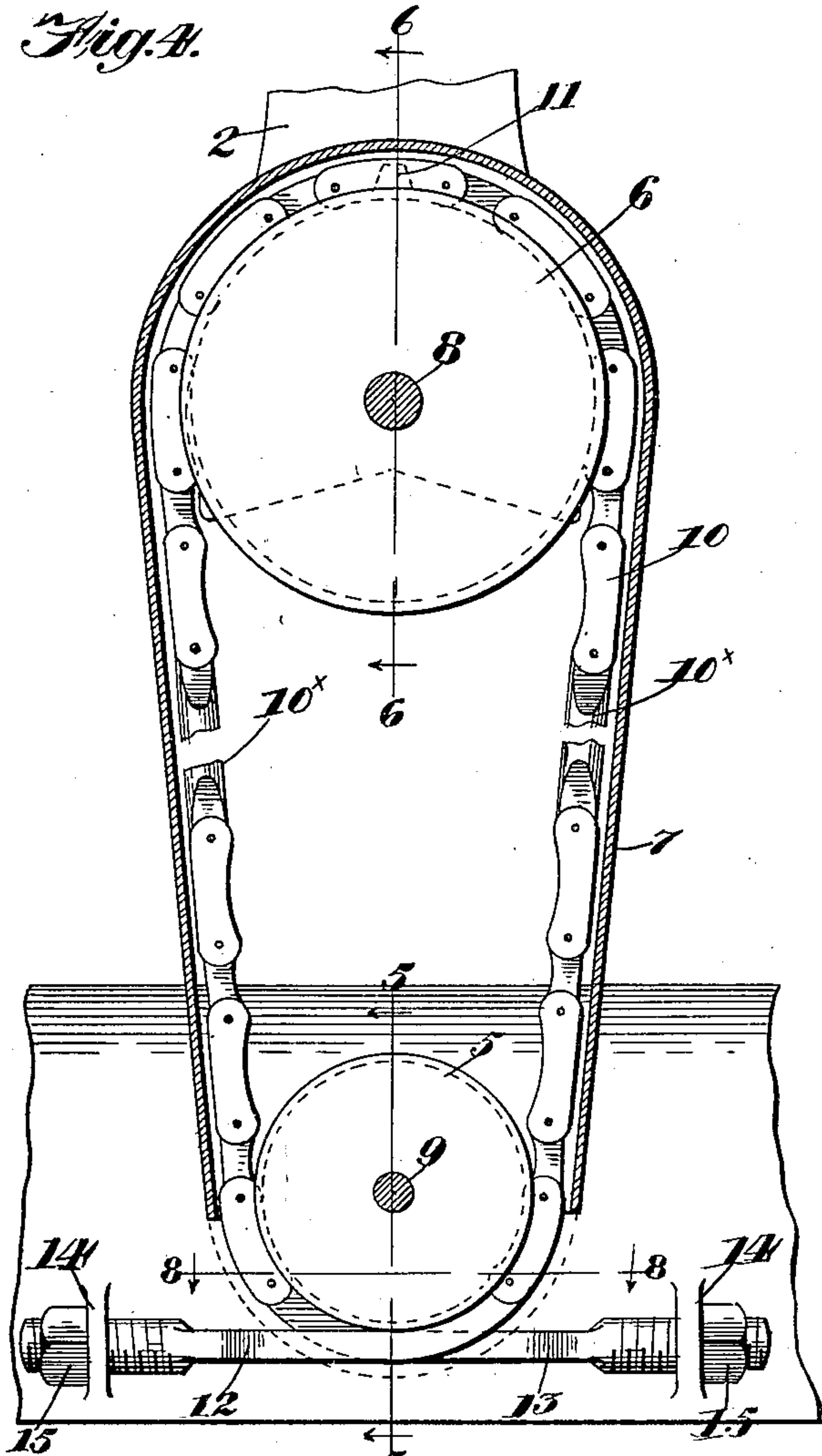


Fig. 6.

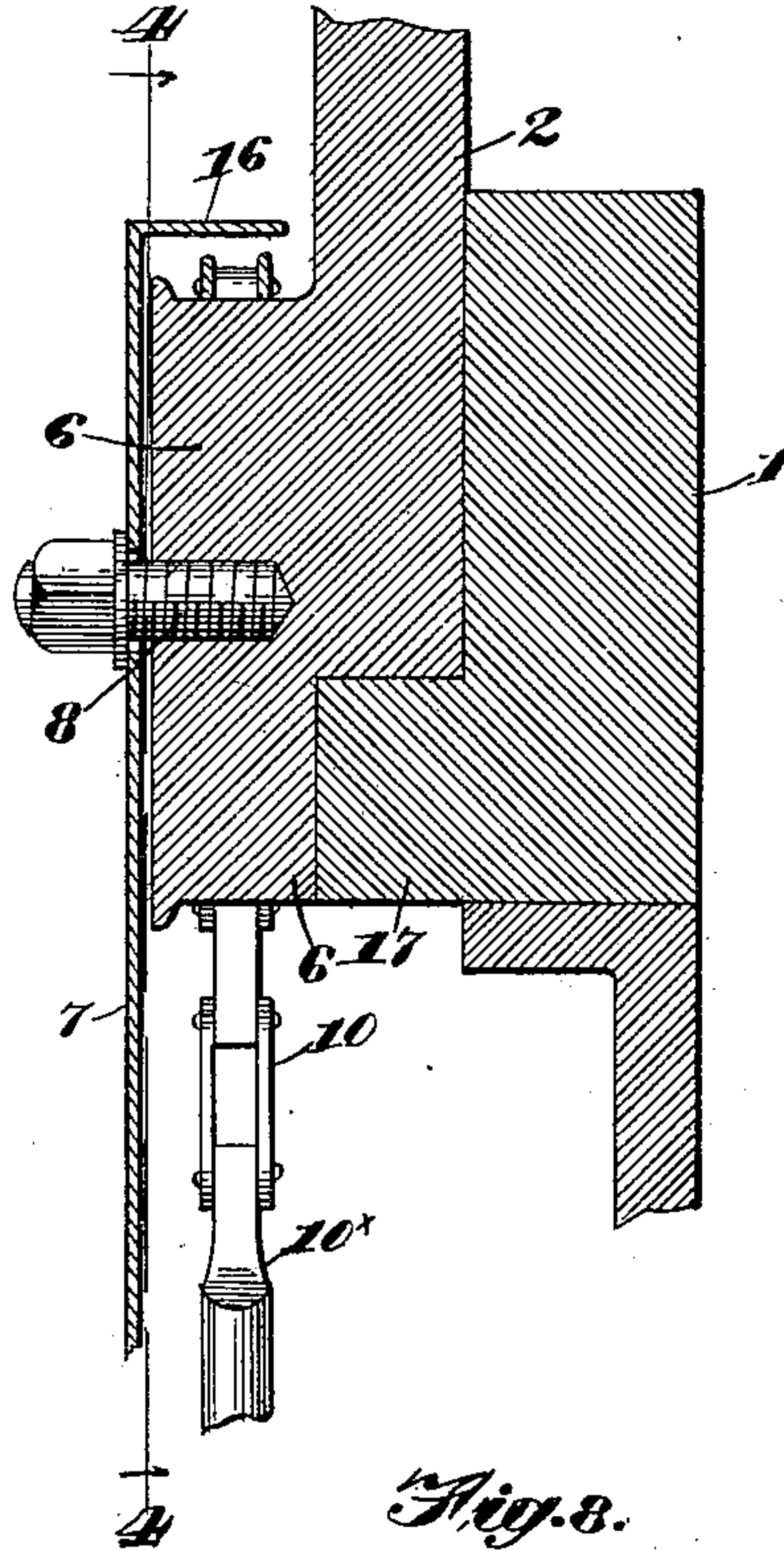


Fig. 8.

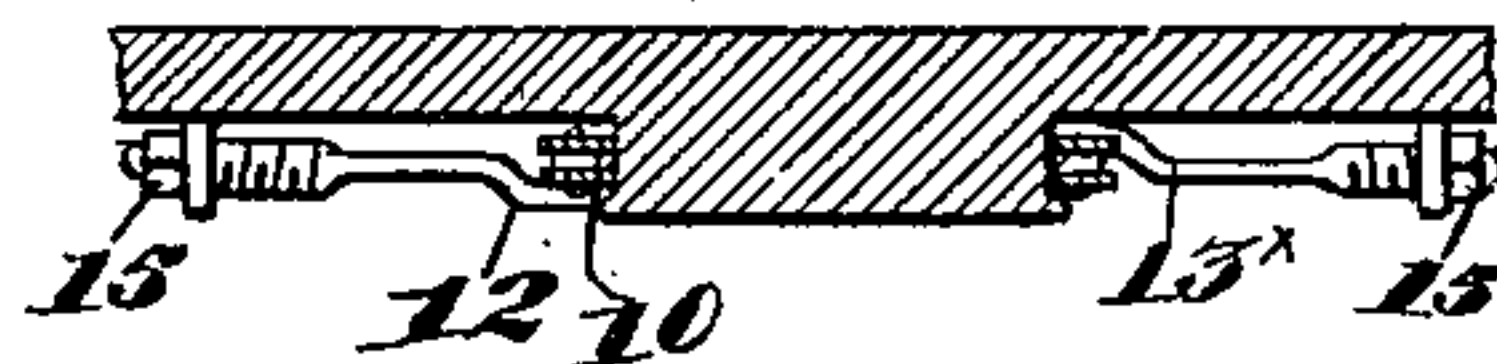
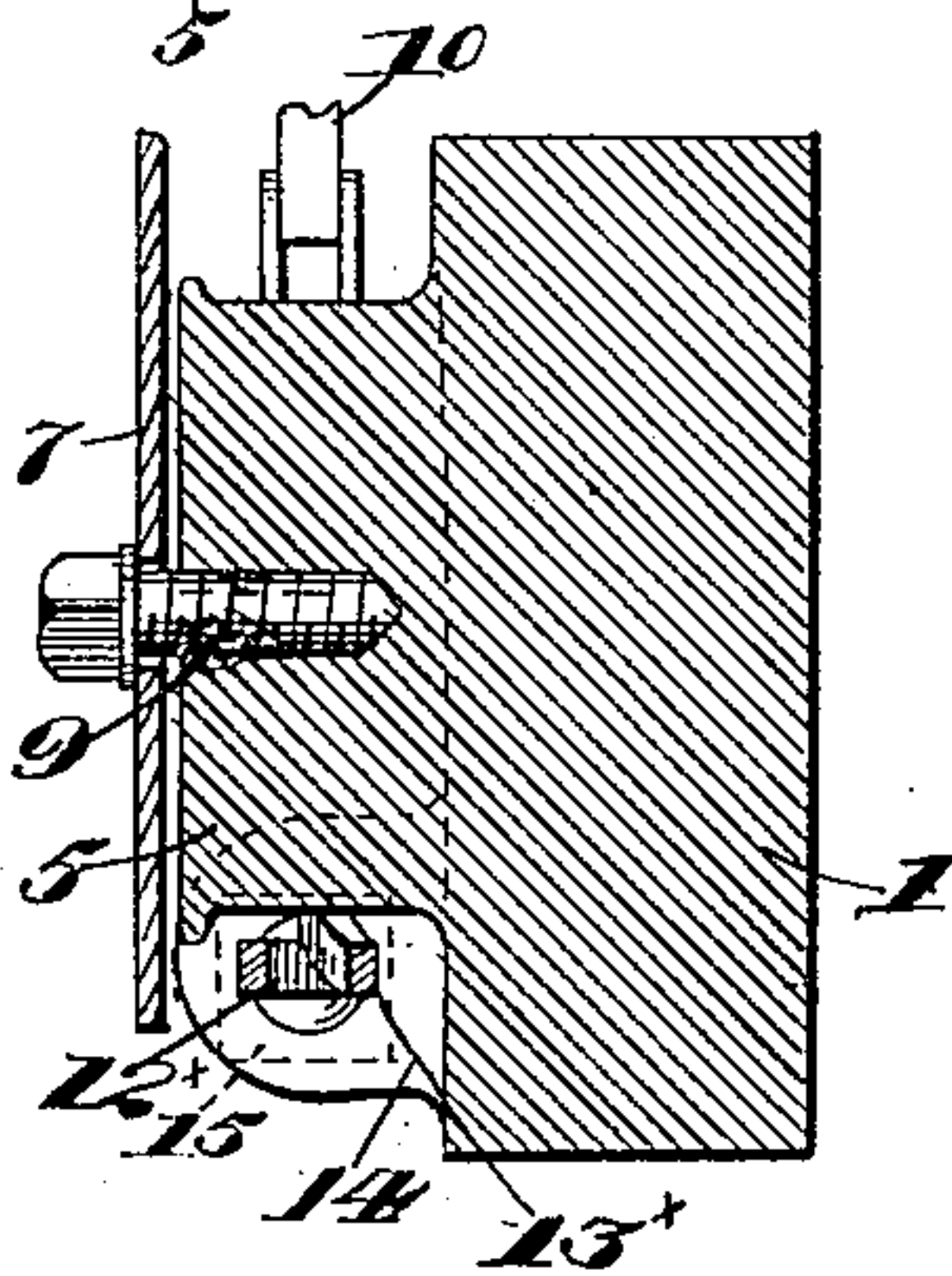
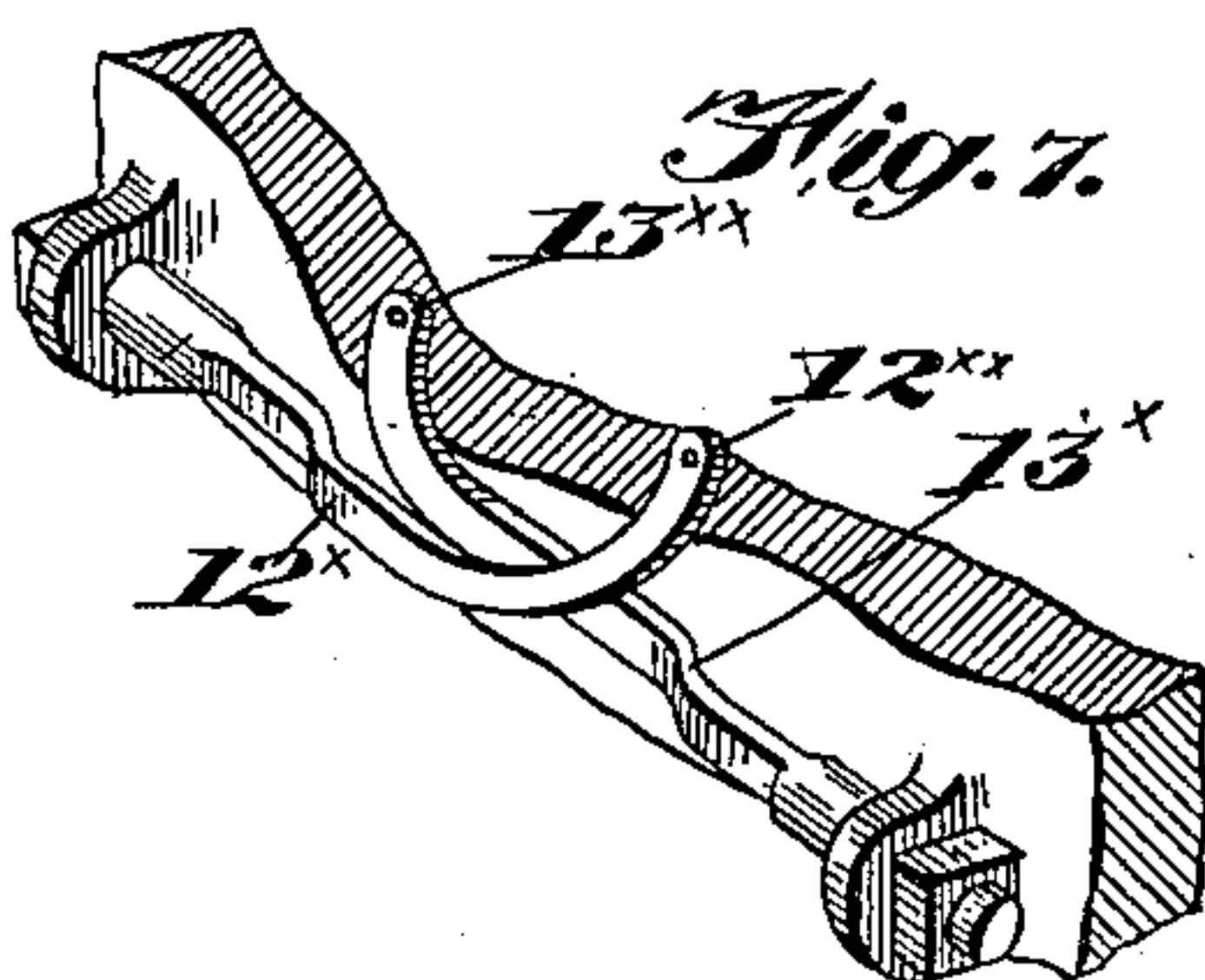


Fig. 5.



Witnesses:
J. B. Weir
O. M. Vermich



E. T. McKAIG, Inventor:
by *Curran & Hopewell*
Attys.

UNITED STATES PATENT OFFICE.

EDDY T. MCKAIG, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO
JAY K. SHEFFY, OF CHICAGO, ILLINOIS.

CAR-SEAT MOVEMENT.

SPECIFICATION forming part of Letters Patent No. 731,205, dated June 16, 1903.

Application filed June 18, 1902. Serial No. 112,131. (No model.)

To all whom it may concern:

Be it known that I, EDDY T. MCKAIG, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Car-Seat Movements, of which the following is a full, clear, and exact specification.

My invention relates to movements for pivotally supporting and adjusting the backs of seats, principally car-seats; and it has for its primary object to provide a simple, inexpensive, and efficient movement which will hold the back rigid when in place for use and will tip the back to the desired angle when the latter is thrown or shifted from side to side.

With these ends in view my invention consists in certain features of novelty in the construction, combination, and arrangement of parts by which the said objects and certain other objects hereinafter appearing are attained, all as fully described with reference to the accompanying drawings, and more particularly pointed out in the claims.

In the said drawings, Figure 1 is a side elevation of my improved seat movement, showing the same applied to one of the end frame members of a car-seat. Fig. 2 is an enlarged detail view of the lower end of the back-supporting member, showing the same in its vertical or intermediate position. Fig. 3 is a perspective view, on a smaller scale, of said back-supporting member in its shifted position at the limit of its throw. Fig. 4 is an enlarged sectional view taken on the line 4 4, Fig. 6. Fig. 5 is a vertical sectional view on the line 5 5, Fig. 4. Fig. 6 is a vertical sectional view on the line 6 6, Fig. 4. Fig. 7 is a detail perspective view of the adjusting-rods, on a smaller scale; and Fig. 8 is a sectional view on the line 8 8, Fig. 4.

1 represents one of the end members of the seat-frame of an ordinary car-seat, which may be of the usual or any suitable construction, and 2 is one of the back-supporting members, to which the back 3, as shown in dotted lines, may be secured in the usual or any suitable way.

On the side of the frame member 1, preferably the side next the cushion 4, is formed or secured a projection 5, which is preferably

circular or cylindrical, and on the lower end of the back-supporting member 2, preferably on the same side, is formed or secured a similar projection 6. The center of the projection 6 is connected by an arm 7 with the center of the projection 5, the upper end of arm 7 being pivoted to the projection 6 by a bolt or other suitable pivot 8, while the lower end is pivoted to projection 5 by a similar bolt or pivot 9, so that the back-supporting member 2 is capable of a bodily motion around the center 9 and also of a rotary motion on its independent axis or center 8 and is capable of being turned in either direction on the latter center regardless of the direction in which it may be moving on the center 9.

The projection 5 is connected with the projection 6 by a suitable flexible connection, which will serve to turn the back-supporting member 2 toward the left on its independent axis 8 while it is moving bodily toward the right around the center 9. This flexible connection preferably consists of a sprocket-chain 10, with at least one link of which engages a tooth or lug 11, formed on the projection 6, and thus causes the projection 6 to turn or move with the chain around the center 8. The lower ends of this chain pass partially around the projection 5 and are secured, respectively, to two adjusting-rods 12 13, which are arranged at an angle to the chain, and preferably horizontally with their inner ends crossed, as shown in Fig. 7. The outer ends of these rods 12 13 are screw-threaded and pass through stationary lugs 14, formed on or secured to the inner face of the frame member 1, and on the outer sides of these lugs the threaded ends are provided with adjusting-nuts 15, whereby the rods may be adjusted toward or from each other for taking up or allowing slack in chain 10. The main portions or threaded ends of the adjusting-rods 12 13 are arranged in axial alinement with each other; but their inner crossed ends are provided with offsets 12^x 13^x, and their extremities are curved upwardly in opposite directions, as shown at 12^{xx} 13^{xx}, respectively, and attached to the free ends of the chain 10. These curved ends of the adjusting-rods are also bent laterally, one over the other, as shown in Fig. 8, so that the end of one will

be in the same vertical plane with the threaded end of the other and the free ends of the chain will be in the same vertical plane and in a plane with the threaded ends of the adjusting-rods; so that while the inner ends of the rods curve upwardly partially around the under side of projection 5 and are crossed they nevertheless hold the ends of the chain in the same plane and in line with the main portions of the adjusting-rods, so as to be in the direct line of strain.

If desired, the edges of the arm 7 may be turned or flanged partially over the chain 10, excepting where it passes under the projection 5, as shown at 16, so as to serve as a guard. For the sake of convenience and economy the ends of the chain intermediate of the projections 5 6 may be constituted by long links or bars 10^x, inasmuch as these portions never lap around either of the projections.

On each side of the frame member 1 is formed or secured an angular rest 17, and on the lower end of the back-supporting member is formed a lug 18, complementary in shape to the rest 17 and adapted to engage therewith when the back is in position for use, the point of engagement between the rest and lug being below the center 8 and their engaging surfaces being formed on a very wide angle, as shown in Figs. 2 and 3, with the inner or contiguous ends of the two rests arranged horizontally, so that the outer end of the angle of the lug will engage the inner end of the angle of the rest when the back is in one position, and vice versa when in the other position, and when in either position the back would be at the proper angle of inclination for use.

With a movement thus constructed it will be seen that when the back-supporting member 2 is thrown bodily in one direction the flexible connection being securely held at its lower end will rotate the back on the pivot 8 in the opposite direction, and inasmuch as the projections 5 6 may be so relatively proportioned in diameter as to give the projection 6 any desired degree of rotation on the pivot 8 the back member 2 may be caused to stand at any desired angle of inclination when in position for use.

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

1. In a car-seat movement the combination with a frame member and a back-supporting member movable bodily and also on an independent axis with relation to said frame member, of projections on said members respectively, a flexible connection between said projections for converting said bodily movement of the back member into a pivotal movement on said independent axis, and means for pulling said connection endwise for taking up the slack therein, substantially as set forth.

2. In a car-seat movement the combination with a frame member and a back-supporting

member movable bodily and also on an independent axis with relation to said frame member, of projections on said members respectively, a flexible connection between said projections for converting said bodily movement of the back member into a pivotal movement on said independent axis, and an adjusting-screw secured to the end of said connection for taking up the slack therein, substantially as set forth.

3. In a car-seat movement the combination with a frame member and a back-supporting member movable bodily and also on an independent axis with relation to said frame member, of projections on said members respectively, a flexible connection between said projections for converting said bodily movement of the back member into a pivotal movement on said independent axis, and means for pulling both ends of said flexible connection lengthwise for taking up the slack therein, substantially as set forth.

4. In a car-seat movement the combination with a frame member and a back-supporting member movable bodily and also on an independent axis with relation to said frame member, of projections on said members respectively, a flexible connection between said projections for converting said bodily movement of the back member into a pivotal movement on said independent axis, and two adjusting-screws secured to the ends of said flexible connection respectively for taking up the slack therein, substantially as set forth.

5. In a car-seat movement the combination with a frame member and a back-supporting member movable bodily and also on an independent axis with relation to said frame member, of projections on said members respectively, a flexible connection between said projections for converting said bodily movement of the back member into a pivotal movement on said independent axis having its ends brought toward each other around one of said projections, and means for pulling the ends of said flexible connection lengthwise and toward each other for taking up the slack therein, substantially as set forth.

6. In a car-seat movement the combination with a frame member and a back-supporting member movable bodily and also on an independent axis with relation to said frame member, of projections on said members respectively, a flexible connection between said projections for converting said bodily movement of the back member into a pivotal movement on said independent axis, and crossed adjusting devices secured to the ends of said flexible connection respectively for taking up the slack therein, substantially as set forth.

7. In a car-seat movement the combination with a frame member and a back-supporting member movable bodily and also on an independent axis with relation to said frame member, of projections on said members respectively, a flexible connection between said projections for converting said bodily movement

of the back member into a pivotal movement on said independent axis, said connection being passed around one of said projections and having its free ends arranged in the same plane and means connected with said free ends for taking up the slack therein, substantially as set forth.

8. In a car-seat movement the combination with a frame member and a back-supporting member movable bodily and also on an independent axis with relation to said frame member, of projections on said members respectively, a flexible connection between said projections for converting said bodily movement of the back member into a pivotal movement on said independent axis, the ends of said connection being arranged in the same plane and crossed adjusting-rods having their outer ends arranged in line with each other and their inner ends deflected into line with and connected to the ends of said flexible connection respectively, substantially as set forth.

9. In a car-seat movement the combination with a frame member and a back-supporting member movable bodily and also on an independent axis with relation to said frame member, of projections on said members respec-

tively, a flexible connection between said projections for converting said bodily movement of the back member into a pivotal movement on said independent axis, and adjusting-rods extending in opposite directions and having their ends bent into line with and connected to the ends of said connection, substantially as set forth.

10. In a car-seat movement the combination with a frame member and a back-supporting member movable bodily and also on an independent axis with relation to said frame member, of projections on said members respectively, a flexible connection between said projections for converting said bodily movement of the back member into a pivotal movement on said independent axis, lugs on said frame member, threaded adjusting-rods passing through said lugs and having nuts on the outer ends thereof, the inner ends of said rods being crossed and secured respectively to the ends of said flexible connection, substantially as set forth.

EDDY T. MCKAIG.

Witnesses:

F. A. HOPKINS,
M. B. ALLSTADT.