F. H. HENRY.

CAR SEAT.

APPLICATION FILED JAN. 26, 1909.

997,814.

Patented July 11, 1911.

3 SHEETS—SHEET 1.

Fig. 1.

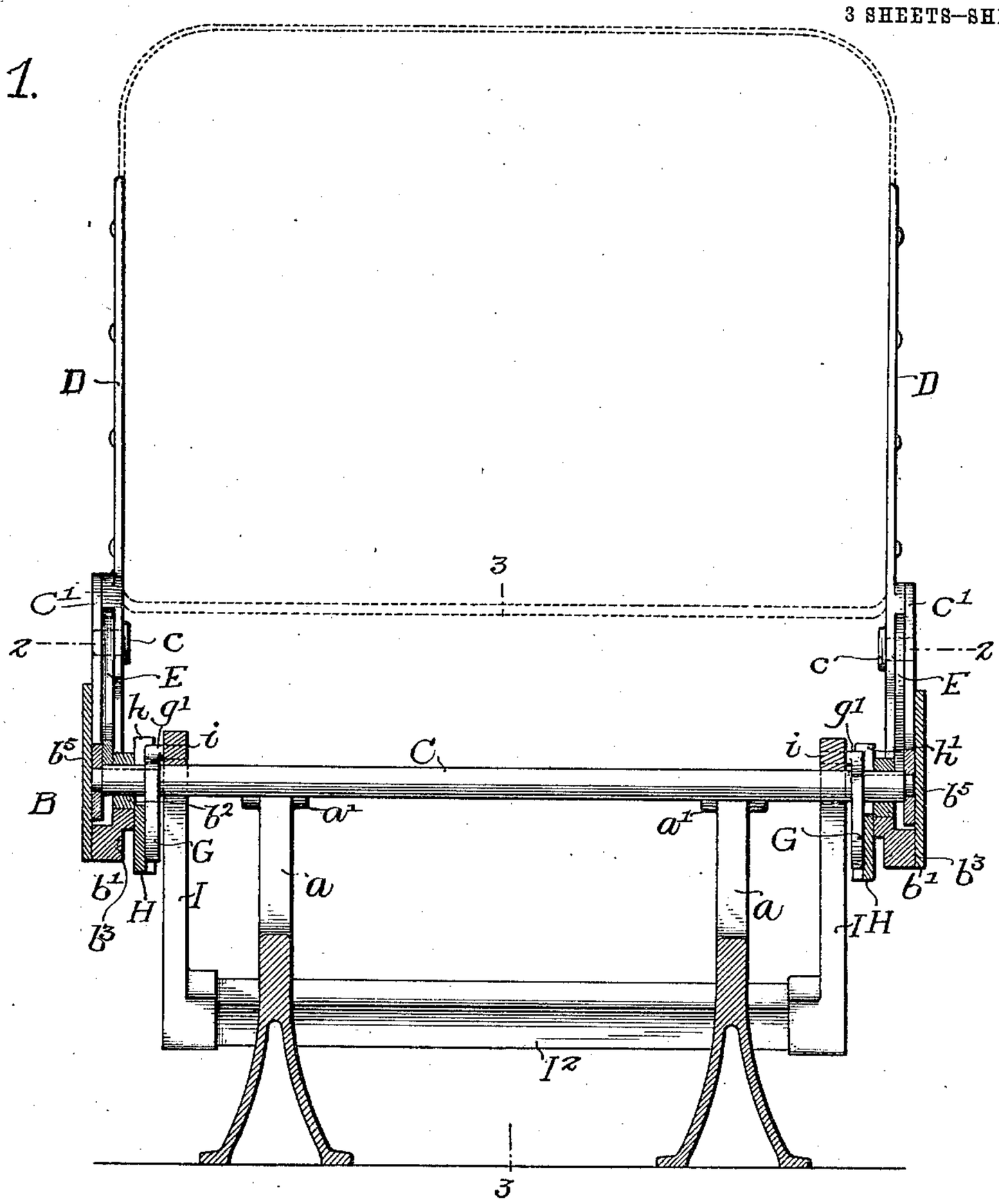
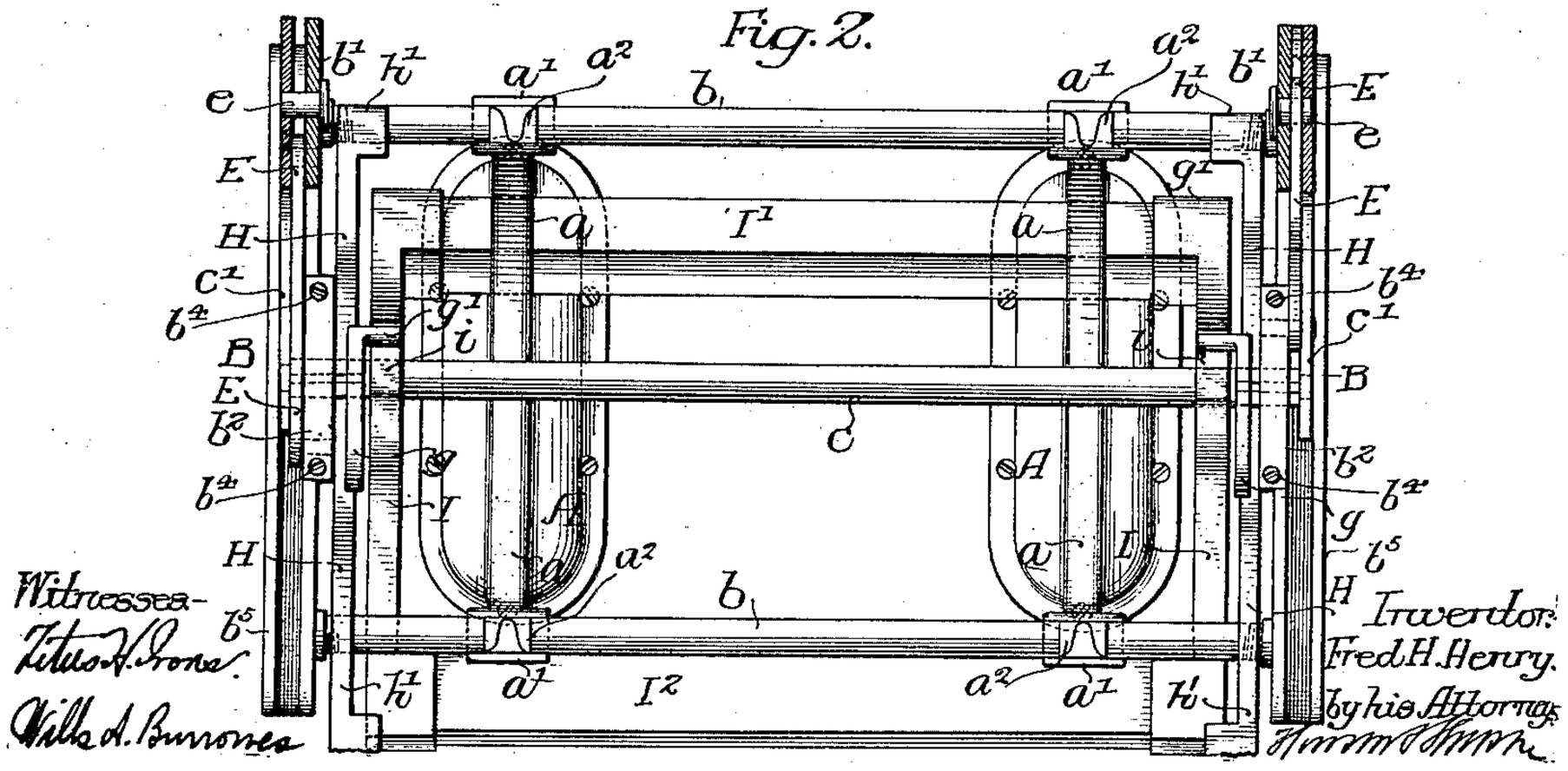


Fig. 2.



COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

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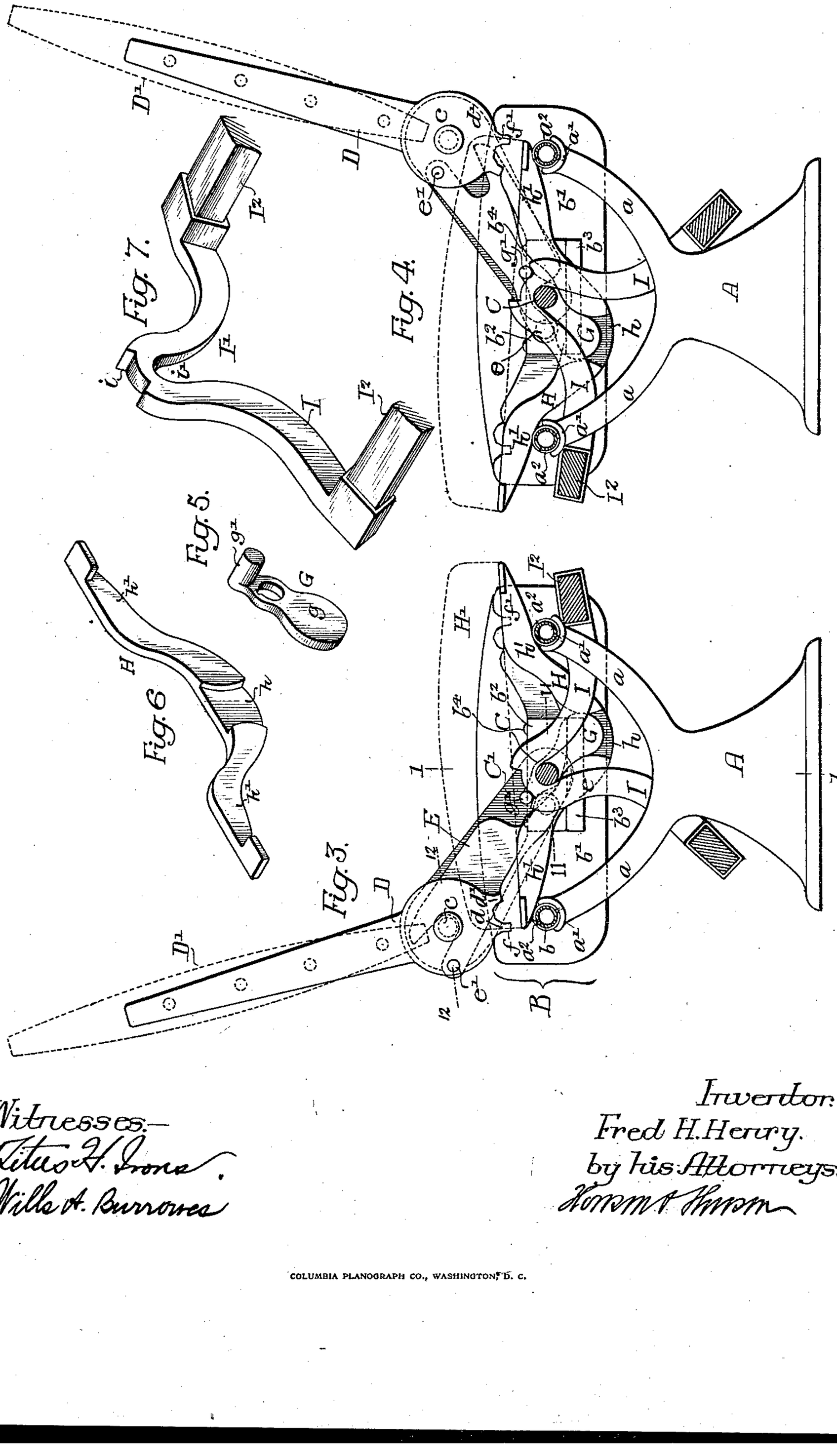
3 SHEETS—SHEET 2.



Witnesses:—
Titus H. Irons.
Wills A. Burrows

Inventor:—
Fred H. Henry.
by his Attorneys.—
Howson & Howson

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3 SHEETS—SHEET 3.

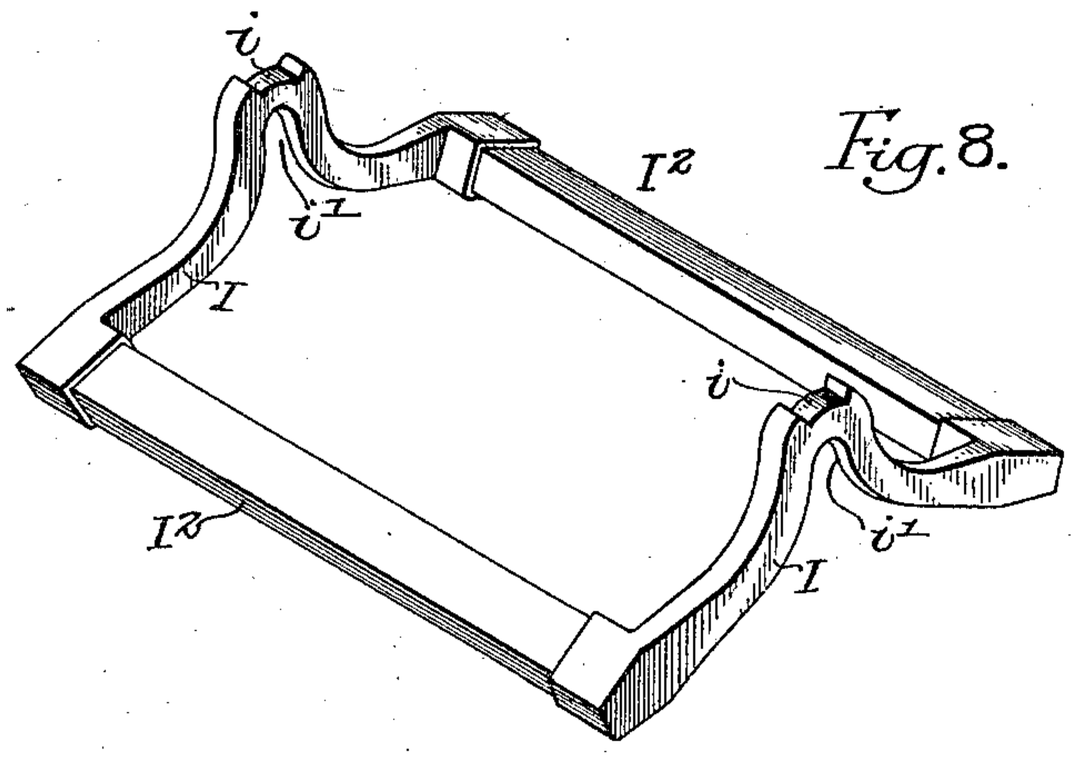

Fig. 8.

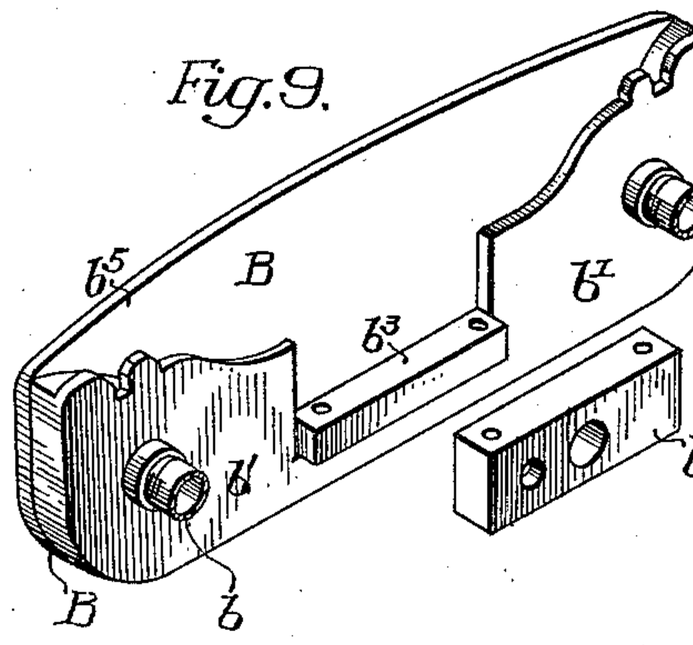

Fig. 9.

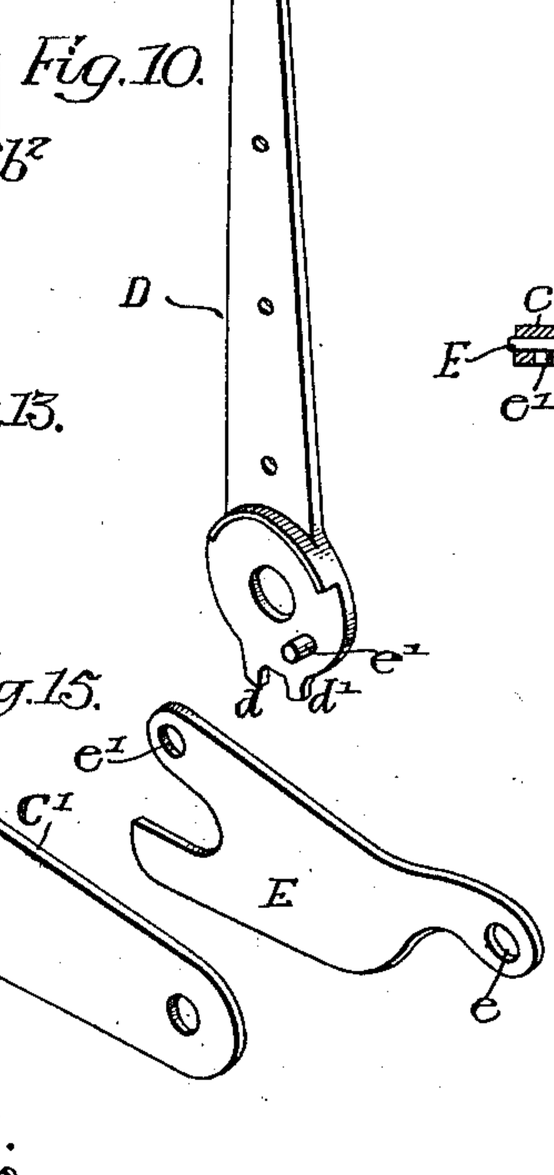

Fig. 10.

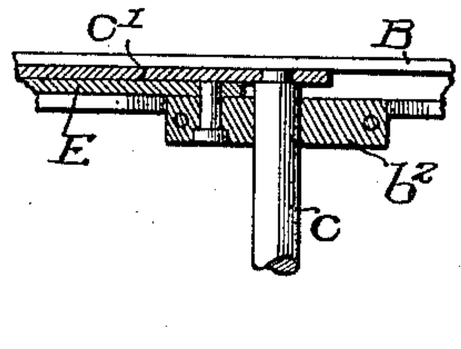

Fig. 11.

Fig. 12.

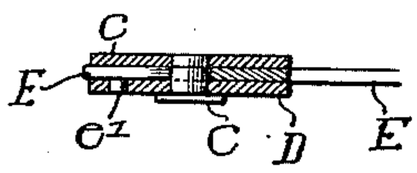

Fig. 13.

Fig. 14.

Fig. 15.

Fig. 16.

Witnesses:-

Titus H. Stone.

Willet A. Burrowes

Inventor:-

Fred H. Henry.

by his Attorneys-

Simon & Simon

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FRED H. HENRY, OF PHILADELPHIA, PENNSYLVANIA.

CAR-SEAT.

997,814. Specification of Letters Patent. **Patented July 11, 1911.**

Application filed January 26, 1909. Serial No. 474,202.

To all whom it may concern:

Be it known that I, FRED H. HENRY, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Car-Seats, of which the following is a specification.

My invention relates to certain improvements in seats of the type in which, when the back is shifted from one side of the seat to the other, the seat proper is also shifted, as well as the foot rest.

One object of my invention is to provide an easily operated and simply constructed seat of this type which, when in one position or the other, will be perfectly rigid.

A further object of the invention is to make the parts at each end of the seat identical and to so arrange the parts that the pressure against the back will be resisted at one end by a member under tension and at the other end by a member under compression.

In the accompanying drawings:—Figure 1, is a longitudinal sectional view on the line 1—1, Fig. 3, showing the seat proper and back in dotted outline; Fig. 2, is a sectional plan view on the line 2—2, Fig. 1; Fig. 3, is a transverse sectional view on the line 3—3, Fig. 1, showing the back at one side of the seat and the other parts shifted accordingly; Fig. 4, is a view similar to Fig. 3, with the back at the opposite side of the seat; Fig. 5, is a perspective view of the lever for shifting the seat proper and the foot rest; Fig. 6, is a detached perspective view of one of the supports for the seat proper; Fig. 7, is a detached perspective view of one end of the foot rest; Fig. 8, is a perspective view of the entire foot rest; Fig. 9, is a perspective view of one of the ends of the frame; Fig. 10, is a detached view of one of the bearings; Fig. 11, is a sectional view on the line 11—11, Fig. 3; Fig. 12, is a section on the line 12—12, Fig. 3; Fig. 13, is a perspective view of one of the plates of the seat back; Fig. 14, is a perspective view of one of the levers; Fig. 15, is a perspective view of one of the links; and Fig. 16, is a detached perspective view of a socket clamp plate.

In the drawings I have shown the seat with two pedestal or base members and arranged independently of the side of the car, but the seat may be made with a single pedestal and secured to the side of the car if desired.

A, A are the base members of the seat, each having arms a, a provided with sockets a' adapted to receive the cross bars b of the frame B. Secured to the sockets are clamp plates a^2, as illustrated in Fig. 16. These clamp plates may be secured to the sockets by rivets or screws and the arms of these clamp plates are bent around the bars b so as to dispense with any bolts or other fastenings. The clamp plates a^2 in the present instance are made of flat plates having two fingers at one end and a single finger at the opposite end. The single finger alines with the space between the two fingers at the opposite end, so that when the fingers are bent over the bar, as illustrated in Figs. 2 and 3, the single finger extends into the space between the other two fingers. While this is the preferred means for fastening the frame B to the base members A, other means of fastening may be resorted to without departing from the main features of my invention.

The frame B is composed of the end members b' and connecting bars b, making a practically rigid quadrangular frame. The bars b are preferably in the form of tubes threaded at each end and screwed into threaded openings in the end members b'. In the end members b' are recesses b^3 for the bearing b^2. This bearing b^2 is secured to the frame by bolts or other fastenings and mounted in the bearings is the shaft C, which is the operating shaft of the seat. By simply unscrewing the bolts the two bearings at each end of the seat may be removed with the shaft and the other mechanism, leaving the frame intact.

Secured to each end of the shaft is an arm C′ to which the back plates D are pivoted at c, and located alongside the arm C′ is a link E pivoted to the bearing b^2 at e and to the back plates at e', so that when the back D′ to which the back plates are secured is shifted from one position to the other, it will rotate the shaft C and the angle of the back will be changed as the pivot of the link E is eccentric to the bearing b^3 and the back plate D, as clearly indicated in Figs. 3 and 4. On the back plate are two

projections d, d', which enter sockets f, f' respectively in the side plates b', so as to lock the back and relieve the arms and links from a certain amount of strain, at the same time holding the back perfectly rigid. When the back is in the position shown in Fig. 3, the projections d are in the sockets f, and when the back is turned to the position shown in Fig. 4, the projections d' are in the sockets f'.

Secured to the shaft C near each end is a lever G, illustrated in Fig. 5, having two arms. One arm g enters a recess h in a rocker H carrying the seat proper H' while the other arm of the lever has a lateral projection g' which enters a notch i in the side frame I' of the foot rest I. The two side frames I' are made as shown in Figs. 7 and 8, and are connected together by the bars I^2 which are adapted to sockets in said side frames. Each side frame is recessed at i' to rest upon the shaft C; the shaft being the fulcrum upon which it swings.

The rocker H has two arms h' which rest upon the cross bars b of the frame B and the under surface of each arm is beveled so that when the rockers are shifted the arms act as wedges to raise one side of the seat and lower the other, according to which position the back is shifted, and as the levers G are secured to the shaft C they must turn with it, so that when the back D' is shifted from one position to the other the lever is changed from the position shown in Fig. 3 to that shown in Fig. 4, shifting the seat proper H' from the position shown in dotted lines in Fig. 3 to that illustrated in dotted lines in Fig. 4, and also shifting the foot rest from the position illustrated in Fig. 3 to that illustrated in Fig. 4.

All the parts at one end of the seat are duplicates of the parts at the opposite end, so that only one set of castings or dies is necessary, and the parts are readily interchangeable and when the link E at one end is under tension the link at the opposite end is under compression due to the location of the pivots, as clearly shown in Figs. 3 and 4, thus making a very stiff construction. The levers and the links being flat and wide take up very little room and yet are strong and will resist any pressure caused by the straining of the back. The frame is preferably provided with side panels b^5, which can be ornamented or left plain, as desired.

It will be seen by the above construction that I provide a very simple and effective car seat, in which the seat proper and the foot rest will be shifted with the back and locked in the position to which they are shifted. The parts are readily interchangeable; the parts at one end of the car seats being duplicates of those at the opposite end. The entire mechanism with the back can be readily removed from the frame B by simply detaching the bolts b^4 and lifting the bearings b^2 out of their sockets.

I claim:—

1. The combination in a car seat, of a frame, a shaft mounted in the frame, a back arranged to swing from one side of the seat to the other, an arm on each end of the seat secured to the shaft and pivoted to the back, and a single link at each end of the seat pivoted to the frame at one side of the bearing for the shaft and pivoted to the back at one side of the pivot of the arm, so that the link on one end of the seat is under tension and the link at the opposite end of the seat is under compression.

2. The combination in a car seat, of a frame, a back adapted to be shifted from one side of the frame to the other, a shaft extending from one end of the frame to the other, bearings for the said shaft, arms secured to the shaft and pivoted to the back, links pivoted to the bearing and connected to the back at one side of the pivot of the arm, a rocker at each end of the frame supporting the seat section proper, a foot rest pivotally mounted on the shaft, a lever secured to each end of the shaft, one arm of each lever engaging the rocker and the other arm engaging the foot rest, so that as the back is shifted the foot rest and the seat proper will also be shifted.

3. The combination in a car seat, of a frame, a shaft extending from one end of the frame to the other, bearings for said shaft, a back adapted to be shifted from one side of the frame to the other, arms on the shaft pivoted to the back, and links secured to a fixed point on the frame and pivoted to the back some distance from the pivot of the arms, two rockers beveled on their undersides and mounted on the frame, a seat proper carried by the rockers, said rockers being recessed, a foot rest, said foot rest having end members and connecting bars, each end member being hung on the shaft and notched, with levers on each end of the shaft, one arm of each lever entering the recess in a rocker, the other arm having a projection entering the notch in the arm of the foot rest.

4. The combination in a car seat, of a frame having end sections and connecting bars at each side, with a base member having sockets adapted to receive the connecting bars of the frame, and clamp plates secured to the sockets and having arms extending over the bars of the frame.

5. The combination of a base member having two sockets, a flexible metallic clamp plate secured to each socket, each clamp plate having two arms on one side, and a single arm on the opposite side adapted to enter the space between the two arms on the other side, and a side frame having side members and connecting bars, said bars be-

ing adapted to rest in the sockets and to be secured therein by bending the arms of the clamp plates.

6. The combination in a car seat, of a frame, a movable back, an arm at each end of the seat pivoted to the frame and to the lower end of the back, a flat link at each end pivoted to the frame and back at one side of the pivots of the arm, said link being notched to span the back pivot of the arm.

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

FRED H. HENRY.

Witnesses:
WM. A. BARR,
JOS. H. KLEIN.