

No. 778,219.

PATENTED DEC. 27, 1904.

E. G. BUDD.
CAR SEAT.

APPLICATION FILED APR. 22, 1904.

4 SHEETS—SHEET 1.

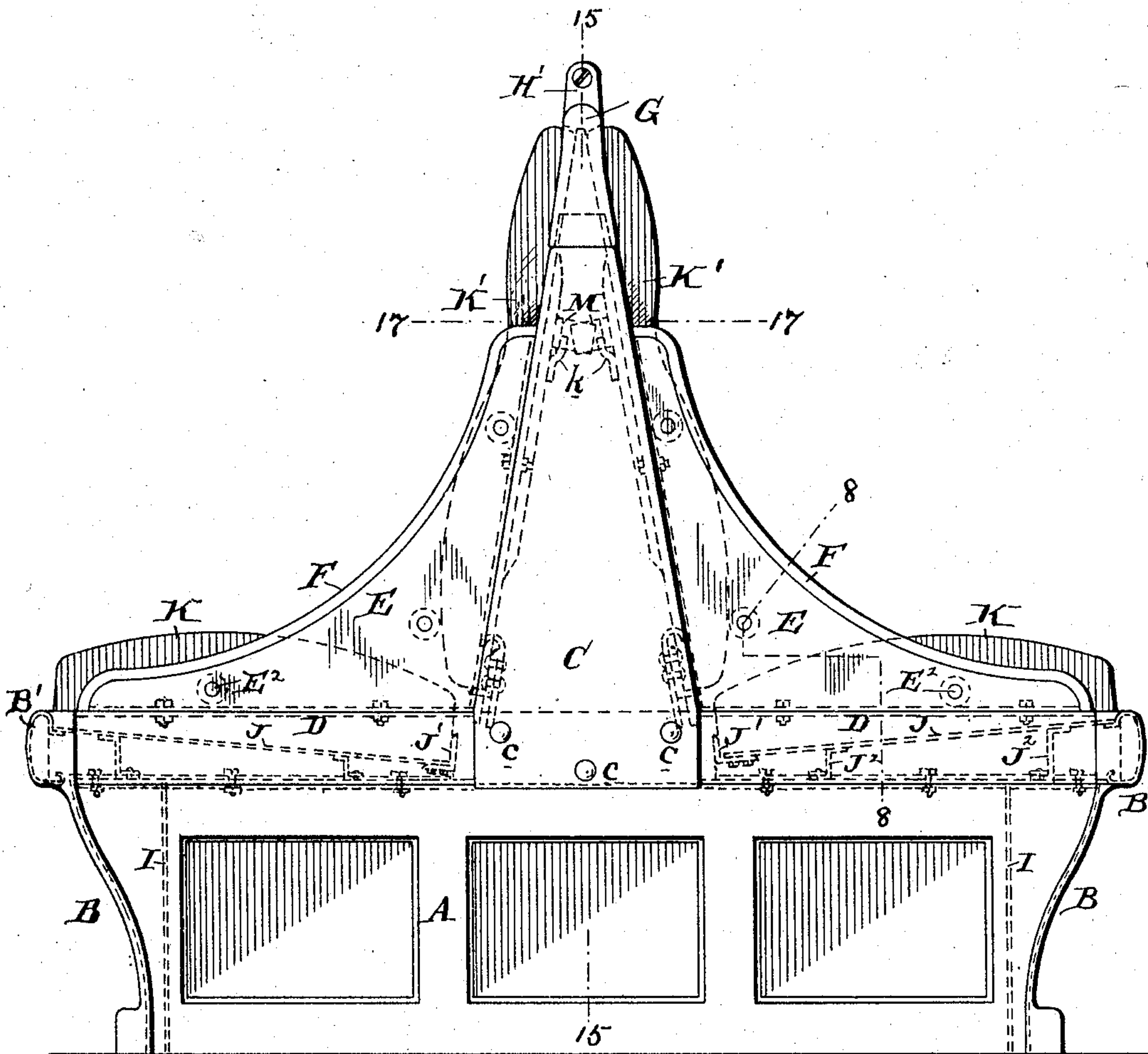


FIG. 1

FIG. 10

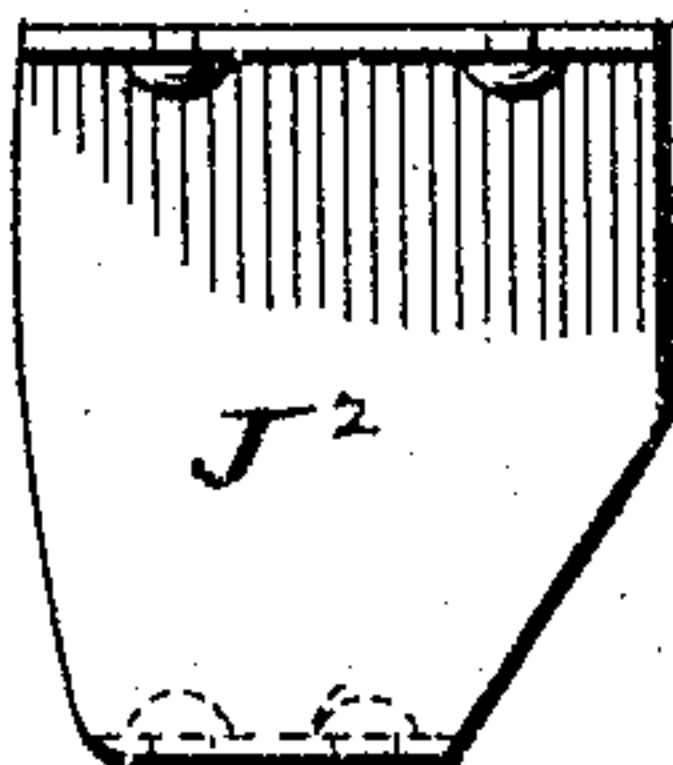


FIG. 11

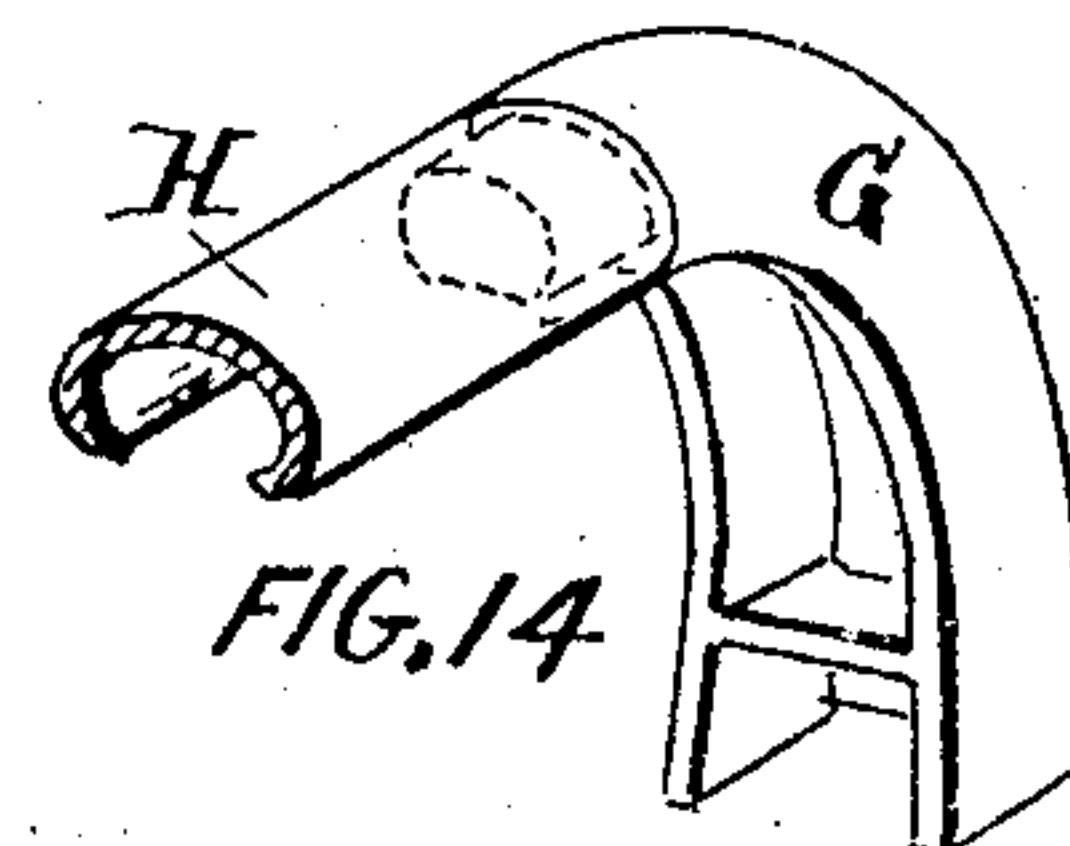
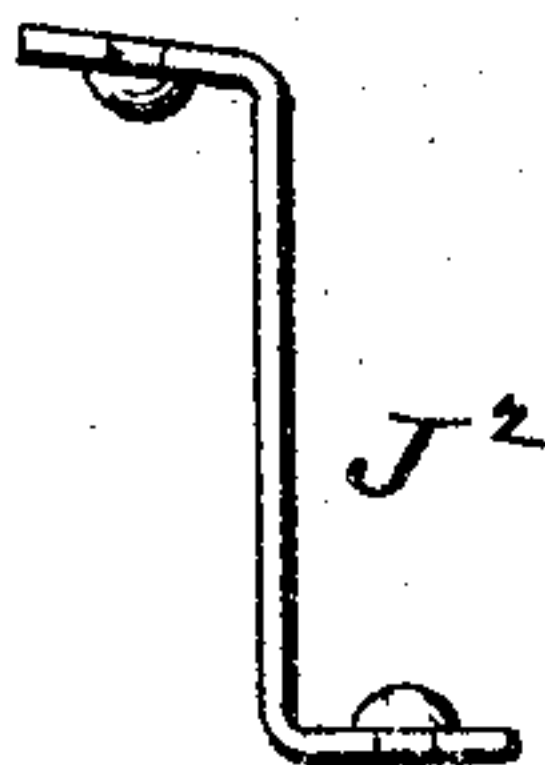
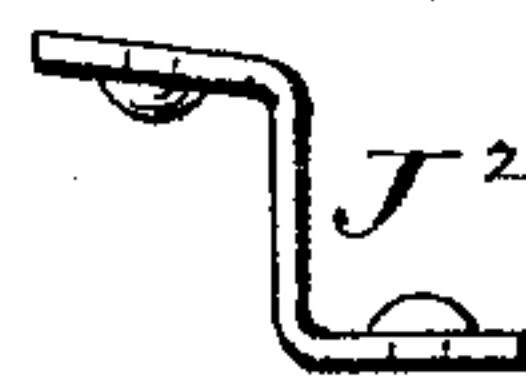


FIG. 14

FIG. 12



FIG. 13



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4 SHEETS—SHEET 2.

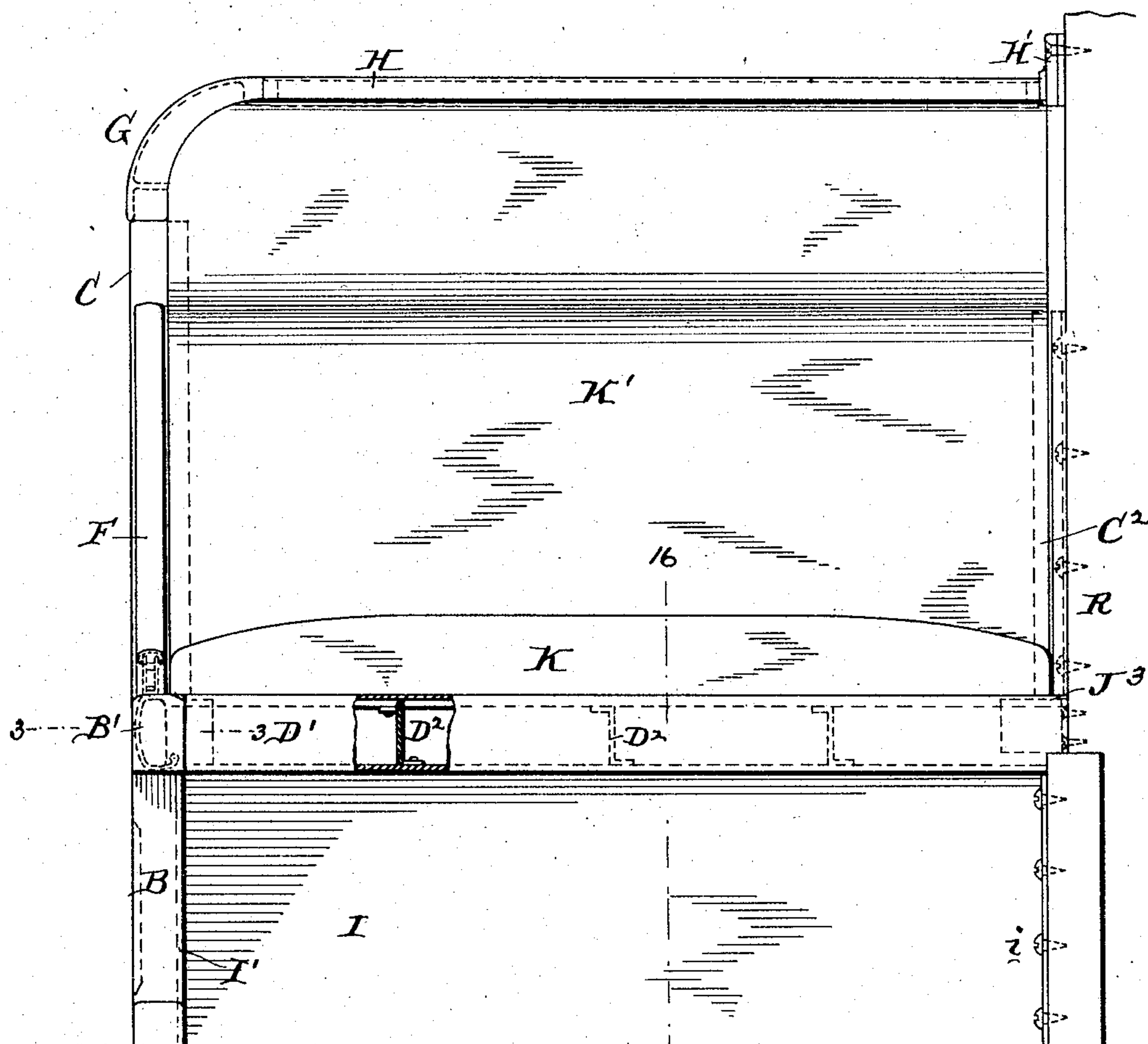


FIG. 2

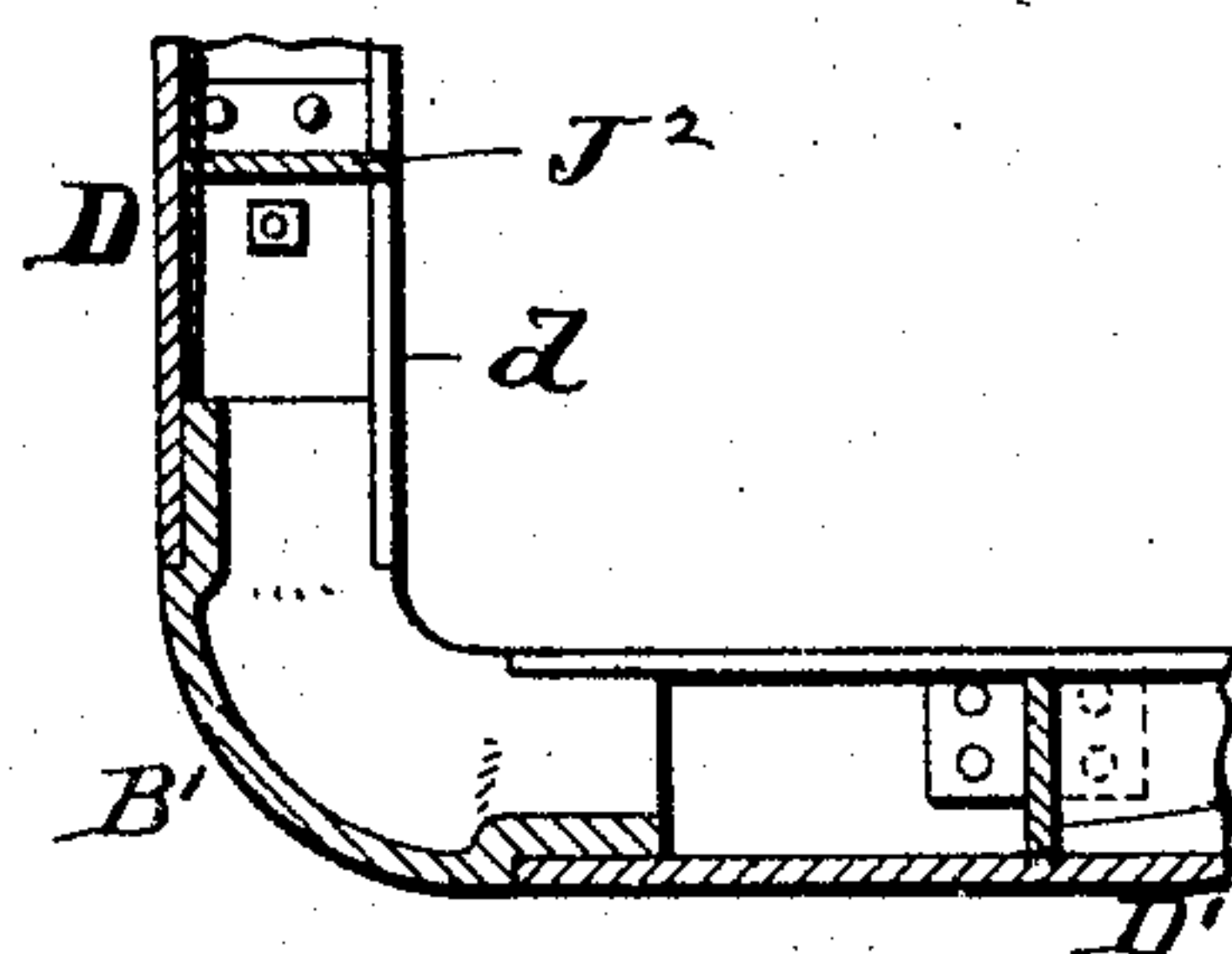


FIG. 3

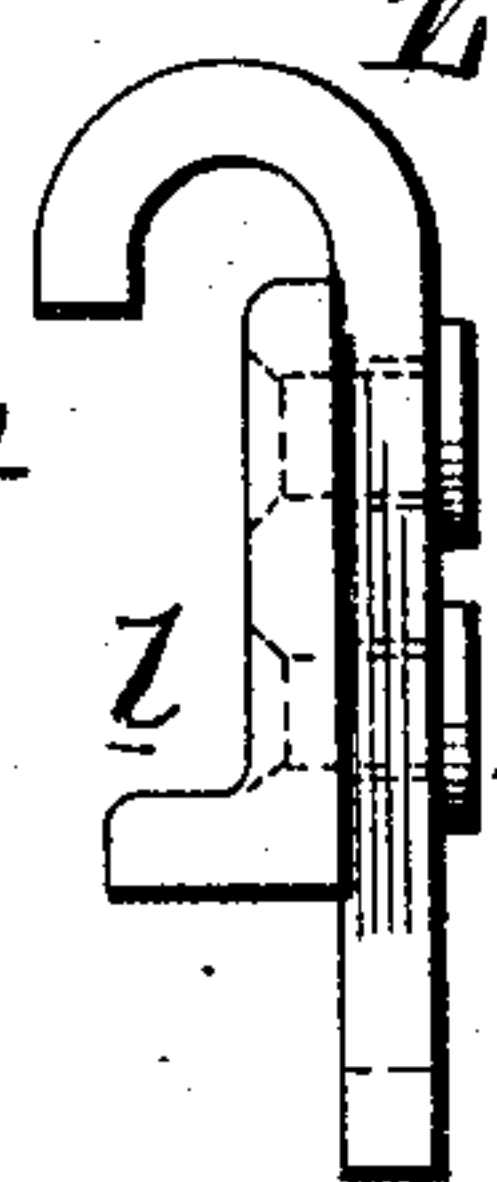


FIG. 4

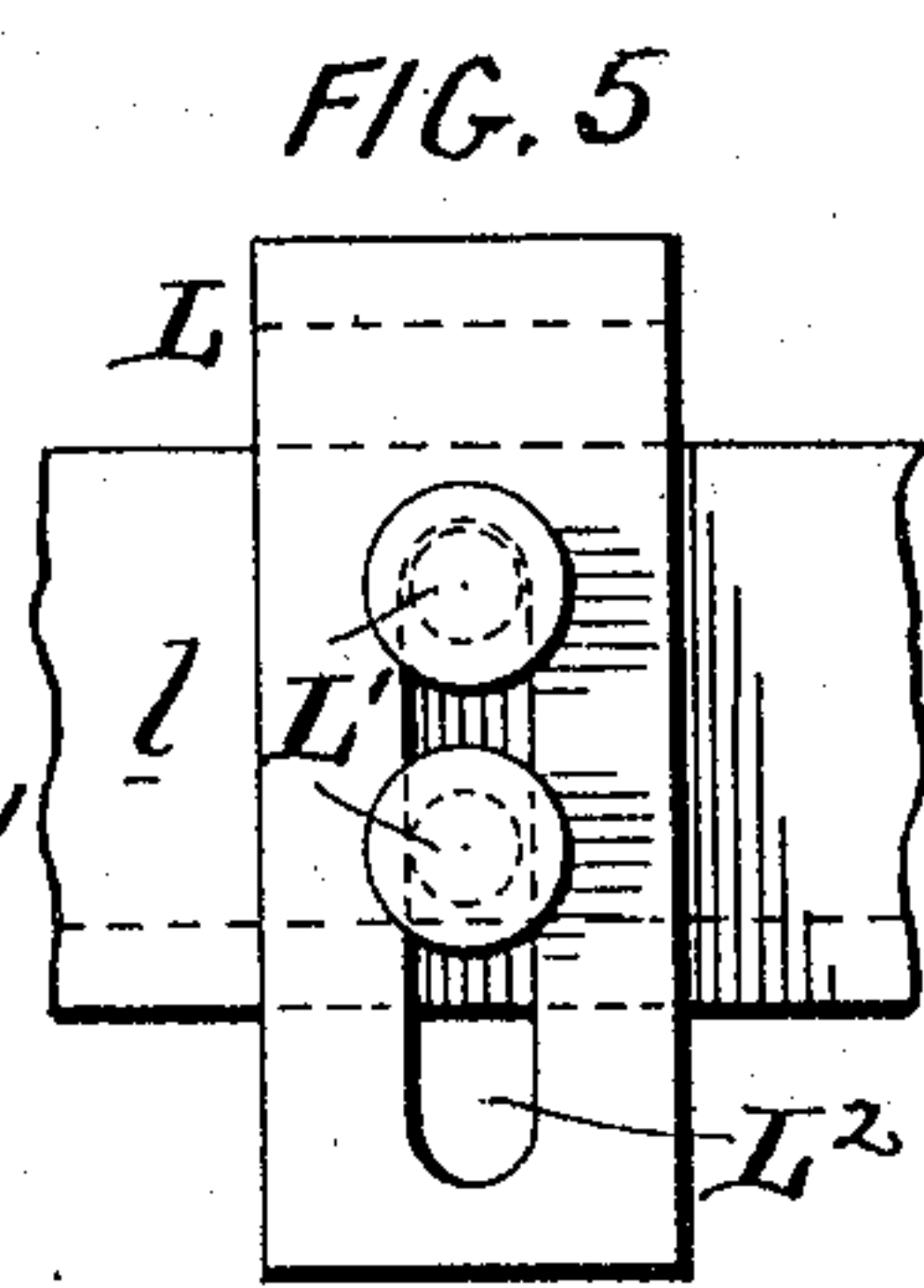


FIG. 5

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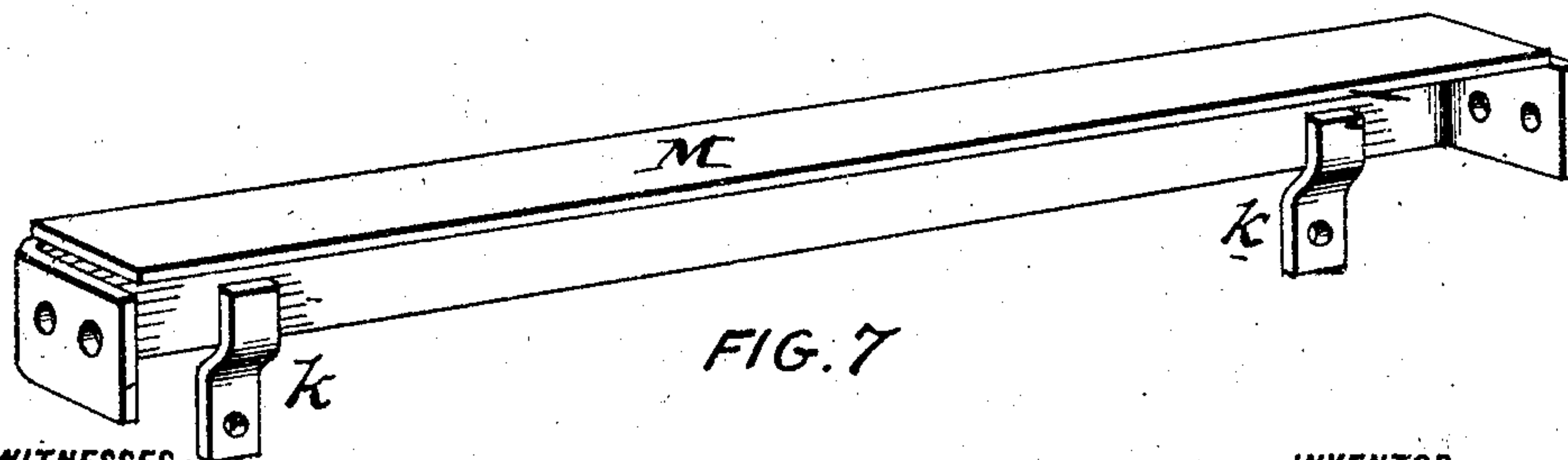
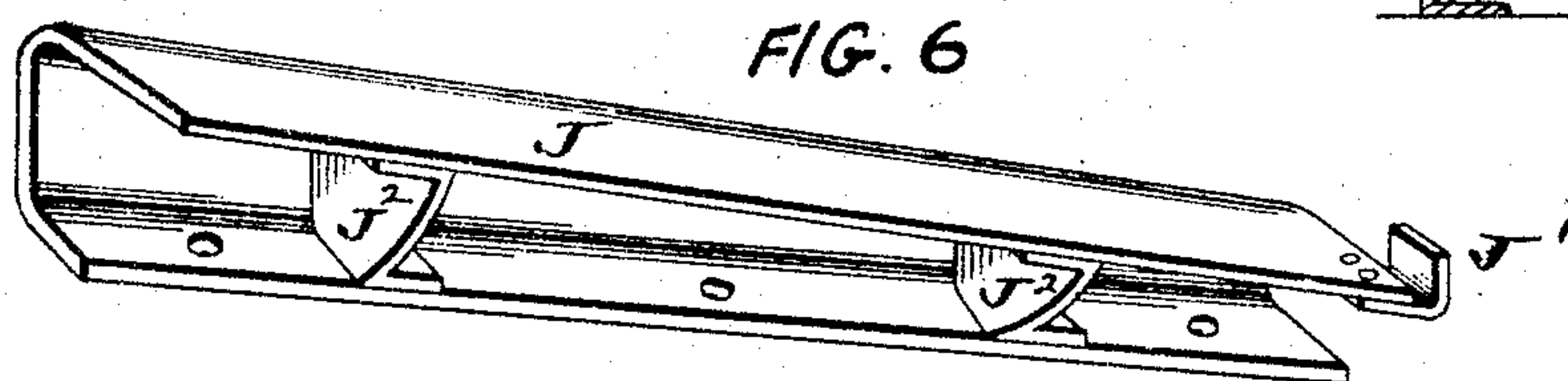
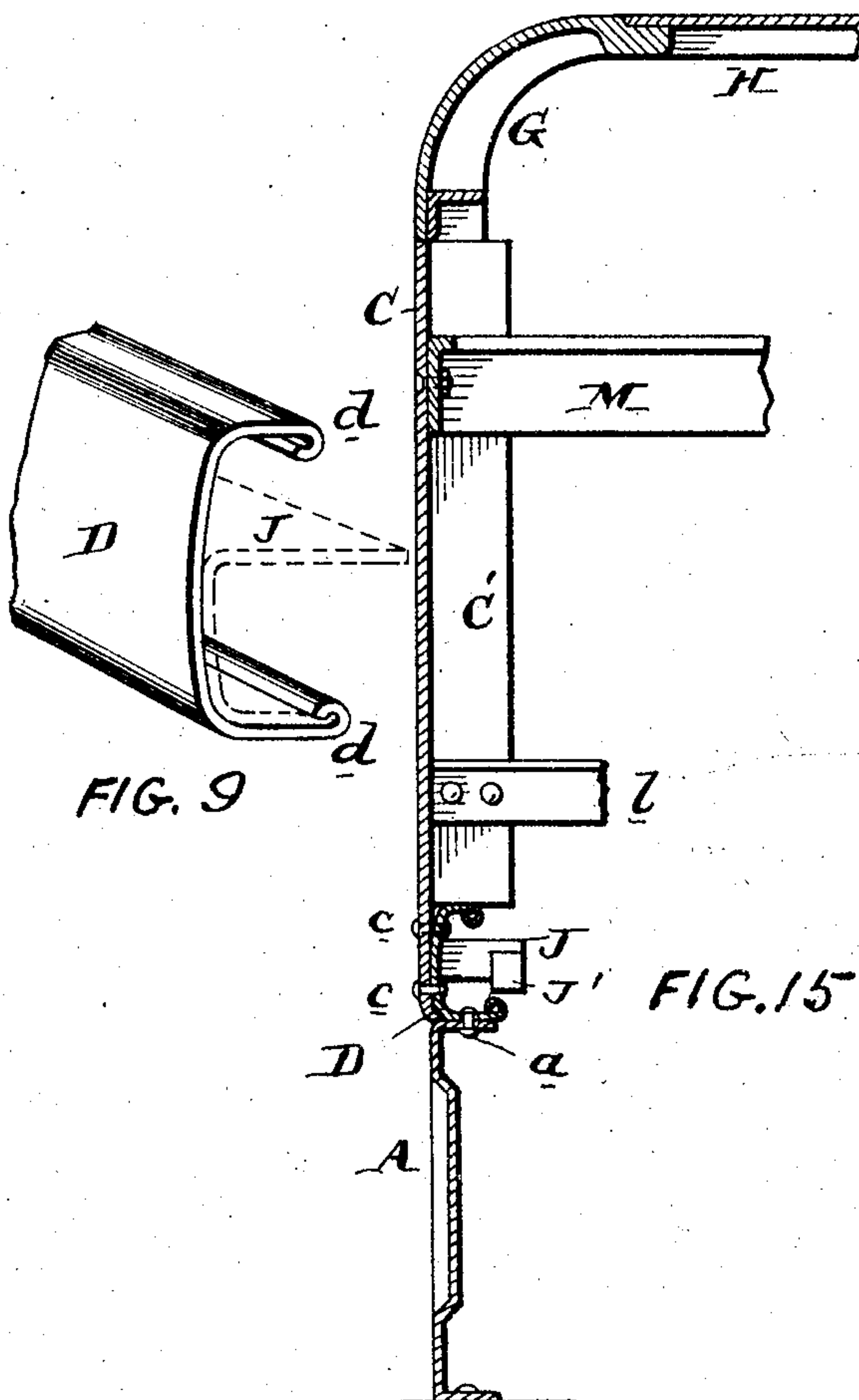
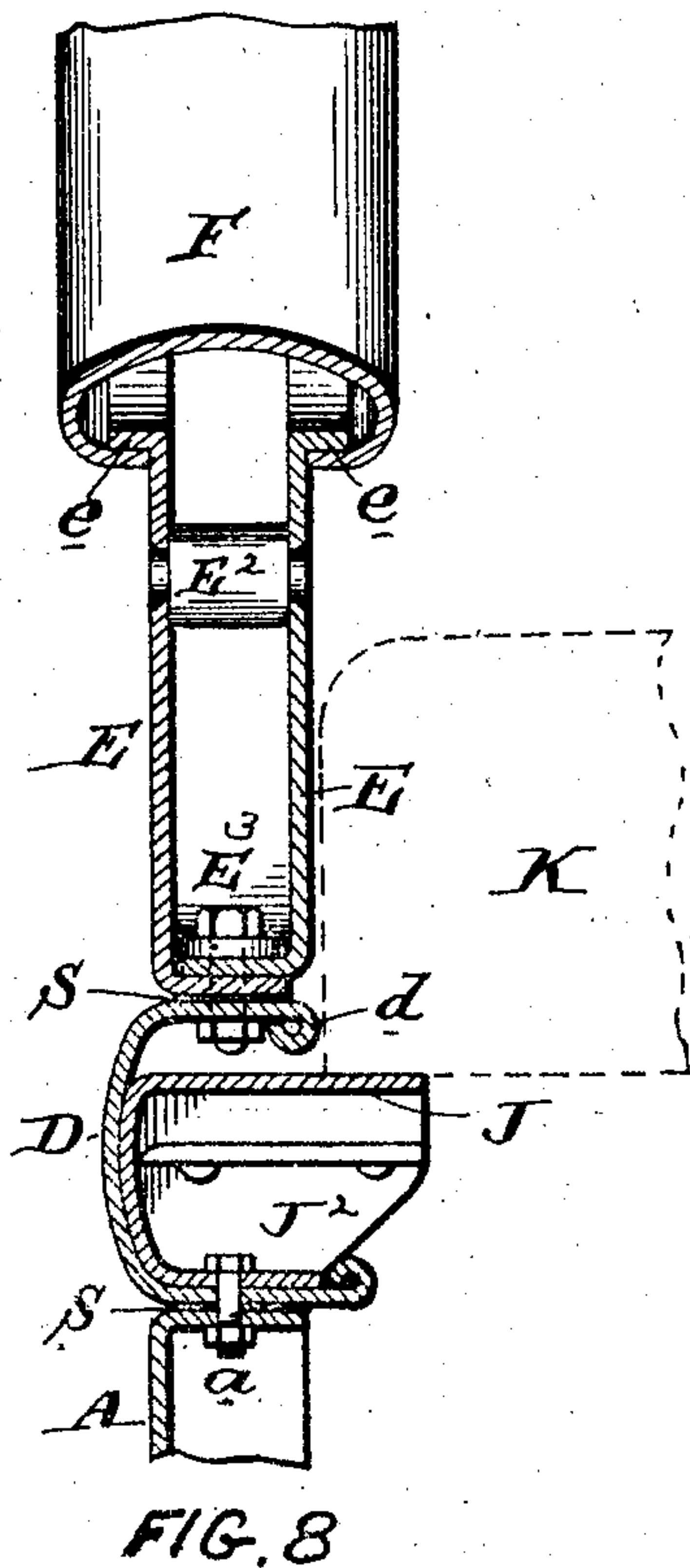
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4 SHEETS—SHEET 3.



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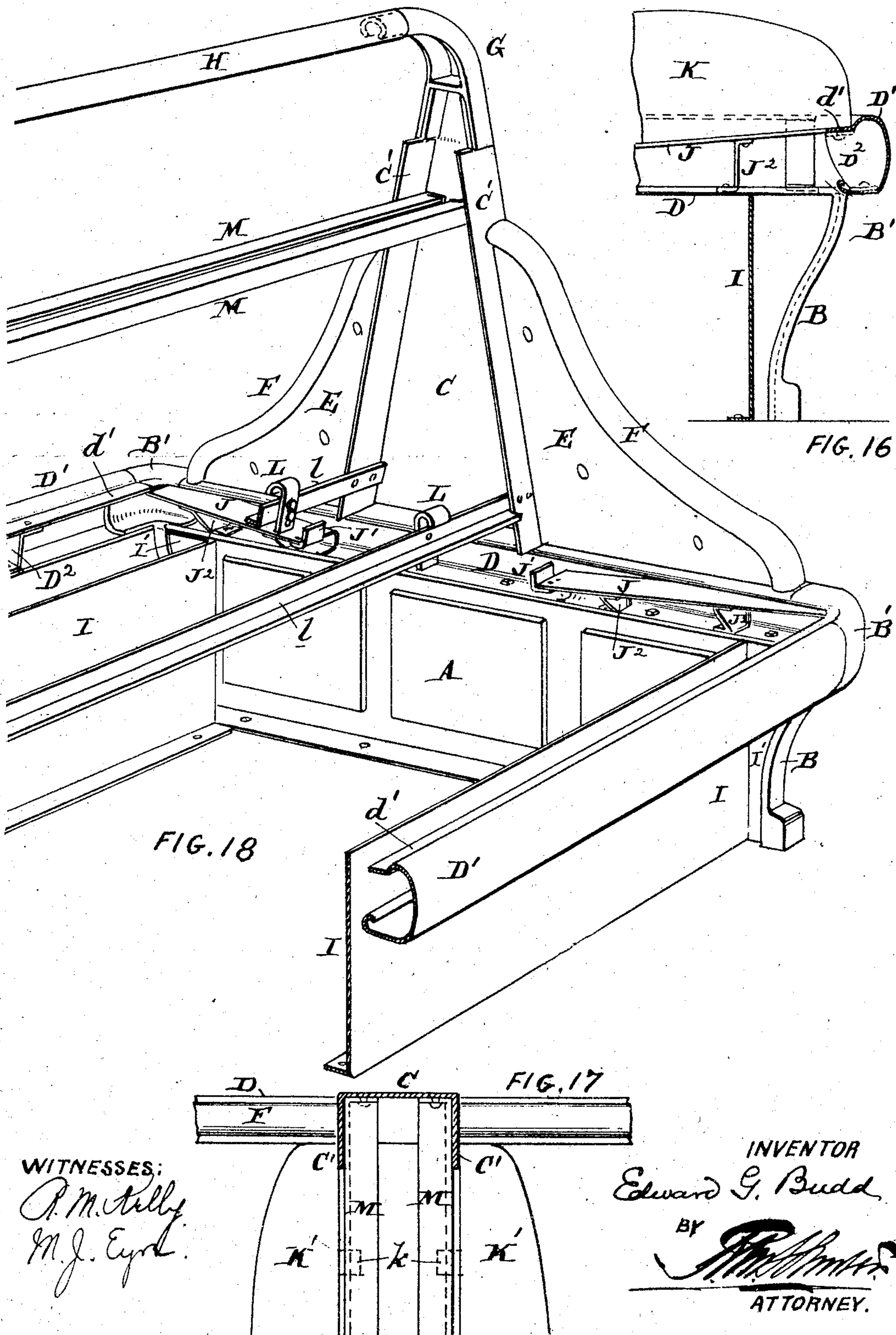
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4 SHEETS—SHEET 4.



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CAR-SEAT.

SPECIFICATION forming part of Letters Patent No. 778,219, dated December 27, 1904.

Application filed April 22, 1904. Serial No. 204,324.

To all whom it may concern:

Be it known that I, EDWARD G. BUDD, of the city and county of Philadelphia, State of Pennsylvania, have invented an Improvement in
5 Car-Seats, of which the following is a specification.

My invention has reference to car-seats; and it consists of certain improvements which are fully set forth in the following specification
10 and shown in the accompanying drawings, which form a part thereof.

The object of my invention is to construct a railway car-seat framework entirely of metal, whereby it is strong, light in weight,
15 and fireproof.

In carrying out my invention I form the framework of sheet metal in sections and secure them by bolts or rivets and so shape the several parts that great strength coupled with
20 lightness are secured; and my invention consists of various features of construction, which will be better understood by reference to the accompanying drawings, in which—

Figure 1 is an end elevation of a car-seat
25 embodying my invention. Fig. 2 is a front elevation of same. Fig. 3 is a cross-section at the corner on line 3 3 of Fig. 2. Figs. 4 and 5 are elevations of one of the locks for holding the back-cushions in place. Fig. 6 is
30 a perspective view of one of the oblique supporting-rails for the seat-cushions. Fig. 7 is a perspective view of one of the brace and lock bars. Fig. 8 is a sectional elevation on line 8 8 of Fig. 1. Fig. 9 is a perspective view of the band-rail. Figs. 10 to 13 are ele-
35 vations of stirrups for the supporting-rails of Fig. 6. Fig. 14 is a perspective view of the top rail and supporting-casting. Fig. 15 is a vertical section on line 15 15 of Fig. 1. Fig.
40 16 is a cross-section on line 16 16 of Fig. 2. Fig. 17 is a cross-section on line 17 17 of Fig. 1, and Fig. 18 is a perspective view of the sheet-metal structure from the inside with a portion broken away.

45 A is the base-plate of the end frame, and I I are the front plates extending from the wall to the aisle end of the seat. One end of these

plates I is secured to the wall of the car by screws *i*, and the other end is bent outward and, with the base-plate A, fitted to a cast-
50 metal corner-leg B.

D and D' are the seat-supporting sheet-metal frames, the frame D being secured above the base-plate A and the frames D' D' extending from the wall to the aisle. These
55 frames D and D' are connected at the corners by the cast heads B' of the corner-legs B, as shown in Figs. 1, 2, and 3. These frames are of special form to give strength and good appearance.
60

Frame D is shaped as shown in Figs. 9 and 15, having the channel form with the upper and lower beaded flanges *d*, the lower one being of greater width than the upper one. This frame D is of the full length of the base-
65 plate A and rests upon its upper flange and to which it is bolted at *a*. Secured to the middle of the frame D at *c* is the top plate C, which is slightly triangular in appearance and has the side flanges C'. The upper end
70 of this top plate C is connected with a top rail H, of sheet metal, by a corner-casting G. The ends of this casting are so formed that the lower end receives and shields the top of the plate C, and the upper lateral end is pro-
75 vided with an extension which is received in the top rail, as shown in Figs. 2 and 15. The other end of the top rail H is secured to a bracket H', which is screwed to the wall of the car. The frame D upon each side of the
80 top plate C is provided with an inclined seat-rail J, which is secured in position by brackets J², riveted to the rail J at their tops and to the lower flange *d* of the frame D at their bottoms, as shown in Figs. 1 and 15. These
85 rails J are wider than the upper flange *d* of the frame D, so as to project laterally and act as a support for the seat-cushion K, Fig. 8. The inner ends of these rails are provided with angle-irons J', which act as stops to
90 limit the backward movement of the seat-cushions. The front frames D' are also channel-shaped, as shown in Fig. 16; but the top flange is stepped, as at *d'*, to form a support

for the front edges of the seat-cushions K. These front frames D' are further reinforced by bracing-irons D², which are riveted between the top and bottom flanges, as shown in Fig. 2. It will thus be seen that the front of the cushions K rests upon the flange d' of the front frame D'. The aisle end of the cushions rests upon the oblique rail J, and the wall end rests upon an angle-rail J³, screwed to the wall, as indicated in dotted lines in Fig. 2.

F represents the arm-rests and are curved, as indicated in Fig. 1. They consist of slotted tubular metal, preferably of brass, the slot coming upon the under side and receiving the two triangular plates E E, which are outwardly flanged at the top at e to correspond to the curvature of the arm-rests and adapted to fit inside of the lower free edges thereof. These plates E E are kept at proper distances apart by spacing-studs E², which have small ends fitting through apertures in said plates, which may simply rest in said apertures or be riveted therein, as desired. The lower edges of these plates E E are flanged toward each other, as at E', and bolts E³ extend through said flanges and the upper flange d of the frame D, as clearly shown in Fig. 8. These plates E E are also bolted to the flanges C' of the top plate C. The top plate is braced to the wall of the car by angle-bars M, riveted at one end to the top plate and screwed to the wall of the car at the other end, and said angle-bars present a lower edge under which the hooks k on the seat-back cushions engage to prevent the upper portion of seat-back cushions falling outward. The lower part of said cushions rests upon an angle iron or bar l, as indicated in dotted lines in Fig. 1, said bar being riveted at the aisle end to the flange C' of the top plate and at the other end to an angle-iron C², which is screwed against the wall R of the car and forms a support for the wall end of the seat-back, as indicated in dotted lines in Fig. 2.

L represents locking devices which are connected to the transverse bar l by rivets L', extending through vertical slots L² in the locking device L. The upper end of this locking device is hooked and is adapted to catch over the lower part of the frame of the seat-back cushion K'. These locking devices operate by gravity and may be raised to release the seat-back by first drawing the seat K forward and then inserting the hand to lift them. Ordinarily two such locking devices would be employed; but this is not essential. The upper parts of the cushions K' fit snugly under the corner-casting G and under the lower part of the top rail H, as indicated in Figs. 1 and 2.

If desired, the frames A, D, E, and C may have a layer of stiff paper or other fibrous material interposed between their joints to re-

duce tendency to rattling due to vibration, such a layer being indicated at S in Fig. 8.

It is immaterial to my invention what character of construction is employed in the seat-cushions K and seat-back cushions K', as these may be of any of the well-known constructions now in use, the seat-back cushions being provided with the locking devices or hooks k to retain them in position.

It is evident that in cars the end seats are backed against the transverse divisions of the car-body, and consequently there are in those cases no seats back to back, as illustrated in Fig. 1; but my invention is equally applicable to these end seats, since it is equivalent to simply omitting one-half of the structure or approximately one-half, (shown in Fig. 1,) and I therefore wish it to be understood that my invention is equally applicable to single or double seats, as may be required in the equipment of the car.

While I have described my invention in the form which I have found to be the most practical embodiment, I do not limit myself to the minor details of construction, as these may be modified in various ways without departing from the spirit of the invention.

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

1. In a sheet-metal car-seat, the end structure consisting of the combination of a base-plate, a channel-frame secured to the top of the base-plate, a top plate secured to the channel-frame and extending upward, and an arm-rest secured to the top plate and to the upper portion of the channel-frame.

2. In a sheet-metal car-seat, the end structure consisting of the combination of a base-plate, a channel-frame secured to the top of the base-plate, a top plate secured to the channel-frame and extending upward, and two arm-rests secured to the top plate on opposite sides and also respectively secured to the top flanges of the channel-frame at each side of the top plate.

3. In a sheet-metal car-seat, the end structure consisting of the combination of a base-plate, a channel-frame secured to the top of the base-plate, a top plate secured to the channel-frame and extending upward, an arm-rest secured to the top plate and to the upper portion of the channel-frame and said arm-rest consisting of a slotted tubular portion F and two plates E E extending through the slot of the slotted tubular portion and held apart by spacing-studs.

4. In a sheet-metal car-seat, the end structure consisting of the combination of a base-plate, a channel-frame secured to the top of the base-plate, a top plate secured to the channel-frame and extending upward and having an inwardly-directed flange C', an arm-rest

secured to the top plate and to the upper portion of the channel-frame, and an inclined seat-rail secured to and projecting laterally from the slotted side of the channel-frame.

5 5. In a sheet-metal car-seat, the end structure consisting of the combination of a base-plate, a channel-frame secured to the top of the base-plate, a top plate secured to the channel-frame and extending upward, an arm-rest
10 secured to the top plate and to the upper portion of the channel-frame, a front frame for receiving the front portion of the seat-cushion, an inclined seat-rail secured to and projecting laterally from the slotted side of the
15 channel-frame, and a seat-back cushion supported upon the top plate.

6. In a sheet-metal car-seat, the end structure consisting of the combination of a base-plate, a channel-frame secured to the top of
20 the base-plate, a top plate secured to the channel-frame and extending upward, an arm-rest secured to the top plate and to the upper portion of the channel-frame, a front frame for receiving the front portion of the seat-cushion, an inclined seat-rail secured to and projecting laterally from the slotted side of the
25 channel-frame, a seat-back cushion supported upon the top plate, a bar connecting the upper portion of the top plate to the wall of the car, an angle-bar connecting the lower part
30 of the top plate with the wall of the car and adapted to support the seat-back cushion, and a locking device carried by the angle-bar to lock the seat-back cushion upon it.

35 7. In a sheet-metal car-seat, the end structure consisting of the combination of a base-plate, a channel-frame secured to the top of the base-plate, a top plate secured to the channel-frame and extending upward, an arm-rest
40 secured to the top plate and to the upper portion of the channel-frame, a front frame for receiving the front portion of the seat-cushion, an inclined seat-rail secured to and projecting laterally from the slotted side of the
45 channel-frame, a seat-back cushion supported upon the top plate, a bar connecting the upper portion of the top plate to the wall of the car, an angle-bar connecting the lower part of the top plate with the wall of the car and
50 adapted to support the seat-back cushion, a locking device carried by the angle-bar to lock the seat-back cushion upon it, and a hook or locking device attached to the seat-back cushion and extending under and upwardly behind
55 the bar connecting the upper part of the top plate of the car for holding the cushion against outward displacement.

8. In a sheet-metal car-seat, the end structure consisting of the combination of a base-plate, a channel-frame secured to the top of
60 the base-plate, a top plate secured to the channel-frame and extending upward, an arm-rest secured to the top plate and to the upper portion of the channel-frame, a corner-casting G

fitted upon the upper end of the top plate and
65 a top rail extending from the wall of the car and fitted upon the upper end of the said corner-casting G.

9. In a sheet-metal car-seat, a base portion combined with a sheet-metal top plate C provided with two inclined flanges C' acting as
70 supports for the seat-back cushions, arms secured to each of the flanges, and two removable cushions respectively resting against the flanges C'.

10. In a sheet-metal car-seat, a metallic lower portion combined with a top plate C secured to said metallic lower portion and formed with
75 inclined flanges C' acting as supports for the seat-back cushion, metallic corner-pieces fitted to the upper end of the top plate, and a horizontal top rail extending from the wall of the car and connecting with the free end of the corner-pieces.

11. In a sheet-metal car-seat, the combination of the base-plates A and I, the channel-iron seat-supporting frames D and D', and a
85 cast-metal corner-leg B uniting the said plates at the corner of the seat.

12. In a sheet-metal car-seat, the combination of a flat sheet-metal base-plate A with a
90 channel-iron frame D having the upper and lower flanges d and secured upon the base-plate A.

13. In a sheet-metal car-seat, the combination of a flat sheet-metal base-plate A with a
95 channel-iron frame D having the upper and lower flanges d and secured upon the base-plate A, and suitable arm-rests extending upward from the upper flange of the frame D.

14. In a sheet-metal car-seat, the combination of a flat sheet-metal base-plate A with a
100 channel-iron frame D having the upper and lower flanges d and secured upon the base-plate A, a suitable arm-rest extending upward from the upper flange of the frame D, and consisting of two metal plates E E bolted to the frame D and having upwardly-flanged upper
105 edges and slotted tubular part F fitted over the lateral flanges of the plate C.

15. In a sheet-metal car-seat, an arm-rest consisting of two triangular sheet-metal plates
110 E E secured together on two of their edges and having the remaining edges outwardly flanged as at e, in combination with a slotted tubular part F fitted over the edges of said
115 plates E E and under the lateral flanges thereof.

16. In a sheet-metal car-seat, an arm-rest consisting of two triangular sheet-metal plates
120 E E secured together on two of their edges and having the remaining edges outwardly flanged as at e, in combination with a slotted tubular part F fitted over the edges of said plates E E and under the lateral flanges thereof, and a series of spacing-studs to keep the
125 said plates E E at the proper distance apart.

17. In a sheet-metal car-seat structure, the front channel-frame D' having the upper and

lower flanges and the strengthening-ribs D², combined with side seat-supports, and a seat-cushion resting upon said supports and upon the upper flange of the channel-frame D'.

- 5 18. In a sheet-metal car-seat structure, the combination of the base-plates A and I the latter being bent at right angles to form the flange I' parallel to the plate A, and the cor-

ner or leg casting B fitting over the front edges of the parts A and I'. 10

In testimony of which invention I hereunto set my hand.

EDWARD G. BUDD.

Witnesses:

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R. M. KELLY.