G. B. KOHLER.

CAR SEAT.

APPLICATION FILED MAY 11, 1915.

1,243,531.

Patented Oct. 16, 1917.

3 SHEETS—SHEET 1.

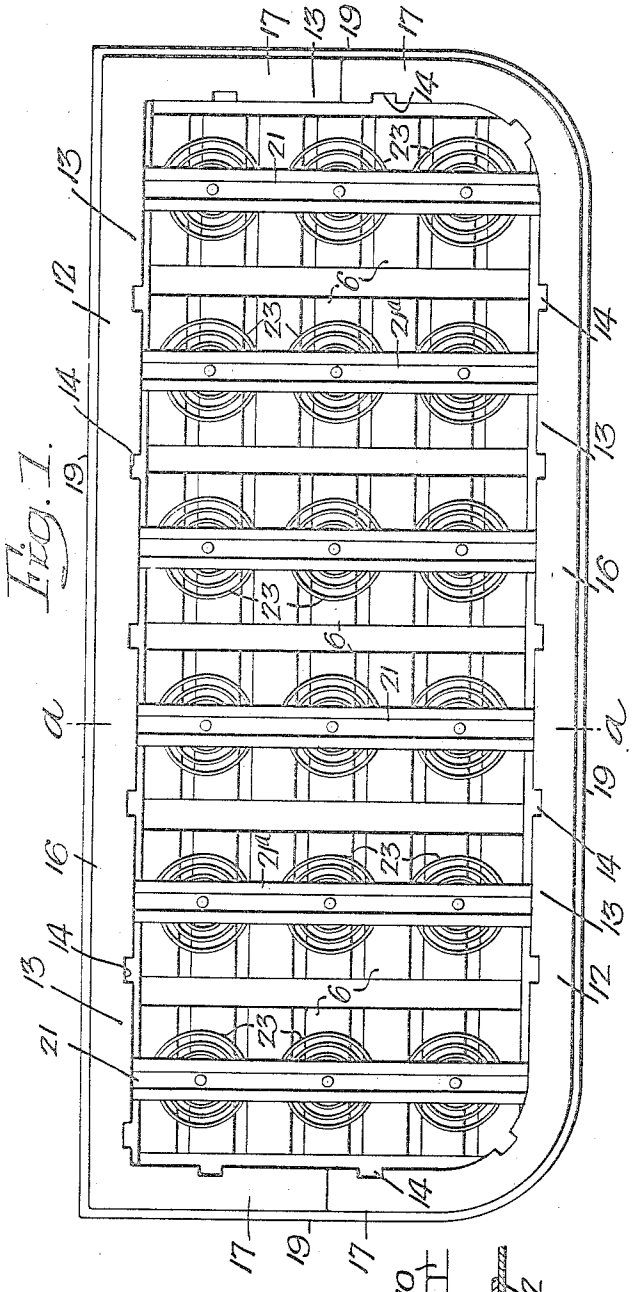


Fig. 1.

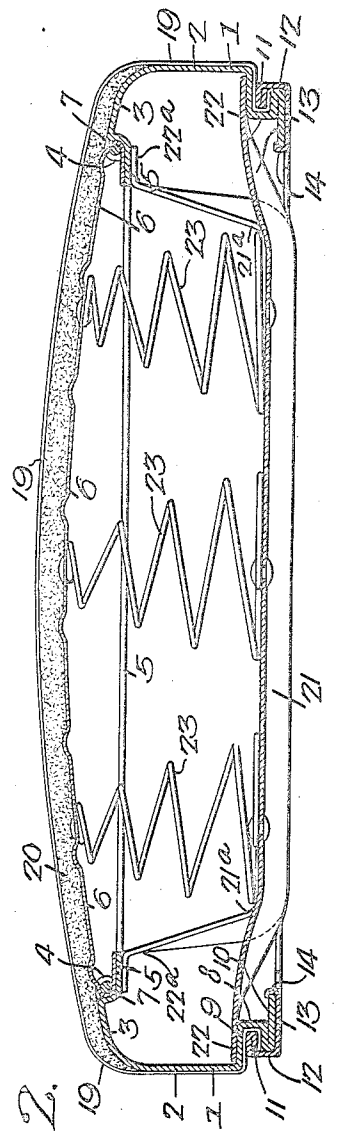


Fig. 2.

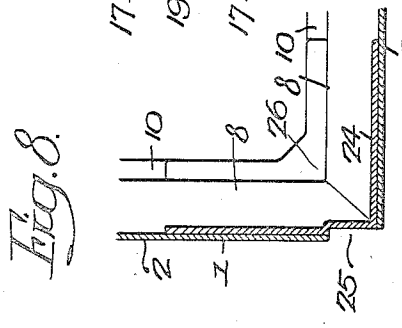


Fig. 8.

Inventor:—
George B. Kohler.
by his Attorneys.—
Howson & Howson

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3 SHEETS—SHEET 2.

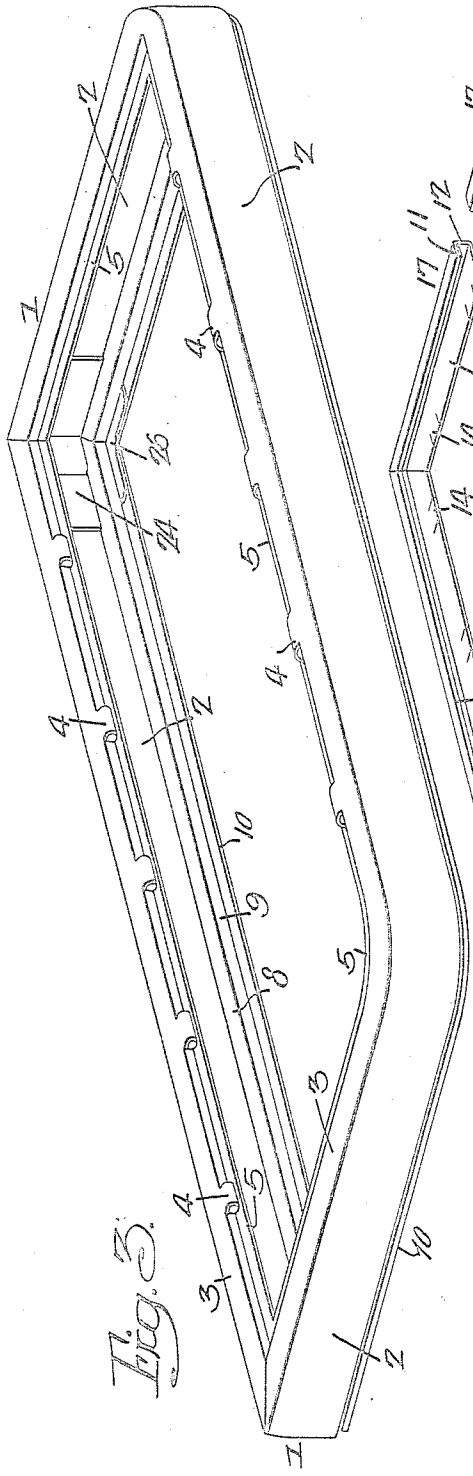


Fig. 3.

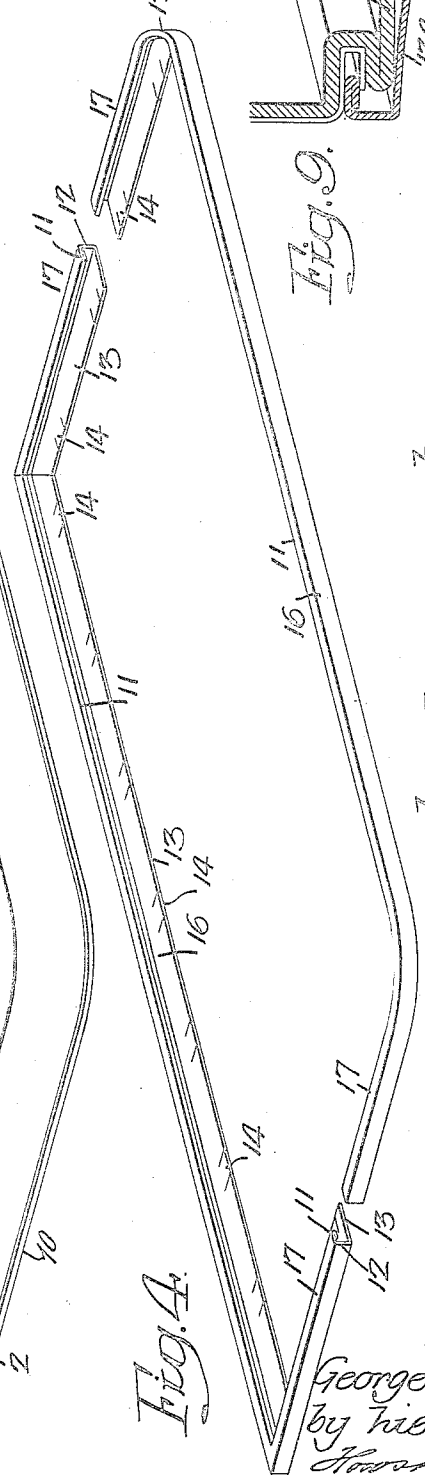


Fig. 4.

Fig. 9.

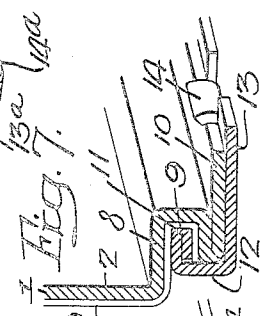


Fig. 7.

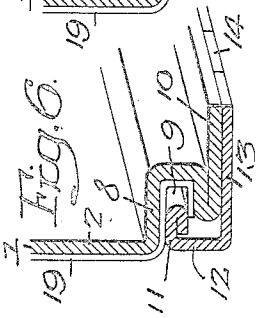


Fig. 6.

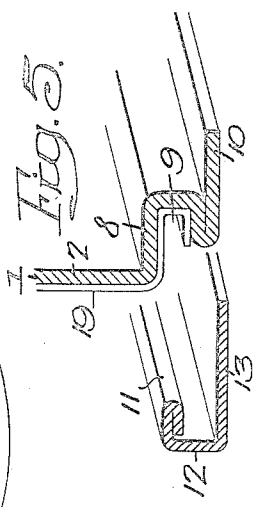


Fig. 5.

Inventor:-
George B. Kohler
by his Attorneys.
Howson & Howson

G. B. KOHLER.

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3 SHEETS—SHEET 3.

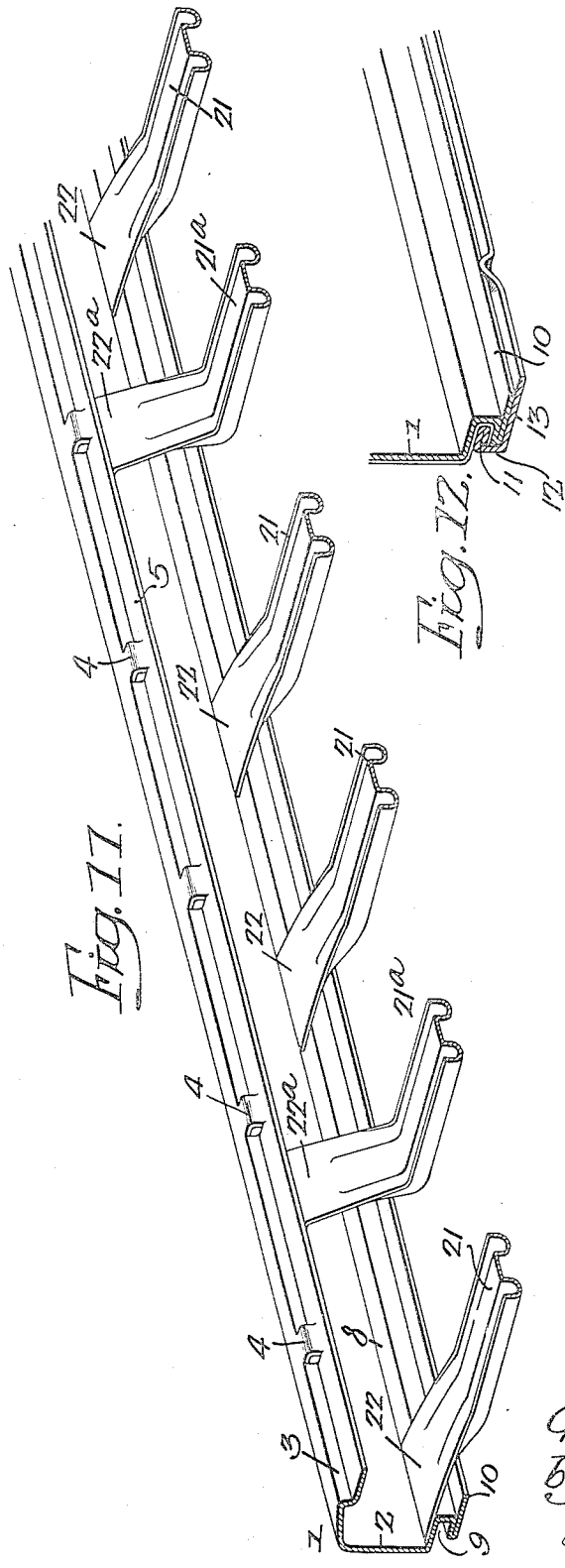


Fig. 11.

Fig. 12.

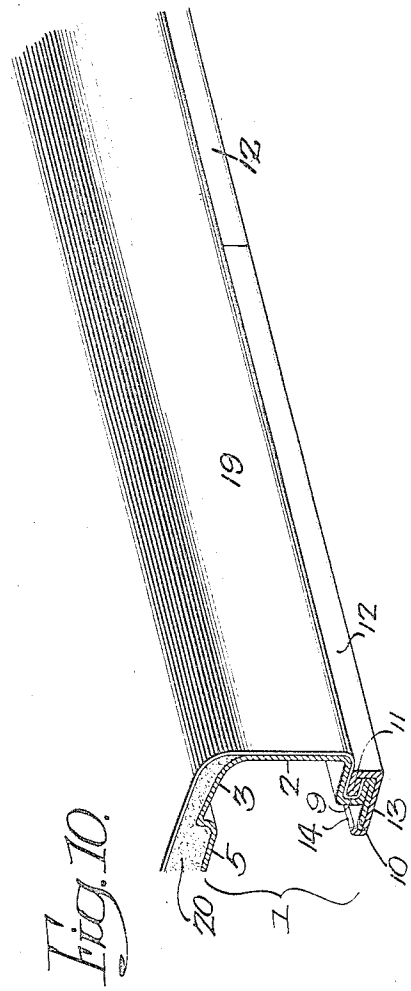


Fig. 10.

Inventor.—
George B. Kohler.
by his Attorneys.—
Howson & Howson

UNITED STATES PATENT OFFICE.

GEORGE B. KOHLER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE J. G. BRILL COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

CAR-SEAT.

1,243,531. Specification of Letters Patent. Patented Oct. 16, 1917.

Application filed May 11, 1915. Serial No. 27,390.

To all whom it may concern:

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

The object of my invention is to construct a car seat so that a continuous metal frame can be used in connection with a clamping frame or bar which secures the ratan, or other fabric, to the frame.

In the accompanying drawings:—

Figure 1, is an inverted plan view of my improved car seat;

Fig. 2, is an enlarged transverse sectional view on the line *a*—*a*, Fig. 1;

Fig. 3, is a detached perspective view of the frame of the car seat;

Fig. 4, is a detached perspective view of the two-part clamping frame;

Figs. 5, 6 and 7, are sectional perspective views showing the different steps in securing the clamping frame in position;

Fig. 8, is a sectional plan view of one corner of the main frame;

Fig. 9, is a view illustrating a modification of the clamping frame;

Fig. 10, is a perspective view showing the front of a long seat, illustrating the outward appearance of the clamping frame;

Fig. 11, is a perspective view showing the arrangement of the cross bars forming the spring supports; and

Fig. 12, is a view of the modification.

Referring to the drawings, 1 is the main frame of the car seat having a vertical portion 2 and an upper inwardly projecting flange 3. This flange is bent and cut at its outer end to form bearings 4 and a supporting ledge 5. 6, 6 are cushion supporting plates which extend from side to side of the car seat and are bent at the ends and rest upon the ledges 5; being held in position by rods 7, which extend through the bearings 4, thus locking the cushion supports firmly to the main frame 1.

8 is the lower flange of the frame 1 which is bent to form a groove 9 and a horizontal extension 10. The groove 9 extends entirely around the seat and is shaped to receive the upper flange 11 of the clamping frame 12, which has a lower flange 13, which fits snugly under the extension 10. When the parts are in position the flange 13 projects beyond the extension 10 and is cut at intervals to form tongues 14 which are bent up against the edge of the extension 10 and thus hold the clamping frame 12 in position.

In Fig. 9, I have shown a modification of the clamping frame, in which the flange 13^a has a lip 14^a which is arranged to spring into position back of the portion 10^a when the clamping frame is forced into position.

It will be seen, upon referring to Figs. 1 and 4, that the clamping frame 12 is made in two sections. In the present instance, each of these sections has a longitudinal member 16 and end members 17 which, when in position as in Fig. 1, abut so as to form a continuous bottom member.

The outer covering 19 is of ratan in the present instance, and the lower edge of this covering extends into the groove 9, as clearly shown in Figs. 2 and 5, so that, when the sections of the clamping frame are forced into position, the upper flange 11 of the clamping frame retains the edges of the ratan, or other covering, in the groove, and, when the parts are locked, as in Fig. 7, the covering is firmly secured to the main frame. In the present instance, there is a filling 20 of hair, or other suitable material, preferably inclosed in a burlap casing, between the outer covering 19 and the spring supporting plates 6.

Extending from one side of the main frame to the other are cross bars 21, 21^a, which are made as shown in the drawings. The ends of the bars 21 are flat as at 22 and are secured to the lower flange 8, as shown in Fig. 11, by spot welding or riveting. The ends of the bars 21^a are turned up, as at 22^a, and are secured to the upper flange 3 by spot welding or riveting.

This construction makes an exceedingly rigid structure; the bars 21^a extending to the upper flange of the frame act as braces for the frame, preventing the frame collapsing, while the other bars hold the parts rigidly in position.

The bars 21, 21^a support the springs 23, which are of the general construction used in car seat structures. The springs are attached to the cross bars 21, 21^a and to the spring plates 6. The cross bars are preferably made of sheet metal pressed into the shape shown, but it will be understood that they may be modified without departing from the spirit of the invention.

The main frame is preferably made from

a single piece of metal cut and bent, as illustrated in Figs. 3 and 8, to form the right angled corners, and the ends may be secured together in any manner desired.

In Fig. 8, I have shown the joint at one of the rear corners of the seat; the corner is reinforced by a plate 24 and the structure is cut away at 25 to receive the fold of the ratan cover material.

The corners of the main frame are preferably reinforced by an angle plate 26, as illustrated in Figs. 3 and 8, which may be riveted or welded in position, as desired. The shape of the interlocking flanges of the main frame and of the clamping frame may be modified without departing from the essential features of the invention.

In Figs. 1, 3 and 4 of the drawings, I have shown the invention as applied to a double seat, such as used in transverse structures of railway cars, but where the long seats, which run parallel with the sides of the car, are used, the clamping bar extends along the front edge of the seat and may be made in as many sections as desired, as illustrated in Fig. 10.

While I have described my invention as applied to a car seat structure, it will be understood that the invention can be used for a seat structure for other purposes, or it may be used as a back, as the shape can be varied according to the different uses to which the structure is applied.

It will be understood that in assembling the parts, the main frame, with the cross bars, springs and spring plates in position, is covered, the edges of the covering extending all around the four sides of the frame so that the edges can be forced into the groove of the frame, and the clamping frames or bars are applied to the main frame by moving them laterally toward each other, and, when the clamping frames are forced into their different positions, the tongues 14 are bent over the edges of the lower flanges of the main frame, thus holding the clamping frames in position.

In some instances the flange 13 need not be cut to form a tongue and the metal may be forced up back of the portion 10 sufficiently to hold the clamping frame or bar in position, as in Fig. 12.

I claim:—

1. The combination in a seat structure, of a main frame made of pressed sheet metal and having an endless groove extending at each side and at each end; means carried by the frame for supporting a seat structure; a two-part clamping frame, each part having a side portion and end portions and having an upper flange arranged to extend into the groove of the main frame and retain the seat covering therein, and having a lower flange extending under the main frame, and having means for retaining it in position on the main frame.

2. The combination in a seat structure, of a main frame having a groove set back from the edge of said frame and having a lower internal flange; with a clamping frame having an upper flange arranged to extend into the groove and retain the seat covering therein, and having a lower flange extending under the internal flange of the main frame, the clamping frame, when in position, being flush with the body of the main frame.

3. The combination in a seat structure, of a main frame made of pressed sheet metal having an upper and a lower internal flange and having a groove in its outer surface near the lower edge; with a clamping frame of pressed sheet metal having an upper flange adapted to the groove and a lower flange, the lower flange being of a greater width than the upper flange and having a series of cuts therein forming tongues which, when bent over the edge of the lower flange of the main frame, retain the upper flange in the groove.

GEORGE B. KOHLER.