

H. U. HART.
METAL SEAT AND THE LIKE.
APPLICATION FILED JULY 21, 1909.

951,371.

Patented Mar. 8, 1910.
2 SHEETS—SHEET 1.

Fig. 1.

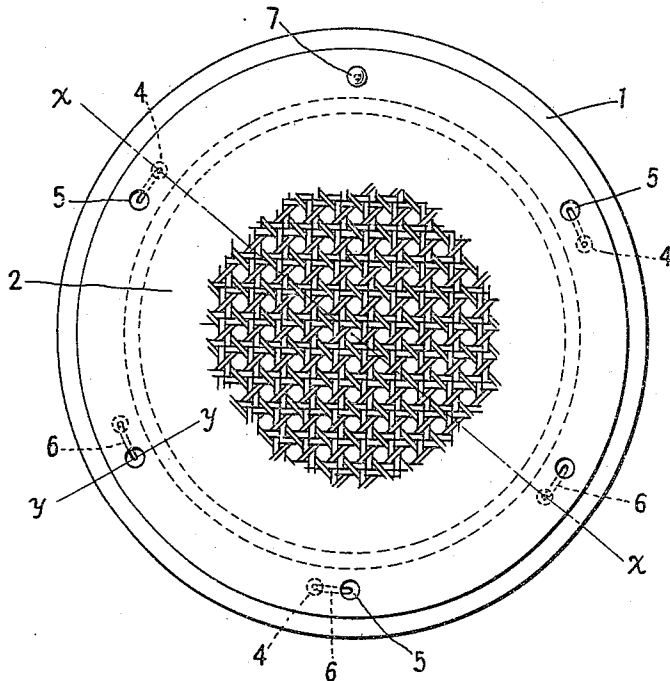


Fig. 2.

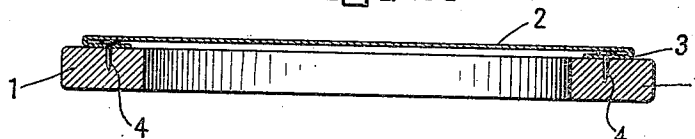


Fig. 3.

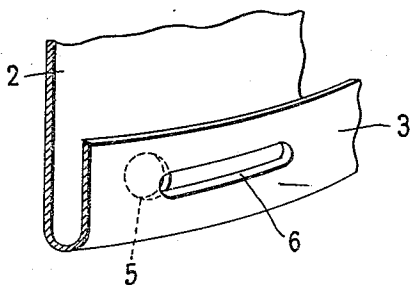


Fig. 4.

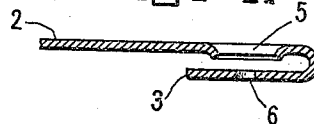
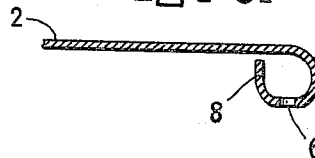


Fig. 5.



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2 SHEETS—SHEET 2.

Fig- 6.

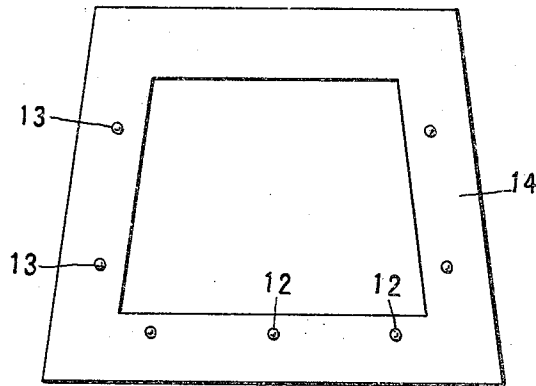


Fig- 8.

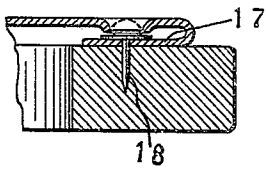


Fig- 9.

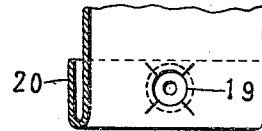


Fig- 10.

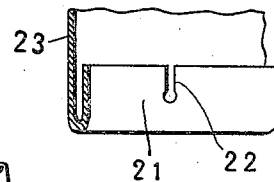
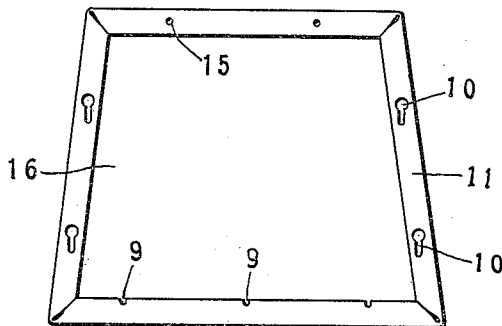


Fig- 7.



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METAL SEAT AND THE LIKE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HENRY U. HART, a citizen of the United States, residing at borough of Brooklyn, city of New York, in the county of Kings and State of New York, have invented certain new and useful Improvements in Metal Seats and the Like, of which the following is a specification.

While I shall hereafter describe my invention in reference to chair seats only, I wish it understood that I claim it as applicable equally to the backs and sides of chairs, and to the seats, backs, and sides of stools, settees, benches and other similar articles of furniture, and to the seats, backs, and sides of conveyances, and also to such seats, backs, and sides having a covered metal base. In the claims the word "seat" will be used to cover such constructions broadly.

Metal chair seats, particularly those decorated by painting, lithographing, or other process, to resemble wood or cane, are well known. Such seats possess great advantages over leather, wooden, papier mâché, and cane seats, as regards durability, cleanliness, cheapness, and in strengthening the chair. Those now on the market however have certain disadvantages such as requiring special appliances upon the chair, separate from the seat. Some are fastened by nails, the heads of which project above. In the first case, they are impracticable of general application because manufacturers of chairs are unwilling to make chairs in such form that, when the seat wears out, the chair can only be resealed by some special kind of seat and the public cannot use them because chairs do not have such appliances. In the second case, pressure on the seats, by leverage on the metal sheet, works the nails up so that they are apt to catch and tear the clothing and cause wounds. In addition in the case of metal seats consisting of a flat metal sheet, a great number of nails is required to hold it at all flat. This adds to the cost of the seats, and increases the labor of putting on or removing such a seat. Further it is impossible to drive all the nails exactly straight and as a result the thin metal sheet, particularly if round or curved, is drawn out of shape in applying it and in use the edges crimp, making it so much the more apt to cause injury. Other objections are that the sharp edges of such seats make them dangerous for dealers to handle, and the seats are extremely hard and rigid. It fol-

lows, that an integral seat, secured by a few nails or screws, which can be readily applied and will not tear the clothing or cause injury is desirable.

My invention entirely overcomes these serious difficulties; it effectually conceals the nails, prevents them from working up and protruding above the surface of the seat, reduces the number of the nails to a minimum and makes adjustment and removal easy and cheap. It also prevents crimping of the edges of the seat and at the same time gives a spring to the seat thereby making it more comfortable, as well as allowing a lighter gage of metal to be used and thereby rendering it cheaper to produce. I shall use the term "nail" to include tacks or screws as well.

Figure 1, shows a round seat of my invention. Fig. 2, is a section thereof on X X Fig. 1. Fig. 3, is a perspective view of a fragment of the rim of the metal part of the seat. Fig. 4, is a fragmentary section on Y—Y Fig. 1. Fig. 5, is a similar fragmentary section of a modification. Fig. 6, is a view of the frame of an angular seat. Fig. 7, is a bottom view of the metal seat portion therefor. Fig. 8, is a section of frame and metal portion of a modification. Figs. 9 and 10 are perspective views of fragments of rims showing other modifications.

The seat frame 1 is usually of wood. The metal portion 2 or seat proper is usually of iron or steel and may be decorated and perforated as shown to imitate woven cane. The rim is turned down and in to form a flange 3 which is secured to the frame by a few nails such as 4, 4, whose heads lie between the body of the seat 2 and the flange 3. These nails may be applied in a number of ways. For instance a series of holes such as 5, 5 of any shape, but preferably round, are provided in the upper part of the seat large enough to let the heads of the nails through. The edges of these holes 5, 5 may and should be counter sunk as shown in Fig. 4. Beneath these holes 5, 5 are elongated holes such as 6, 6. These holes are of such breadth as to allow the shanks of the nails to pass through but not broad enough to admit the heads and are of such length and so placed that one end of each hole 6 is immediately below a hole 5 and the remainder of the holes 6, 6 all extend in the same direction under the upper surface of the seat. In a round seat the holes 6, 6 should preferably be

curved and parallel with the circumference of the seat. I fasten the seat by driving nails such as 4, 4 having heads just small enough to pass through the holes 5, 5 and shanks small enough to pass through the holes 6, 6 into the frame 1 until the heads are just beneath the upper surface of the seat, but not tight against flange 3, the heads remaining between the top and the flange. I then turn the seat or draw it in a direction parallel with the holes, the shanks of the nails 4, 4 being guided by the sides of the holes 6, 6 until the heads of the nails can not be seen through the holes 5, 5. I then prevent the seat from being turned or drawn back, by driving one or more nails such as 7 through some portion of the seat and through both surfaces and preferably in the back of the seat. The other nails may also be driven down tight by striking on the seat above their heads. The heads of the nails can not then come out or protrude above the upper surface of the seat. The flange may be rounded as at 8 in Fig. 5 but the nails cannot be so easily driven.

If desired and I claim this as a variation of the foregoing within my broad claims, the holes in the flange instead of being entirely within the metal sheet may be struck out from the edge in the form of notches 9, 9 as shown in Fig. 7. If desired in this case the upper holes may be omitted entirely and the holes 10, 10 provided in the flange 11. In fastening the seat the nails 12, 12 and 13, 13 are first driven into the frame 14 and the seat placed above them so that the heads of the nails 13, 13 pass through the large ends of the openings 10, 10 and the seat is then drawn back until the notches 9, 9 come under the heads of the nails 12, 12. The seat is then finally fastened by driving in one or more nails through holes such as 15 extending through the top 16 and the flange 11. As a further variation I also claim broadly such a seat having the edge turned over into a flange as at 17 in Fig. 8 with large holes in the top and small holes immediately beneath and held down by a series of nails such as 18. These nails have heads shaped so as to go through the top holes and be flattened out against the flange 17. They therefore cannot work loose.

Fig. 9 shows a seat in the upper surface of which is a series of holes such as 19 struck

through the top in such a manner that the margin of the holes is left flexible. Nails are then driven into the seat frame through these openings so that the heads pass through and are caught between the flange and the top. Obviously such holes might be in the flange 20 and the nails might be first driven into the frame and the metal seat portion pressed down over them, the heads of the nails snapping through the openings.

In the construction of Fig. 10, the flange 21 has a number of slots such as 22. Nails can be readily inserted in these slots, the heads of the nails coming between the top 23 and the flange 21. The top is then pressed down and the nails driven in by striking the top just above the nail heads.

All of these constructions result in a smooth seat with no projections and with the nails locked so as to prevent working loose.

What I claim is:

1. A seat comprising a frame, a metal sheet having a downwardly and inwardly turned flange and nails securing said flange to said frame and having their heads locked beneath the top of said sheet.

2. A seat comprising a frame, a metal sheet having a flat flange beneath the top and nails for fastening said flange to said frame but leaving said top portion free and elastic.

3. A metal seat comprising a top portion having holes large enough to permit passage of the heads of nails and a flange portion beneath the top portion with holes to permit the passage of the nail shanks but too small to let their heads through.

4. A metal seat comprising a top portion having holes large enough to permit passage of the heads of nails and a flange portion beneath the top portion with elongated holes to permit the passage of the nail shanks but too small to let their heads through and means for preventing movement of the seat.

5. A seat comprising, a frame portion, a flanged metal seat portion having elongated holes in its flange, nails passing through said holes, said seat portion being slidable into position, and means for preventing sliding.

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Witnesses:

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