Dec. 3, 1935. H. F. DAVIS 2,022,955

CHAIR

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Fig. 1.

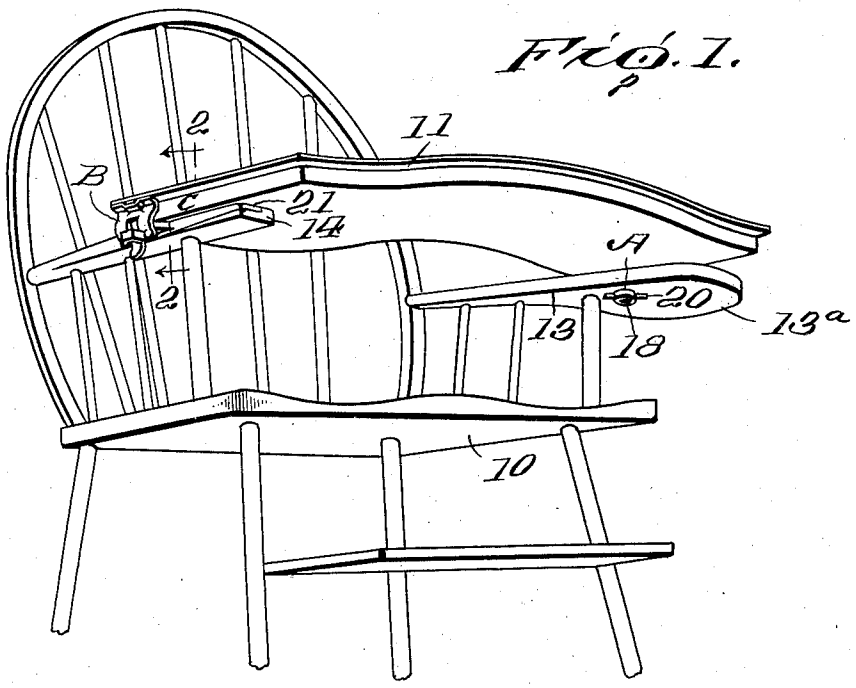


Fig. 2.

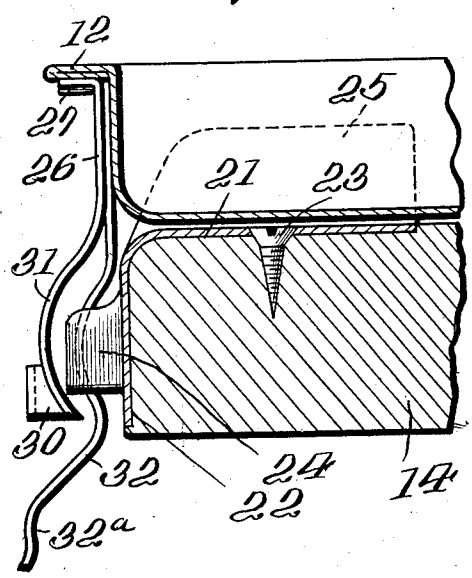
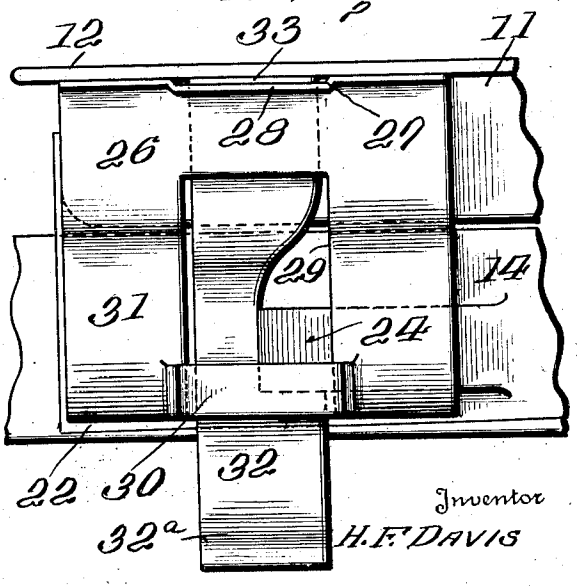


Fig. 3.



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FIG. 4.

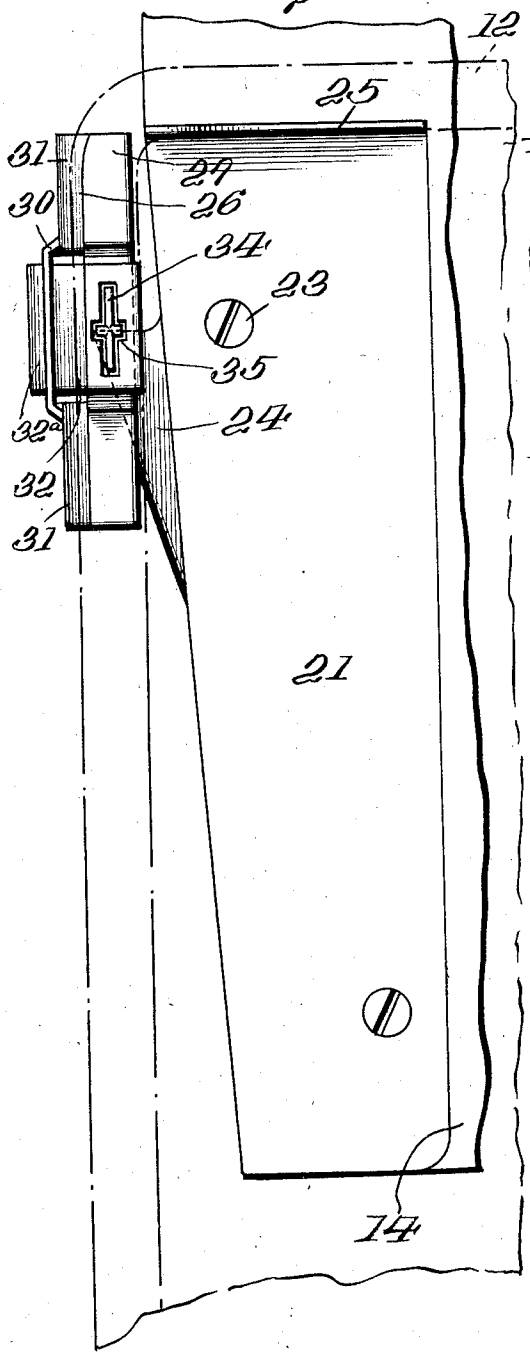


FIG. 5.

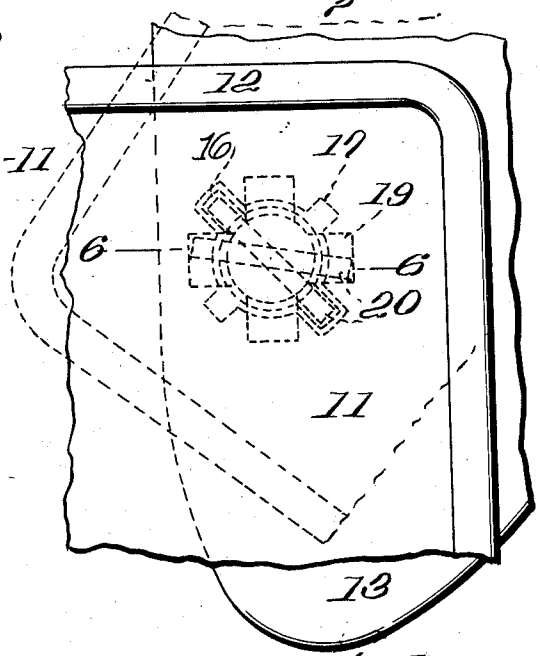


FIG. 6.

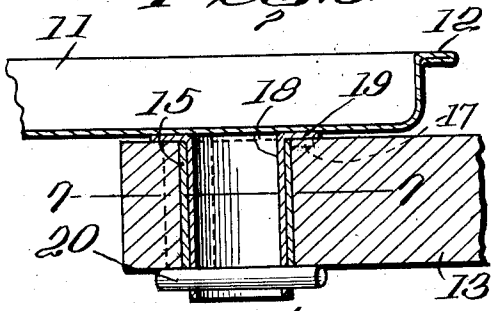
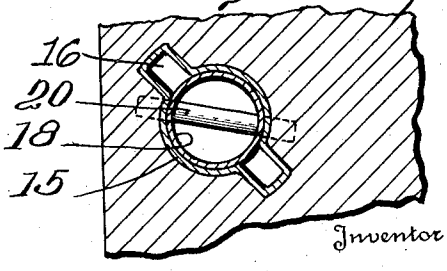


FIG. 7.



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CHAIR

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Application April 24, 1935, Serial No. 18,047

6 Claims. (Cl. 155—127)

The present invention relates to new and useful improvements in chairs of the type having a tray associated therewith, and more particularly to a chair of the above type wherein the tray is pivotally mounted thereon for horizontal swinging movement.

An object of the invention is to provide, in a chair of the above type, an all-metal tray assembly having a depending pivot post and a latching device welded thereto at opposite sides thereof for cooperation with the arms of the chair.

A further object of the invention is to provide, in a chair of the above type, an improved latching device which is welded to the tray at one side thereof.

The above and other objects of the invention will in part be obvious and will be hereinafter more fully described.

Referring to the drawings:

Fig. 1 is a prospective view of the assembled chair and tray.

Fig. 2 is a sectional view taken along line 2—2 of Fig. 1 showing the improved locking device.

Fig. 3 is a side elevation of Fig. 2.

Fig. 4 is a greatly enlarged plan view of the improved locking device.

Fig. 5 is an enlarged plan view showing the details of the pivot for the tray.

Fig. 6 is a sectional view taken along line 6—6 of Fig. 5.

Fig. 7 is a plan view in section taken along line 7—7 of Fig. 6.

In Fig. 1 of the accompanying drawings, the chair 10 is illustrated as being of the highchair type, but it is to be clearly understood that the tray assembly may be used with chairs of other types. The tray 11 is preferably made of sheet metal and has an outwardly extending peripheral edge which is rolled or turned inwardly as at 12 so that no sharp edges will be encountered. The tray is pivotally mounted as at A on an arm 13, this arm having an enlarged wing portion 13a which aids in supporting the tray when it is swung to an open position. A latching device B is welded or otherwise suitably secured to the opposite edge of the tray and is adapted to cooperate with a keeper C on the other arm 14 of the chair for locking the tray across the front of the chair.

The pivotal connection between the tray and the arm 13 will now be described, reference being made particularly to Figs. 5 to 7. The arm 13 has a properly shaped opening therethrough into which is pressed a metal bushing 15. This bushing is provided with a pair of diametrically opposed slots or openings 16 and with a pair of diametrically opposed ears 17. The ears 17 extend outwardly from the body portion of the bushing and rest upon the upper face of the arm 13 so as to prevent the bushing from falling therethrough. A depending pivot member or post 18 is secured to the underside of the tray 11. This post 18 is provided with outwardly extending ears 19 which are secured by spot welding or the like to the face of the tray 11. The post 18 is provided with a pin 20, the ends of which extend beyond the periphery of the post 18 and are inserted into the diametrically opposed slots 16 in the bushing 15. When in this position, the tray may be pushed down so that the pin 20 is disposed at a point below the bottom edge of the bushing 15 and the underside of the arm 13, as shown in Fig. 6. The tray may then be turned about its pivot point to the position shown in Fig. 1. It is to be noted that the position of the bushing 15 in the arm 13 and the position of the pin 20 in the post 18 are such that when the tray is in its normal closed position across the arms of the chair and its normal open position at approximately ninety degrees from its closed position, the ends of the pin are out of line with the slots 16 in the bushing 15 so that the tray must be turned through an angle of well over ninety degrees from its closed position before it can be removed from the arm of the chair.

Referring more in detail at this time to Figs. 2 to 4, the improved locking device for holding the tray in position across the arms 13 and 14 will now be described. The keeper C is preferably in the form of an angle plate having a horizontal portion 21 which fits over a portion of the upper face of the arm 14 and a depending side portion 22 which fits next to the outer edge of the arm 14. The keeper C may of course be made up in a plurality of sections if so desired. As shown in Fig. 4, the outer side edge of the arm 14 is slightly cut away so as to provide clearance for the latching device B as the tray is swung to and away from its locked position. The angle plate is secured to the arm 14 by screws 23 or the like. The depending side portion 22 of the angle plate has a portion thereof cut and formed to provide a keeper 24 which extends outwardly from the arm 14. The horizontal portion 21 of the angle plate has an upwardly bent rear portion 25 which serves as a stop against which the rear edge of the tray 11 abuts when in locked position.

The latching device B includes a guide member 26 which has a laterally extending upper edge or flange 27 which is welded to the underside of the inwardly rolled edge 12 of the tray 11. As

shown in the accompanying drawings, the laterally extending edge 27 is provided with an offset or slightly depressed central portion 28. The guide member 26 is provided with a cut-out portion 29 in the side thereof below the depressed portion 28, the bottom edges of the guide member being joined by an offset portion 30 which greatly strengthens the same. As shown in Fig. 2, the lower portion of the guide member 26 is curved outwardly as at 31 in order that it will clear the keeper 24 as the tray is moved about its pivot point. A spring latch 32 has a portion thereof tightly fitting between the guide 26 and the edge of the tray 11. The upper edge 33 of the latch 32 is bent outwardly to extend between the inwardly rolled edge 12 of the tray 11 and the depressed portion 28 of the upper edge of the guide. As shown in Fig. 4, the upper surface of the depressed portion 28 is embossed to provide an irregular raised surface 34, and the outwardly bent portion 33 of the latch 32 is cut out to provide a recess 35 which corresponds in shape to the raised portion 34 so that an interlocking connection between the guide 26 and the latch 32 is thus provided.

In operation, the tray 11, after the pivot post 13 has been inserted within the bushing 15 on the arm 13 of the chair, may be swung horizontally to the position shown in Fig. 1. As the tray approaches the position shown in Fig. 1, the latch 32 will ride over the inclined surface of the keeper 24 and will ultimately spring down behind the edge of the keeper as shown in Fig. 2, when the tray has reached the limit of its inward movement by engagement with the stop 25. As has been heretofore pointed out, the outwardly curved portion 31 on the guide 26 permits the closing of the tray without interfering with the keeper. When it is desired to release the tray from its locked position, it is merely necessary to grasp the end portion 32a of the latch 32 and pull the same outwardly beyond the edge of the keeper 24 so that the tray may be swung outwardly. The offset portion 30 at the bottom edge of the guide 26 permits this movement of the latch 32 within the cut-out portion 29.

From the foregoing description, it will be apparent that the present invention affords a compact all-metal tray. The tray includes a pivot post welded thereto which fits within a bushing in one arm of the chair for providing a pivotal connection about which the tray may be swung horizontally. There is also provided a latching device which is rigidly secured by welding to the opposite edge of the tray and which cooperates with a keeper mounted on the other arm of the chair.

It is to be clearly understood that minor changes in the details of the construction and arrangement of parts may be made without departing from the scope of the invention as set forth in the appended claims.

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

1. A chair comprising, in combination, a pair of arms, a metal bushing pressed in one of said arms, a sheet metal tray having a depending pivot post welded thereto, said post fitting within said bushing whereby to provide a pivotal mounting for said tray, a guide member welded to an edge of said tray, a spring latch having a portion thereof interlocked between said tray and said guide member and having the remaining portion thereof depending from said tray, and a keeper mounted on the other arm of said chair and extending outwardly therefrom for cooperation with the depending portion of said spring latch whereby to lock said tray in position across the arms of the chair.

2. A chair comprising, in combination, a pair of arms, a metal bushing pressed in one of said arms, a sheet metal tray having a depending pivot post welded thereto, said post fitting within said bushing whereby to provide a pivotal mounting for said tray, a guide member welded to an edge of said tray, a spring latch having a portion thereof interlocked between said tray and said guide member and having the remaining portion thereof depending from said tray, an angle plate carried by the other of said arms, said plate having stop means for limiting the inward movement of said tray, and a keeper extending horizontally from the side of said plate for cooperation with the depending portion of said spring latch whereby to lock said tray in position across the arms of the chair.

3. A chair comprising, in combination, a pair of arms, a metal bushing pressed in one of said arms, a sheet metal tray having a depending pivot post welded thereto, said post fitting within said bushing whereby to provide a pivotal mounting for said tray, a keeper carried by the other of said arms and extending laterally therefrom, a guide member having a laterally extending flange welded to said tray, said flange having a central depressed portion spaced from said tray, and a spring latch depending from said tray and having an outwardly bent portion extending between said depressed portion and said tray whereby to hold said latch in position, said latch cooperating with said keeper for holding the tray in position across the arms of the chair.

4. A chair comprising, in combination, a pair of arms, a metal bushing pressed in one of said arms, a sheet metal tray having a depending pivot post welded thereto, said post fitting within said bushing whereby to provide a pivotal mounting for said tray, a keeper carried by the other of said arms and extending laterally therefrom, a guide member having a laterally extending flange welded to said tray, said flange being provided with a central depressed portion having a raised surface thereon, and a spring latch depending from said tray and having an outwardly bent portion extending between said depressed portion and said tray, said outwardly bent portion having an opening therethrough corresponding to the shape of said raised surface whereby to hold said latch in position, said latch cooperating with said keeper to hold the tray in position across the arms of the chair.

5. A chair comprising, in combination, a pair of arms, a metal bushing pressed in one of said arms, a sheet metal tray having a depending pivot post welded thereto and a peripheral flange, said post fitting within said bushing whereby to provide a pivotal mounting for said tray, an apertured guide member having a laterally extending portion welded to the under side of said flange, said laterally extending portion having a central depression spaced from said flange, a resilient latch depending from said tray and operating in the aperture in said guide member, said latch having the upper end thereof bent outwardly to lie between said flange and said depressed portion whereby to hold the said latch in position, and a keeper extending laterally from the opposite arm of said chair, said latch being adapted to spring behind said keeper when the

tray is in a closed position across the arms of the chair.

6. A chair comprising, in combination, a pair of arms, a sheet metal tray having a lateral peripheral flange, means for pivotally mounting said tray on one of said arms, a guide member depending from said tray and having an outwardly bent edge welded to said flange, said guide member having a longitudinal aperture therein, a resilient latch secured between said flange and said guide member and depending therefrom, said aperture permitting a slight lateral movement of said latch, and a keeper mounted on the other of said arms and extending laterally therefrom for cooperation with said latch to hold the tray in position across the arms of the chair, the depending body portion of said guide member being curved outwardly to permit the same to clear the keeper when the tray is swung about its pivot.

HAROLD FRANK DAVIS.