Oct. 20, 1931. S. A. SOMMERS 1,828,550

LEG FASTENING FOR STOOLS AND THE LIKE

Filed July 19, 1930

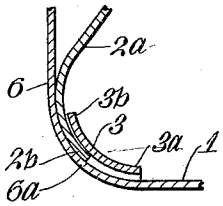


Fig. 5

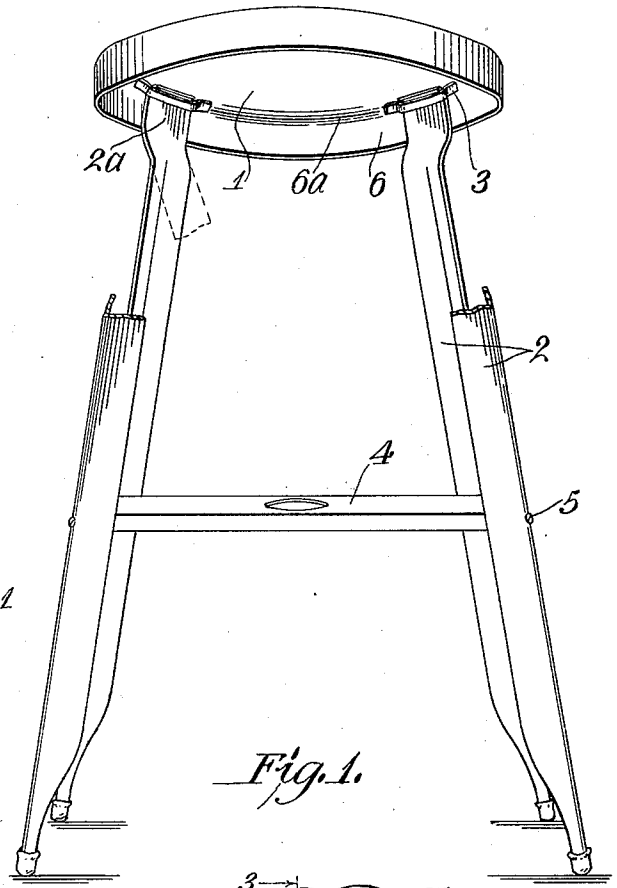


Fig. 1.

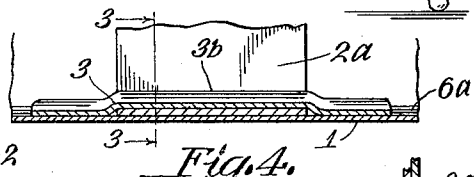


Fig. 4.

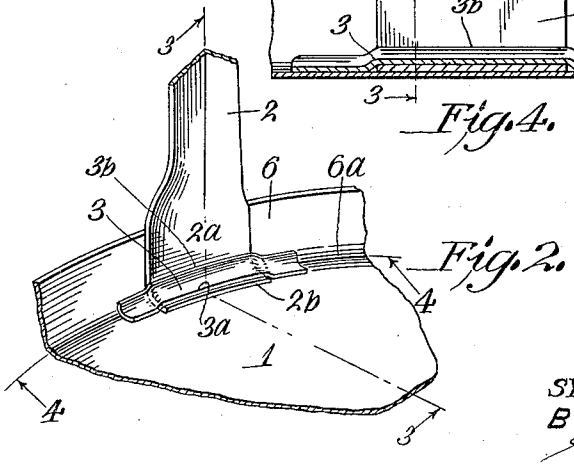


Fig. 2.

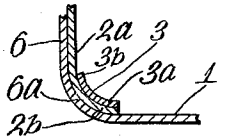


Fig. 3.

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UNITED STATES PATENT OFFICE

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LEG FASTENING FOR STOOLS AND THE LIKE

Application filed July 19, 1930. Serial No. 469,059.

This invention relates to stools, tables and similar articles that have sheet metal seats or tops and legs of sheet metal. For purposes of description it will be shown embodied in a knock-down stool. The improvement relates particularly to a novel form and arrangement of certain parts that make up the detachable joint by which the knock-down legs are removably secured to the seat.

An object of the invention is to provide a leg and seat structure that does not require special accuracy or care in the manufacture and assembling of its members, and consequently can be made cheaply, yet will lock the leg to the seat so rigidly that there will be no appreciable amount of play between them either vertically, horizontally or sidewise and the joint will be as secure as a socket joint of usual construction is, after having had its parts fitted to each other with much care and at considerable cost.

More particularly, an object of the invention is to provide a simple joint structure wherein certain curved shapes of the seat member at the base of its flange and other curved shapes of the interlocking end of the leg enable them to co-act to produce the above mentioned locking result.

The seat is in the usual form, an inverted pan comprising a substantially flat disk of circular or otherwise curved contour, rimmed by a downwardly projecting flange. The sheet metal is rounded where the flange and body join, presenting, as viewed from underneath the seat, a curved surface that is fillet-like in its cross-sectional shape, being of relatively large radius, and is also curved in a peripheral direction, following the contour of the flange.

The claimed subject-matter of the invention is found in the combination with the above mentioned peripheral and fillet-like curvatures in the seat member, of a co-operating strap-like keeper correspondingly curved as to its cross-sectional shape and also lengthwise, and the transversely curved and longitudinally hooked end of the leg itself. This combination of curved locking elements is so arranged that the extreme top edge of the leg can readily be inserted into the slot defined by the fillet and the strap while the leg is held in an inwardly tilted position, and the end of the leg is so curved and hooked that when the leg has been inserted in the slot and is then swung outward to its final position it will, by reason of its curved and hooked shape, wedge itself between the flat part of the seat bottom and the strap, its middle binding against the seat bottom and its two side edges against the strap. In that way the desired locking effect is produced, even though the leg, the strap and the fillet may not have been originally shaped to accurately fit each other.

With the foregoing and certain other objects in view, which will appear later in the specification, my invention comprises the devices described and claimed and the equivalents thereof.

In the drawings Fig. 1 is a side view in perspective of an assembled stool with the two near legs partly broken away.

Fig. 2 is an enlarged fragmentary view of the seat inverted, showing the joint between the leg and the seat member.

Fig. 3 is a cross section taken on the line 3—3 of Figs. 2 and 4.

Fig. 4 is a vertical section taken along the line 4—4 of Fig. 2.

Fig. 5 is a section similar to Fig. 3, showing the leg end being inserted.

Numeral 1 designates a circular seat to which legs 2 are joined by being hooked under metal straps or keepers 3 which in cross section are curved to the radius of the fillet 6*a* and which are bent lengthwise to follow the inner contour of the seat where the flange joins the body or plate of the seat. The upper ends of the legs 2 are curved so their outer faces fit the inner wall of the curved flange 6, as shown in Fig. 2.

The extreme end portion 2*b* of the part 2*a* of leg 2 is shaped to form a slight hook at the end of the leg, as indicated in Figs. 2 and 3. Numeral 4 designates the usual horizontal shelf, secured at its corners by bolts 5 so as to hold the legs spread apart in the position shown in Fig. 1, and keep the back faces of the parts 2*a* braced against the inside wall of flange 6. Numeral 6*a* designates the fillet-

like surface of the metal joining the flange 6 and seat 1. The hook 2*b* is made to conform with the shape of the fillet 6*a*, both as to the radius of the fillet and as to the cross-sectional curvature and the longitudinal curvature of the strap 3.

In assembling the stool the seat member 1 is inverted, as shown in Figs. 2 and 5, and the hooked end 2*b* of the leg is inserted beneath the strap 3. The other end of the leg is then moved outward from the inclined position shown in dotted lines in Fig. 1 to its normal position. Since the slot at edge 3*b* of the strap 3 conforms in shape to the curvature of flange 6, and the same slot, at edge 3*a* of strap 3, is flat or parallel-edged, conforming to the flat seat plate 1, the hooked and transversely curved end 2*b* of the leg 2 will conform to the slot at 3*b* and enter it without binding when the leg is tilted, but will tightly wedge itself within the slot, at 3*a*, when the leg is swung into its final position.

It is now evident that when the leg is in its normal position its hooked end 2*b* is engaged, as shown in Figs. 2 and 3, between the flat seat plate 1 and the overlying edge 3*a* of curved strap 3, preventing the hook from being pulled downwardly away from the seat and also holding the leg 2 against swaying sidewise. The wall of flange 6 and the adjacent edge 3*b* of strap 3 define between them a narrow, peripherally disposed curved slot. Said parts 6 and 3*b* lock the curved part 2*a* of the leg between them after the hook 2*b* is in position, preventing radial outward or inward movement of the leg.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

In combination a seat plate having a peripherally curved flange connected thereto by a fillet-shaped part, a strap-like keeper of curved cross-sectional shape and curved lengthwise in conformity with the said fillet-shaped part, its ends fixed to said fillet, said strap defining with the fillet a slot of double curvature, an edge of said keeper conforming to the curve of the flange, the other edge conforming to the plane of the seat plate, the main or body part of the keeper conforming to the curved face of the fillet, and a sheet metal leg formed with a hooked end shaped to conform to the curvature of the slot, the part of the leg adjacent the hooked end being curved to conform to the inner face of the flange, said leg adapted to be engaged in said slot, and a spreader holding the leg in position.

In testimony whereof, I affix my signature.

SYLVESTER A. SOMMERS.