H. W. BOLENS.

CHAIR IRON.

APPLICATION FILED DEC. 6, 1918.

1,297,436. Patented Mar. 18, 1919.

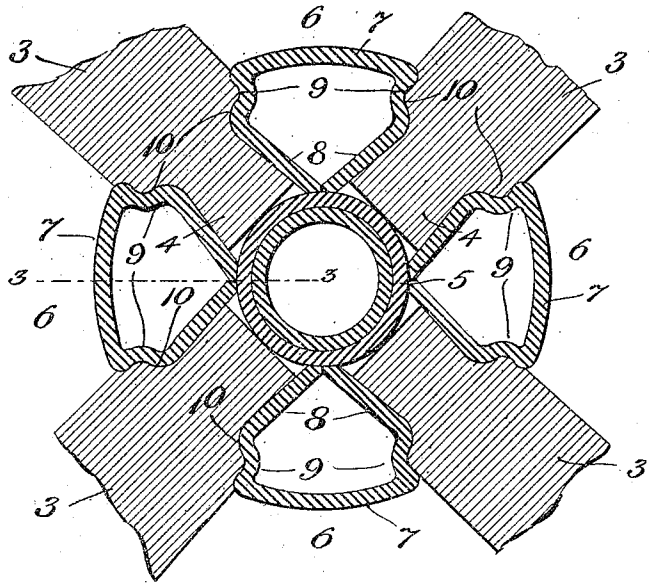
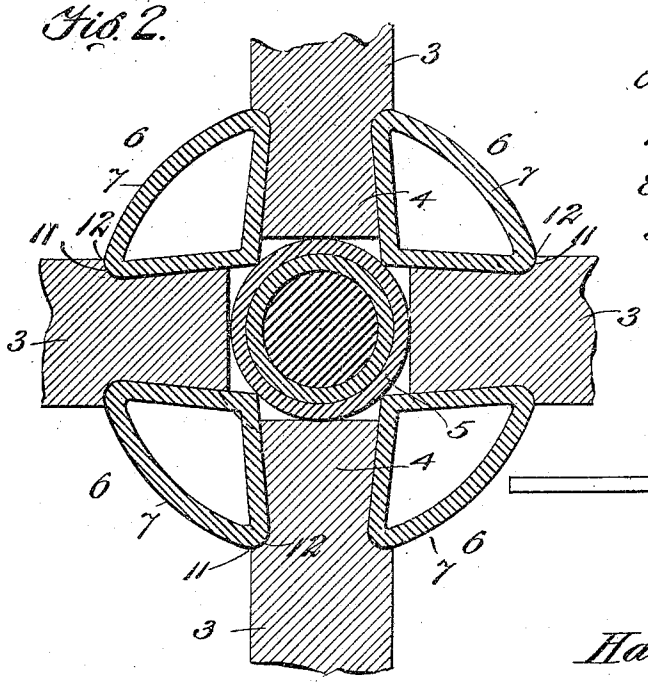


Fig. 1.

Fig. 2.



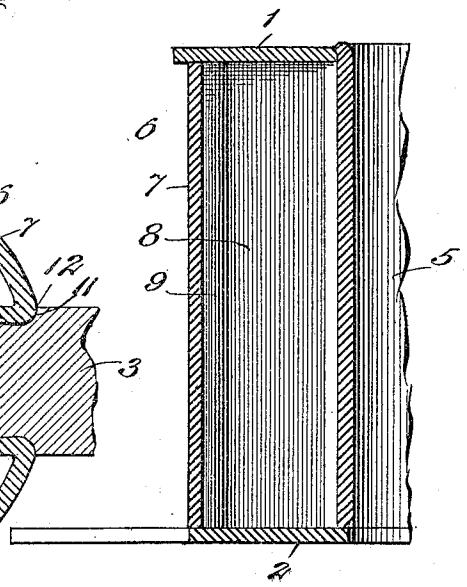


Fig. 3.

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CHAIR-IRON.

1,297,436. Specification of Letters Patent. Patented Mar. 18, 1919.

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To all whom it may concern:

Be it known that I, HARRY W. BOLENS, a citizen of the United States, residing at Port Washington, in the county of Ozaukee and State of Wisconsin, have invented new and useful Improvements in Chair-Irons, of which the following is a specification.

This invention relates to improvements in chair-irons used in connection with revolving and tilting chairs, and has particular reference to the hubs thereof which form parts of the chair-bases.

The objects of the invention are to substitute for the usual heavy castings in such hubs lighter and equally as strong constructions of sheet-metal, thereby securing a reduction in the cost of manufacture as well as a saving in the rates of transportation.

Other objects and advantages of the invention will hereinafter appear, and the novel features of the invention will be particularly pointed out in the claims.

Referring to the drawing—

Figure 1 is a transverse sectional view of a hub for chair-irons constructed in accordance with my invention;

Fig. 2 is a similar view of a slightly modified construction; and

Fig. 3 is a vertical sectional view on the line 3—3 of Fig. 1.

Like numerals of reference indicate like parts in all the figures of the drawing.

In carrying my invention into practice, I employ the usual top-plate 1 and bottom-plate 2, between which are located the chair-legs 3, the latter plate being perforated at intervals for the reception of upwardly disposed screws (not shown) which enter the undersides of the legs.

The legs are, at their inner ends, formed with the dove-tailed tenons 4, and abut against the hub-sleeve 5. Where the hub is cast, it is usual to cast integral with the hub-sleeve and top-plate radiating flanges to form sockets for the inner ends of the legs, or, when the hub is formed of sheet-metal, radial flanges, generally in the form of angle or channel-irons, are secured to the top-plate and at times also to the hub. This construction, whether cast or otherwise formed, leaves spaces between the chair-legs, and the latter are closed by means of filler-blocks of wood, such generally being merely triangular blocks of wood shaped to suit the flanges and at their outer faces curved so that when in position the hub has a general cylindrical appearance. In some hubs these filler-blocks are omitted.

By my invention, however, I propose to substitute for the angle and channel-irons, between which it is usual to locate the wood filler-blocks, either tubular or semi-tubular sections 6. These sections may be cut from a conveniently formed blank of the desired shape in cross-section into convenient lengths, and positioned at equidistant points about the hub-sleeve 5. Various means may be employed to secure these tubular sections in place, but I prefer to spot-weld them to the upper or top-plate 1 and to the hub-sleeve at proper points, although, if desired, I may utilize the well-known expedient of tongues and mortises.

As stated, the sections 6 may be tubular or semi-tubular in cross-section, but in each of the instances shown (Figs. 1 and 2) I have shown them as tubular. However, I do not wish to be understood as being limited in this respect, nor in respect to the shape in cross-section.

In the preferred form, illustrated in Fig. 1, each section comprises an outer segmentally shaped wall 7, and two inner converging side-walls 8, which, of course, may meet or be spaced apart, as preferred. Each of the converging side-walls 8, near its juncture with the segmental wall 7, is bent or off-set to produce a shoulder 9.

In the construction illustrated in Fig. 2, the same form of section 6 is employed with the exception that the off-sets or shoulders 9 are omitted.

The inner ends of the chair-legs, as before stated, are formed with the tenons 4, the dove-tailed sides of which agree with the converging walls 7 of the sections, hence in the instance illustrated in Fig. 1, in advance of the sides of the tenons, the latter are formed with shoulders 10, corresponding with the off-sets or shoulders 9 of the sections, whereas, in Fig. 2, the usual vertical shoulders 11, are employed, the latter abutting against the vertical angular shoulders 12 of the sections.

In either instance, the result is the same, the legs being held firmly in place at their inner ends and prevented from spreading by the bottom-plate and attaching-screws. By utilizing the spaces between the sections as the leg-sockets, instead of forming such sockets in the sections themselves, I am en-

abled to use tubular or semi-tubular sheet-metal and employ one of the walls thereon, in this instance, the outer curved or segmental wall 7, as a filler between the legs, and by so doing obviating the necessity of employing the usually present filler-block of wood. Of course, if desired, the curved wall 7 of the section may be painted or otherwise ornamented to represent the usual wood filler-block.

A hub thus constructed will be found to be as rigid and strong as a cast hub, and yet may be constructed much lighter and cheaper; and furthermore, the smooth surfaces of the sections permit of a better finish than does cast-metal, so that altogether the chair is lighter, just as strong and durable, and may be produced for less.

I am aware that it is not novel in the art to employ sheet-metal sections formed of channel-iron and, therefore, to this extent, they might be termed semi-tubular, but in all such instances of which I am aware, such sections have been positioned so that their flanges are disposed outward instead of inward from the sleeve of the hub. Such a disposition required the utilization of wood filler-blocks, or, if such were not used, then recesses or pockets occurred between the chair-legs and became depositories for accumulations of dust and dirt, thus rendering the chair unsightly.

Having described my invention, what I claim, is:

1. A chair-hub, comprising a central sleeve, a top-plate connected thereto, and a series of hollow sections secured about the sleeve and combining to form intermediate leg-receiving sockets, said sections having their outer portions closing the spaces between said leg-receiving sockets.

2. A chair-hub, comprising a central sleeve, a top-plate connected thereto, and a series of hollow sections angular in cross-section, secured about the sleeve and combining to form intermediate leg-receiving sockets, said sections having their outer walls closing the spaces between said leg-receiving sockets.

3. A chair-hub, comprising a central sleeve, a top-plate connected thereto, and a series of hollow sections substantially angular in cross-section and having an outer segmental wall, secured about the sleeve and combining to form intermediate leg-receiving sockets, the said outer segmental walls of said sections closing the spaces between said leg-receiving sockets.

4. A chair-hub, comprising a central sleeve, a top-plate connected thereto, and a series of tubular sections secured about the sleeve, each of said sections comprising an outer and opposite side converging walls, said sections combining to produce intermediate leg-receiving sockets and the outer walls of the sections serving to close the spaces between said sockets.

5. A chair-hub, comprising a central sleeve, a top-plate connected thereto, a series of tubular sections secured about the sleeve, said sections being substantially triangular in cross-section and comprising opposite vertical converging side walls and an outer intermediate connecting wall, the said side walls of each two adjacent sections combining to produce a dove-tailed leg-receiving socket and the outer wall of each section serving to fill a space between two of said sockets, and chair-legs having inner dove-tailed ends fitting within the sockets and provided with vertical shoulders in front of said ends engaging corresponding shoulders on the sections.

6. A chair-hub, comprising a central sleeve, a top-plate connected thereto, a series of tubular sections secured about the sleeve, said sections being substantially triangular in cross-section and comprising converging side walls and an outer intermediate connecting wall having shoulders formed at its ends, chair-legs having their inner ends shaped to fit the sockets and provided with shoulders corresponding to those of the sections, and a bottom-plate connecting the legs.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HARRY W. BOLENS.

In the presence of—
T. A. BOERNER,
CHAS. J. TRAVERS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."