

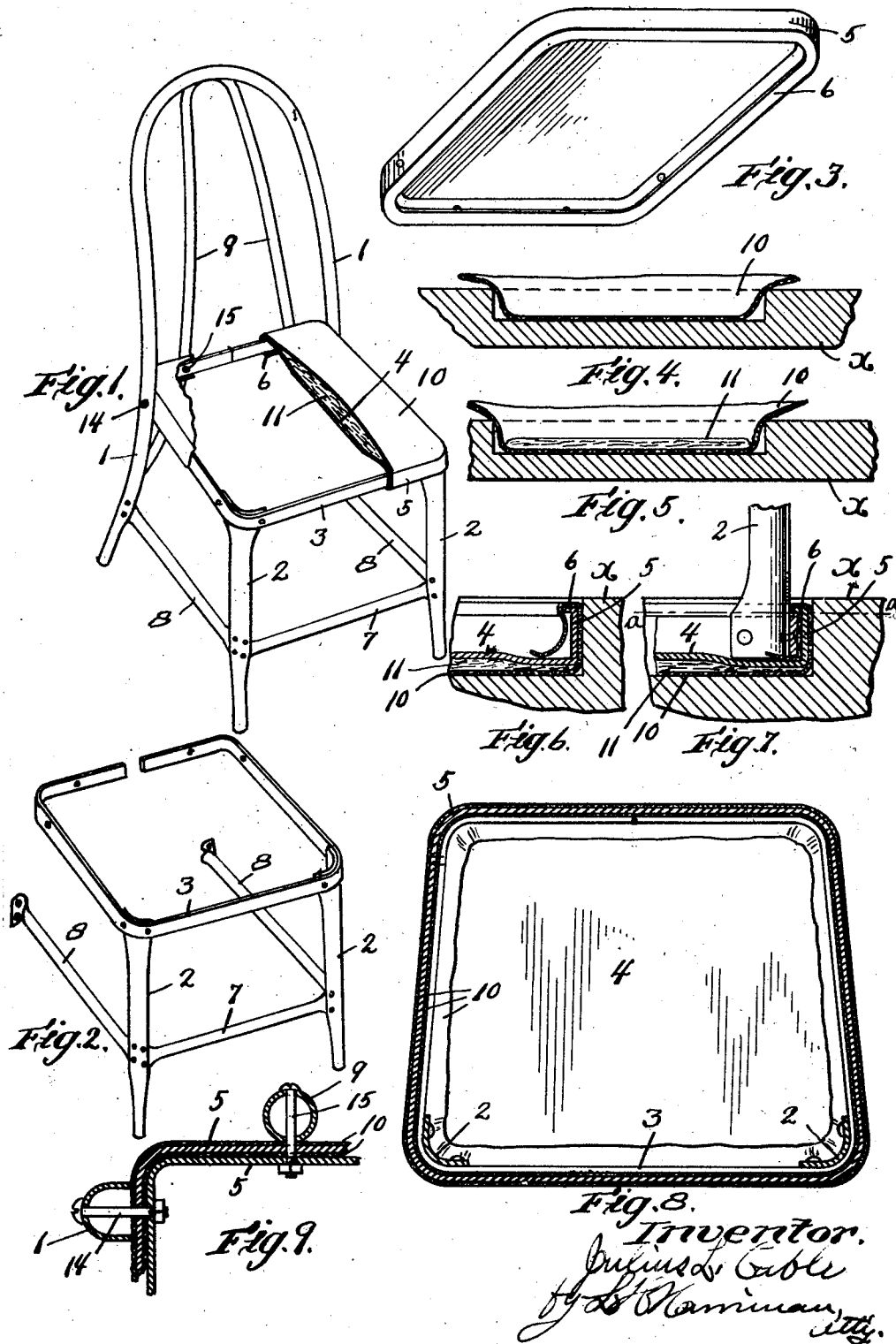
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J. L. CABLE

CHAIR

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UNITED STATES PATENT OFFICE.

JULIUS L. CABLE, OF BOSTON, MASSACHUSETTS.

CHAIR.

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This invention relates to chairs, or the like, in which the seat bottom and legs are constructed of metal, the seat bottom being formed from an approximately flat sheet metal plate.

With articles of this type, it is desirable that the seat bottom be upholstered in some manner, a textile cover and a padding between the cover and seat bottom usually being sufficient, but in such instances, where tacks cannot be driven into the frame or seat bottom, considerable difficulty has been encountered in providing means for securing the covering in place at a reasonable labor cost and in a manner which will be satisfactory in appearance.

The objects of my invention are to provide an improved construction whereby an all metal chair seat bottom may be provided with a rigid supporting means, and may be suitably covered or upholstered without difficulty and at small expense during the process of manufacture.

I accomplish these objects by providing a construction in which the means for attaching the chair legs to the seat bottom is combined with means for clamping the edge portion of the seat covering to the seat bottom permitting the entire operation to be rapidly performed.

For a more complete understanding of the invention, reference is made to the accompanying drawing, in which:—

Fig. 1 is a perspective view of a chair embodying my invention, partly broken away.

Fig. 2 is a similar view of the front legs and their connecting means.

Fig. 3 is a detail view of the seat bottom in perspective, showing the under side thereof.

Figs. 4, 5, 6 and 7 are detail sectional views, showing different stages of the operation of applying the upholstery material to the seat bottom.

Fig. 8 is a sectional view at line *a—**a* of Fig. 7.

Fig. 9 is a detail sectional view of the seat and back connections.

The particular construction of chair shown is not entirely essential to my invention, but illustrates a form in connection with which it is preferably employed and is especially advantageous, all parts of the chair shown aside from the upholstery, being made of metal.

In the chair illustrated the back frame and

rear legs are formed of a continuous strip of metal 1 of approximately U-shape, and bent transversely into semi-tubular, and, at some portions, a nearly tubular form. The front legs 2 are of similarly formed metal strips, the upper end portions being shaped to conform to the inner surface of the corner portions of a nearly rigid, or slightly flexible metal strip, or band 3, which is bent to conform to the approximately rectangular shape of a sheet metal seat bottom 4, the corners of which are rounded. Said seat bottom is provided with an edge flange 5, which is formed by bending the edge portion thereof downwardly at right angles, and the edge portion of said flange is intumed to form a lip 6, which extends at right angles to the flange 5, providing a recess or groove between the under side of the seat bottom and the lip, and into which the band 3 is adapted to be fitted and to extend for the entire length thereof.

The front legs 2 are rigidly secured by rivets to the band 3, at the inner sides of the corners, and are also connected to each other by a front brace 7 and to the rear legs by side braces 8. A U-shaped back brace 9 is also preferably provided within the back frame 1.

In assembling the portions of the chair above referred to, a form X is provided having a recess therein, which corresponds to the shape of the seat bottom. The cloth covering 10 for the seat, which will have been cut to suitable shape, is laid over the recess, as shown in Fig. 4, and suitable cushioning material 11 is placed therein, as shown in Fig. 5. The seat bottom 4 is then placed in inverted position on the material 11 and pressed into the form, so as to draw the covering tightly over the seat bottom, and then the edge portions of the covering 10 are drawn over the flange 4 and lip 5, so that it lies in the groove within the lip 6, as shown in Fig. 6, in which position it may be temporarily held by an adhesive, if it is found necessary to do so, but in most instances the sides of the form will hold the covering in position until its edge portions are clamped, as will now be described.

The band 3 is so formed that its ends meet when in position in the chair, at the back portion thereof, preferably near the middle.

The front legs 2 having been previously secured to the band 3 and to the braces 7 and 8, as shown in Fig. 2, the band 3 is slight-

ly collapsed by springing its end portions out of line and pressing its side portions towards each other, so that said end portions overlap to an extent, and then the front portion thereof is inserted in the front portion of the recess between the seat bottom and the lip 6 and then it is pressed downward until it is level and may be sprung into the recess thruout its entire length with its ends in abutment.

10 The band 3 is so formed that, when in this position, its sides will be pressed against the bottom of the recess in the seat bottom with sufficient force to clamp the edge portion of the covering 10 firmly against the bottom of the recess.

The drawing action on the covering caused by the action of forcing the seat bottom into the form, and the action of the band 3 in forcing the covering into the recess of the seat bottom, will ordinarily be sufficient to take up all slack material and pull out all wrinkles in the covering. In case, however, it should be found that the covering is not drawn over the seat bottom as tightly as is desired, sufficient material may be provided to extend beyond the edge of the clamping band, so that, by pulling thereon, all wrinkles may be pulled out, and if the band is found to clamp the covering too firmly to permit this to be done, its clamping effect may be relieved by pressing the abutting ends out of line and springing the sides toward each other. The covering may then be drawn as tightly as desired and reclamped by springing the band back into position as shown in Fig. 8. The clamping action of the band will then be increased by the attachment of the back and rear legs 1 and back brace 9, clamping bolts 14 being passed thru the legs 1, the side portions of the flange 5, near the back edge of the seat bottom, and thru the covering and the side portions of the band 3, and, by means of nuts on the inner ends of the bolts 14, the side portions of the band will be firmly clamped against the covering in the seat bottom recess, as shown in Fig. 9. If any additional clamping action is secured beyond that secured by the resiliency of the band or the action of pulling its ends into abutment, the abutting ends will be slightly separated, the construction permitting as strong a clamping action to be secured as may be desired, and at the same time the rear legs will be secured to the seat bottom and to the band 3. The legs will also be secured to the rear end of the braces 8, if this has not been done previously. The brace portion 9 will then be secured to the back flange portion of the seat bottom, in a similar manner, bolts 15 being passed thru the same and thru the flange 5 and end portions of band 3, so that, when the clamping nuts are tightened thereon, the end portions of the band will be clamped firmly against the covering, as shown in Fig. 9.

As shown, the middle portion of the brace

9 is secured to the middle portion of the frame 1, and the end portions of the brace 9 are extended beneath the seat and connected to the leg portions of the frame 1. As thus arranged all parts of the chair will be firmly secured together and the upholstery securely attached to the seat bottom.

If it is desired to renew the upholstery, this may be readily accomplished by removing the bolts 14 and 15, so as to release the band 3, these bolts being made detachable for this purpose.

While the above described construction is primarily designed for use in connection with a chair, it may be employed to advantage in holding a covering in position on a table top, which use is deemed to be equivalent to the use herein claimed.

In addition to the advantages secured by reason of the facility with which the seat covering is drawn into position and the effectiveness with which it is secured, by means of the above described construction, the means provided for secure attachment of the legs is particularly advantageous, as the additional rigidity secured by providing the relatively heavy metal strip 3, to reinforce the comparatively thin flange on the edge of the seat bottom, is of great importance, and at the same time a means for attaching the front legs is provided which is not visible from the front.

I claim—

1. In a chair, a seat comprising a sheet metal plate having a depending edge flange extending about the same, a seat covering extending over the upper surface thereof and about said flange onto its inner side, a metal clamping strip arranged beneath said plate and having means to clamp the same against the inner side of said flange, to clamp said covering between said flange and strip, and supporting legs having means for securing the same to said clamping strip.

2. In a chair, a seat comprising a sheet metal bottom plate having a depending flange extending about the edge thereof, said flange having an inturned lip at its edge forming a recess between said lip and the under side of the plate, a covering extending over said plate and about said flange and into said recess, a flexible metal strip closely fitted in said recess and extending thruout the length thereof, means to clamp said strip against the bottom of said recess to secure the same to the plate and to clamp the covering thereto and supporting legs for said seat attached to said strip.

3. In a chair, a sheet metal seat bottom having a depending edge flange extending continuously about the entire edge thereof and determining the contour of the seat, said flange having an inturned lip at its lower edge forming a recess between the same and the under side of the seat bottom a semi rigid

metal strip fitted in said recess and extending thruout the length thereof, with its ends in abutment, at the rear of the seat, a covering extending over said seat bottom and about 5 said flange between said strip and the bottom of said recess, a pair of legs rigidly secured to said strip at the front of the seat and a second pair of legs at the rear thereof having removable means engaging opposite end portions of the strip to clamp the strip and legs 10 to the adjacent portions of said flange.

4. In a chair, a sheet metal seat plate having a depending edge flange extending continuously about the entire edge thereof and having an inwardly projecting lip at its lower end 15 forming an internal recess, a seat covering extending over said plate and about said flange into said recess, a transversely rigid metal strip adapted to be sprung into said 20 recess, so that it ends abut, and arranged to fit closely within the recess and clamp the

edge portion of the covering against the bottom thereof and legs for the chair rigidly attached to said strip.

5. In a chair, a sheet metal seat plate having a vertically depending flange extending 25 about the entire edge thereof, said flange having a lip at its lower edge projecting right angularly inward therefrom, and upholstery covering extending over the plate and flange 30 and about said lip onto the inner side of the flange, a relatively rigid metal strip extending for the length of the flange and arranged to fit closely between said lip and the under side of the plate and to clamp the covering 35 against the lip and the inner side of the flange, and legs secured to the inner side of said strip.

In testimony whereof, I have signed my name to this specification.

JULIUS L. CABLE.