June 20, 1933. B. G. RAND 1,914,646

METALLIC FURNITURE

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Fig. 1

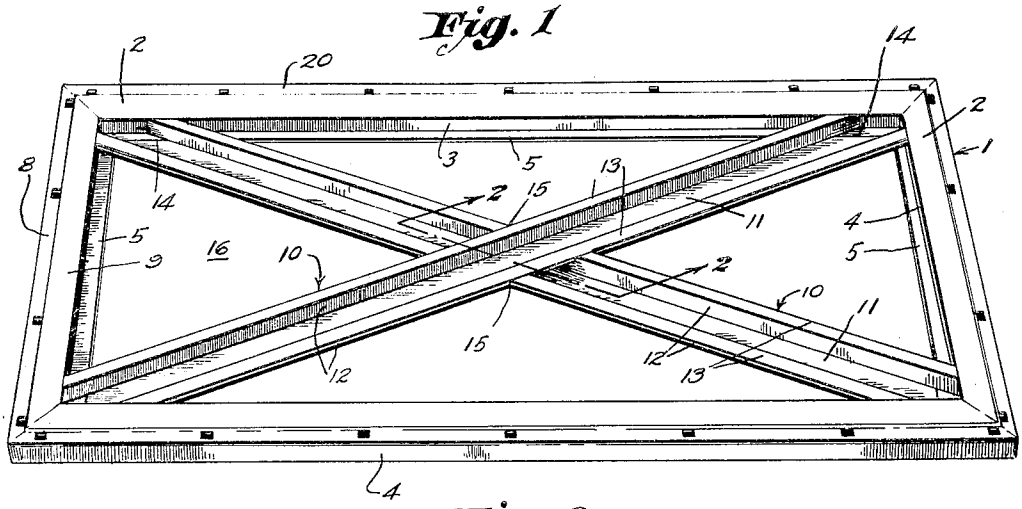



Fig. 2

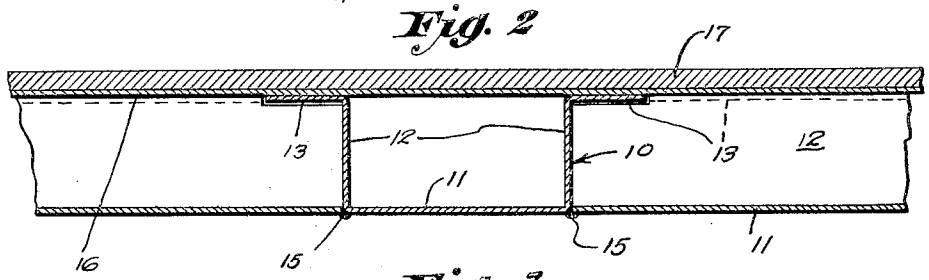
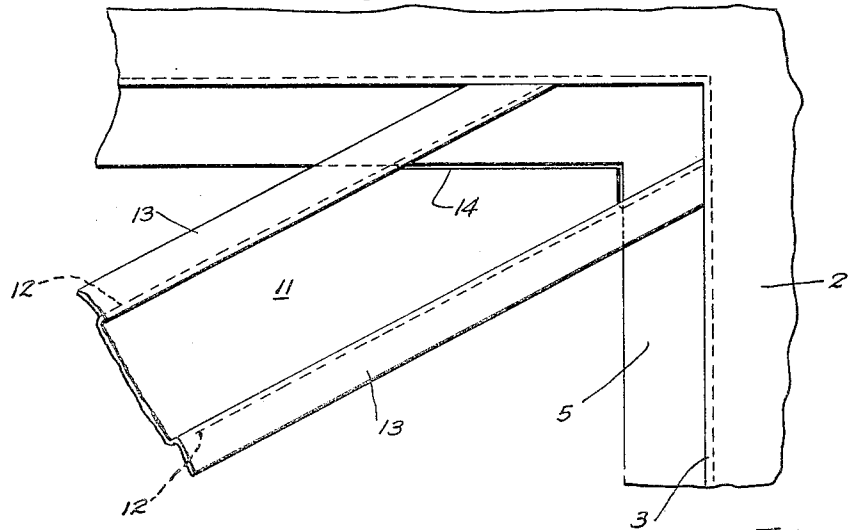



Fig. 3




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Fig. 5

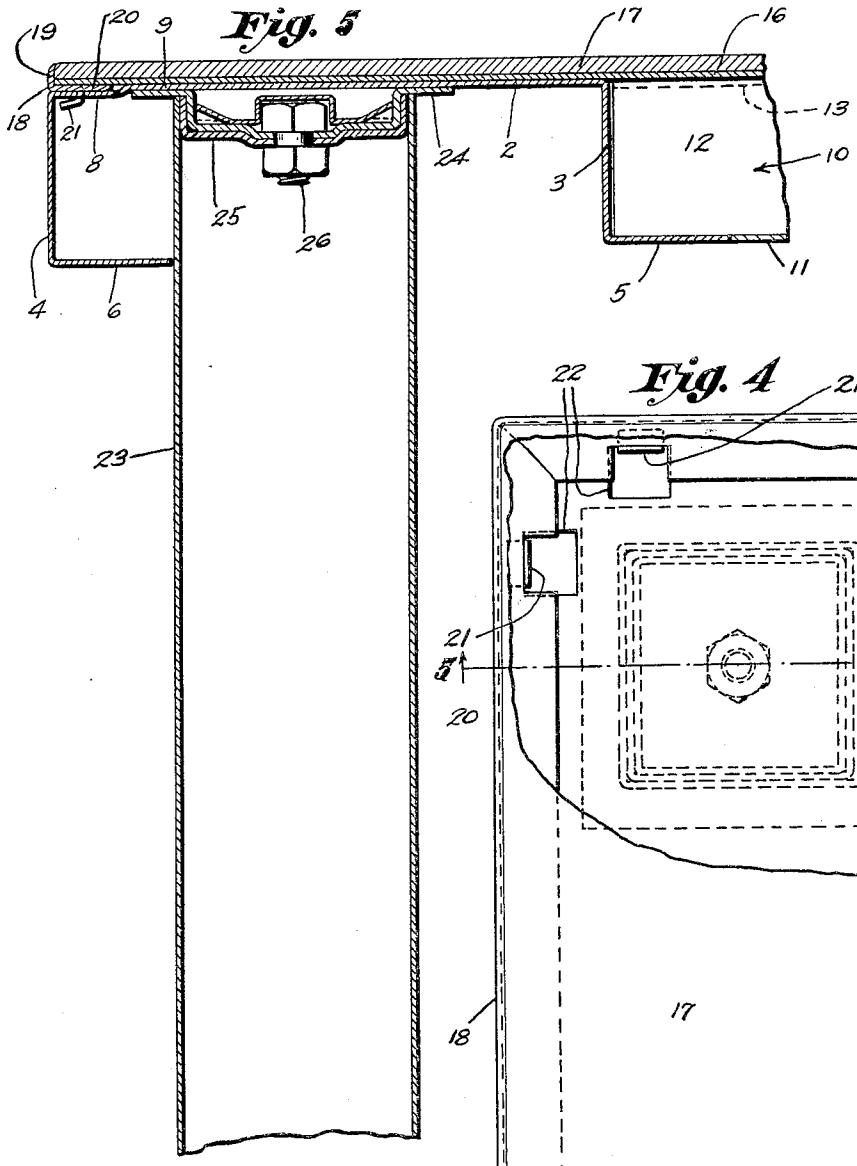
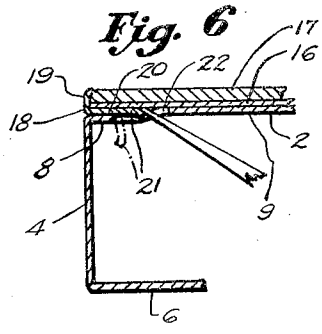



Fig. 4




Fig. 6




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Patented June 20, 1933 1,914,646

# UNITED STATES PATENT OFFICE

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## METALLIC FURNITURE

Application filed February 12, 1930. Serial No. 427,842.

The present invention relates to metallic furniture and has particular relation to top construction for metal office desks.

One of the objects of the present invention is to provide a desk top of the character described provided with a cover portion of fibrous or other material secured thereto by a bead or binding strip having an interlocking connection with the body portion of the top and which may be quickly and easily attached and detached without the use of bolts or screws and without employing any particular type of tool.

Another object of the invention is to provide a top construction of the character specified which is of light weight but provided with stress reducing members so arranged as to minimize the flexing of the top in all directions.

Other objects of the invention will appear from the following specification and the appended claims.

In the accompanying drawings:

Fig. 1 is a perspective view of the frame of a desk top constructed in accordance with the present invention.

Fig. 2 is a fragmentary sectional view on a larger scale taken on line 2—2 of Fig. 1.

Fig. 3 is a fragmentary view on a larger scale of a portion of the improved construction and illustrating the manner of connecting the stress reducing members to the marginal frame portion of the top.

Fig. 4 is a fragmentary plan view, with parts proken away, showing the improved means of securing the binding strip to the frame of the top.

Fig. 5 is a fragmentary vertical sectional view taken on line 5—5 of Fig. 4.

Fig. 6 is a detail sectional view illustrating the manner in which the improved binding strip is secured to the frame of the top.

Referring to the drawings, a desk top construction in accordance with the present invention is shown as comprising a rectangular outer frame 1, having a horizontal top portion 2 provided with downwardly extending inner and outer flanges 3 and 4 terminating at their lower edges with inwardly extending horizontal flanges 5 and 6 respectively. The portion 2 is preferably provided with a step or shoulder 7 which divides this portion of the frame into an outer horizontal portion 8 and an inner horizontal portion 9 offset vertically with respect thereto.

The frame 1 is reinforced by means of a pair of diagonally extending stress reducing members 10 of channel construction each of which comprises a bottom portion 11 having vertically extending parallel flanges 12 each terminating at their upper edges with outwardly extending horizontal flanges 13. The bottoms 11 of the channel members are cut away as indicated at 14, Fig. 3, so as to permit the vertical flanges 12 to rest directly upon the horizontal flange 5 of the outer frame member 1 to which they are secured by welding. One of the stress reducing members 10 is cut away as indicated at 15, Fig. 2, and is welded to the flanges 11 and 12 of the corresponding stress member 10.

It will be apparent from the foregoing that a very rigid construction is thus obtained and one which will prevent flexing even though it is lifted at one corner only.

A sheet metal plate 16 is secured to the offset portions 9 of the outer frame 1 and to the flanges 13 of the stress reducing members 10 in any preferred manner, such as by spot welding, with the outer edge thereof in overlapping spaced relation with respect to the portion 8, Figs. 5 and 6. A top 17 preferably of fibrous material is glued or otherwise secured to the plate 16 with its outer edge flush with the outer edge of the plate 16. The edges of this top are protected and secured against displacement from the metallic plate 16 by means of a bead or binding member 18 which surrounds the entire top. This member is preferably of angular construction, having an upwardly extending flange 19 which is bent inwardly adjacent its upper extremity for gripping engagement with the fibrous top 17 and with an inwardly extending horizontal flange 20 adapted to project into the space between the plate 16 and the portion 8 of the outer frame 1. This flange is provided with a plurality of cut-out portions or tongues 21 arranged at intervals throughout its length which are adapted to

register with apertures 22 provided in the portion 8 of the frame 1. These tongues are adapted to be bent downwardly through the apertures 22 and backwardly so as to secure the binding strip securely to the frame 1. It will be noted from inspection of Figs. 5 and 6 of the drawings that when the tongues 21 are thus deformed there is a tendency to draw the binding strip inwardly and the upwardly extending flange 19 thereof into intimate engagement with the edge of the fibrous top. This method of securing the binding strip in position is of considerable importance for the reason that no additional securing means such as screws, rivets or the like are required and it permits of a rapid assembly of the parts.

The top construction above described may be attached to vertical legs 23 as shown in Fig. 5 by means of a boss 24 which is welded to the portion 9 of the frame 1. The boss 24 is adapted to nest within a cup-shaped member 25 which is welded in the upper end of the leg 23 and is maintained in position by means of a bolt 26. This particular construction forms no part of the present invention and is more particularly described in my copending application filed March 19, 1930, Serial No. 437,087.

From the foregoing it is apparent that a desk top is provided which is of light weight and relatively great strength and one which may be assembled with a minimum of time and effort.

The invention may be modified in construction and arrangement without departing from the scope of the invention as defined in the appended claims.

What is claimed is:

1. In a top construction for furniture, a top body member, a cover secured thereto, and a marginal member carried by said body member for engagement with the edge of said cover, one of said members having a plurality of tongues adapted to be bent into interlocking engagement with the other.

2. In a top construction for furniture, a top body member, a cover secured thereto, and a marginal member carried by said body member for engagement with the edge of said cover, said marginal member having a plurality of tongues adapted to be bent into interlocking engagement with said body member.

3. In a top construction for furniture, a top body having the peripheral portion thereof offset from the plane of the central portion of the body, a cover secured to the central portion of said body and in overhanging relation to said offset portion, and a marginal bead having a substantially vertical flange for engagement with the edge of said cover and a substantially horizontal flange disposed between said offset portion and said cover and adapted to be bent into interlocking engagement with said body.

4. In a top construction for furniture, a top body having the peripheral portion thereof offset from the plane of the central portion of the body, a cover secured to the central portion of said body and overhanging said offset portion, and a marginal or edgeing member having a substantially vertical flange for engagement with the edge of said cover and a substantially horizontal flange disposed between said offset portion and said cover and having a plurality of tongues adapted to be bent into interlocking engagement with said body.

5. In a top construction for furniture, a top body having a peripheral portion offset from the plane of the central portion thereof and provided with a plurality of apertures therein, a plate secured to the central portion of said body and overhanging said offset portion, a cover secured to said plate, and a marginal strip or bead having a vertical flange for engagement with the edge of said cover and a substantially horizontal flange disposed between said plate and the offset portion of said body and provided with a plurality of tongues adapted to be bent through said apertures into interlocking engagement with the offset portion of said body.

6. In a top construction for furniture, a rectangular frame, a pair of intersecting channel bars extending diagonally of said frame and connecting opposite corners thereof, and a flexible sheet metal plate secured to said frame and to the flanges of said channel bars, said frame and channel bars having a plurality of web portions in substantially perpendicular relation to said metal plate.

7. In a top construction for furniture, a rectangular frame, a pair of intersecting channel bars extending diagonally of said frame and connecting opposite corners thereof, the flanges of said channel bars having outwardly extending horizontal portions, and a flexible sheet metal plate secured to said frame and to the horizontal portions of said channel bars.

8. In a top construction for furniture, a rectangular frame comprising a horizontal portion having downwardly extending inner and outer spaced flanges, a pair of intersecting channel bars extending diagonally of said frame and connected to the inner flange of said frame adjacent to the corners thereof, the flanges of said channel bars having outwardly extending horizontal portions disposed in the plane of the horizontal portions of said frame, and a plate secured to said frame and to the horizontal portions of said channel bars.

9. In a top construction for furniture, a top body member, and a marginal member positioned on the body member for engagement with the edge of the cover, one of said

members having a plurality of receiving portions and the other member having a plurality of distortable tongue members adapted to be bent into interlocking engagement in said receiving portions.

10. In a top construction for furniture, a sheet metal top plate, a plurality of laterally extending members connected to said top plate, a plurality of horizontal members connected to said laterally extending members and extending in parallel spaced relation to said top plate, whereby said laterally extending members provide web portions perpendicular to said top plate between said top plate and said horizontal members and are arranged and cooperate with said top plate to provide a substantially rigid top construction.

11. In a top construction for furniture, a sheet metal top plate, a plurality of members secured to said top plate having web portions extending laterally to said top plate, said web portions cooperating with each other and the top plate to provide a substantially rigid and non-flexible desk top construction.

12. In a top construction for furniture, a sheet metal top plate, a plurality of members secured to said top plate having web portions continuously interconnected and extending laterally to said top plate, said web portions cooperating with each other and the top plate to provide a substantially rigid and non-flexible desk top construction.

13. In a top construction for furniture, a top plate, a cover member of composition material covering the upper face of said top plate, a plurality of laterally extending members connected to the under face of said top plate, arranged and cooperating with said top plate to provide a substantially rigid top construction.

14. In a top construction for furniture, a top plate, a cover member of composition material covering the upper face of said top plate, a plurality of members secured to the under face of said top plate having web portions extending laterally to the top plate, said web portions cooperating with each other and the top plate to provide a substantially rigid and non-flexible desk top construction.

15. In a top construction for furniture, a sheet metal top plate, a cover member of suitable material covering the upper face of said top plate, a plurality of members secured to the under face of said top plate having continuously interconnected web portions extending laterally to the top plate, said web portions cooperating with each other and the top plate to provide a substantially rigid and non-flexible desk top construction.

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