W. CHIPPERFIELD.

CONSTRUCTION OF METAL CASES FOR CONTAINING DRAWERS, SHELVES, OR THE LIKE.

APPLICATION FILED FEB. 10, 1920.

1,401,041. Patented Dec. 20, 1921.

2 SHEETS—SHEET 1.

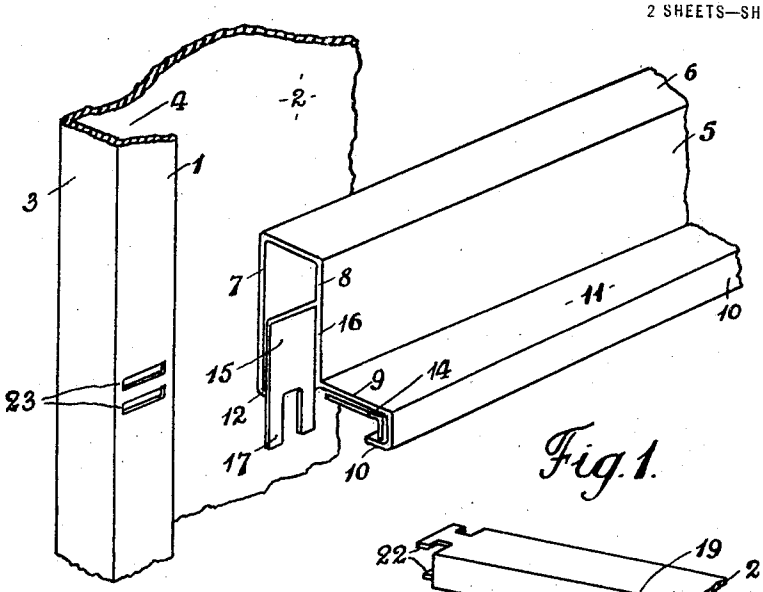
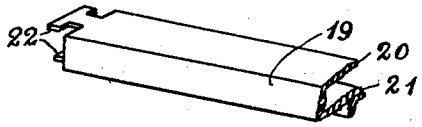


Fig. 1.



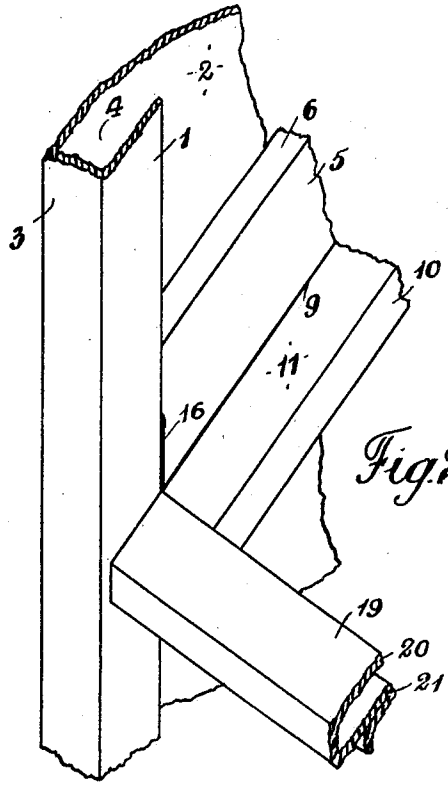


Fig. 2.

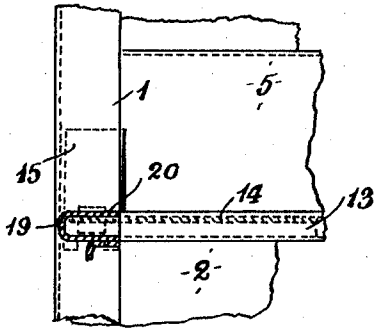


Fig. 3.

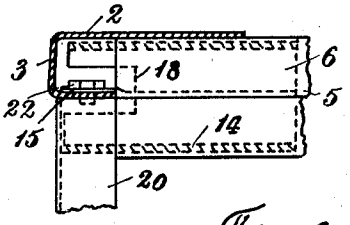


Fig. 4.

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2 SHEETS—SHEET 2.

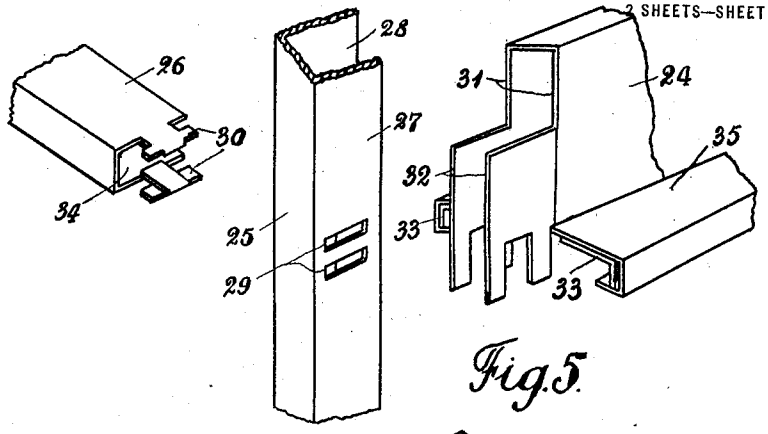


Fig. 5.

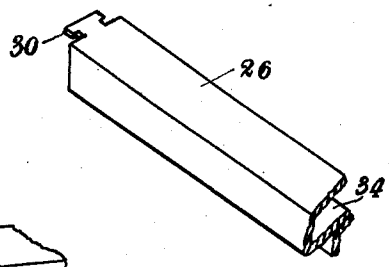


Fig. 6.

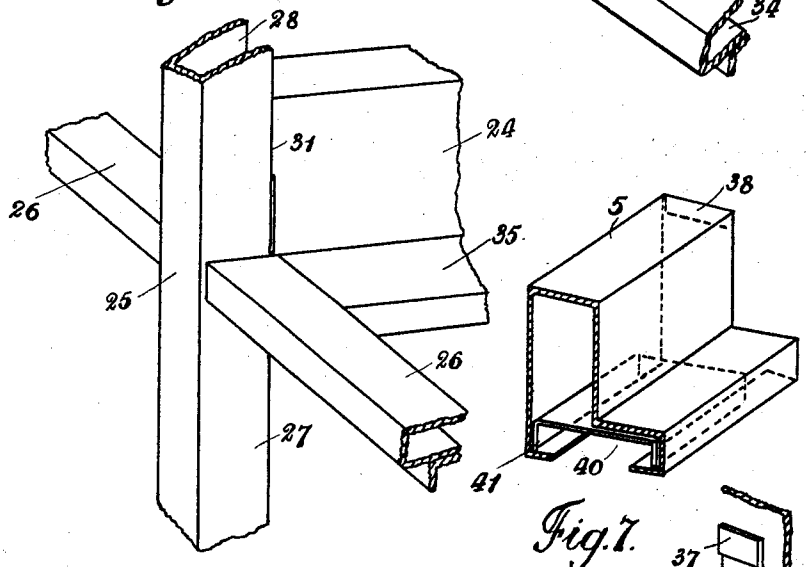
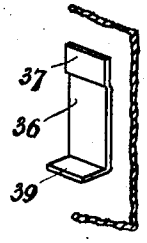


Fig. 7.



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UNITED STATES PATENT OFFICE.

WALTER CHIPPERFIELD, OF ROMFORD, ENGLAND.

CONSTRUCTION OF METAL CASES FOR CONTAINING DRAWERS, SHELVES, OR THE LIKE.

1,401,041. Specification of Letters Patent. Patented Dec. 20, 1921.

Application filed February 10, 1920. Serial No. 357,657.

To all whom it may concern:

Be it known that I, WALTER CHIPPERFIELD, a subject of the King of Great Britain, residing at Roneo Works, Romford, in the county of Essex, England, have invented new and useful Improvements in the Construction of Metal Cases for Containing Drawers, Shelves, or the like, (for which I have obtained a patent in France numbered 511,623, dated September 25, 1920,) of which the following is a specification.

The present invention relates to improvements in the construction of metal cases for containing drawers, or shelves and particularly is directed to the manufacture of such metal cases from sheet metal.

In the manufacture of such cases it is desirable that they should have a substantial and finished appearance so that they shall form presentable and attractive articles of furniture, and it is further desirable that the component parts shall be capable of being connected together in such manner that the means of connection are not observable and do not call for the employment of screws and bolts, and it is also preferable that the component parts shall be capable of being brought together and locked in proper relation to each other with as little use of tools as possible.

The object of the present invention is to provide a construction of jointing or connection by which these ends may be attained, and the present invention will be described with reference to a type of jointing or connection particularly applicable for connecting the front horizontal dividing members, and the drawer bearers to the side walls or the front vertical posts, and the construction of joint according to this invention will be readily understood by describing the same as applied to the parts mentioned.

In order that the invention may be clearly understood the same will be described with reference to the accompanying drawings in which Figure 1. is a perspective view of detached portions of a side wall, a drawer bearer, and a front horizontal dividing member constructed according to the present invention.

Fig. 2. is a perspective view of similar parts assembled.

Fig. 3. is a sectional side elevation, and Fig. 4. a sectional plan view of similar parts assembled, showing the method of locking the said parts together.

Fig. 5. is a similar view to Fig. 1. of detached portions of a front vertical post, a drawer bearer and two front horizontal dividing members.

Fig. 6. is a perspective view of similar parts assembled.

Fig. 7. is a perspective view showing a method of securing the rear ends of the drawer bearers to the rear wall of the case.

Referring to Figs. 1, 2, 3 and 4, the connection of the forward end of a horizontal dividing member and a drawer bearer at one side of the same to the front edge of a side wall will be first described. In this construction the front vertical edge 1 of the side wall 2, which is of sheet metal, is bent over at right angles in plan view and again bent rearward, also at right angles, so that in appearance in front elevation it presents a flat surface 3 of a suitable width, and a channel 4 is formed which is open at the rear. The bearer 5 which is to be fixed so that it extends through the depth of the case in contact with the interior surface of the side wall 2 and which is also constructed of sheet metal, is bent so that it presents an upper flat surface 6 with two downwardly extending flanges 7 and 8, the outer flange 7 which is to contact with the side wall 2 terminating, while the inner flange 8 which is to be at a distance from the side wall 2 is extended horizontally by bending its lower portion outwardly at 9 and again bending downwardly and inwardly at 10, so that a horizontal surface 11, is presented of a sufficient width to support the drawer, said horizontal surface 11 extending from the lower portion of the inner flange aforesaid.

The lower edge 12 of the outer vertical flange 7 of the drawer bearer 5, which is adjacent to the side wall 2, is also bent at right angles inward, so that a channel 13 is formed at the base of the drawer bearer 5 to receive a horizontally slidable bolt 14.

The two main vertical flanges 7 and 8 of the drawer bearer 5 are at such a distance apart that when the outer flange 7 is in surface contact with the interior of the side

wall 2, the inner flange 8 will fit against the edge 1 of the channel 4 which has been formed by bending the front edge 1 of the side wall 2 of the case, so that the exposed edge of the inner flange 8 of the bearer 5 will be flush with the returned edge 1 of the side wall 2. A tongue 15 extends from the forward edge of the inner flange 8 of the bearer and is so bent at 16 that it will pass within the returned edge 1 of the side wall 2, and the lower end of the tongue 15 is forked as shown at 17, while the bolt 14 aforesaid is slotted as shown at 18, so that it will pass on either side of the tongue 15.

The front horizontal dividing member 19 extending between the front edges of the side walls is formed of rectangular channel section having its flanges 20 and 21 directed inward, and the ends of the upper and lower flanges 20 and 21 are each formed with a tongue 22, one tongue located above the other, the tongues 22 being formed with enlarged ends. Slots 23 are formed in the surface of the returned edge 1 of the side wall 2 through which slots 23 the tongues 22 of the front horizontal dividing member 19 can be passed.

In fitting these parts together the tongues 22 at the end of the front horizontal dividing member 20 are first passed through the slots 23 in the returned edge 1 of the side wall 2, so that their enlarged ends extend into the front channel 4 of the side wall 2. The end of the drawer bearer 5 is then placed in position so that the exposed edge of the inner flange 8 fits in surface contact with the returned edge 1 of the side wall 2 in such a manner that the surfaces of the returned edge 1 of the side wall 2 is flush with the face of the inner flange 8 of the drawer bearer 5.

In fitting these parts together the end of the drawer bearer 5 must be placed at a higher elevation than it is eventually intended to assume in order that the forked tongue 17 of the drawer bearer 5 may extend above the tongues 22 of the horizontal member 19 which protrude into the channel 4 of the side wall 2. By then bringing down the drawer bearer 5, the fork 17 of the tongue 15 will pass astride the necks of the tongues 22 of the front horizontal member 19, and the drawer bearer 5 will rest with its horizontal carrying surface 11 flush with the upper flange 20 of the front horizontal member 19, and the tongues 22 of the latter cannot leave the slots 23 owing to their engagement with the forked tongue 17 of the drawer bearer 5.

The parts having been so placed, the bolt 14 aforesaid is slid so that its end enters between the upper and lower flanges 20 and 21 of the front horizontal member 19, which not only prevents the drawer bearer 5 being lifted out of place, but also insures that the horizontal surface 11 of the drawer bearer 5 shall register flush with the upper flange 20 of the front horizontal member 19.

Referring now to Figs. 5 and 6 a similar construction of the joints between the end of a horizontal drawer bearer 24, the front vertical post 25 of the casing, and the ends of two front horizontal dividing members 26 will now be described. The front post 25 is formed of rectangular channel section, its flanges 27 and 28 facing inward, and two slots 29 are formed at proper positions in each flange 27 and 28 to receive the enlarged headed tongue 30 extending from the ends of the channel section front horizontal dividing members 26.

In this case both the inner and outer flanges 31 of the drawer bearer 24 have forwardly projecting fork ended tongues 32 to enter between the flanges 28 and 29 of the front post 25, one such fork tongue 32 engaging the tongues 30 on the other front horizontal dividing member 26, so locking the horizontal members in position. The bolt 33 carried by the drawer bearer 24 is then slid forward and engages in the channel 34 of both of the front horizontal members 26, alines the surfaces 26 with the horizontal surfaces 35 of the metal drawer bearer 24, and prevents the drawer bearer 24 being lifted and the joint being accidentally thereby disengaged.

Referring now to Fig. 7, in order to secure the rear ends of the drawer bearers the following device may be adopted: For each drawer bearer, the rear wall of the case has secured to it, by spot welding or the like, a bracket 36, the upper part 37 of which stands away slightly from the surface of the back of the case in order to receive a downwardly turned flange 38 at the end of the drawer bearer. The lower part 39 of the bracket 36 is bent at right angles to the wall of the case and enters the channel 40 formed by the base of the drawer bearer, and a sliding bolt 41 in the channel 40 of the drawer bearer is then slid forward and passes below the right angled flange 39 of the bracket 36 and so prevents the drawer bearer from being lifted at its rear end away from the bracket 36 until the bolt 41 is removed.

From the foregoing description and examples it will be understood that the first part, such as the return flange of a side wall or a front vertical post is formed with slots through which pass enlarged headed tongues projecting from a second part, such as a front horizontal dividing member, while a third part, such as a drawer bearer, has a forked tongue, the fork of which passes astride the necks of the tongues of the second part and locks the latter in position, while the third part carrying the forked tongue has a bolt which is slid and engages

in the second part and locks all the three parts together so long as the bolt is in position.

Having thus described my invention what I desire to secure by Letters Patent of the United States is as follows:—

1. In a metal case construction, a flanged support having parallel, spaced slots in a flange thereof, a channeled member, tongues on said member and enlarged heads on said tongues, said tongues and heads being adapted to be disposed through the slots in said support flange and extended therebeyond, a supplemental support, a forked tongue carried thereby and adapted to straddle the tongues of said channeled member between said flange and the heads of the tongues, and a bolt slidably carried by said supplemental support adapted to engage said channeled member for locking said parts in connected relation.

2. In a metal case construction, vertical side members having flanges thereon, a horizontal dividing member of channeled section, said flanges having spaced, parallel, horizontal slots therein, headed tongues on said dividing member adapted to be disposed through said slots, a drawer support, a forked tongue carried thereby and adapted to straddle the tongues of said dividing member, a bolt slidably carried on said drawer support and adapted to be slid into the channeled portion of said dividing member for locking connection of the parts.

3. In a metal case construction the combination of sheet metal side walls bent to form parallel reverse flanges and having spaced parallel horizontal slots in the flanges, a sheet metal rear wall connecting said side walls, spaced front posts comprising channeled members slotted to correspond with the slots in said wall members, horizontal dividing members for spacing said front posts and side walls, said dividing members comprising channeled sections provided with tongues carrying enlarged heads and adapted to be disposed through the slots in said front posts and side wall members, drawer supports comprising flanged metal sections and provided with forked tongues adapted to straddle the tongues of said dividing members for connection therewith, certain of the flanges on said drawer supports being horizontally disposed and bent upon themselves to form guides, longitudinally slidable bolts in said guides and adapted to engage the channeled portions of said dividing members for locking all of said parts in connected and assembled relation.

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

WALTER CHIPPERFIELD.