(No Model.)

E. M. TURNER.

FRAME FOR TRUNKS, VALISES, &c.

No. 588,199. Patented Aug. 17, 1897.

Fig. 1.

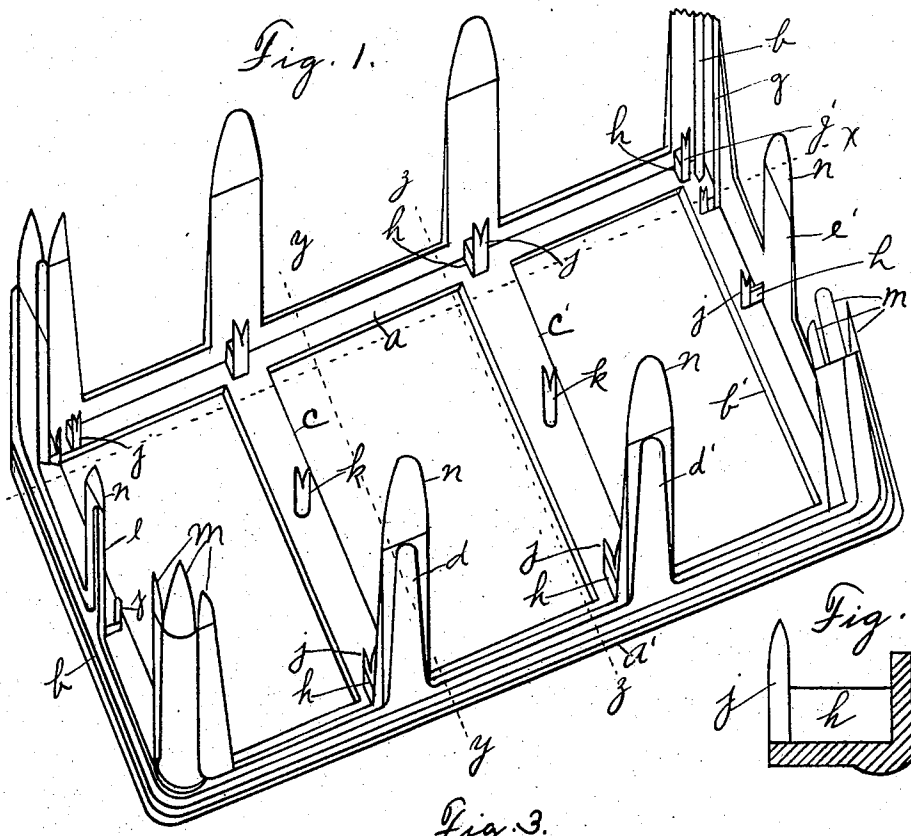


Fig. 2.

Fig. 3.

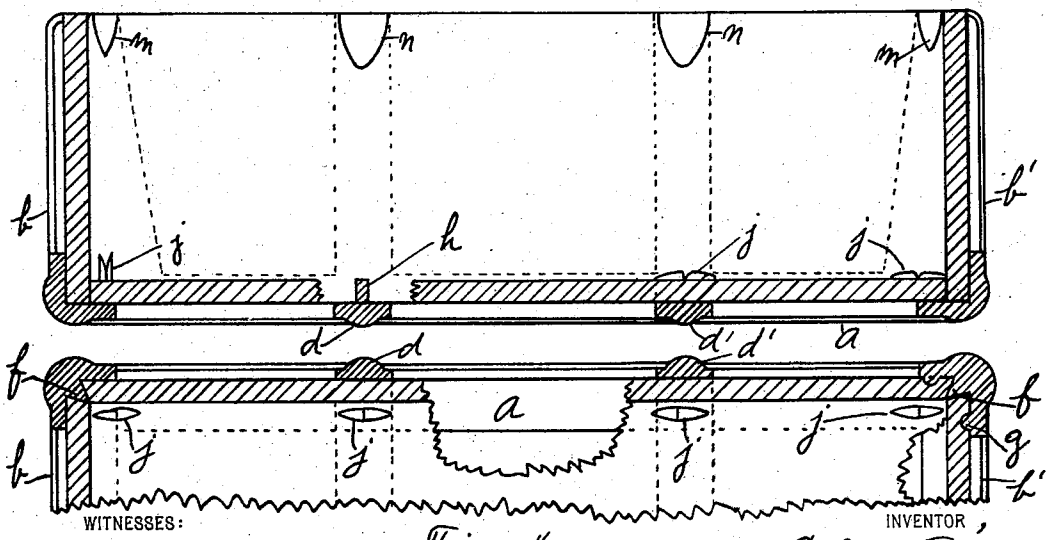


Fig. 4.

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FRAME FOR TRUNKS, VALISES, &c.

SPECIFICATION forming part of Letters Patent No. 588,199, dated August 17, 1897.

Application filed September 19, 1896. Serial No. 606,356. (No model.)

To all whom it may concern:

Be it known that I, EPHRAIM M. TURNER, a citizen of the United States, residing at Fort Worth, Texas, have invented a new and Improved Frame for Trunks, Valises, Boxes, and Like Articles, of which the following is a specification.

My invention relates to frames for trunks, valises, boxes, vehicle-bodies, and like articles; and the object is to construct frames which will be strong and durable, which will require no bolts or nails or tacks, and which can be cast or molded or formed in single pieces of metal.

The invention consists in the novel construction and combination hereinafter fully described, and more particularly pointed out in the claims.

Reference is had to the accompanying drawings, forming a part of this specification.

Figure 1 is a perspective view of a frame. Fig. 2 is a detailed sectional view showing a brad and a lug or rib cast integral with a side piece. Fig. 3 is a longitudinal vertical section through line X X of Fig. 1, showing a part of the frame and sections of the end and bottom and side pieces of a trunk or other article held in place by the frame. Fig. 4 is a horizontal sectional view in detail, showing construction of the corners and the adjusting of the end and bottom and side pieces.

Similar characters of reference are used to indicate the same parts throughout the several views.

The entire frame is preferably constructed in one piece. The bottom pieces *a* and *a'* and the end pieces *b* and *b'* are substantially angular in cross-section, being angular on the inside and curved on the outside, as shown in Figs. 1 and 2. The side pieces of the trunk or other article rest on the horizontal flanges of the side pieces. The bottom pieces of the trunk rest on the horizontal flanges of all the bottom pieces of the frame, and the end pieces of the trunk rest on the horizontal flanges of the end pieces of the frame and against the vertical flanges of the end pieces. The bottom of the trunk or other article aids in holding the side and end pieces of the trunk in place, since those parts extend down between the metal vertical flanges and the bottom piece of the trunk.

In order to add strength to the sides and bottom, bands *c* and *c'* are cast integral with the side pieces *a* and *a'*. These bands have ribs *d* and *d'* on the outside, as illustrated in Fig. 1 and at the bottom of Fig. 3. The ends are strengthened by uprights *e* and *e'*, cast with the end pieces of the frame, or, if desirable, these end uprights may extend under the bottom and thus add strength to the frame. The uprights at the corners are constructed as illustrated in Fig. 4. The flanges *f* hold the side and end pieces of trunks and other articles in place; but for some articles the flanges *f* may be dispensed with.

In order to give strength and to prevent the corner-uprights from flaring out at the top, ribs or flanges *g* are cast integral with and on the inside of the flanges of the corner-pieces. These ribs may not be necessary on the flanges toward the sides. The corner at the right side of Fig. 4 shows a rib on each flange and the corner at the left shows no ribs on the flanges. The purpose for which the frames must be made will be the guide in making the frame.

Another means of adding strength consists in lugs or ribs cast integral with the bottom flanges. At the outer ends of these lugs are cast forked or pronged brads integral with the lugs and the bottom flanges. Figs. 1 and 2 show the lugs *h* and brads *j*. Fig. 3 shows two of the brads clenched and one not clenched. Fig. 3 also shows one of the lugs *h*, the brad being cut away. (See the broken space in the section of the bottom piece of the trunk.) The brads hold the bottoms of trunks or other articles and the lugs hold the side and end pieces. Other brads K K may be provided to hold the bottom down.

In order to hold the end and side pieces down, brads *m* and *n* are cast integral with the top of the upright corner-pieces and the bands *c* and *c'* and the uprights *e* and *e'*, respectively. Fig. 3 shows how these brads are bent over the edges of a side piece of a trunk or other article and clenched. Before putting in the side and end pieces grooves have to be cut in the bottoms of these pieces corresponding with the lugs *h*. Grooves have to be made also in the ends of the side and end pieces for the ribs *g* when these ribs are used. Grooves or beds are cut in the top edges of the side

and end pieces of trunks for the brads *m* and *n* to rest in. For some purposes the frames cast in one piece might be too heavy. In order to make frames light enough, they may be formed in sections. Each section may contain one or more of the bands *c* and *c'*, or the frames may be formed in one piece and then cut into sections, as through lines *y y* and *z z* of Fig. 1.

For trunks, valises, and boxes it will be practical to make the frames of single pieces of metal.

It will be seen that every part of the frame, including the flanges, lugs, and pronged brads, are all so arranged that they can be cast in one mold. Frames for trunk-lids or other lids are made in exactly the same way as the frames already described. The end pieces may be curved.

I do not limit myself to the particular forms described, as many changes in the forms may be made without departing from my invention.

There will be no necessity for nails or tacks or bolts of any kind, as the lugs *h*, brads *j* and *k*, and brads *m* and *n*, and flanges *g* take the place of all fastening devices. These parts are all so arranged that they are formed integral with the frames.

For some purposes it may be practical to use the bottom rim with suitable cross-bands and without any uprights at the corners or elsewhere.

The frames are preferably formed of malleable castings, such as malleable iron. For light articles composition metal may be used, such as malleable brass.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A frame for the bottoms of trunks and like articles consisting of end and side pieces having vertical and interior horizontal flanges coming together and forming angles, brads and lugs formed on said horizontal flanges, all of said parts being formed of one piece of metal.

2. A frame for the bottom of trunks or like articles consisting of end and side pieces having interior angles and having their exterior sides curved, brads and lugs formed on the top of the said horizontal flanges, all of said parts being formed of one piece of metal.

3. A frame for trunks and like articles consisting of a bottom part extending on the four or more sides of the article and bands extending around the sides and bottom, said bottom part having an interior angle, and said bands having exterior ribs formed on the exterior thereof, all formed of one piece of metal.

4. A frame for trunks and like articles consisting of a single piece of metal having a bottom rim angular in cross-section, corner-uprights, and uprights intermediate the corners, all of said uprights having brads integral with the top parts, said brads being adapted to be bent and clenched over the sides, ends and corners of the trunk or other article.

5. A frame for trunks or like articles consisting of a bottom rim having vertical and horizontal flanges, said flanges coming together and forming an interior angle, corner-uprights, and bands intermediate the ends of the frame, lugs formed on said horizontal flanges and integral therewith and with said vertical flanges to hold the side pieces of the trunk or other article in place, all of said parts being formed of one piece of metal.

6. A frame for trunks and like articles consisting of a bottom rim having vertical and horizontal flanges, said flanges coming together and forming an interior angle, corner-uprights and bands intermediate the ends of the frame, brads integral with said horizontal flanges and bands adapted to hold the bottom of the trunk or article in place, all of said parts being formed of one piece of metal.

7. A frame for trunks and like articles consisting of a bottom rim having vertical and horizontal flanges, said flanges coming together and forming an interior angle, corner-uprights and bands intermediate the ends of the frame, lugs formed on said horizontal flanges and integral therewith and with said vertical flanges adapted to hold the side pieces of the trunk, and brads integral with said bands and horizontal flanges adapted to hold the bottom of the trunk in place, all of said parts being formed of one piece of metal.

8. A frame for trunks and like articles consisting of a bottom rim, corner-uprights and bands integral with said rim, lugs integral with said rim, and brads integral with said rim and uprights and bands, said bands and lugs being adapted to hold the bottom, sides and ends of the trunk or other article in place, all of said parts being formed of one piece of metal.

9. A frame for trunks or like articles consisting of a bottom rim having horizontal and vertical flanges, said flanges forming an interior angle, and corner-uprights integral with said rim, said uprights being curved on the exterior and having an interior angle, a flange dividing said angle, said flange being adapted to hold the side and end pieces of trunks or other articles in place, all of said parts being formed of one piece of metal.

10. A frame for trunks or like articles consisting of a rim having horizontal and vertical flanges, said flanges forming an interior angle and corner-uprights integral with said rim, said uprights having flanges forming interior angles, ribs on the interior of said flanges adapted to lock the side and end pieces of a trunk or other article in place, flanges dividing the interior angles of said uprights, all of said parts being formed of one piece of metal.

11. A frame for trunks and like articles consisting of an angular rim, corner-uprights integral with said rim, said uprights being

curved on the exterior and having flanges forming interior angles, ribs on the interior of said flanges, each of said uprights having a flange dividing its angle, said ribs and flanges being adapted to lock the side and end pieces of a trunk or other article in place, all of said parts being formed of one piece of metal.

12. Corners for trunks and like articles consisting of pieces of metal, each adapted to secure the three converging edges of a trunk or other article, each having angular extensions for securing the two bottom edges and an upright extending the entire length of the upright edge, said upright having two flanges forming an interior angle, ribs on the interior of said angles, a flange dividing said angle, and brads integral with said upright for clenching the top edges.

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