

G. W. HARTLEY.

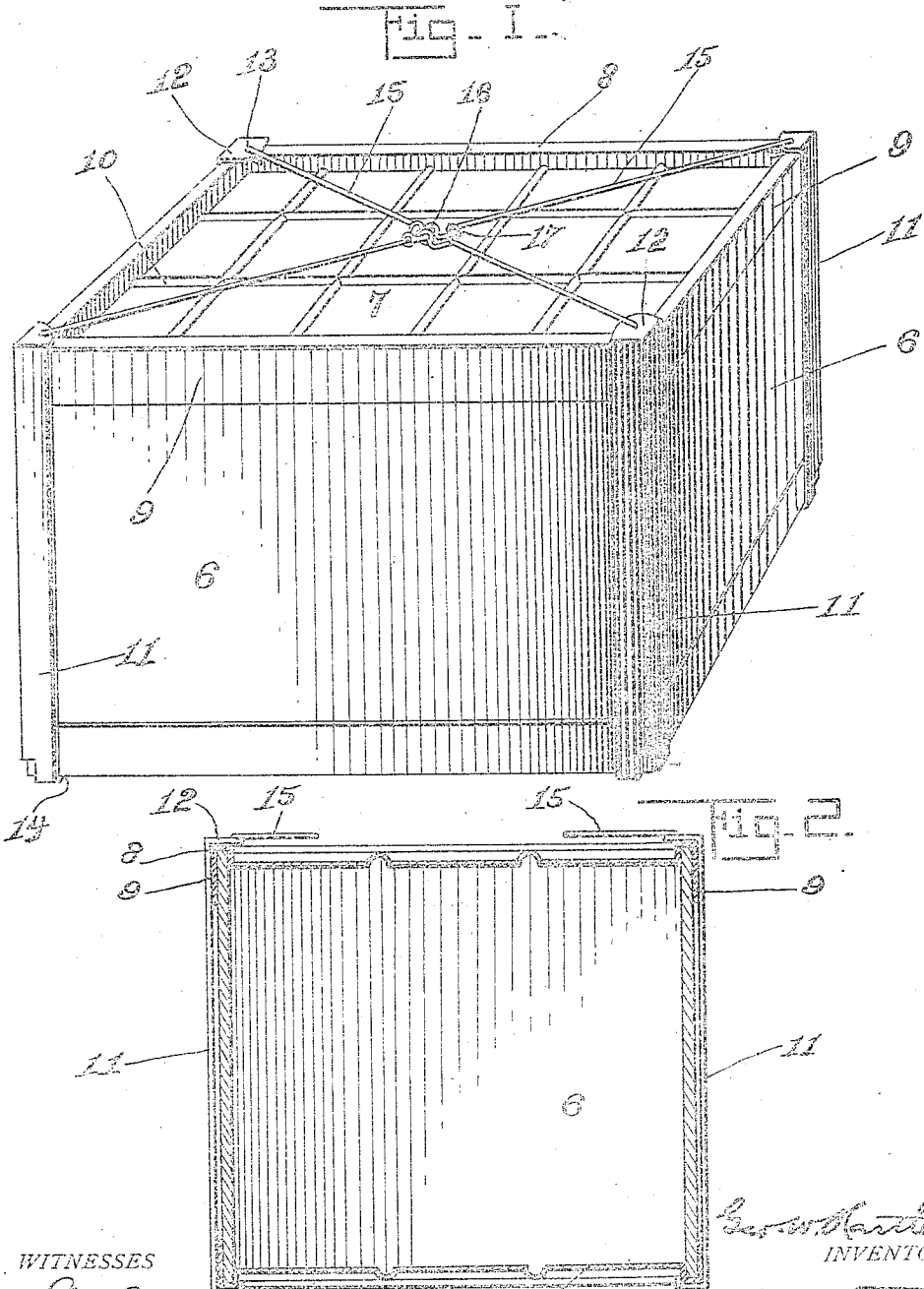
BOX.

APPLICATION FILED JULY 11, 1912.

Patented Oct. 29, 1912.

2 SHEETS-SHEET 1.

1,042,789.



WITNESSES

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BOX.

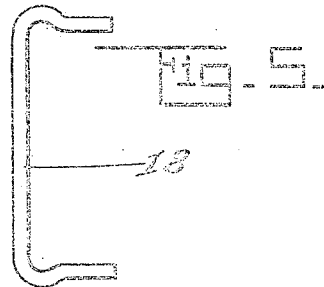
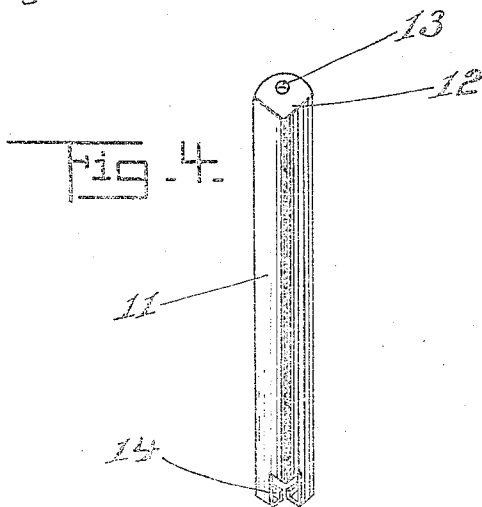
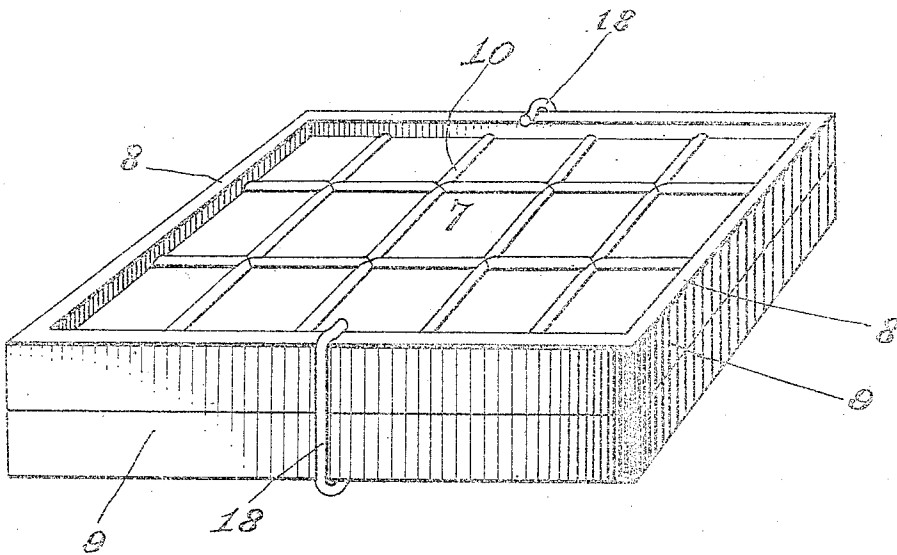
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2 SHEETS-SHEET 2.

FIG. 3.



WITNESSES

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UNITED STATES PATENT OFFICE

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322

 1.0×10^{-2} mol/l.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, George W. Harnsey, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful improvements in Bones, of which the following is a specification.

This invention relates to boxes, particularly adapted and intended for transportation purposes, and has for its object to provide an improved knock down box which may be made wholly of metal, or partly of metal and partly of other material, although the material of all the parts may be selected as desired.

A feature of the invention is the ease and facility with which the parts may be assembled or disconnected, and the parts may be made interchangeable, so that a number of 20 boxes can be set up and used without any particular selection of the parts of a particular box. When the box is knocked down, all the parts may be included within the top and bottom members, and so shipped in collapsed condition occupying but very little 25 space. Therefore the box may be set up to ship goods and knocked down to be returned to the shipper.

The key to success of being produced in 20 stamped silver metal, requiring no special fitting or machining, can be made in quantities at a comparatively low cost.

Further advantages will be apparent from the following description of one embodiment of the invention.

It is to be remembered that the invention is not limited to the form shown, but may be varied in many ways, in the actual construction of the article.

40 In the drawings--Figure 1 is a perspective view of the device up. Fig. 2 is a top plan view of the device, the lines numbered 1-10 on the drawing of Fig. 1 are shown in Fig. 2 as a plan view of one of the device parts. Fig. 3 is a view of one of the device parts in edge view to show the shape of the bar together, when collapsed.

Reference specifically to the drawings, it indicates the style and type of the work. There are no structural stress or plates of fiber, wood, metal or other material and to the extent that work is done. The bed may be made up of any kind of wood, or it may be made of metal. The top and bottom plates and headboard, and are preferably made of some heavy material, such as steel, or the desired

shape. Each comprises a sheet 7 the edges of which are bent to produce an outwardly extending groove, as indicated at 8, said groove having opposite side walls and an outer connecting wall, and said groove extends around the complete edge of the sheet. The outside flange 9 is preferably extended inwardly a sufficient distance to make a comparatively deep flange, and the groove is of proper width and size to receive the edges of the side walls 6 which are fitted therein, inside the outer flanges 9, as clearly shown in Fig. 2. These grooves support the side walls and hold the same in position, and it will be understood that one of the plates is used at the top and a similar plate at the bottom, the side walls being thus engaged in the grooves at both the top and bottom edges. Ribs 10 are preferably pressed into the plate 7, to give added strength and stiffness to the same. Each corner is formed by an angle piece shown in Fig. 4, and indicated at 11. These pieces are made of stamped sheet metal or the like, and at one end each piece has a transverse or cross piece 12 provided with a hole 13. At the opposite end the corner is cut out as indicated at 14, and the flanges are bent inwardly to form hooks 15, or proper size and shape to hook under or around the grooved edge of the bottom plate 7. The corner pieces are of proper length or height to fit the corners snugly, the end 12 fitting over the corner of the top piece, and the hooks 15 engaging under the corner of the bottom piece. The corner pieces are fastened together at the top, by any suitable means. I have illustrated wires 16 hooked at their ends through the holes 13 and joined at the middle by a suitable clip or clasp 17 fastened by a screw 18. Any other suitable form of fastener or device may be used for this purpose. A simple wire knot will do, and such fastener device serves the purpose of drawing the wires tight and so binds the corner pieces against the corner of the box and holds them tight.

Then, edging the box the side walls 6 are first fitted into the grooves of the top and bottom plates. The corner pieces are then hooked in the bottom plate and closed against the top plate, and the wires 15 are then drawn tight by the fastening device 13. This completes the box, and it will hold in shape under all ordinary conditions for transportation and storage purposes. It

collapse the box, the device 10 is unfastened permitting the opposite corner pieces to be slipped out and unhooked at the bottom and the side walls 6 can then be slipped out of the grooves. The side walls and corner pieces may then be placed between the top and bottom pieces which are closed or placed together. The wide side flanges 9 give sufficient space for this purpose. The wires 15 fold in against the corner pieces. Then the two top and bottom pieces are fastened together by any suitable means such as the clips 18, shown in Figs. 3 and 5, which snap over the edges of said pieces and hold them together. These clips will be supplied with the box, with proper directions for use. Other devices for the same purpose may be used. The box may thus be readily set up or knocked down for the purposes indicated, and when in collapsed condition will occupy but little space for storage. As stated, the parts are similar and may be interchanged or selected to build up the box wherever desired. The box can be used repeatedly. The side walls are merely slid into the frames formed by the top and bottom pieces, and require no special fastenings or reinforcements at the sides, being held in position by the grooves indicated, and the angle iron combination corner protection and locking device positively protects the corners.

I claim:

1. A box comprising side walls, top and bottom pieces provided with grooves around the edges thereof, in which grooves the top and bottom edges of the side walls fit when the box is set up, corner pieces connecting the top and bottom pieces, and means to at-

tach the corner pieces to said top and bottom pieces.

2. A box comprising side walls, top and bottom pieces having grooves around the edges thereof and detachable corner pieces, one end of each corner piece being provided with a hook engaging the said bottom, and fastening devices connecting the opposite ends of the corner pieces, to hold the same in place when the box is set up.

3. A collapsible box comprising side walls, top and bottom pieces having grooves and inwardly extending flanges around the edges thereof, in which grooves the upper and lower edges of the side walls fit, detachable corner pieces, and means to fasten the corner pieces to the top and bottom pieces, said flanges being of sufficient depth to inclose the side walls and corner pieces between the top and bottom pieces when the box is collapsed.

4. A collapsible box comprising side walls, top and bottom pieces having grooves around the edges thereof in which the upper and lower edges of the side walls fit, and corner pieces adapted to fit the vertical corners of the box when it is set up, each of said corner pieces having hooks at one end to engage under the bottom piece, and means to detachably connect the opposite ends of the corner pieces on the exterior of the top piece.

In testimony whereof, I affix my signature in presence of two witnesses.

GEORGE W. HARTLEY.

Witnesses:

ROSE KATZER,
GERTRUDE WILLIAMS.