No. 788,055. PATENTED APR. 25, 1905.

J. MATHY.

METALLIC CRATE.

APPLICATION FILED FEB. 27, 1904.

Fig. 1.

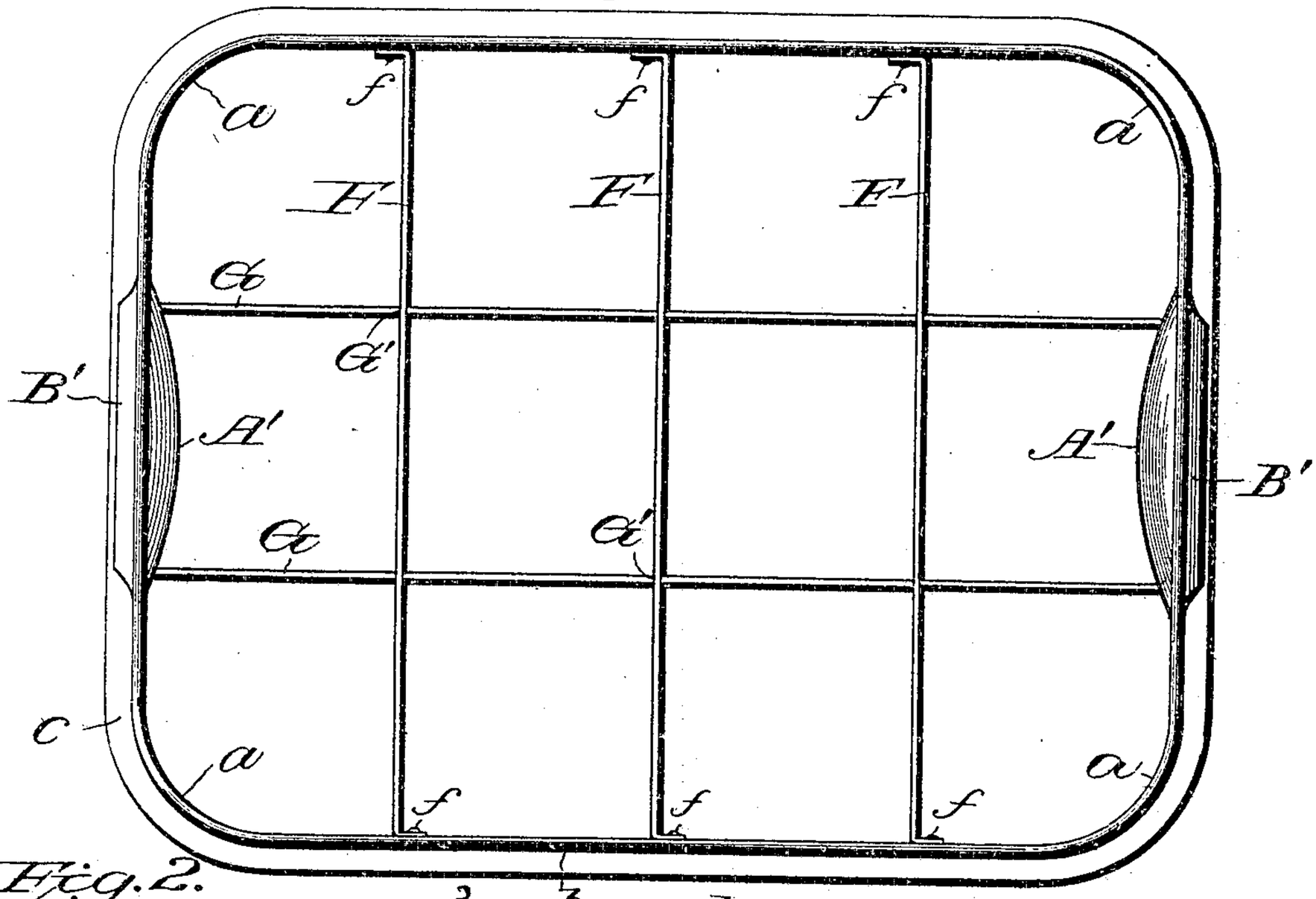

Fig. 2.

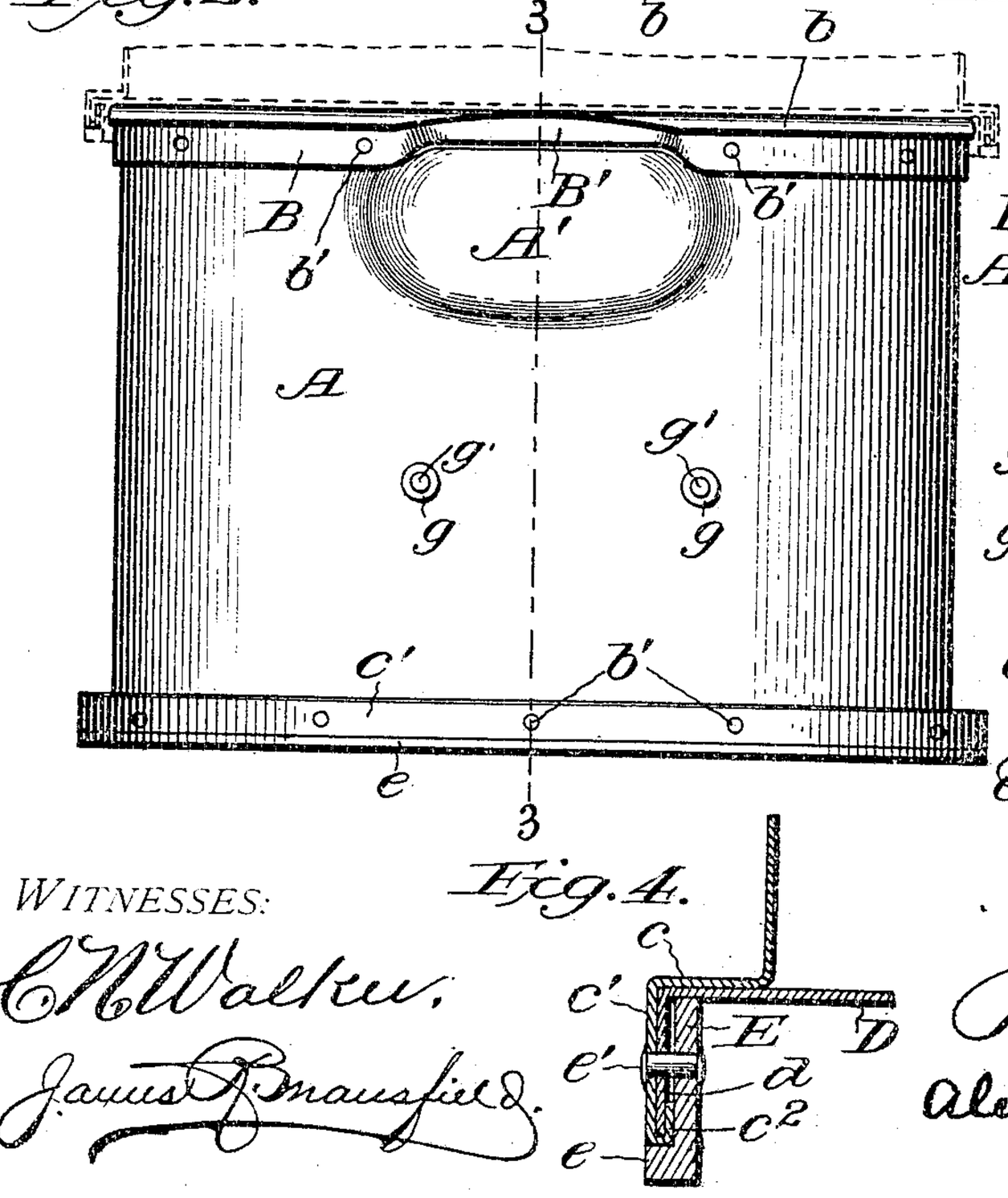

Fig. 3.

Fig. 4.

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UNITED STATES PATENT OFFICE.

JOSEPH MATHY, OF WASHINGTON, DISTRICT OF COLUMBIA.

METALLIC CRATE.

SPECIFICATION forming part of Letters Patent No. 788,055, dated April 25, 1905.

Application filed February 27, 1904. Serial No. 195,575.

To all whom it may concern:

Be it known that I, JOSEPH MATHY, of Washington, in the District of Columbia, have invented certain new and useful Improvements in Metallic Crates; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

This invention is an improvement in metallic crates especially designed for use in transporting bottles, and is an improvement upon the crate shown and described in my Patent No. 678,826, granted to me July 16, 1901, the object of the present invention being to simplify the construction of the crate shown in said patent so as to enable it to be more cheaply and economically manufactured by machinery and with less labor, at the same time preserving all the advantageous features of the crate shown in my said patent and obviating all the difficulties and objections which have been met with in the practical manufacture of such crates.

The object of the present invention is to provide an all-metal crate capable of standing rough usage, which will contain a number of bottles separated and the refrigerant, if desired, wherein one crate may be used as a cover for the other, while the lower crate will answer as a support for the superimposed crate, and they may be thus securely and closely packed in the wagons or for transportation in other vehicles and can be more conveniently handled than the crate shown in my said patent.

In the accompanying drawings, Figure 1 is a plan view of the improved crate. Fig. 2 is an end view thereof. Fig. 3 is a vertical section through one end of the crate on line 3 3, Fig. 2. Fig. 4 is an enlarged section of the connection between the bottom and sides of the crate.

The side and end walls A of the crate are made of sheet metal and in one piece. They are practically vertical and preferably rounded at the corners, as shown at *a*, so as not to present any sharp exterior or interior corners or angles. Around the top edges of the sides and ends of the crate is a strengthening-band B of strap metal, over which the upper ends of the sides and ends are flanged, as indicated at *b*, so that the body can be suspended from this band, which is further secured to the body by rivets *b'*, as shown. The said band B also forms the handles for the crate, it being bent laterally outward at each end, as indicated at B', while the end portion of the body adjacent to and below the handle parts B' are bulged inwardly, as indicated at A', so that any one can readily grasp the handles B' without cramping the fingers. This feature of forming the handles by bulging the straps outwardly and the end pieces inwardly is a feature of the invention, as it does not cause the handles to project beyond the bottom of the flanges and affords plenty of room for grasping the crates and does not materially weaken either the strap or the body nor materially lessen the internal capacity of the crate.

The lower edges of the sides and ends of the body are flared horizontally outward, as at *c*, for about three-eighths of an inch, then bent vertically downward, as at *c'*, and then bent vertically upward, as at c^2, so as to inclose the lower edge of a vertical flange *d* on the bottom D, which extends horizontally across the body and under the flanges *c*, against which it tightly fits, and is provided with the aforesaid downwardly-extending vertical flange *d* on its edges, fitting closely against the vertical flange *c'* on the body and within the upturned inner flange c^2. (See Fig. 4.) This forms a broad surface joint between the bottom and body, which is closed both by the galvanizing metal and by the rivets, and in order to stiffen this bottom joint a stout metal band E is placed within and against the flanges c^2 and *d*, said strap E preferably having an outwardly-extending flange *e* on its bottom, which underlies the flanges *c' d* c^2, as shown in Fig. 4, and protects the latter. The band E is secured to said flanges by means of rivets *e'*, as shown in Fig. 4.

The interior diameter and form of the band E is slightly greatly than and conforms to the exterior diameter and form of the top of the crate, so that when one crate is placed upon another, as indicated in dotted lines, Fig. 2,

the band E will slip loosely over the top of the lower crate and hold the upper crate in position thereon, the lower crate forming a support for the upper crate, while the upper crate forms a cover for the lower crate. Any number of crates may be thus placed one above another. By the lateral enlargement of the bottom flanges of the crates I am enabled to make their sides vertical and yet have them fit one upon another as described, and this effects a saving both of material and room as compared with the form shown in my said patent, wherein the sides of the crate were necessarily inclined for this purpose. The bottom flanges are also rounded at the corner of the crate, so they do not present any sharp angles which are liable to cause injury.

At a suitable distance above the bottom of the crate are arranged a transverse series of metal straps or stays F, the ends of which are attached to the opposite sides of the crate by means of rivets *f*, which are provided with washers *f'* on their outer sides to strengthen them. These stays F are intersected by longitudinally-arranged metal straps or stays G, the ends of which are secured by washers *g* and rivets *g'* at opposite ends of the crate, as shown in Fig. 1.

Where the stays F G intersect they are notched, as shown at F' G', so that their upper edges may be flush, and the notches also prevent their moving laterally relative to each other at the points of intersection. These stays do not have to be riveted together and as they present only broad sides to the bottles are, I think, preferable to the form shown in my said patent. The stays not only retain the bottles in relative position, but they also brace the crate against lateral and longitudinal strains, so that altogether the crate is very stiff and secure and well suited for its purpose.

The crates are preferably built out of black sheet-iron and after having been put together are submitted to a galvinizing-bath, and this bath while it coats the iron of the crate also seals all the joints thereof and renders the same water-tight, and I do not have to resort to soldering nor to the use of fillet process to make the corners tight, and owing to the rounded corners of the crate the same can be cleaned very rapidly and thoroughly.

Having thus described my invention, what I claim is—

1. The herein-described metal crate, composed of a body rounded at the corners, and having a reinforcing-band secured externally to and around the upper edge of the body, said band being bent at diametrically opposite points at the ends of the body, and the end of said body being bulged inwardly adjacent to the bends of the top band, a bottom piece of larger diameter than the body and projecting beyond the sides thereof but secured thereto by flanges, substantially as described, and a reinforcing-band of larger diameter than the top of the body and secured to the flanges of the bottom and body, substantially as specified.

2. The herein-described metal crate, having a strengthening metal band around its top and secured externally thereto, parts of the said band at diametrically opposite points being bent or flared outwardly to form handles, and the adjacent portions of the body being bulged inwardly to facilitate the grasping of the handles, substantially as described.

3. The herein-described metal crate, consisting of a body portion having a reinforcing metal band around its top, an outwardly-extending horizontal flange at its bottom provided on its outer edge with a downwardly-depending flange, and a bottom piece fitted within the outwardly-projecting flange of the body and having a downwardly-projecting flange fitted to the downwardly-projecting flange of the body, and a metal reinforcing-band L-shaped in cross-section fitted within the parallel flanges of the bottom and body and having its L part extending outwardly and underneath all said flanges, substantially as described.

4. The herein-described metal crate, consisting of a sheet-metal body, a bottom secured to the lower edges of the body by horizontal and vertical flanges extending outside the plane of the body; a reinforcing metal band L-shaped in cross-section secured within said vertical flanges, said band being of larger internal diameter than the external diameter of the top or bottom of the body; and having its L part extending outwardly beneath said flanges, substantially as described.

5. The herein-described metal crate comprising a sheet-metal body, a bottom secured to the lower edges of the body by coincident horizontal and vertical flanges on the body and bottom, the body-flange being upturned around the lower part of the bottom flange, and a reinforcing metal strap L-shaped in cross-section secured to and within the vertical flanges on the bottom and body with its L part extending beneath the said flanges, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOSEPH MATHY.

In presence of—

ARTHUR E. DOWELL,
JAMES R. MANSFIELD.