E. RYAN.

METALLIC RECEPTACLE.

APPLICATION FILED MAR. 8, 1909.

962,470. Patented June 28, 1910.

Fig. 1.

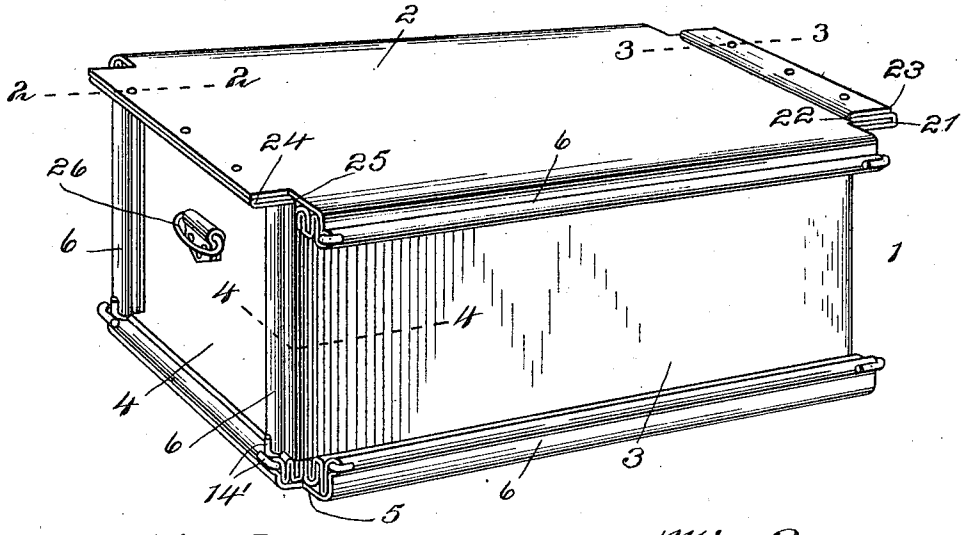


Fig. 2.

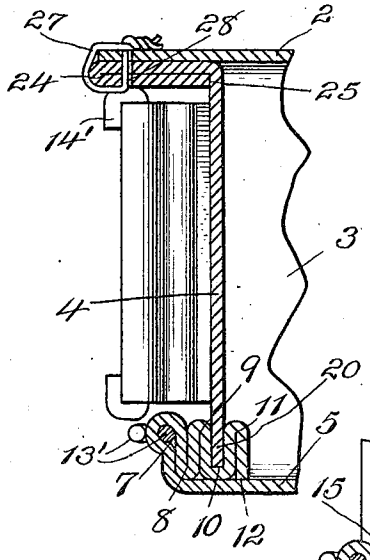


Fig. 3.

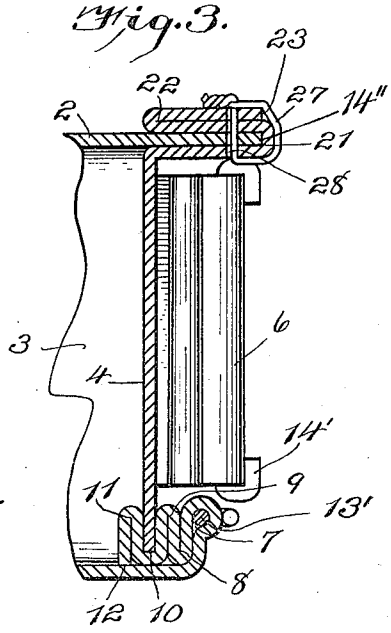
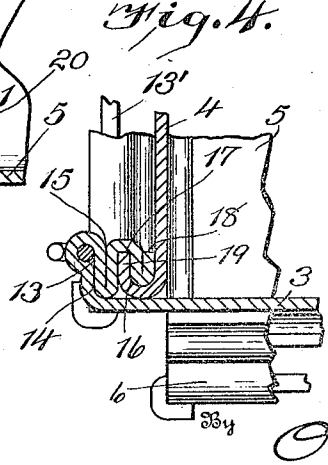


Fig. 4.



Witnesses

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METALLIC RECEPTACLE.

962,470. Specification of Letters Patent. Patented June 28, 1910.

Application filed March 8, 1909. Serial No. 482,155.

To all whom it may concern:

Be it known that I, EDMUND RYAN, a citizen of the United States, residing at Lawrenceville, in the county of Lawrence and State of Illinois, have invented certain new and useful Improvements in Metallic Receptacles; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to the construction of metallic receptacles and particularly to metallic shipping cases and has for its object to provide a knock-down metallic receptacle or case which can be quickly and easily assembled for shipment and which can be quickly knocked down for return shipment and storage.

A further object of my invention is to provide a metallic shipping case which is particularly simple in its construction, cheap and easy to manufacture, strong, durable and efficient.

A further object of my invention is to provide a metallic receptacle or shipping case having its lock seams so constructed as to greatly strengthen the structure in such manner that the seams will not become bent or dented while the box is in transit.

With these objects in view my invention consists in the novel construction of the members of the receptacle or case which provides for a strong and rigid construction; and my invention particularly consists in the novel construction of the lock seams as will be hereinafter fully described and afterward specifically pointed out in the appended claims.

Referring to the accompanying drawings: Figure 1 is a perspective view of a shipping case constructed in accordance with my invention. Fig. 2 is a vertical sectional view taken on line 2—2 of Fig. 1. Fig. 3 is a vertical sectional view taken on line 3—3 of Fig. 1, and Fig. 4 is a horizontal sectional view through one corner of the box as on line 4—4 of Fig. 1.

Like numerals of reference indicate the same parts throughout the several figures in which;

1 indicates the box which comprises a top 2, sides 3, ends 4 and bottom 5. As shown in Fig. 1 the longitudinal edges of the top 2, bottom 5 and sides 3 are rolled in such manner that they form a lock seam 6.

Referring to Fig. 4 it will be seen that the vertical edges of the sides 3 and ends 4 are rolled in such manner that a lock seam is formed at the juncture.

Referring to Figs. 2 and 3 it will be seen that the transverse or end edges of the bottom 5 are bent upwardly to the point 7. The metal is then bent back upon itself to the point 8 where it is again bent back upon itself to the point 9. The metal is then bent back upon itself forming the channel 10 and carried upwardly again to the point 11 at which point the metal is again bent back upon itself terminating at 12 adjacent the bottom 5.

As will appear from Fig. 4 the vertical seams 6 are constructed by bending the vertical edges of the side 3 inwardly at substantially right angles to the point 13 where the metal is bent back upon itself to the point 14, then bent back upon itself to the point 15, again back upon itself to the point 16 forming a channel 17, the metal being again bent back upon itself and terminating at 18. The channel 17 thus formed accommodates the turned edge 19 of the ends 4 which turned edge is slid into the said channel as is obvious. This construction of folding the metal back upon itself greatly strengthens the seams and protects the channels 10 and 17 and the turned edges 19 and bottom edge 20 of the ends 4 against denting and mashing. In order to further cushion the seams and protect the same I prefer to insert at the point 7 in the transverse or end seams of the bottom 5 and at the point 13 of the longitudinal and vertical seams 6 a wire or stiffening member 13′ running the entire length of each of the seams and having its ends bent backwardly over the outside of the metal as shown at 14′. By this construction all of the seams are securely protected against denting and mashing while the box is in transit. I have found from experience that the usual construction of lock seams is insufficient to protect the edges of the case or receptacle, it frequently happening that they become mashed or dented to such an extent that the case or receptacle can only be taken apart with great difficulty frequently requiring the use of tools, for the reason

that should the lock seams become mashed or disfigured the parts of the box become locked or jammed together.

Referring now to Figs. 1, 2 and 3 it will be seen that upon one of the ends 4 I provide a channel 14'' at the upper edge, said channel being formed by bending the edge outwardly to the point 21, then back upon itself to the point 22 and again back upon itself terminating at 23, said channel being designed to receive the top 2. The other end 4 at its upper edge is bent outwardly at substantially right angles to the point 24 where it is bent under and back upon itself terminating at 25 adjacent the end 4. This construction provides ledges or flanges at each end of the box for convenient handling of the same, although if desired I may supply drop handles 26 on the ends of the box as shown in Fig. 1.

The top 2 when in position as shown in Figs. 1, 2 and 3 may be securely sealed by means of a series of wires 27 passed through suitable perforations 28 in the ends of the box, the top 2 being provided with perforations registering with the perforations 21 in the ends of the box through which the wires are passed.

Having thus fully described the several parts of my invention its operation is as follows: The longitudinal edges of the bottom 5 being formed as before described and the side pieces 3 having their bottom edges turned as described the said side pieces 3 are secured to the bottom 5 by sliding the said turned edges into the channels 17 on the bottom 5. When the sides are in position the end pieces 4, which as shown in Fig. 4, are provided with vertical turned edges 19 and are forced down into the vertical channels 17 of the sides 3, the extreme bottom edge of each end 4 entering the transverse channel 10 at each end of the bottom 5 and as will appear from Figs. 2 and 3. When the bottom, sides and ends are thus in proper position the case or receptacle is ready to receive its contents, and after the same have been inserted the top 2 which has its longitudinal edges formed, as before described, identical with that shown in Fig. 4 is slid into position, the upper edges of the sides 3 being turned to enter the channel 17 formed along the longitudinal edges of the top 2. When the top is in position shown in Fig. 1 the box may be sealed by passing the wires 27 through the perforations 28 in the top and ends of the box, and any further or additional sealing means may be supplied in order to prevent rifling of the box and to insure delivery of the original contents.

By the construction of box just described all danger of denting or mashing the several seams is eliminated, for the reason that the particular construction of the seams as I have just described so strengthens and cushions the same that they can withstand any ordinary blow to which they might be subjected while the box is in transit, as I have found from experience that a sharp heavy blow on the outside of the seams has no effect on the channels and turned edges so that the interior of the seams is not damaged in the slightest degree.

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent of the United States is;

1. In a metallic receptacle two members connected together at their edges by a lock seam, the edge of one of said members being turned back upon itself, the edge of the other member being bent at an angle, then bent back upon itself to a point adjacent the surface of the last mentioned member at which point the metal is bent back upon itself and again bent back upon itself to form a channel to receive the said turned edge of the first mentioned member, and a stiffening member interposed in the edge of the last mentioned member on the outside of said channel.

2. In a metallic receptacle two members, one of which is provided with a turned edge, the other of which has its edge bent angularly and then bent back upon itself a plurality of times and then bent to form a channel to receive the said turned edge of the first mentioned member, and a stiffening member interposed in the edge of the last mentioned member on the outside of the said channel.

3. In a metallic receptacle two metallic members, one of which is provided with a turned edge, the other of which has its edge bent back upon itself a plurality of times and then bent to form a channel to receive the turned edge of the first mentioned member, and a stiffening member interposed in the edge of the last mentioned member.

4. In a metallic receptacle two metallic members, one of which is provided with a turned edge, the other of which is provided with a channel to receive said turned edge, the metal adjacent said channel being bent back upon itself a plurality of times to form a stiffening and cushioning means for said channel, and a stiffening member arranged in the edge adjacent said channel.

5. In a metallic receptacle two members, one of which has its edge bent angularly and then bent back upon itself a plurality of times and then bent to form a channel to receive the edge of the other member, and a stiffening member interposed in the angularly bent edge of the first mentioned member.

6. In a metallic receptacle two metallic members, one of which has its edge bent back upon itself a plurality of times and then bent to form a channel to receive the edge of the other member, and a stiffening

member interposed in the edge of the first mentioned member.

7. In a metallic receptacle two metallic members, one of which is provided with a channel to receive the edge of the other member, the metal adjacent said channel being bent back upon itself a plurality of times to form a cushioning and a stiffening member arranged in the edge adjacent said channel.

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

EDMUND RYAN.

Witnesses:

HARRY A. HEGARTY,

C. HUGH DUFFY.