

R. BRAY.
MILK CAN NECK AND METHOD OF MAKING THE SAME.
APPLICATION FILED MAY 5, 1909.

938,960.

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Fig. 1.

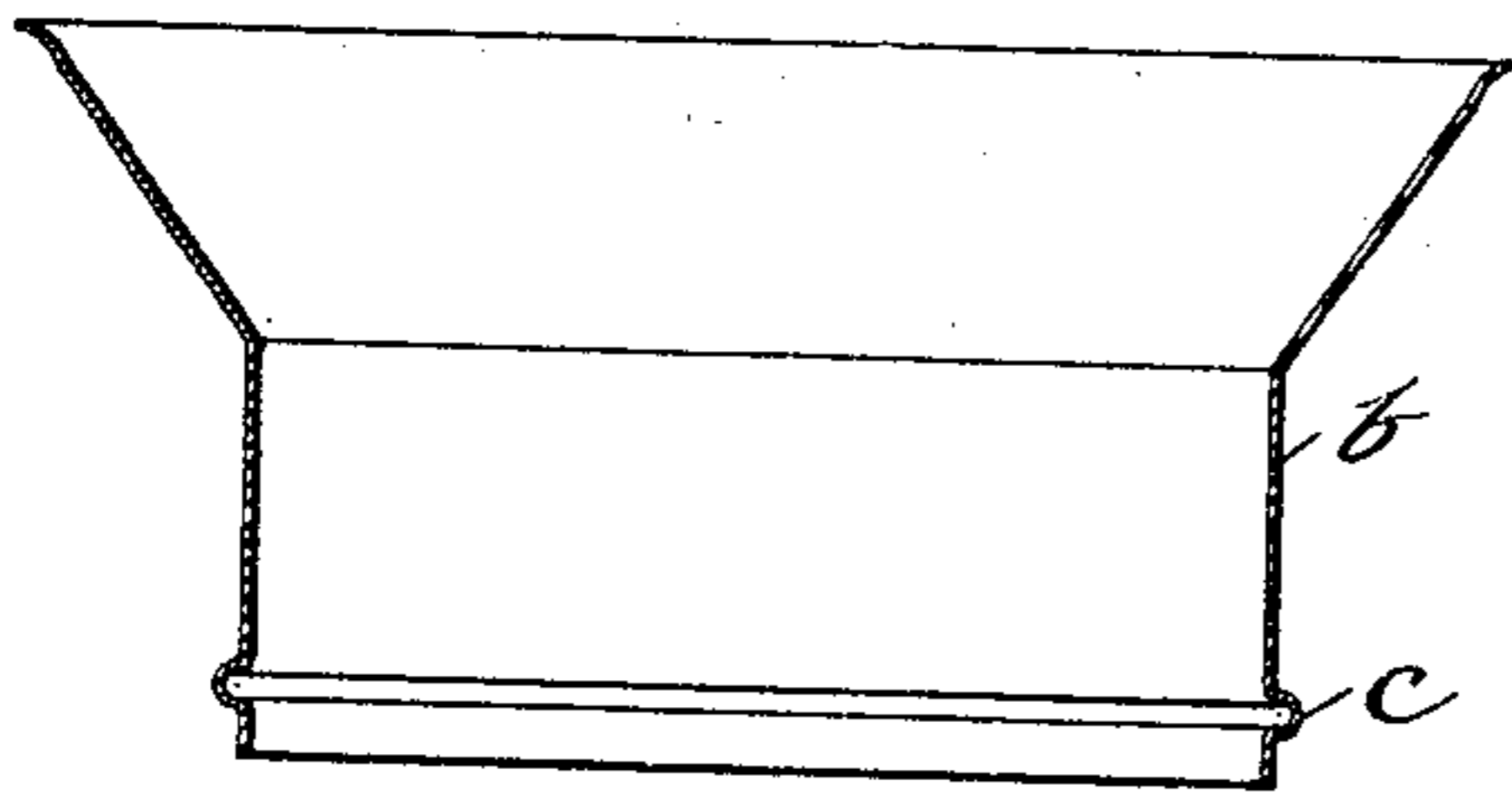


Fig. 2.

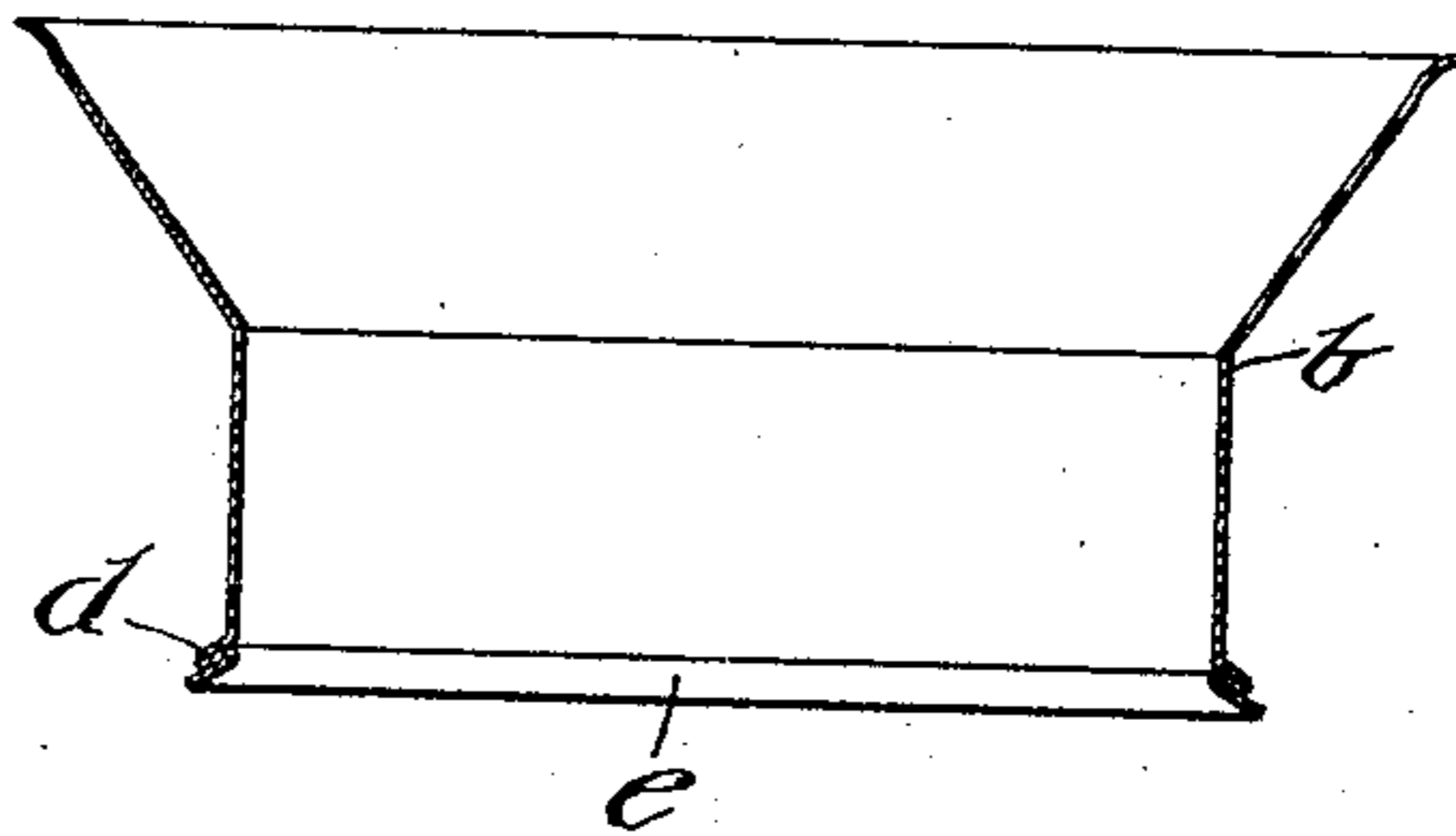


Fig. 3.

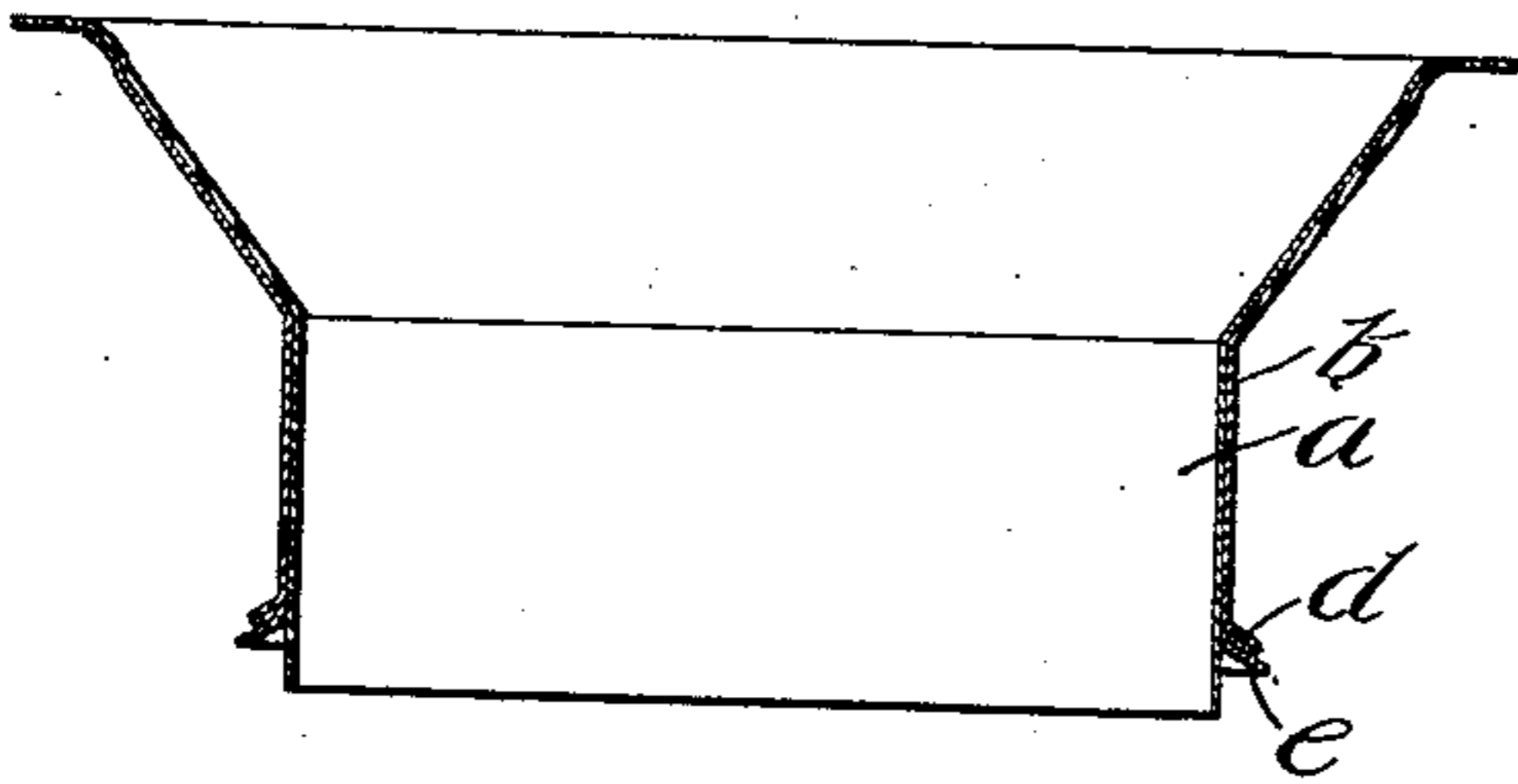


Fig. 4.

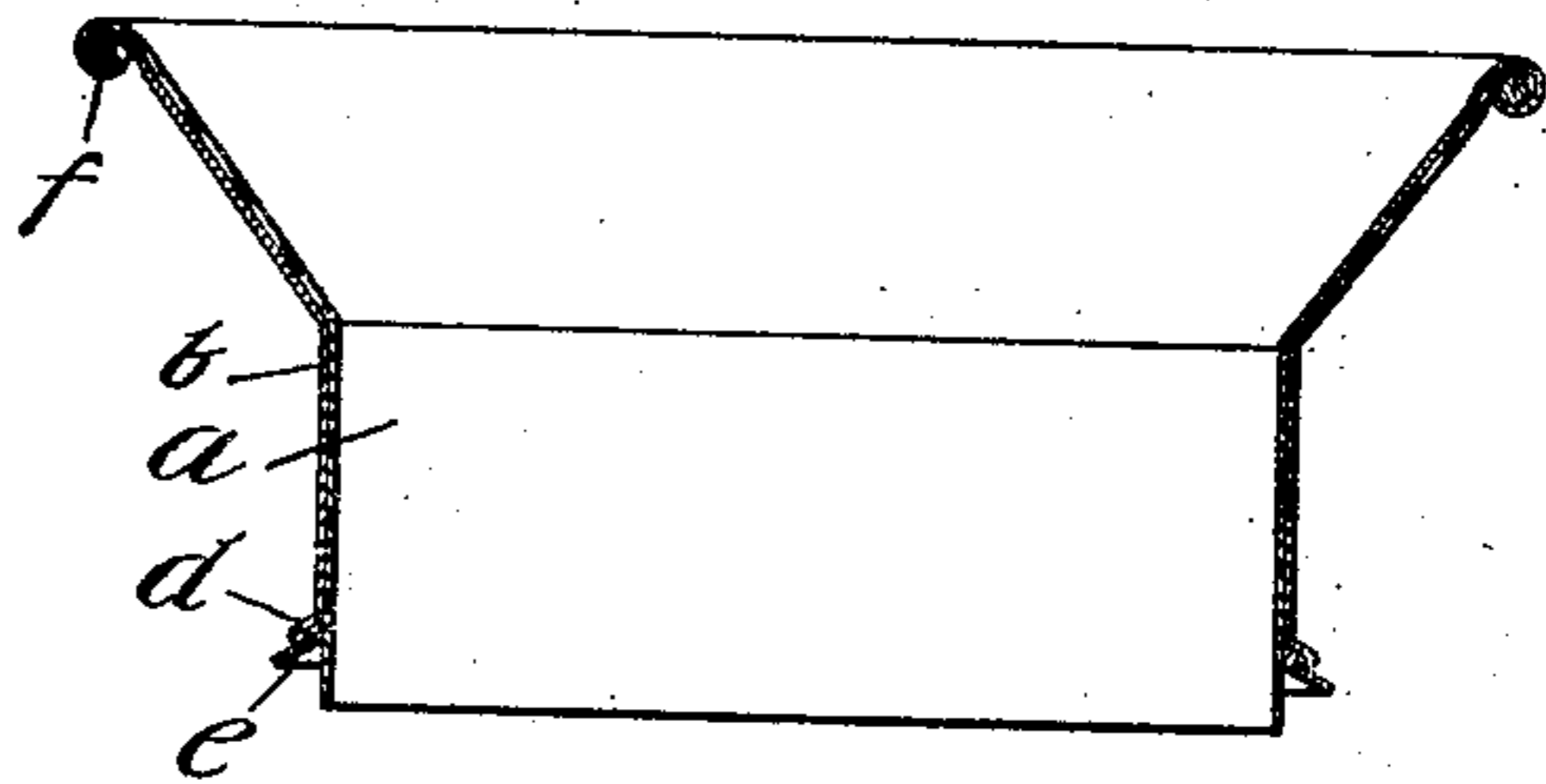
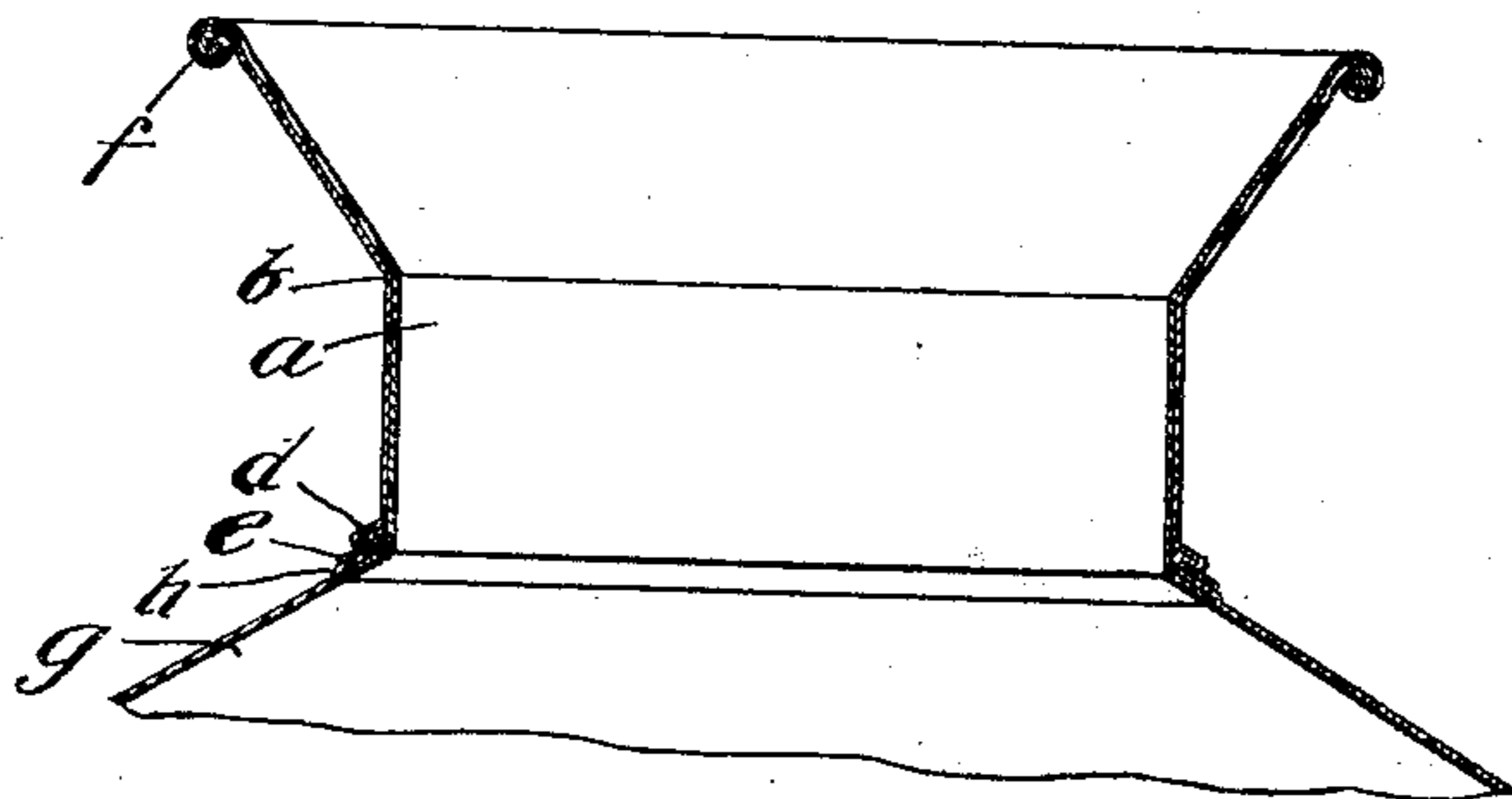


Fig. 5.



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UNITED STATES PATENT OFFICE.

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MILK-CAN NECK AND METHOD OF MAKING THE SAME.

938,960.

Specification of Letters Patent.

Patented Nov. 2, 1909.

Application filed May 5, 1909. Serial No. 494,055.

To all whom it may concern:

Be it known that I, RICHARD BRAY, a citizen of the United States, residing at Arlington Heights, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Milk-Can Necks and Method of Making the Same, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in cans and more especially to large cans of the class or kind used principally for the shipment of milk.

The leading object of the invention is to provide an improved construction at that portion of the device where it is joined to the can-breast so as to insure unusual strength at that point.

It is a further object to so construct the device that while the leading object above stated is attained it will not be at the expense of the appearance of the can.

The invention is shown in connection with a can-neck of the double-wall construction covered by Letters Patent No. 915,826, dated March 23, 1909, granted upon my application.

I attain the objects above stated by the employment of the method of manufacture hereinafter particularly described.

Briefly and broadly stated, the improved can-neck embodying my invention is one in which is formed near its lower end a bead that is so pressed together as to produce an outwardly and downwardly-projecting double-walled flange beneath which lies a flange of single thickness that is formed by flaring out the material below the bead, said flanges being of a shape to conform to a can-breast.

The best embodiment of my invention as known to me is in connection with a double-walled can-neck as shown and described in my said former patent, but except as so claimed in certain claims, I wish it to be understood that I do not limit myself to its use in such connection. That which I believe to be new will be pointed out in the claims.

In the accompanying drawings I have illustrated the successive steps to be taken in the formation of a can-neck embodying my invention.

In such drawings—Figure 1 is a vertical section through the outer member and showing the formation near the lower end thereof

of the outwardly-extending bead; Fig. 2 is a similar view showing the bead compressed and turned down and the narrow piece of material beneath it flared outward to form a flange which lies against said compressed bead; Fig. 3 is a vertical section with the inner member placed within the outer member; Fig. 4 is a view similar to Fig. 3, but showing the two members secured together at their upper edges; and Fig. 5 is a vertical section of the completed neck in position upon a can-breast.

Referring to the several figures,—*a* *b* represent, respectively, the inner and outer members of a can-neck, each formed of a single piece of sheet-metal and preferably seamless, the two members being of a size to fit snugly one within the other, as shown. The lower portion of the neck will be cylindrical in shape, while the upper portion is preferably flaring as usual and as shown in the several figures. Each of said members, *a* and *b*, can be drawn into the required shape by suitable dies, the closed end that is necessarily produced in the drawing operation being, of course, cut out as usual. The outer member *b* after being drawn as stated has formed in it near its lower edge, as clearly shown in Fig. 1, an outwardly-directed bead *c* which can readily be produced by a suitable swage. After the formation of this bead *c*, as shown in said Fig. 1, I subject said member *b* to the action of suitable dies and cause the said bead to be compressed so as to produce a double-walled annular flange, indicated in the drawings by *d*. Such double-walled flange, while being formed, is turned so as to be inclined downward, as clearly shown, and at the same time I bend outward the narrow portion of the material below such flange *d* thereby forming a flaring annular flange, indicated by *e*, said flanges *e* and *d* being pressed closely together and thus forming at the lower end of this member of the can-neck a flaring flange of three thicknesses of material integral with the body portion of such member. The result of the steps so far taken in the manufacture of the outer member of the neck is illustrated in Fig. 2. The next step in the formation of the device is to insert the member *a* within the member *b*, said member *a* fitting, as stated, snugly against the outer member so as to form a strong double-walled structure as in my said Pat-

ent No. 915,826. The upper end of the flaring portion of the outer member projects beyond the upper edge of the inner member, as shown in said Fig. 3, and the two members are secured together by forming a roll edge, as shown in Fig. 4, and as described in my said former patent. This roll edge preferably incloses a strengthening wire *f*. The lower edge of the cylindrical portion of the inner member projects below the annular flaring flange *e* in the construction shown. The neck is next to be secured to a can-breast, and this is accomplished by inserting the upper edge of said breast between the lower edge portion of the inner member and the said flange *e* and thereafter turning said lower edge portion outward and pressing it firmly against the inner face of the breast. The can-breast is indicated by *g*. In order to secure as smooth a surface as possible on the interior, I preferably impart to the breast near its edge a slight bend or offset, as shown at *h* and as fully described in my said patent.

By my invention I provide a construction having all the advantages from a sanitary standpoint as in my said former construction and which, while possessing the same great strength throughout the body of the neck, is much stronger at the line of junction with the breast, for at that line there are five thicknesses of material, viz. the double-walled flange *d*, the flange *e*, the breast, and the turned lower edge of the inner member *a*. That which I claim as my invention, and desire to secure by Letters Patent, is,—

1. A milk-can neck, comprising an inner and an outer member formed of two walls secured together in contact with each other, said outer member having formed integrally with it at its lower edge a flange having a

plurality of thicknesses of material between which and the said inner member the edge of a can-breast is adapted to be inserted.

2. A milk-can neck, comprising an inner and an outer member formed of two walls secured together in contact with each other, said outer member having formed integrally with it in its lower portion an outwardly-extending double-walled flange and below said flange a flange of single thickness, said two flanges lying in contact with each other, between which last-named flange and the said inner member the edge of a can-breast is adapted to be inserted.

3. The method of making a double-walled milk-can neck, which consists in forming in the outer wall an outwardly-extending annular bead in the cylindrical portion near the lower end thereof, then pressing the sides of such bead together to form a flange of double thickness and pressing such flange against the material that was left below said bead, and then securing within such outer wall a close-fitting inner wall.

4. The method of making a double-walled milk-can neck, which consists in forming in the outer wall an outwardly-extending annular bead in the cylindrical portion near the lower end thereof, then pressing the sides of such bead together to form a flange of double thickness and inclining such flange downward and also forcing out the material of the cylinder below the said bead into the shape of a flaring flange, pressing said two flanges together, and then securing within said outer wall a close-fitting inner wall.

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