

Oct. 23, 1928.

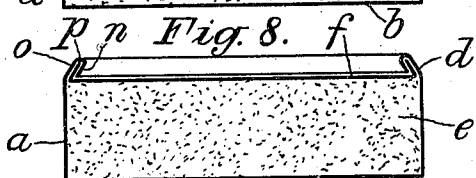
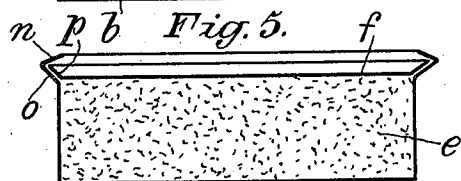
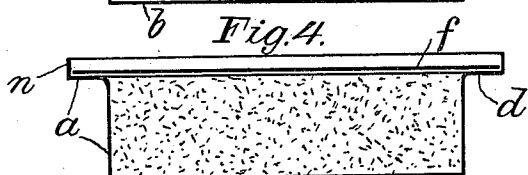
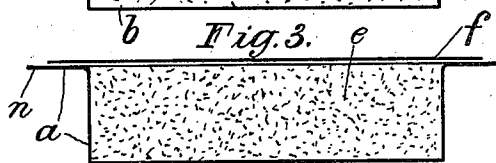
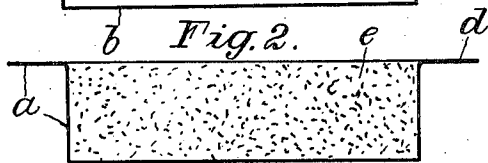
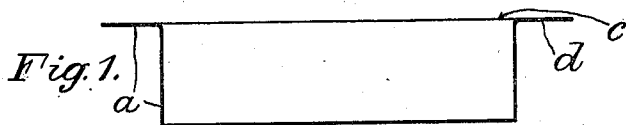
1,689,018

M. FROIDEVAUX

PACKING CONTAINER

Filed Dec. 12, 1924

2 Sheets-Sheet 1



Marcel Froidevaux
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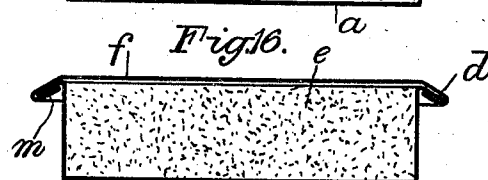
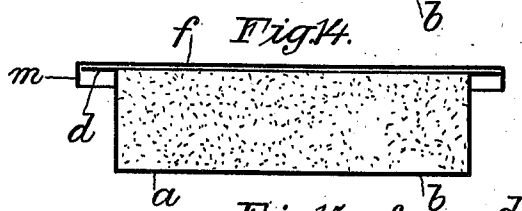
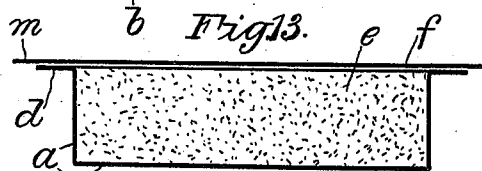
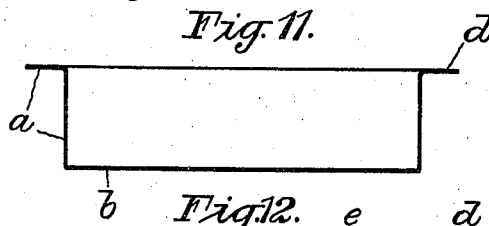
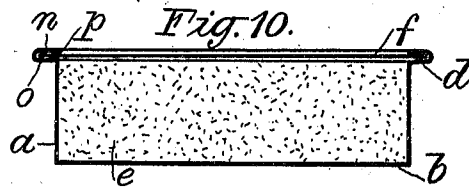
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PACKING CONTAINER

Filed Dec. 12, 1924

2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE.

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PACKING CONTAINER.

Application filed December 12, 1924, Serial No. 755,419, and in Switzerland December 20, 1923.

This invention relates to improvements in containers for receiving various products, food or other, solid, in the form of a powder, semiliquid, or liquid.

5 The process consists in forming from an impermeable sheet, a "shell" with an outside flange round its opening, in introducing the product to be packed into the shell in question, in placing over the filled shell a second imper-
10 meable sheet constituting a lid or cover, the size of the said second sheet being such that it covers the opening of the shell as well as at least a portion of its flange, in securing the above mentioned flange and the edge of the
15 second sheet to each other, and finally in turning down the whole constituted by the edge and the flange, on to the container.

The container is characterized by the fact that it comprises a shell made of an imperme-
20 able sheet provided with an outside flange round its opening, as well as a cover or lid which is also constituted by an impermeable sheet, the edge of which projects beyond the said opening, the said flange and edge being
25 secured together and turned over on the container.

Two methods of carrying out the process according to the invention are illustrated by way of example in the accompanying draw-
30 ing applied to the packing of cheese.

Figures 1 to 9 are cross-sectional views of a container according to my invention in various stages of being closed and sealed.

Figure 10 shows a partial modification of the said container, and

Figures 11 to 17 are views similar to Figures 1 to 9 inclusive showing a different type of container.

First of all a shell or body *a* is formed by
40 stamping out a sheet of "tin paper", the body *b* of which shell is cylindrical and has round its opening *c* an annular outside flange *d* (Figure 1). Into the shell thus formed is introduced the cheese *e* in fluid or semi-fluid state so
45 as to fill it up to the level of the flange *d* (Figure 2). This having been done, over the said shell and its contents *e*, is placed a second sheet *f* of tin, of circular shape, of a diameter materially smaller than the outer diameter of the flange *d* (Figure 3). The projecting
50 portion *n* of the flange *d* is then raised into vertical position (Figure 4), the inner portion *o* of the flange *d* and the edge *p* of the sheet *f* are raised so as to bring to an angle of 45° (Fig-

ure 5) to the horizontal, the portion *n* is turned
55 down over the edge *p* so as to secure the edge and the flange together in a firm and air-tight manner (Figure 6). The whole constituted by the edge *p* and the flange *d* is then brought
60 into vertical position level with the body *b* of the shell *a* (Figure 7), then into a position inclined over the said body (Figure 8), finally it is depressed downwards into the cover *f* (Figure 9) so that it shall not project materi-
65 ally beyond the "volume delimited" by the shell *a*. When the external pressure is applied to bend the edges of the container and cover, the thin metal of the container is braced from within by the contents and held, so as to coop-
70 erate with the external pressure and enable the edges of the container and flange to be so compressed as to form an airtight seam around the outside of the container.

In the modified method shown in Figure 10, the projecting portion *n* of the flange *d*, after
75 having been placed in vertical position as in Figure 4, is directly turned down over the edge *p* of the sheet *f* without the said edge *p* and the portion *o* of the flange *d* having been
80 brought to an inclined position.

According to the second method of carrying out the process, first of all, a shell *a* is also formed by stamping out in a sheet of "tin paper." The body of the said shell *a* is cylindrical and provided round its opening *c* with an an-
85 nular outside flange *d* (Figure 11). Into the shell *a* thus formed is introduced the cheese *e* in a fluid or semi-fluid state so as to fill it to the level of the flange *d* (Figure 12). This having been done over the said shell *a* and its con-
90 tents *e* is placed the second sheet of "tin paper" *f* of circular shape, the diameter of which is considerably larger than the outside diameter of the flange *d* (Figure 13). The projecting
95 portion *m* of the edge of the sheet *f* is then first turned downwards (Figure 14), then inwards (Figure 15) so as to secure the edge and the flange together in a firm and air-tight manner. The whole constituted by the edge
100 and the flange is finally turned down on the body *b* of the shell *a* (Figure 16) and forced in laterally into the said body, so that it shall not project materially beyond the "volume delimited" by the shell *a* (Figure 17).

The outside diameter of the shell *a* and
105 the diameter of the sheet *f*, instead of being different, could be practically the same. The container, instead of being of circular shape,

could be of any other desired shape, for instance that of a rectangle, triangle, sector lozenge.

In the method described, the turning down of the edge of the sheet *f* over the flange *d* is single and flat, but it could also be double, treble, and having the shape of a roll. The securing of the edge of the sheet *f* and of the flange *p* could be moreover effected in some other manner, for instance by means of radial, or annular perforations or corrugations provided simultaneously in the flange and in the edge.

The packing is for cheese and other food products that are to be put up in a fluid or semi-fluid state. The container is therefore made of so called "tin paper" or some other very thin flexible metal which can easily be bent to give the finished container the form shown in Figs. 9 and 17. Without "tin paper" or some similar material the container could not be filled and closed as described without spilling and losing some of the contents. It is therefore quite necessary that the container and cover be made of some very thin material which allows bending of the border as above set forth.

I claim:

1. A container of very thin metal comprising a shell or body having an integral bottom and an opening at the top, an external laterally extending flange surrounding the opening, and a cover to be disposed upon said flange, the cover being of less diameter than the flange so that the periphery of the flange overlaps the periphery of the cover when the cover is first put in place, the periphery of the flange, after the container has been filled with substantially solid or semisolid materials, being bent over upon the cover and the periphery of the flange and cover being then bent over together within the periphery of the container and upon the cover and pressed down to be flush with the outer surface of the cover, the materials in the contain-

er bracing the thin metal thereof from within when the edges of the cover and flange are being bent, and cooperating with the external pressure to cause said edges to form a seam around the outside of the container.

2. A container of very thin metal comprising a shell having an integral bottom and an opening at the top, an exterior laterally extending flange surrounding the opening, and a cover to be disposed upon said flange, one of said parts, after the container has been filled with substantially solid or semisolid materials, to have its edges bent over the edges of the other part and the edges of the cover and flange being bent then together against the outside surface of the container and pressed inward of the container until they are flush with said surface, the materials in the container bracing the thin metal thereof from within when the edges of the cover and flange are being bent, and cooperating with the external pressure to cause said edges to form a seam around the outside of the container.

3. A container of very thin metal comprising a body having an integral bottom and an opening at the top, an exterior laterally extending flange surrounding said opening, and a cover to be disposed upon the flange, the edges of the flange and cover, after the container has been filled with substantially solid or semisolid materials, to be turned over together and pressed inward of the container until they are flush with the outer surface of the cover, the materials in the container bracing the thin metal thereof from within when the edges of the cover and flange are being bent, and cooperating with the external pressure to cause said edges to form a seam around the outside of the container.

In testimony whereof I have affixed my signature.

MARCEL FROIDEVAUX.