W. C. SEARS.

ICE CREAM PAIL FILLER.

APPLICATION FILED OCT. 19, 1916.

1,253,731. Patented Jan. 15, 1918.

Fig. 1.

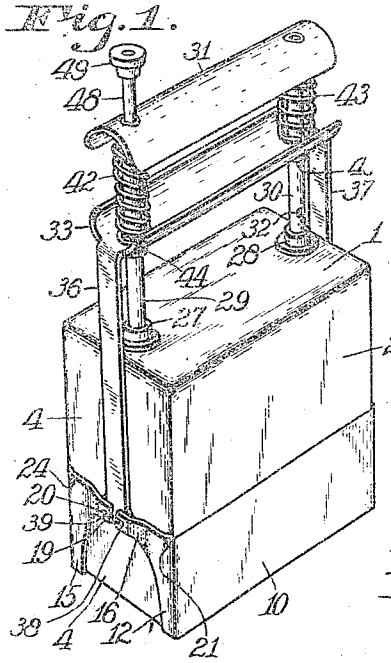


Fig. 2.

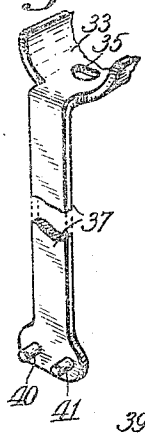


Fig. 3.

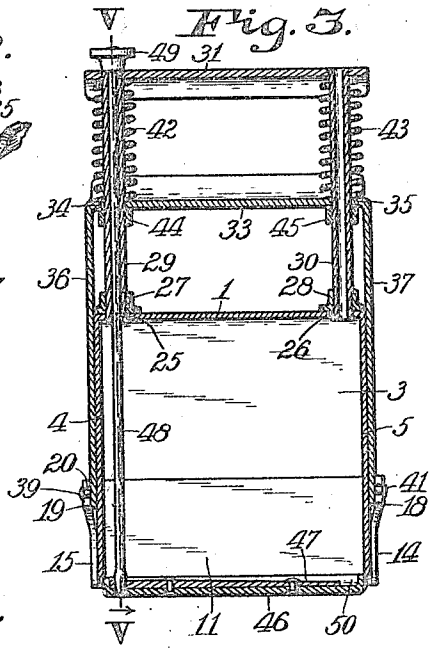


Fig. 4.

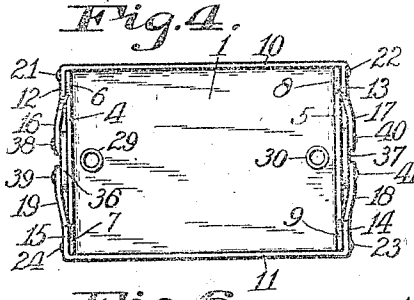


Fig. 5.

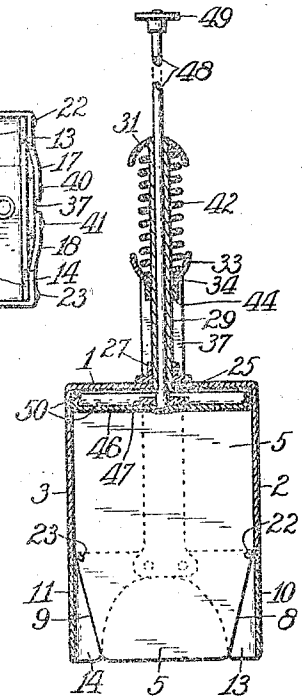


Fig. 6.

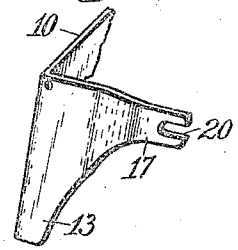
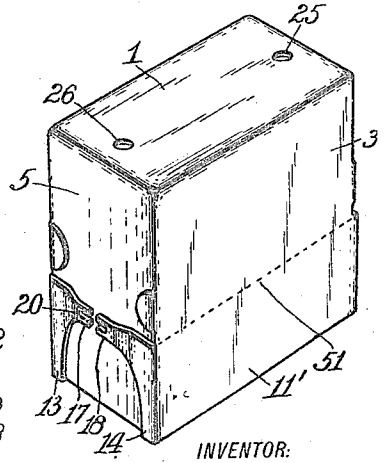


Fig. 7.



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ICE-CREAM-PAIL FILL

1,253,731. Specification of Letters Patent. Patented Jan. 15, 1918.

Application filed October 19, 1916. Serial No. 126,590.

To all whom it may concern:

Be it known that I, WALTER C. SEARS, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Ice-Cream-Pail Filler, of which the following is a specification, reference being had to the accompanying drawings and to the letrers and figures of reference marked thereon.

This invention relates to an article that is designed to be used by retailers of ice-cream, bulk-butter, lard or other substances of similar consistency, and has reference more particularly to a combined measurer and filler adapted for lifting the substance from a container and packing the substance in a paper pail for delivery to the purchaser.

An object of the invention is to provide a pail-filler of such construction as to be capable of cuttting into bulk substance of plastic consistency and receiving the substance in compact condition to be lifted and deposited in a separate receptacle, in order that the operations of filling pails may be expeditiously performed with consequent saving of time and labor. Another object is to provide a pail-filler of such construction as to be capable of lifting from bulk substance the requisite quantity to fill a standard size of pail at one operation, an aim being to fill the pail compactly without air spaces in the substance. A further object is to provide a measuring filler that may be produced inexpensively, which shall be convenient for use and be durable and economical.

With the above-mentioned and other objects in view the invention consists in a lifter and packer of novel construction for measuring and shaping portions of bulk substance and adapted for packing the substance into a pail or vessel; the invention consisting also further in the parts and combinations and arrangements of parts, as hereinafter particularly described, and further defined in the accompanying claims.

Referring to the drawings,—Figure 1 is a perspective view of the pail-filler as preferably constructed; Fig. 2 is a fragmentary perspective view of one of the parts of the pail-filler; Fig. 3 is a vertical central sectional view of the pail-fillers; Fig. 4 is an inverted plan of the hollow bottomless receptacle constituting the main part of the pail-filler; Fig. 5 is a section on the line V—V on Fig. 3; Fig. 6 is a fragmentary perspective view of one of the parts of the receptacle as preferably constructed, and Fig. 7 is a perspective view of the main part of the pail-filler slightly modified.

Similar reference characters on the various figures of the drawings indicate like parts or features of construction herein referred to.

Practically embodied the receptacle or main part of the pail-filler comprises a flat top 1 which preferably is oblong, two side wall portions 2 and 3 that are connected to and extend downward from the longer edges of the top, and two end wall portions 4 and 5 that are connected to the side portions and are also connected to and extend downward from the shorter edges of the top, the end wall portions preferably being longer than the side portions. The end wall portion 4 has convergent edges 6 and 7, the opposite portion 5 having convergent edges 8 and 9, so that the lower edges of the end portions are relatively shorter than the width of the upper edges of the end portions. The side wall portions 2 and 3 have lower portions that extend downward and are adapted to swing inwardly to the convergent edges of the end wall portions, for the purpose of compressing the lower portions of the substance in the receptacle in case of necessity in order to lift the substance in the receptacle. The wall portions are composed of thin metal and the lower edges adapted to cut the substance to be lifted. Preferably the lower side portions are composed of separate sections 10 and 11 fitting closely to the wall portions 2 and 3 respectively and extending downward to the plane of the lower edges of the end portions 4 and 5, the section 10 having end portions 12 and 13 that extend inward against the outer sides of the end portions 4 and 5 respectively, the section 11 having similar end portions 14 and 15 that close the gaps left between the section and the convergent edges of the end wall portions. The end portions 12 and 13 have arms 16 and 17 thereon respectively, the end portions 14 and 15 having arms 18 and 19 thereon respectively for controlling the sections 10 and 11, the arms of each section extending toward the arms of the opposite section, and preferably each

arm has a slot or opening 20 in its end portion. The sections 10 and 11 are hingedly connected with the wall portions 2 and 3 respectively, one section preferably being so connected by means of pivots 21 and 22 connected directly with the end portions 4 and 5 and the end portions 12 and 13 respectively, the opposite sections being similarly connected by means of pivots 23 and 24.

The top 1 of the receptacle has apertures 25 and 26 therein at which bosses 27 and 28 are secured upon the top 1, and two hollow guiding-standards 29 and 30 are secured in the bosses and the apertures, a handle bar 31 being secured on the upper portions of the standards without closing the tops of the standards, and therefore permitting the standards to serve as vent tubes to permit air to escape from the interior of the receptacle, the standard 30, however, preferably having a vent hole 32 therein. A cross-bar 33 is provided and arranged below the handle bar 31 and has guideways 34 and 35 therein receiving the guiding-standards 29 and 30 respectively, the cross-bar being movable up or down relatively to the handle bar. The cross-bar has two pull-rods 36 and 37 fixed on its end portions and they extend downward adjacent to the outside of the end wall portions 4 and 5 respectively to the arms of the movable side wall sections, the pull-rods being suitably connected to the arms. Preferably the pull-rod 36 is provided with pivots 38 and 39 that extend into the openings 20 of the arms 16 and 19 respectively, the pull-rod 37 being provided with similar pivots 40 and 41 that are similarly connected with the arms 17 and 18 respectively, so that all the arms may be drawn upward simultaneously whereby to draw the lower edges of the movable portions 10 and 11 inwardly to or toward the inclined edges of the end wall portions, the interior of the bottom portion of the receptacle thus being contracted. Two strong coil springs 42 and 43 are arranged on the standards 29 and 30 respectively and engage the handle bar 31 and the cross-bar 33 to force the cross-bar downwardly and normally prevent contraction of the side wall portions of the receptacle. Preferably the standards have stop collars 44 and 45 fixed thereto on which the cross-bar normally rests.

The receptacle is provided with an ejector which comprises a flat plate 46 which in plan conforms to the internal dimensions of the top 1 and is adapted to closely slide against the wall portions, the inner side of the plate preferably having a strengthening rib 47 fixed thereto. The ejector comprises also an operating and controlling rod 48 which has one end secured to the plate 46 near one end thereof, the controlling-rod extending upward through the guiding-standard 29 and being provided on its top with a knob 49 which normally rests upon the handle bar 31 when the plate 46 is at the bottom portion of the receptacle. Preferably the plate 46 is composed of thin metal and has an upturned flange 50 thereon which permits the plate 46 to be projected slightly beyond the lower end of the receptacle when packing the ice-cream or other substance into a pail.

In some cases the receptacle is composed of elastic sheet metal, such as steel, and instead of hinging separate side sections 10 and 11 to the side wall portions, the side wall portions have lower hingedly movable portions 11′ integrally connected thereto, as at the broken line 51 to permit the lower edges to be drawn inward to the end wall portions, the necessity of providing hinges or pivots thus being obviated, such elastic wall portions being provided as above described with the controlling arms.

In practical use the handle bar 31 is grasped by the operator whose fingers embrace the cross-bar 33, and the implement is forcibly pushed down into the ice-cream or other substance that is to be lifted, the lower edges of the wall portions of the receptacle being forced into the substance, the latter forcing the ejector upward in the receptacle until the plate 46 is stopped in contact with the top 1 of the receptacle, the air above the plate being forced out of the hollow guiding-standards. The operator then pulls upward and in some cases the vacuum or suction is sufficient to retain the substance in the receptacle while being lifted, depending upon the consistency of the substance, or the operator may forcibly draw the cross-bar 33 toward the handle bar 31 to contract the lower portion of the receptacle, and thus slightly compress the lower portions of the substance in the receptacle to prevent the substance from slipping out of the open bottom of the receptacle. Having carried the pail-filler with its measured contents to a pail, the lower portion of the receptacle is inserted into the top of the pail, after which the operator places his thumb upon the knob 49 and forces the ejector downward, the plate 46 forcing out the contents of the receptacle into the pail, after which the plate is forced downward to press the substance into the pail. In some cases the pail-filler is used for measuring and shaping blocks of butter which may be discharged onto a table and wrapped in paper instead of being packed into a pail, and the pail-filler may be found to be useful for various purposes.

Having thus described the invention, what is claimed as new is—

1. A pail-filler including a flat top and straight side and end wall portions, the opposite side wall portions having each a

hingedly-movable lower portion, each lower portion having two controlling-arms extending adjacent to the outside of the end wall portions respectively, guiding-standards secured to the flat top, a handle bar secured to the guiding-standards, a cross-bar movably guided on the guiding-standards below the handle bar and having two pull-rods connected thereto, each one of the pull-rods having connection with a controlling-arm of each of the hingedly-movable side portions, and two springs on the guiding-standards respectively and under compression against the handle bar and the cross-bar.

2. A pail-filler comprising a flat top and straight side and end wall portions, the side wall portions having each a hingedly-movable lower portion provided with controlling-arms, each end wall portion having a tapering lower portion to permit the hingedly-movable portions to swing each toward the other, guiding-standards secured to the flat top, a handle bar secured to the top portions of the guiding-standards, a cross-bar movably guided on the guiding-standards below the handle bar and having two pull-rods connected thereto, one of the pull-rods having connection with a controlling arm of each of the hingedly-movable portions, the remaining pull-rod having connection with another controlling-arm of each of the hingedly-movable portions, and two springs on the guiding-standards respectively and seated under compression against the handle bar and the cross-bar.

3. A pail-filler including a receptacle comprising a flat top and straight side and end wall portions, the opposite side wall portions having each a hingedly-movable lower portion to coöperate with the end wall portions; a standard secured to the top of the receptacle, a handle bar rigid on the standard, an ejector plate movable between said wall portions and also between the hingedly-movable lower side portions, the plate having a flange thereon extending inward toward said top to contact with said end wall portions and said movable side portions when said plate is projected, means connected with the ejector plate to project the plate, and means connected with the hingedly-movable side portions and having a device to operate between the handle bar and the top of said receptacle for drawing the side portions each toward the other.

4. A pail-filler comprising a flat top and straight side and end wall portions, the opposite side wall portions having each a hingedly movable lower portion, each of said lower portions having two controlling-arms extending adjacent to the outside of the end wall portions respectively; two hollow guiding-standards secured to said top, a handle bar secured to the tops of said guiding-standards, an ejector plate movable between said wall portions and also between the hingedly-movable lower portions, an operating-rod secured to the ejector plate and extending through one of said guiding-standards and through said handle bar, a push-knob secured to the operating-rod beyond said handle bar, a cross-bar movably guided on said guiding-standards between the handle bar and said flat top and having two pull-rods connected to its ends and adjacent to said guiding-standards, each one of the pull-rods having operative connection with a controlling-arm of each of the hingedly-movable side portions, and two springs on the guiding-standards respectively and under compression against the handle bar and the cross-bar.

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

WALTER C. SEARS.

Witnesses:
E. T. SILVIUS,
J. H. GARDNER.