

No. 774,797.

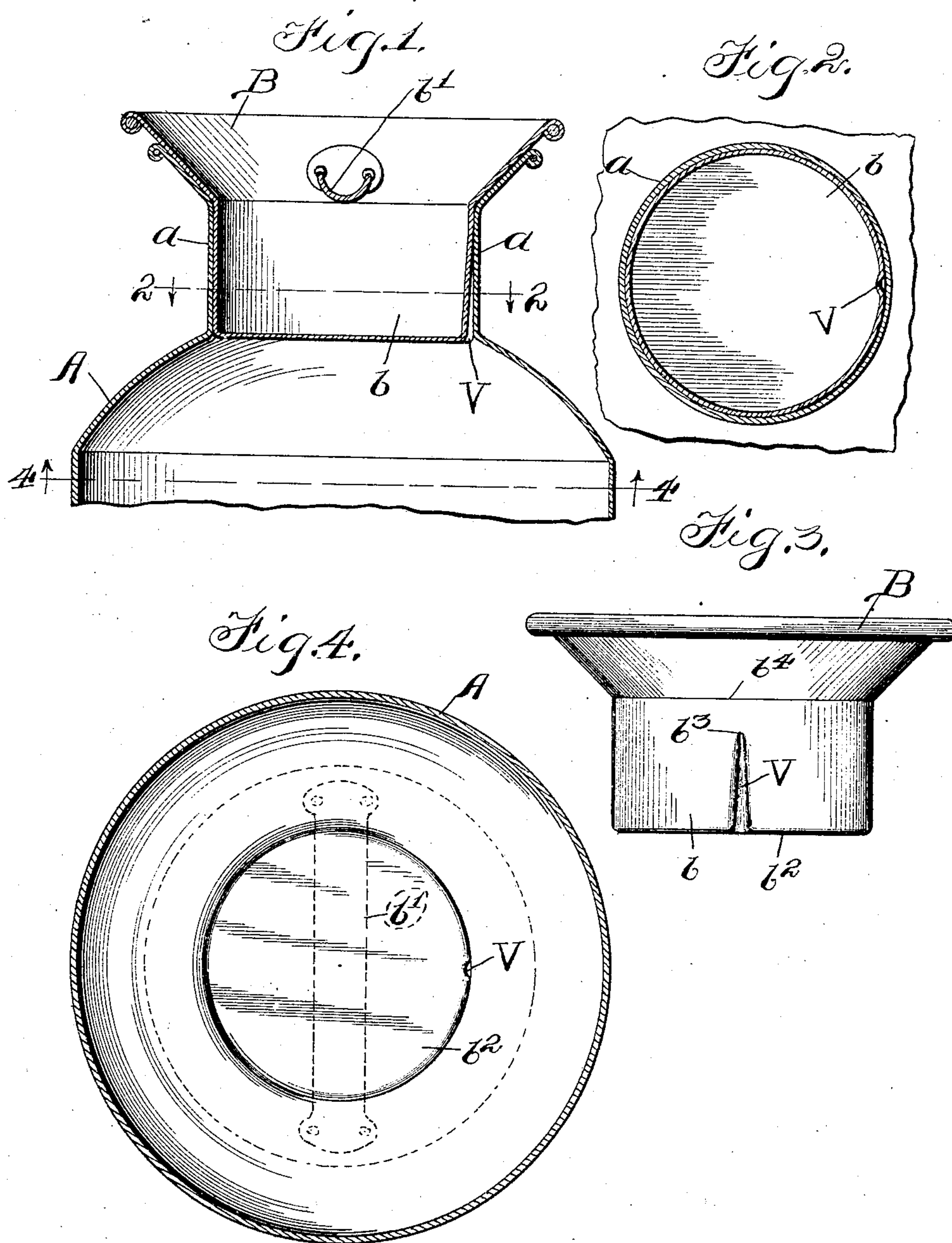
PATENTED NOV. 15, 1904.

L. STURGES.

MILK CAN.

APPLICATION FILED AUG. 17, 1903.

NO MODEL.



Witnesses:
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UNITED STATES PATENT OFFICE.

LEE STURGES, OF ELMHURST, ILLINOIS.

MILK-CAN.

SPECIFICATION forming part of Letters Patent No. 774,797, dated November 15, 1904.

Application filed August 17, 1903. Serial No. 169,679. (No model.)

To all whom it may concern:

Be it known that I, LEE STURGES, a citizen of the United States, residing at Elmhurst, in the county of Dupage and State of Illinois, have invented certain new and useful Improvements in Milk-Cans, of which the following is a specification.

As at present manufactured the large milk-cans used by shippers and dealers in milk are made with open mouths, usually about six inches in diameter, which are normally closed by tight-fitting covers in the shape of large stoppers, and in order that the closure shall be complete and perfect the neck of the can is usually made cylindrical and several inches in depth, and the stopper part of the cover is made correspondingly cylindrical and of corresponding depth, so that it fits the neck of the can tightly throughout a considerable area, the frictional engagement of the stopper and surrounding neck of the can being relied on to hold the stopper in place. A certain amount of difficulty is, however, experienced in applying the covers in constructions of this character, for the reason that the air within the can is compressed by the insertion of the stopper and tends to resist the entrance of the stopper and to force it out as soon as released.

The object of the present improvement is to overcome this difficulty without seriously impairing the tightness of the closure effected by the stopper or requiring the provision of a mechanical fastener or latch for fastening the stopper in place when inserted; and to this end it consists in the provision of a vent or groove in one of the engaging surfaces of the can and cover extending nearly but not quite the full height of these engaging surfaces, so as to permit the escape of air as the stopper is inserted up to a point where the stopper is almost forced home, a margin of contact-surface free from any groove or opening being left beyond this point to complete the closure and perfect the seal. In an approved form such a vent may consist of an upwardly-extending groove of gradually-decreasing depth, the bottom of which ultimately merges into and becomes flush with the cylindric surface of the grooved part. This latter is prefer-

ably the stopper or cover, and in this case the greatest depth of the groove will be at the lower edge of the cover, where it first enters the mouth of the can, the groove growing shallower from this point until it terminates or disappears just below the top of the cylindric or stopper portion of the cover and at a point within the inclosing neck of the can when the stopper is forced home.

The invention consists in the matters thus and hereinafter described, and particularly set forth in the appended claim, and will be fully understood from the following description of the construction illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of the upper part of a milk-can and cover constructed in accordance with my improvements. Fig. 2 is a transverse section thereof, taken on line 2 2 of Fig. 4. Fig. 3 is a side elevation of the cover alone, taken on line 3 3 of Fig. 1. Fig. 4 is a bottom plan section taken on line 4 4 of Fig. 1.

In said drawings, A designates the body of a milk-can which has a cylindric neck *a*, and B the can-cover, which has a cylindric stopper portion fitting closely within the neck *a*. Both can and cover will ordinarily be made of sheet metal, and the cover is herein shown as drawn from a single piece and provided with a transverse bar *b'*, which forms a handle.

V is the vent, which in accordance with the present improvements is provided between the interfitting surfaces of the can neck and cover to permit the escape of air while the cover is being inserted. As herein shown, this vent is provided in the surface of the stopper portion *b* of the cover and consists of a vertical indentation or groove, which is deepest at the lower end *b²* of the stopper and gradually grows shallower as it extends upward, until it disappears or merges into the surface of the stopper at a point *b³* somewhat below the upper margin *b⁴* thereof, thus leaving an annular portion of the stopper between the point *b³* and its top *b⁴* which remains unbroken and fits closely within the neck of the can throughout its entire circumference. With this construction the initial insertion of the stopper will be accompanied by an escape

of air through the vent V, which will obviate any such compression of the air within the can as might otherwise interfere with the closing of the vessel, and this escape of the air will continue until the cover is nearly thrust home, after which that portion of the cover between the upper end b^3 of the vent and the top b^4 of the stopper will tightly engage the neck of the can and seal it. A slight compression of air within the can may obviously occur during this final movement of the closing operation, but will be so slight as to be practically unnoticeable—that is to say, the tendency of the air within the can to force the stopper out again due to this compression will be too small to overcome the friction of the stopper with the neck of the can. With this improvement, therefore, substantially the same perfect closure of the can by the cover is obtained as where no vent is employed, while at the same time the pressure of the inclosed air is relieved through the vent, and the insertion of the cover is not only rendered less difficult, but the liability of the air within the can to force the cover out again is entirely done away with. It will be observed, further, that by gradually decreasing the depth of the vent-groove from its lower end upward and merging it into the cylindric surface of the stopper the groove is rendered self-cleaning, the rush of the compressed air in escaping causing the foreign matter that will naturally collect in the groove to be forced out thereby preventing the groove from becoming clogged; but should the groove become clogged with matter too securely lodged to be forced out by the air it may be readily cleaned

by simply running a brush or the end of the finger down the length of the groove. To facilitate this cleaning, the groove may be gradually narrowed in width from its lower end to its upper end, as shown. This form of groove is also advantageous for the further reason that it is less likely to puncture or weaken the stopper. It will also be observed that by presenting the wide mouth of the vent to the contents of the can clogging of the vent is reduced to a minimum on account of the tendency of the cream to drop out of its under weight when it is splashed into the groove. With a vent-groove of the form shown and described it will be practically impossible to clog it in ordinary use.

I claim as my invention—

A milk-can, provided with a cover, said cover having a cylindric stopper portion fitting closely within the neck of the can and an air-vent consisting of a groove formed in the can-engaging surface of the stopper portion and extending from the bottom of the stopper portion to a point near the top thereof but below the mouth of the can-neck when the stopper is inserted, said groove tapering toward its upper end where it merges into the cylindric surface of the stopper portion, substantially as described.

In testimony that I claim the foregoing as my invention I affix my signature, in presence of two subscribing witnesses, this 1st day of July, A. D. 1903.

LEE STURGES.

Witnesses:

HENRY W. CARTER,
K. A. COSTELLO.