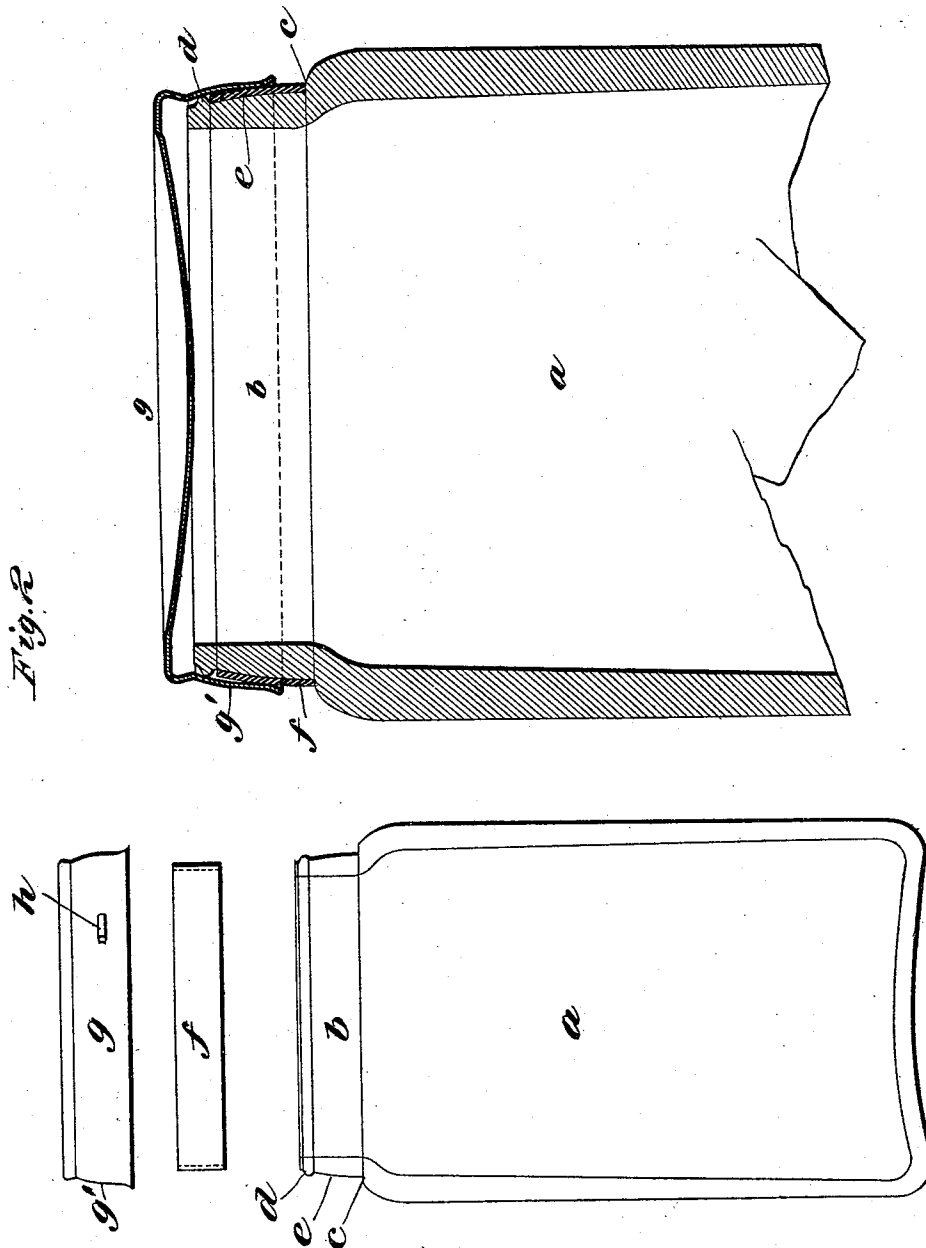


(No Model.)

K. E. GUNKLE.
FRUIT JAR.

No. 581,112.

Patented Apr. 20, 1897.



Witnesses
J. F. Holman
W. H. Callahan

Fig. 1

Inventor
Katherine E. Gunkle
by *W. H. Gunkle*
att'y.

UNITED STATES PATENT OFFICE.

KATHERINE E. GUNKLE, OF FRAZER, PENNSYLVANIA.

FRUIT-JAR.

SPECIFICATION forming part of Letters Patent No. 581,112, dated April 20, 1897.

Application filed December 14, 1895. Serial No. 572,147. (No model.)

To all whom it may concern:

Be it known that I, KATHERINE E. GUNKLE, a citizen of the United States, residing at Frazer, in the county of Chester and State of Pennsylvania, have invented a certain new and useful Improvement in Fruit-Jars, of which the following is a full, clear, and exact description.

The object of this invention is to furnish a jar for fruit, preserved vegetable matter, and for other uses which may be readily sealed in an air-tight manner and which also may be readily unsealed or opened.

In carrying out my invention I have endeavored to compensate for variations in the mouth of the jar incident to the production of blown or molded glass jars by making such mouth with a very slight taper and by making the flange or skirt of the cover almost straight—that is to say, essentially cylindrical—so that a cover fitted to such mouth, with a yielding gasket between, may extend down about such mouth to a greater or less extent, according as the variation is less or more, and yet be air-tight. The gasket is designed to extend beyond—that is to say, below—the cover, so as to be accessible for unsealing the jar. The cover may be enameled. The jar is adapted to be sealed by the combined action of the internal rarefied air and external atmospheric pressure.

Having thus set forth in a general way the principle of my invention, I will proceed now to describe the best mode in which I have contemplated applying that principle, and then will particularly point out and distinctly claim the part, improvement, or combination which I claim as my invention.

In the accompanying drawings, illustrating my invention, in the two figures of which like parts are similarly designated, Figure 1 is an elevation with the parts disassembled. Fig. 2 is a sectional elevation, greatly exaggerated, of the mouth end of a jar with the cover in position as the same will be when the jar is sealed.

The body *a* of the jar may be of glass and of any approved form; but I prefer to make the mouth of the jar as large as permissible, so as to facilitate the filling and emptying of the jar. The mouth *b* is divided from the

jar by a very slight shoulder *c*, and it is provided with a slight bead or lip *d*, which, in conjunction with the shoulder, forms a groove or cavity *e* for the reception of a gasket or other suitable packing-ring *f*. For purposes presently appearing I prefer to give a slight taper or curve to this surface of the mouth of the jar.

The gasket *f* may be a flat tube or ring of rubber, which is held upon the mouth of the jar and within the groove *e* thereof by means of its own elasticity and in a vertical position, as shown.

The cover *g* is made of metal, preferably sheet metal, stamped to shape by means of dies, so as to insure practical uniformity in their production. The flange or skirt *g'* of the cover is nearly straight—that is to say, it is essentially cylindrical—although the drawings show it curved, the better to delineate its conformation.

As is well known, in the production of blown-glass jars in molds there is more or less hot air or gas trapped in the mold, which not being expelled produces a cushion which prevents the glass from entirely filling the mold, and the result is that in the manufacture of jars from a single mold there will be considerable variation in their size, and this variation is so great that covers designed to fit a jar of a given size will be found too large for some, and hence it is impossible to seal with such covers in such manner as to make the jars air-tight. Now by the provision of the externally-tapered mouth with its packing and a cover having its flange or skirt practically straight or cylindrical it will be seen that a cover designed for a jar of the full size and to fit down upon the mouth of such jar substantially to the extent shown in Fig. 2 or even higher up upon the mouth of the jar may be fitted to the jars of the same size whose mouths are of less diameter, it being necessary simply to crowd down the cover farther upon the mouth.

In using the jar it is filled with the hot substance, the gasket *f* having first been applied, and then the cover is pressed down over the gasket until it meets with sufficient resistance to be held in place. The hot air or gas trapped within the jar upon cooling exerts a

sort of suction upon the cover, which aided by external atmospheric pressure insures the air-tight sealing of the jar.

In order to unseal the jar, it is well to catch hold of the projecting edge of the gasket and pull it down from under the cover, so as to admit air beneath the cover, when the cover may be readily displaced, and this operation may be greatly expedited by heating the metal cover, the cover becoming hot and thus expanding more rapidly than the glass, and this fact of the difference in expansion between glass and metal affords an additional reason why I prefer to use a metal cover on a glass jar.

Jar-covers have been made heretofore with porcelain and other linings of non-oxidizable character, and while I may so line my cover I prefer for economical and other reasons to enamel the cover in accordance with the well-known processes of enameling sheet metal, particularly iron.

The cover may be provided with a lug $\frac{1}{2}$ in order to afford a finger-hold upon the cover to aid in applying and removing it.

I am aware that glass jars have been provided with glass covers secured to the jar through the intervention of a rubber gasket, and I am also aware that glass vessels have been supplied with metal covers forced upon their mouths, and I am also aware that a glass vessel has been provided with a tapering and

grooved neck supplied with a rubber gasket and having a tapering metal cover forced thereon and held frictionally by the rubber gasket. My invention differs from all these in that I use a metal cover having an essentially straight—that is to say, cylindrical—skirt or flange in combination with a flat gasket immovably fixed to the mouth of the jar and a jar whose mouth is slightly curved and tapering.

What I claim is—

As an improved article of manufacture, the herein-described jar, having its mouth of essentially the diameter of the body of the jar and with a slightly-curved taper externally, and provided with a flat circumferential gasket applied vertically to said tapered portion of the mouth, combined with the metal cover having its skirt or flange essentially cylindrical, whereby said cover is adapted to be applied to the gasket upon the mouth of the jar whether the jar's mouth be of the exact size of the cover or not, substantially in the manner and for the purpose set forth.

In testimony whereof I have hereunto set my hand this 10th day of December, A. D. 1895.

KATHERINE E. GUNKLE.

Witnesses:

SARA S. GUNKLE,
J. FRANK GUNKLE.