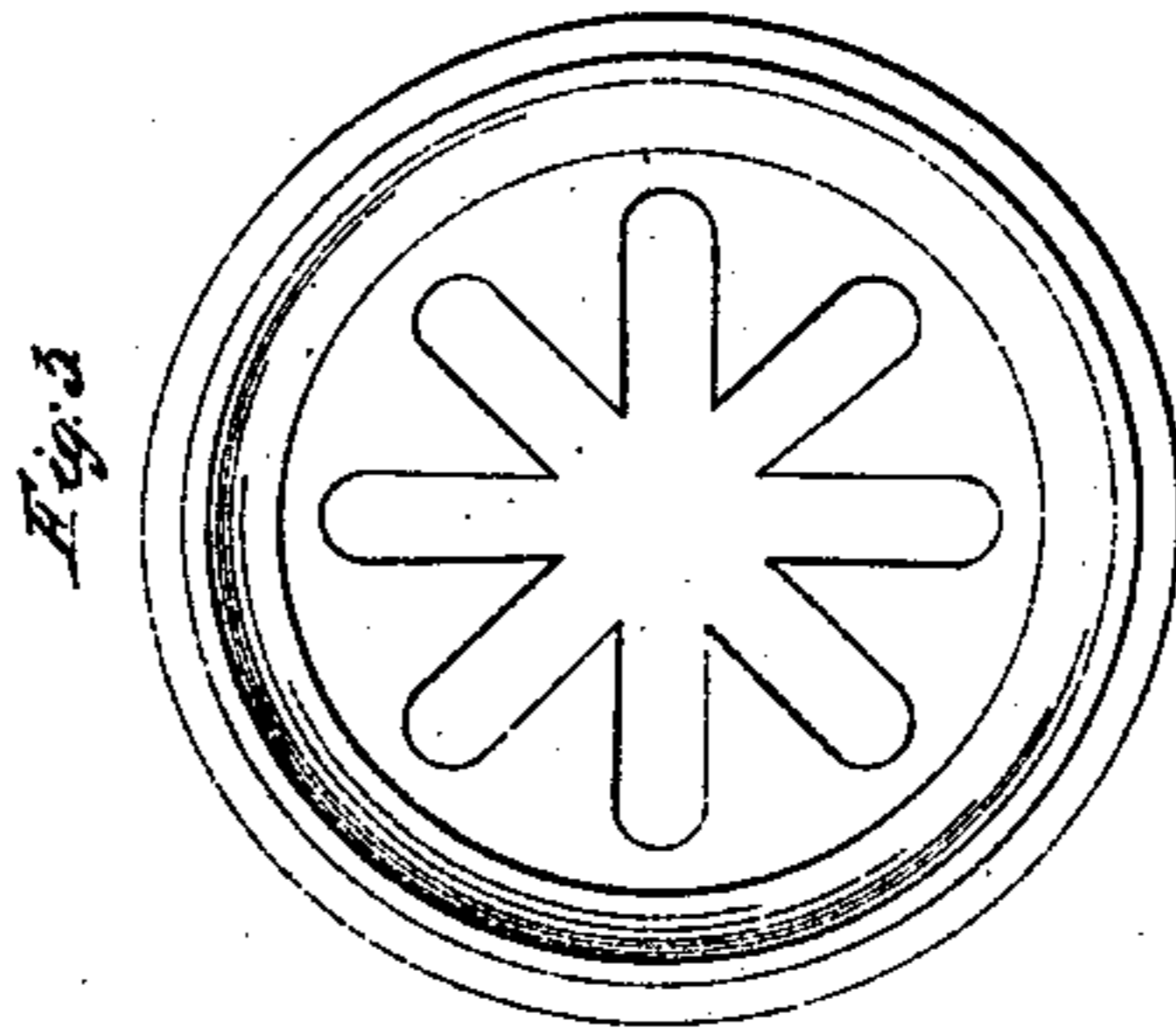
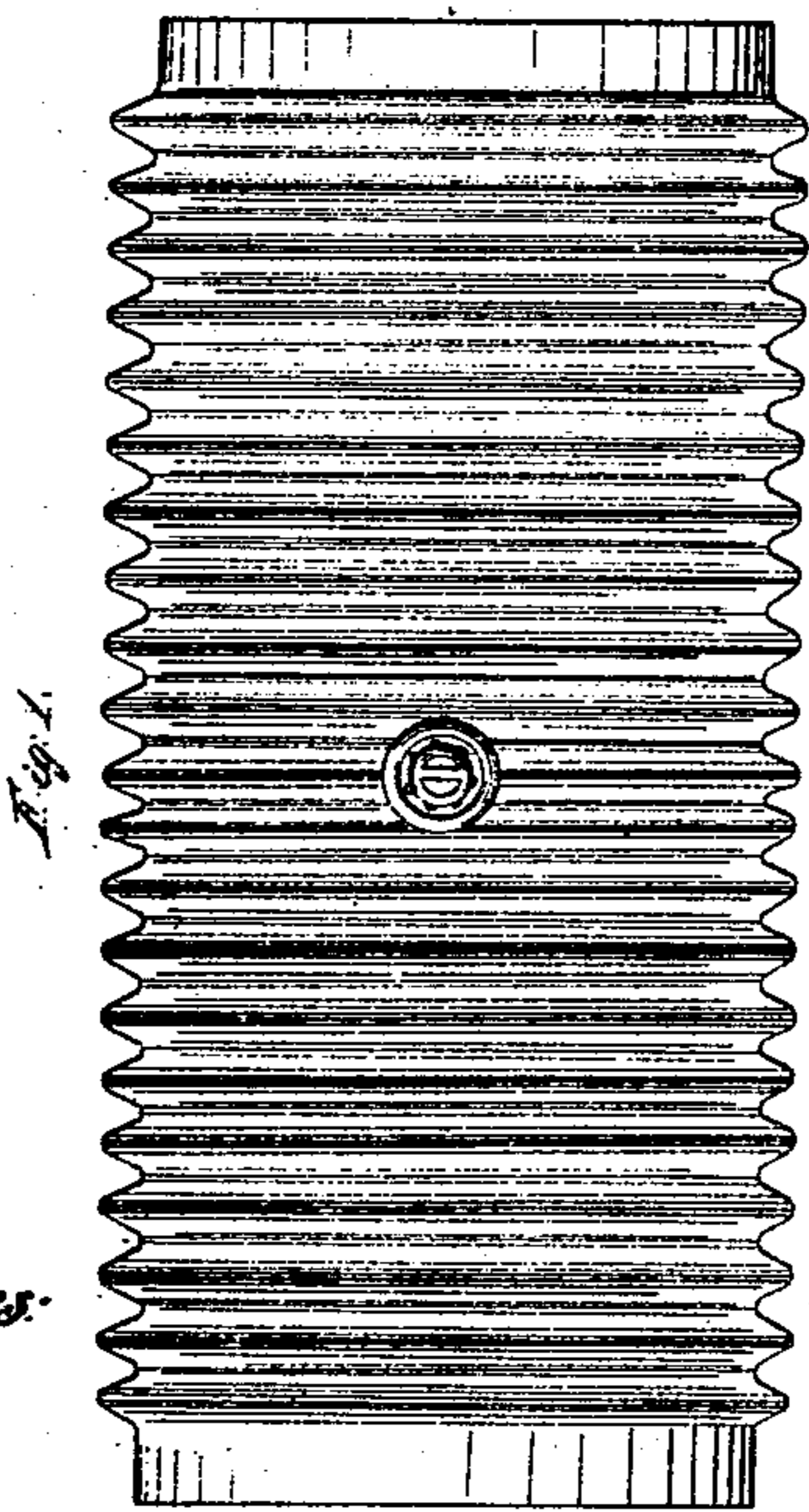
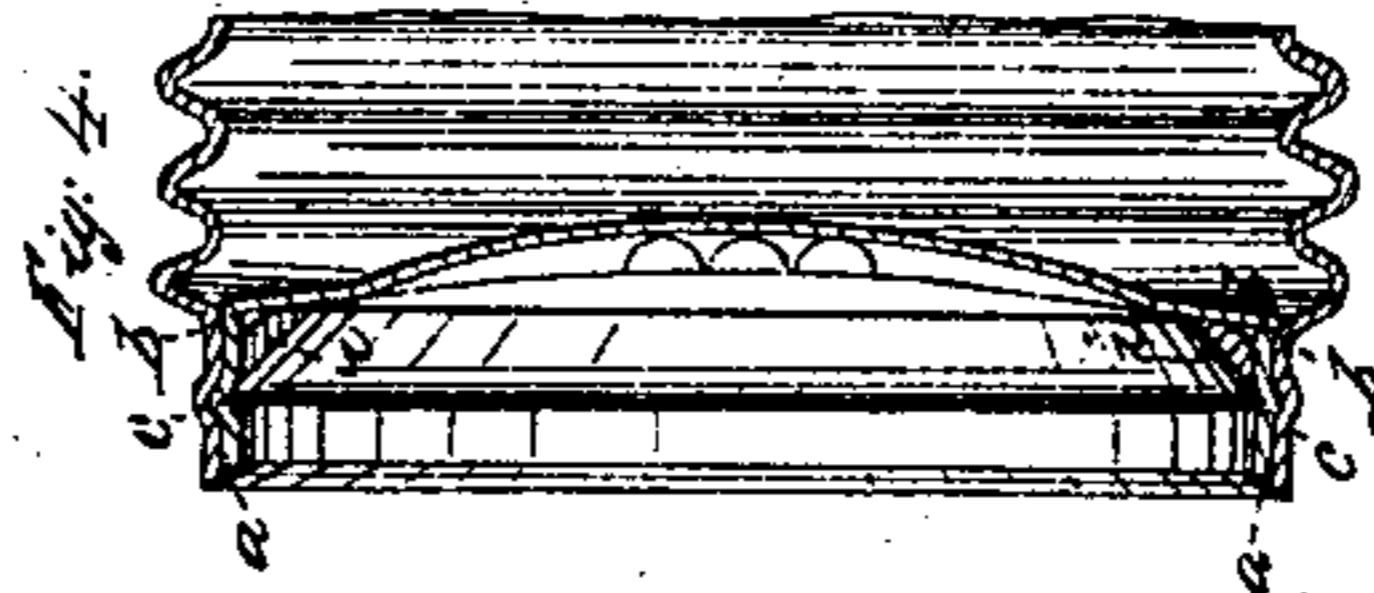
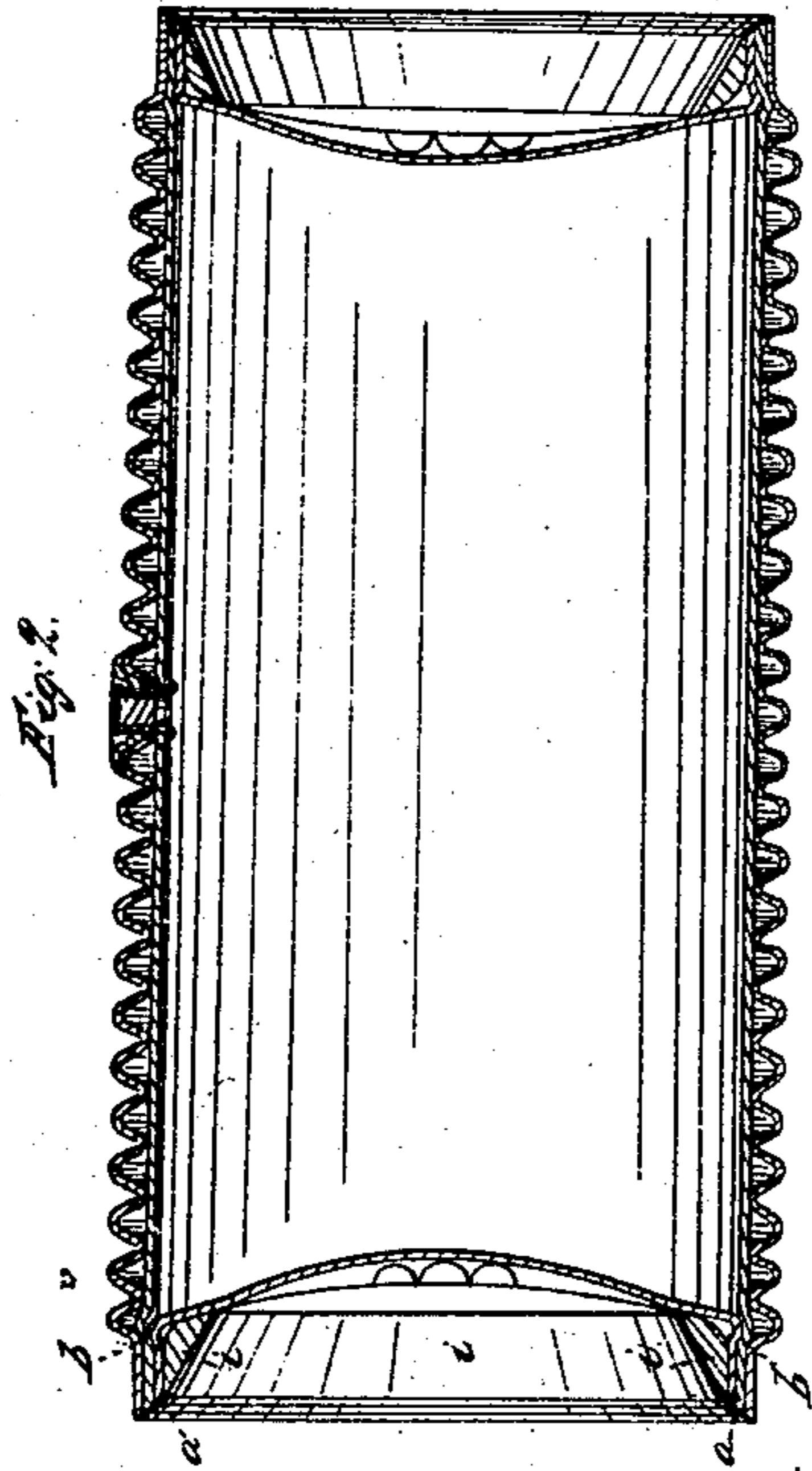


S. J. Seely,
Metal Cask.

N^o 36,175.

Patented Aug. 12, 1862.



Witnesses:
G. Dietrich
Samuel Seely

Inventor:
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UNITED STATES PATENT OFFICE.

SAMUEL J. SEELY, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN SHEET-METAL CASKS.

Specification forming part of Letters Patent No. 36,175, dated August 12, 1862.

To all whom it may concern:

Be it known that I, SAMUEL J. SEELY, of the city of Brooklyn, in the State of New York, have invented a new and Improved Mode of Constructing Barrels and Casks from Sheet Metal; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 is an elevation of the cask when completed. Fig. 2 is a longitudinal section of the same. Fig. 3 is an elevation of one of the heads of the cask. Fig. 4 is a section showing a modified mode of construction. Fig. 5 is a section showing the manner of constructing the bung of the cask.

The nature of my invention consists in constructing a cask of a cylindrical form, which renders it more convenient to be handled, and makes it capable of being more closely stowed on board ship or elsewhere. To render it durable and impermeable to moisture, I make it of metal; and in order to secure the requisite lightness and strength, I use thin sheets of this material, which are to be corrugated or otherwise arranged, as hereinafter described. I first form the external cylindrical surface of the casks of sheet metal corrugated transversely, the corrugations extending in continued series from one chine of the cask to the other, as shown in drawings 1 and 2. This is bent into a cylindrical form of the proper dimensions, the ends being firmly fastened together by being soldered or riveted and cemented, or in any other way that shall render the connection perfectly tight and strong. The corrugations are so shaped that the salient corrugations of one cask shall fit into the re-entering corrugations of another cask of the same pattern when placed side by side, or when the one is placed above the other.

The head of one cask will project beyond that of the one contiguous to it by half the breadth of one corrugation; but with this slight variation the casks will firmly interlock with each other, and stand ranged in regular ranks, either longitudinally or vertically, and the irregularities in one rank can be made to fit into those of the contiguous rank, so that all the space will be occupied, and this very irregularity will form a kind of breaking of joints between the different ranks of casks, so

as to add to their compactness and to bind them more firmly together, thus avoiding the shifting of a cargo on board of ships in a storm. The cylindrical form of the cask avoids the necessity of dunnage, which is always necessary where casks are constructed in the ordinary way with a bilge. It also gives much more space in storage, as there is less waste space when the casks are made cylindrical or of equal size from end to end. I then form an internal cylinder of plain sheet metal, which is bent into shape and soldered or cemented, as above mentioned, and of such diameter that it shall fit snug and tight into the external corrugated cylinder aforesaid. This internal lining-cylinder may sometimes be dispensed with, as represented in Fig. 4, though in most cases I prefer to retain it, as the cask is thereby greatly strengthened, and is also much more readily emptied of its contents. The external cylinder may be constructed of sheet-iron about No. 20 in thickness for a cask which is to contain forty gallons, and heavier or lighter for casks of other sizes, in proportion to their dimensions. I prefer galvanized iron as the material from which the internal or lining cylinder is to be constructed, as it is less likely to affect or to be affected by the contents of the cask than most other metals, except such as are too expensive for ordinary use. It may be made of much lighter sheets than is requisite for the external cylinder. Even tin of the ordinary thickness answers a very good purpose in many cases.

The heads of the casks should be made somewhat concave, in order to sustain the pressure from within. It may also be corrugated, as shown in the drawings Figs. 2, 3, and 4, or in various other modes, though I do not think any of these corrugations necessary, and prefer a plain concave surface as being more convenient, less expensive, and sufficiently strong.

Where an internal lining-cylinder is used for the body of the cask, the head should be made of a similar material, or else it should have an internal lining of such material in order that the contents of the cask should come in contact with the same metal at the ends as on the sides. These heads are constructed with a flange, *a*, as shown in Figs. 2 and 4, which may be riveted and soldered or cemented to the chines of the cylinders forming the sides of the cask. The angle of the flange is en-

larged, so as to form a shoulder, as at *b*, which must not be so large as to prevent the head from being sprung into the end of the cylinder of the cask. Where great care to prevent leakage is required, I sometimes make a "croze" or indentation, *c*, in which I place a twine, and afterward rivet the chine on each side of the croze.

The bung-hole is composed of two rings, *e f*, united by bolts *o o*, into which the bung *g* is to be screwed. These rings are so constructed as to fit the corrugations or the external or internal surfaces of the cask as far as they extend. The external ring should be made almost flush with the external surface of the cask, so that in rolling the cask there will scarcely be any jar or jolt produced by rolling over the bung-hole. The bung itself should be depressed somewhat below the cheeks of this external ring, so as to be protected by the latter from coming in contact with the surface over which the cask may be rolled. The screw at the bung-hole is made slightly tapering, so that the bung can be more readily removed and prevented from being made fast in the bung-hole in consequence of an external blow, or in consequence of the gluey or gummy nature of the contents of the cask.

I sometimes strengthen the heads of the casks by the "head-linings" *i i*, Figs. 2 and 4, having a beveled surface extending entirely around the chines, to which they may be riveted or otherwise attached.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A cylindrically-shaped cask the external convex surface of which is composed of sheet metal, with transverse corrugations extending in a continuous series from one chine thereof to the other, when such corrugations are so constructed that the salient corrugations of one cask shall fit into the re-entering corrugations of that which is next it, (if made of the same pattern,) and so that a rank of such casks shall interlock firmly with each other and pack closely together, substantially in the manner and for the purpose above described.

2. In a cask of a cylindrical shape, the external convex surface of which is composed of

sheet metal transversely corrugated, the insertion of a plain internal or lining cylinder, made to fit snug and tight to the external cylinder, by which it is supported, the whole being firmly attached together at the chine, substantially as described.

3. In a cask constructed of sheet metal, the insertion of heads of sheet metal, made sufficiently concave to prevent being bent outward by the internal pressure of the fluid which may be contained in the cask, and having flanges bent down at nearly right angles to their respective surfaces, and so shaped as to be readily fitted and riveted, or otherwise cemented to the chines of said cask, substantially as described.

4. In a cylindrical metallic cask in which the head is made slightly concave, and is constructed with a flange fitting the chine of the cask, as above described, making the diameter of the head proper larger than the internal diameter of the cask, in combination with a groove or corrugation fitted to receive it, so that when such head is sprung into the cask it shall find a firm shoulder and make a closer joint when any internal pressure is brought against the head, as is hereinbefore described.

5. In a cylindrical corrugated cask, constructed as hereinbefore described, and in which the bung-hole is placed upon the convex side thereof, surrounding it with metallic supports composed of two parts attached together and fitting the corrugations of the body of the cask, substantially as above described.

6. In a metallic cylindrical cask having the bung-hole upon its convex cylindrical surface, and so constructed as to be nearly flush with that surface, so constructing the bung that it will be somewhat depressed beneath the cheeks which surround the hole, so as to be protected by those cheeks when the cask is rolled over an even surface, substantially as described.

Witness my hand in the matter of my application for patent on improvement in manufacture of metal casks, &c., this 3d day of July, 1862.

SAML. J. SEELY.

Witnesses:

G. DIETERICH,
EDWIN S. JACOB.