No. 38,810. PATENTED JUNE 9, 1863.

J. K. CHASE.

CAP FOR JARS, CANS, &c.

Fig. 1.

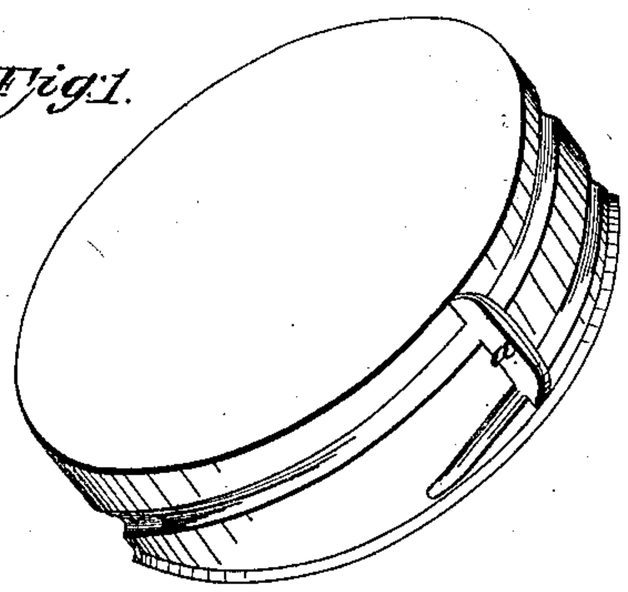


Fig. 3.

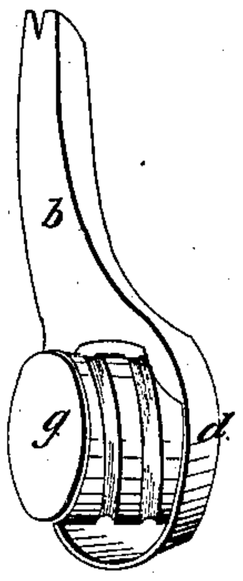


Fig. 4.

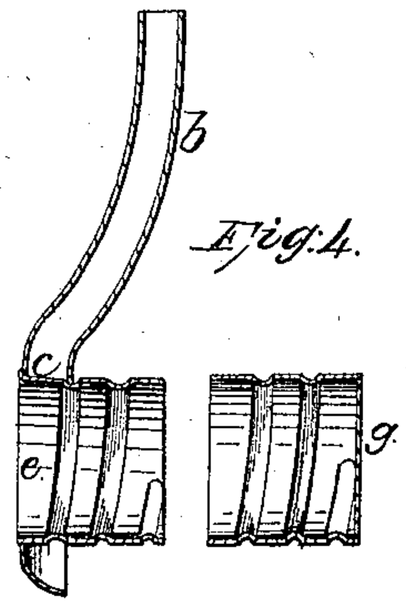


Fig. 2.

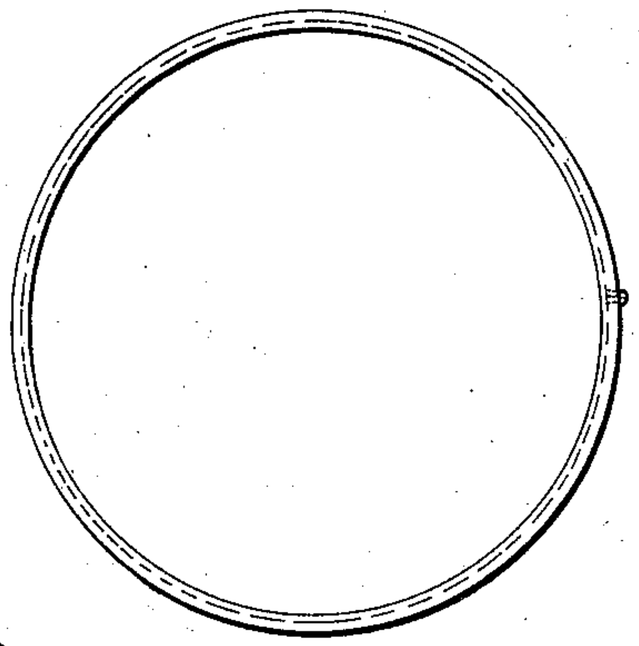
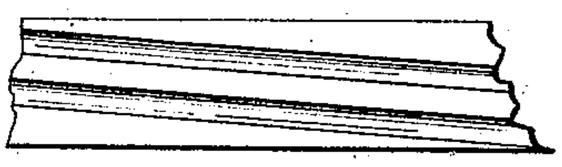


Fig. 5.



Witnesses:

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The drawing in this patent is not in print.

UNITED STATES PATENT OFFICE.

JOHN K. CHASE, OF NEW YORK, N. Y.

IMPROVEMENT IN CAPS FOR JARS, CANS, &c.

Specification forming part of Letters Patent No. **38,810**, dated June 9, 1863.

To all whom it may concern:

Be it known that I, JOHN K. CHASE, of the State, county, and city of New York, have invented a certain new and useful improvement in tops or caps for jars to contain and preserve fruit and other articles, or for analogous purposes; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the drawings which accompany and form a part of this specification.

Of the drawings, Figure 1 is a perspective view of my improvement, showing the cap from the outside. Fig. 2 represents the inside thereof, exhibiting the thickness of the ring which composes its sides. Fig. 5 is a delineation of a short piece of one of the strips of which this ring is made. Fig. 3 illustrates in perspective an adaptation of my invention, which will be hereinafter set forth. Fig. 4 is a vertical section of the same with the cap slightly removed from the nozzle to indicate more plainly the adjustment of the parts.

This improvement consists of a novel construction and arrangement of that class of jar-fasteners which are commonly called "screw-tops," and is designed to constitute an extremely cheap, simple, durable, easily manipulated, and effectual sealing-cap for all kinds of bottles, jars, or other similar articles which require to be made air-tight.

To enable those skilled in the art to make and use my invention, I will describe it in detail.

I form my cap out of tin, brass, or any suitable sheet metal, though I prefer tin, on account of its cheapness. The screw which I put into it is what is called a "corkscrew thread." Any other style or any shape of thread which is desired, whether **V**, square, or otherwise, may be adopted. It is made by placing the sheet metal flat between male and female dies properly grooved to impress upon the metal such a thread as is shown in Fig. 3. It will be observed that this screw is entirely on the inside of the cap—that is to say, the depressions between the ribs which constitute the thread are all in the plane of the inner face of the metal, so that there are no projections on its outer surface corresponding with them. It is consequently but one-half a double-threaded screw, and hence less nicety is required in putting it in, and it can be made with greater ease, rapidity, and cheapness than if formed in the usual way. The dies may be of the proper size to enable as many of these screw-threads as desired to be stamped at once out of a single sheet of metal, and the latter is then cut into strips as wide as the intended depth of the cap. These strips are then bent into a ring and strongly soldered, and a circular disk of the same or other metal, of a diameter slightly greater than that of the ring, is soldered over one edge of the latter to form the top of the cap, like a box-cover. The opposite or lower edge of the ring is then "hemmed" and "thrown out" a little, as shown in the drawings, or made straight up and down, so as to set properly onto the gasket. The hemming renders the cap stiffer and better able to retain its shape than any other in the market, and I prefer to dispense with the throwing out of the edge and to leave it straighter, because it will in the latter condition be more certain to secure an air-tight fit over the gasket. The neck of the jar or other vessel to which my improvement is applied should have blown or otherwise formed upon its exterior a thread to correspond with that of the cap, and the latter is screwed upon it, a rubber gasket or suitable packing being employed, as usual, between the cap and the jar or vessel. By this means I produce a better cap than any others hitherto known, while at the same time I am enabled to make it more cheaply and far more quickly than has heretofore been possible. By the stamping process the thread is completed in a small fraction of the period required for putting it in by other devices, and if, as already suggested, the dies are prepared so as to stamp an entire sheet of metal at once, a large number of the screws can be made as quickly as one. No expensive tools—such as lathes, chucks, &c.—are needed for the manufacture, as is the case with other styles of caps, and I thus save materially in the investment of capital and the wear and tear of machinery. Moreover, the disadvantages of other articles of the kind, such as multiplicity of parts, difficulty of manipulation, lack of certainty of an air-tight fit, and the tendency to cause the gasket by being improperly located, as is unavoidable in some caps, to impart a

taste to the contents of the jar, are entirely obviated by my improved manner of construction.

For the purpose of facilitating the tightening or loosening of my cap, I turn the two ends of the strip which contains the thread slightly outward, when it is bent into a ring, as before described. These edges are then firmly soldered, and thus form a small knob or projection, *a*, upon one side of the cap at its seam, by which the cap can either be tightly secured or readily loosened after it has become "set" by lapse of time and the exhaustion of the air in the jar or vessel. It is found that when the latter has been sealed for a certain period considerable force is required to start the "top," and more usually than women, for whose use in families these articles are mainly designed, can exert. It has, therefore, been the practice to solder two points or "starts" upon the top of the cap, over which a wrench or key is fitted, in order to fasten or remove the cap. This mode of construction is attended with an expense and trouble which it is desirable to avoid, and the device of the knob or projection which I have described constitutes an economical and successful substitute for it.

It will of course be understood that though I have referred above only to caps, nozzles, when required, are to be formed in the same way, except that the disk which makes the top of the former is omitted.

I also contemplate combining with my improved screw-cap and nozzle the spout or lip of oil-cans, molasses-cups, and similar articles in such a manner that all together shall practically be but a single piece, whereby I am enabled to provide vessels of this character with an air-tight stopper of good quality, which has never been done before. Figs. 3 and 4 illustrate this part of my invention. *b* is the spout or lip, provided with the passage *c*, for the discharge of the contents of the vessel. At the opposite end of the spout is formed a bowl-shaped or otherwise formed protuberance, *d*, perforated with the hole *e*, communicating with the interior of the can or cup. One of my improved nozzles is soldered into this aperture, as shown, and the cap *g* made to fit it. The whole is then secured to the neck of the vessels either by the latter being made to fit it just outside of the aperture *e*, where it is to be soldered, or in any other convenient manner, thus furnishing an exceedingly useful device for a great variety of purposes.

I do not claim a screw-cap or nozzle considered by itself; but,

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

1. The mode, substantially as described, of constructing caps for the purposes mentioned.

2. The combination, with a cap for the purposes enumerated, whether constructed substantially as described or not, of a knob or projection for facilitating the tightening or loosening of the cap, as set forth.

3. The combination of a cap and nozzle, whether constructed substantially as described or not, with the spouts of oil-cans or molasses-cups, or the lips of bottles and other similar articles, substantially as set forth.

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Witnesses:
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