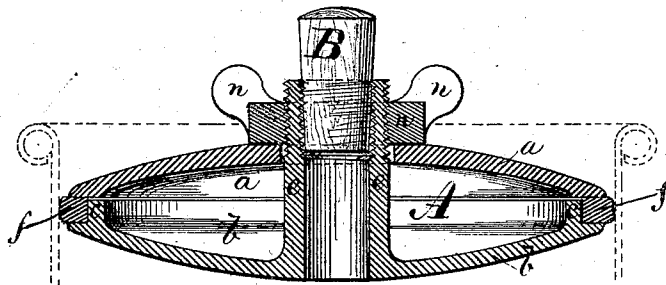


M. D. L. GAINES.
Cans for Transporting Milk.

No. 147,929.

Patented Feb. 24, 1874.



Witnesses.

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UNITED STATES PATENT OFFICE.

MARQUIS D. L. GAINES, OF BOONTON, NEW JERSEY.

IMPROVEMENT IN CANS FOR TRANSPORTING MILK.

Specification forming part of Letters Patent No. **147,929**, dated February 24, 1874; application filed October 24, 1873.

To all whom it may concern:

Be it known that I, MARQUIS D. L. GAINES, of Boonton, Morris county, New Jersey, have invented a Device for Securing Milk, &c., in Cans for Transportation; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, in which the figure represents a sectional view of my device.

My invention is an improvement upon an invention for which I filed an application for Letters Patent June 4, 1873, and upon which a patent was allowed June 18, 1873.

The object of this invention is, in connection with my plug for binding the milk or other fluids into cans for transportation, to provide a more effective and reliable packing for the cap. It is found that a very strong and tight joint is necessary between the cap and the sides of the can to counteract the force of my screw-plug into the milk. I have, therefore, applied a self-sealing cap, as herein described; and my invention consists in the combination of my screw-plug with a self-sealing cap.

In the drawings, A represents the cap of a can, the top of the can being represented by dotted lines, and B represents the plug. The cap is divided into two parts horizontally, *a* *b*. The lower part *b* has a flange, *c*, a short distance from its periphery, which, in connection with the upper edge, forms a rabbet for the reception of a rubber or other flexible ring, *f*. Said ring, being wider than the height of the flange, consequently projects above it. From the center of the part *b* of the cap A projects a shaft, *e*, a considerable distance beyond the plane of the upper side of the cap, terminating in a screw-thread and thumb-nut, *n*. This projecting shaft, *e*, is made hollow for the admis-

sion of the plug B, and is provided with a female screw-thread the whole or a part of its length. The upper part *a* of the cap A is constructed with a flattened surface at the bottom of its outer edge, so as to bear against the rubber ring *f*, and a hole in the middle admits the projection *e*, the thumb-screw binding all together.

The operation of my invention is as follows: When a can for transportation is filled with milk or other fluid, the cap A, with the parts slightly screwed together, is inserted into the neck of the can until the milk fills the hole into the cap to be occupied by the plug. The thumb-screw is then turned down, causing the upper plate *a* to press upon the rubber band *f*, and, the rubber ring fitting tightly into the rabbet of the lower part *b*, the pressure, in flattening the flexible ring, causes it to extend outward, (the only remaining direction for it to extend,) pressing with force against the inner surface of the neck of the can, making a rigid air-tight joint. The self-sealing cap having thus been secured into the can, the plug B is then screwed down into the milk, forcing it into every interstice of the can, and preventing it from churning during transportation.

Having fully described my invention, what I desire to secure by Letters Patent is—

In combination with a plug for binding milk or other fluids in cans for transportation, a self-sealing air-tight cap, substantially as herein described.

The above specification of my said invention signed and witnessed, at Boonton, this 22d day of October, A. D. 1873.

M. D. L. GAINES.

Witnesses:

MELVIN S. CONDIT,
E. B. DAWSON.