

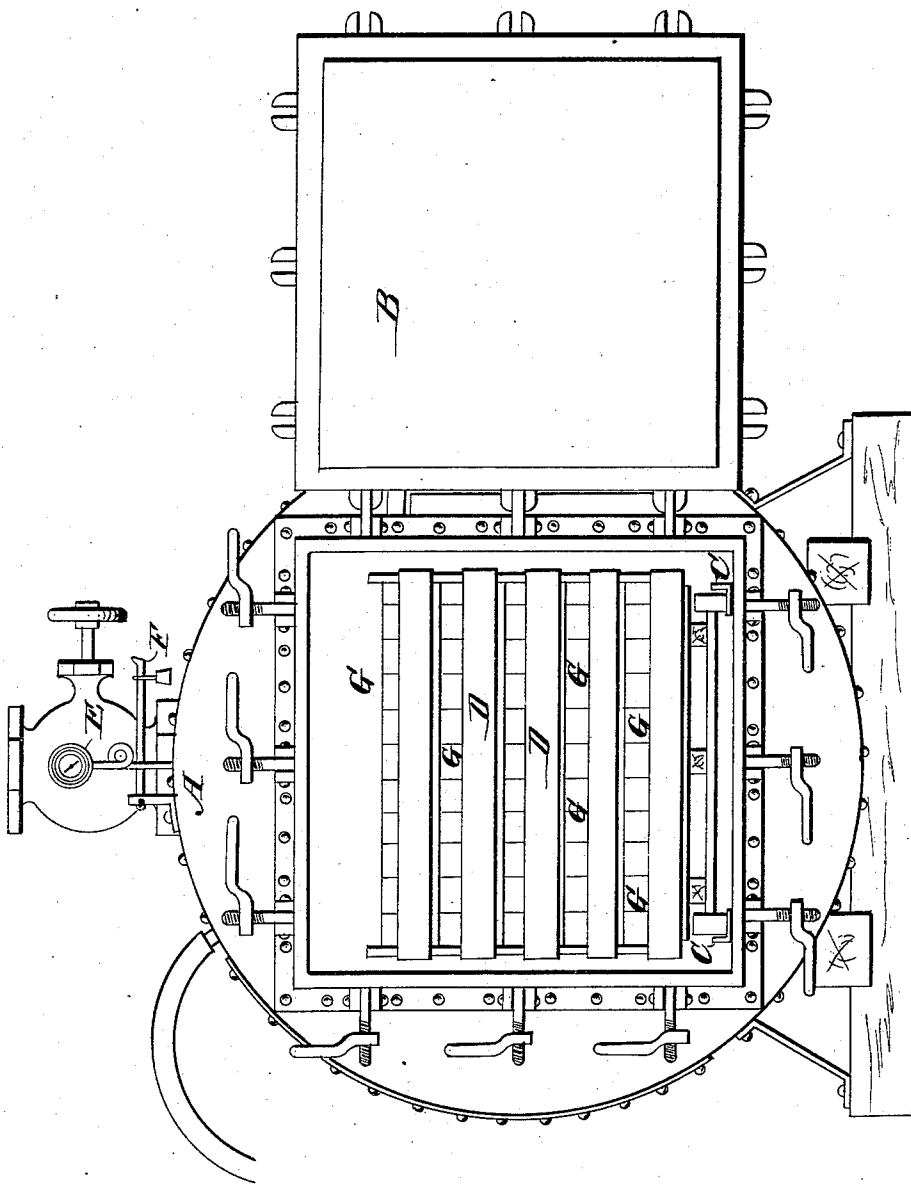
(No Model.)

M. C. HUTCHINGS.

TESTING SEALED CANS.

No. 314,180.

Patented Mar. 17, 1885.



WITNESSES:

F. M. Anole.
C. Sedgwick

INVENTOR:

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UNITED STATES PATENT OFFICE.

MARVIN C. HUTCHINGS, OF ASTORIA, OREGON.

TESTING SEALED CANS.

SPECIFICATION forming part of Letters Patent No. 314,180, dated March 17, 1885.

Application filed August 18, 1884. (No model.)

To all whom it may concern:

Be it known that I, MARVIN C. HUTCHINGS, of Astoria, in the county of Clatsop and State of Oregon, have invented certain new and useful Improvements in Testing Sealed Cans, of which the following is a full, clear, and exact description.

The object of my invention is to test sealed cans for the purpose of detecting leaky cans in time to seal them and prevent the contents from becoming decomposed.

The invention consists in placing the cans in a strong air-tight vessel and then forcing air into the vessel until there is considerable pressure in the same and then exhausting the air very rapidly. The leaky cans have one or both heads bulged out and can thus be detected very easily.

Reference is to be had to the accompanying drawing, forming part of this specification, in which an end view of the apparatus for testing the cans is shown, the door being open.

A cylindrical or like iron or steel vessel, A, placed horizontally, is provided at one end with a hinged door, B, and with means for holding the door closed hermetically. Tracks C are arranged within the vessel, and on the same a car or truck, D, runs, on which the cans G to be tested are placed. The vessel A is provided with a pressure-gage, E, and with a safety-valve, F, and is connected with a pump or other air-forcing apparatus for forcing air under pressure into the vessel C.

The filled cans G to be tested are placed on the car D, which is run into the vessel A, and then the door B is closed hermetically. Air is forced into the vessel A, and the compressed air is permitted to remain in the ves-

sel for several minutes, and is then permitted to escape suddenly. Thus the air has time to find its way into all such cans as are not soldered perfectly tight, so that an equilibrium of pressure is maintained outside and inside; but upon sudden relief of exterior pressure the air within the defective cans fails to find ready exit, owing to the small size of the opening or openings therein, and hence exerts a strong outward pressure against the inner sides of such cans, thereby bulging one or both heads. To thus relieve the pressure in vessel A, the air is shut off from access to it and an escape-pipe opened. The bulged cans can easily be assorted from the rest, and are then soldered and again tested, thereby avoiding great losses in material and freight.

I do not claim, broadly, applying compressed air to fruit and other cans for the purpose of discovering such as are defective, since I am aware this has been effected by various forms of apparatus.

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

The herein described method of testing filled tin cans whose heads have been soldered in place, the same consisting in placing the cans in a vessel, closing the latter hermetically, then admitting air compressed to the required degree, next shutting off the same and opening the vessel, and then suddenly relieving the air-pressure on the cans exteriorly, as specified.

MARVIN C. HUTCHINGS.

Witnesses:

T. A. McBRIDE,
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