

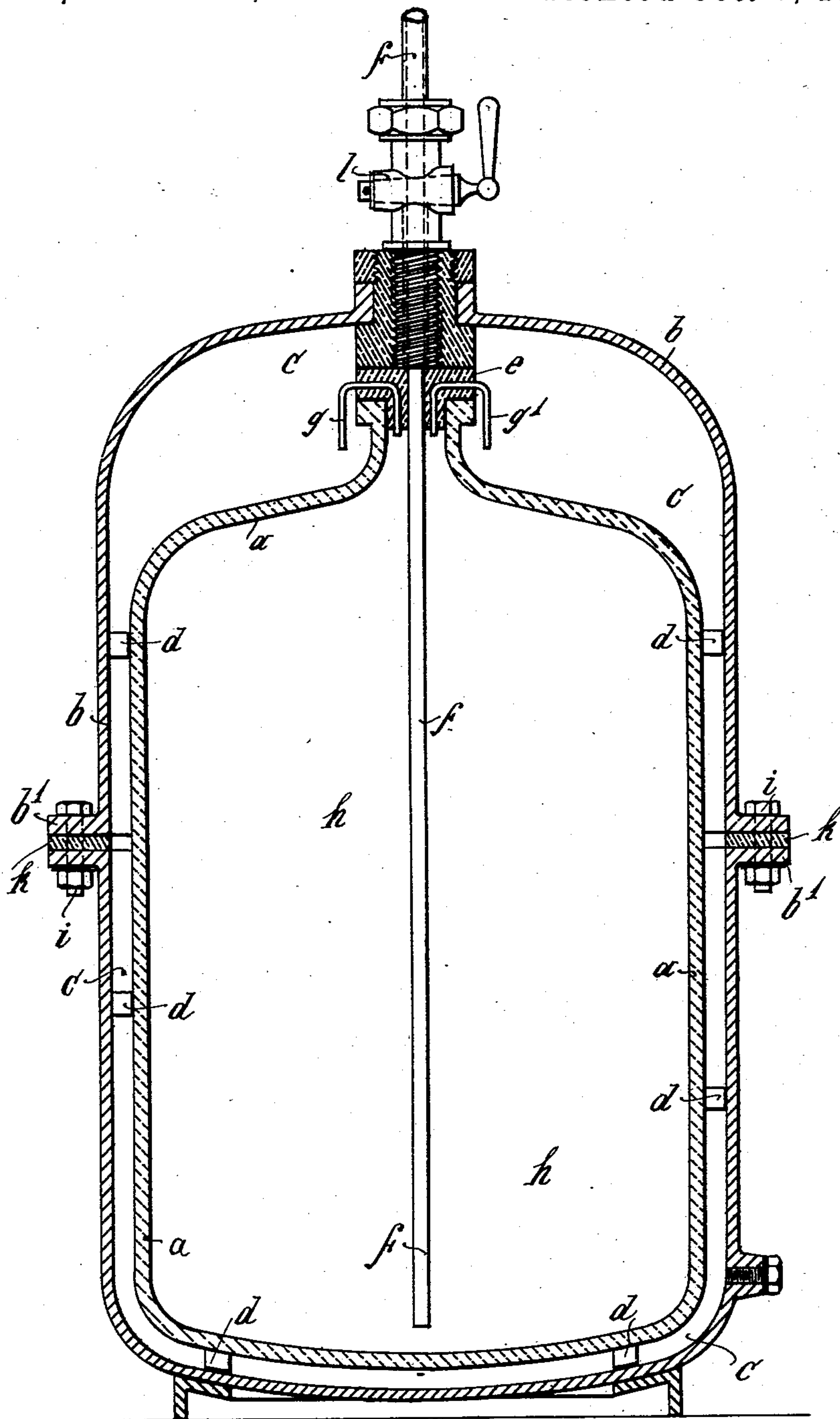
(No Model.)

L. NATHAN.

VESSEL FOR STORING AND TRANSPORTING LIQUORS CONTAINING  
GAS UNDER PRESSURE.

No. 569,028.

Patented Oct. 6, 1896.



Witnesses:

Carl Ochsback  
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by  
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# UNITED STATES PATENT OFFICE.

LEOPOLD NATHAN, OF ROTTWEIL, GERMANY.

VESSEL FOR STORING AND TRANSPORTING LIQUORS CONTAINING GAS UNDER PRESSURE.

SPECIFICATION forming part of Letters Patent No. 569,028, dated October 6, 1896.

Application filed May 14, 1894. Serial No. 511,201. (No model.)

*To all whom it may concern:*

Be it known that I, LEOPOLD NATHAN, a subject of the King of Würtemberg, and a resident of Rottweil, in the Kingdom of Würtemberg, German Empire, have invented an Improved Vessel for Storing and Transporting Liquors Containing Gas Under Pressure, of which the following is a specification.

This invention relates to a vessel for storing and transporting liquors containing gas under pressure, especially to be used for beverages containing carbonic acid, as, for instance, champagne. Beverages of this kind could be stored and transported hitherto only by means of thick-walled bottles of ordinary size, in which the thick walls were capable of standing the strong pressure of the gas. If large bottles or vessels of larger size should be used, their large inner surfaces would necessitate walls of such thickness that the vessels would become very heavy, as well as expensive. It must be borne in mind here that such sensitive liquors as, for instance, champagne cannot be stored and transported in vessels of any desired material, but only in such of materials not capable of imparting a tang to the wine or the like, as glass, porcelain, and similar materials.

My invention therefore resides especially in making larger vessels of such materials adapted to be used for the storage and transport of liquors with strong contents of gas. I attain this object by combining and inclosing the glass, porcelain, or other vessel with a second vessel, of metal or a similar strong material, which is capable of standing a pressure of such height that the inner vessel or its walls respectively is or are wholly or nearly wholly relieved. That is to say, a space is left between the two vessels, and this space is brought into communication with the space of the inner vessel by means of capillary tubes, allowing the gas to go over into the said intermediate space, but preventing the liquor from entering that space, so that the liquor is kept back within the inner vessel, while the gas is contained in the inner space as well as in the intermediate one. As the pressures on both sides of the inner vessel are alike, the latter is perfectly relieved, and the said vessel is thus prevented from bursting.

In order to make my invention more clear,

I refer to the accompanying drawing, in which is shown a vertical section through one method of construction of the improved vessel. The same consists of the inner vessel *a*, made from glass, porcelain, or other suitable material not capable of imparting a tang to the liquor, and of the outer vessel *b*, made from metal or other suitable material capable of resisting a strong inner pressure. The size of the vessels differ, so that a space *c* is left between the same. The proper equal distance at all parts is maintained by the india-rubber rings *d*.

Vessel *a* is closed by a stopper *e*, of any suitable construction. The same holds the delivery-tube *f*, as well as the two capillary tubes *g g'*, by means of which latter the space *c* is brought into constant communication with the space *h* of vessel *a*. There is thus in both spaces always the same pressure, so that vessel *a* is entirely relieved.

Vessel *b* consists (in the mode of construction shown) of an upper and an under portion, which are provided with flanges *b'* and connected by bolts *i* with the insertion of a tightening-ring *k*. The head of vessel *b* carries the cock *l*, by means of which pipe *f* may be opened or closed.

The improved vessel is intended for the storage and transport especially of champagne, strongly-foaming fruit-juices, and similar liquors containing more or less gas, and may be used, also, in connection with a retailing apparatus for selling said beverages of such kind by the glass instead of by the bottle.

Having now described the nature of this invention, what I desire to secure by Letters Patent of the United States is—

1. In a vessel for storing and transporting liquids containing gas under pressure, the combination with the inner vessel constructed of porcelain or similar material as specified, of the outer vessel of metal or the like surrounding the inner vessel and of such greater size than the latter as to form a space between the two vessels upon all sides of the inner vessel, a stopper fitting in the upper end of the inner vessel and capillary tubes carried by said stopper and communicating at one end with the space between the vessels and at the opposite end with the interior of the inner vessel, as specified.

2. In a vessel for storing and transporting liquids containing gas under pressure, the combination with the inner vessel constructed of porcelain or similar material as specified, 5 of the outer vessel of metal or the like surrounding the inner vessel and of such greater size than the latter as to form a space between the two vessels upon all sides of the inner vessel, a stopper fitting in the upper end of the 10 inner vessel, capillary tubes carried by said stopper and communicating at one end with

the space between the vessels and at the opposite end with the interior of the inner vessel, as specified; and elastic rings *d*, arranged between the two vessels.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

LEOPOLD NATHAN.

Witnesses:

G. GOF,

C. ARDELFINGER.