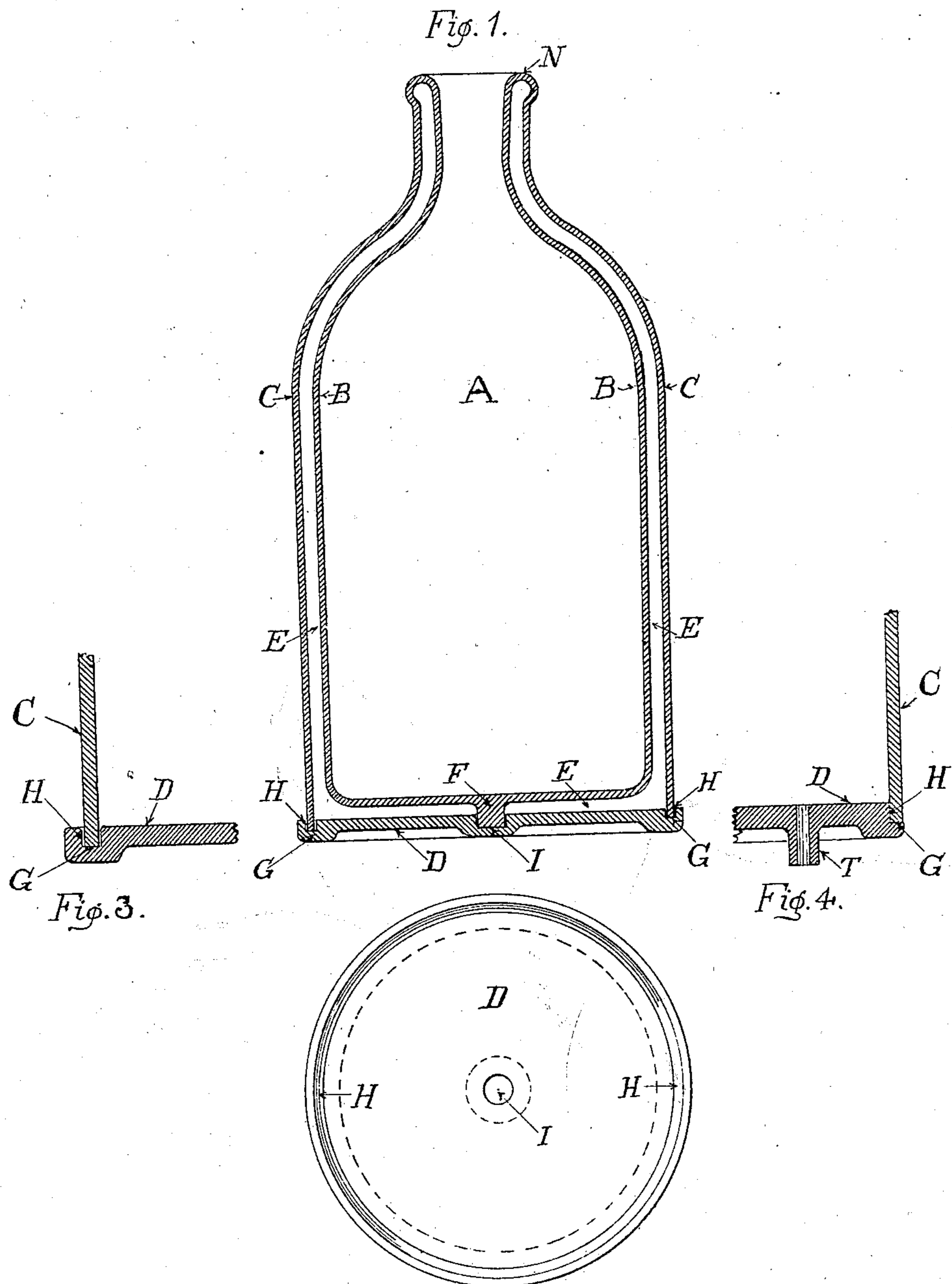


K. KATHER & G. F. SCHILD.  
VACUUM BOTTLE.  
APPLICATION FILED AUG. 24, 1909,

Patented Aug. 2, 1910.

966,216.



Witnesses.  
J. N. Miller  
John W. Oliver

Fig. 2.

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# UNITED STATES PATENT OFFICE.

KONRAD KATHER, OF SAN FRANCISCO, AND GEORG F. SCHILD, OF VALLEJO,  
CALIFORNIA.

## VACUUM-BOTTLE.

966,216.

Specification of Letters Patent.

Patented Aug. 2, 1910.

Application filed August 24, 1909. Serial No. 514,425.

To all whom it may concern:

Be it known that we, KONRAD KATHER, a citizen of the United States, residing in San Francisco, in the county of San Francisco and State of California, and GEORG F. SCHILD, a citizen of the United States, residing in Vallejo, in the county of Solano and State of California, have jointly invented certain new and useful Improvements in Vacuum-Bottles, of which the following is a specification.

The object of our invention is to provide a portable double walled bottle or receptacle for holding and keeping liquids or substances cold or hot, in which the inner bottle is securely centered on the bottom within the outer bottle to prevent the breaking at the sealed neck.

In the accompanying drawing: Figure 1 is a vertical section through the complete bottle embodying our invention; Fig. 2 is a plan view of the bottom piece of the bottle, and Figs. 3 and 4 enlarged sections through the rim of the bottom piece. Fig. 1 shows the complete bottle A, consisting of the inner bottle B, the outer bottle C, the bottom piece D, and the air space E.

The inner bottle B, is a complete bottle having in the center of the bottom a pintle F. The outer bottle C, has no bottom the bottom having been removed after blowing the same. The lower rim G, is ground even to give the bottle a length equal to the inner bottle including the pintle F. The inner bottle B, and the outer bottle C, are then sealed at the neck N, leaving an equal annular air space E, between them. The bottom piece D, has a groove or shoulder H, at the outer edge of the exact shape of the lower edge of the outer bottle C, and a socket I, for the reception of the pintle F, of the inner bottle B.

In assembling the pieces, the bottom piece, with some liquid cement in the groove, is placed in the center of an air pump especially constructed for this purpose, the bottle is secured by a screw plug in the top of the air pump exactly over the bottom-piece. After the air has been exhausted in the air pump, the bottle is lowered by means of the screw plug into the groove of the bottom piece, and the complete bottle removed after

the cement has set. Another way to assemble the two pieces would be, to set the bottle over the bottom piece and after sealing them together at the rim, to exhaust the air by means of the tube or nipple T, provided in the bottom piece, which tube is sealed after the air is exhausted from the air space.

Although we show in the drawing a cylindrical bottle, it is obvious that the bottle can be made of any other shape.

We are aware that prior to our invention vacuum bottles have been made in which the inner bottle was centered by means of separators of different materials, but it is very difficult to secure them properly and it is still more difficult to close the outer bottle over the inner bottle to form the bottom and keep an equal air space between the inner and outer-bottle. We overcome all these objections by our improved construction of vacuum bottle, as fully described.

What we claim as new and desire to secure by Letters Patent is:

1. A vacuum jacketed bottle consisting of an inner bottle having a downward projection on its bottom, an outer casing fused to the neck of the inner bottle and of such size and shape as to be uniformly spaced from the inner bottle, and a bottom for said casing having a socket for the reception of said projection and a peripheral groove in which is secured the lower end of said outer casing, the air in the space between the bottom and casing and the inner bottle being exhausted.

2. In a double walled bottle, an inner bottle having a central projection on its bottom, an outer casing and a bottom for said casing, said casing being sealed to the neck of the inner bottle and of such size and shape as to leave a space between the bottle and casing, and said bottom having a socket for the reception of the projection on the bottom, a peripheral groove in which the lower end of the casing is secured and means whereby the air between the inner bottle and outer casing may be exhausted.

KONRAD KATHER.  
GEO. F. SCHILD.

Witnesses:

J. V. MILLER,  
JOHN W. OLIVER.