

T. R. TIMBY.
PORTABLE WARMING APPARATUS.

No. 36,871.

Patented Nov. 4, 1862.

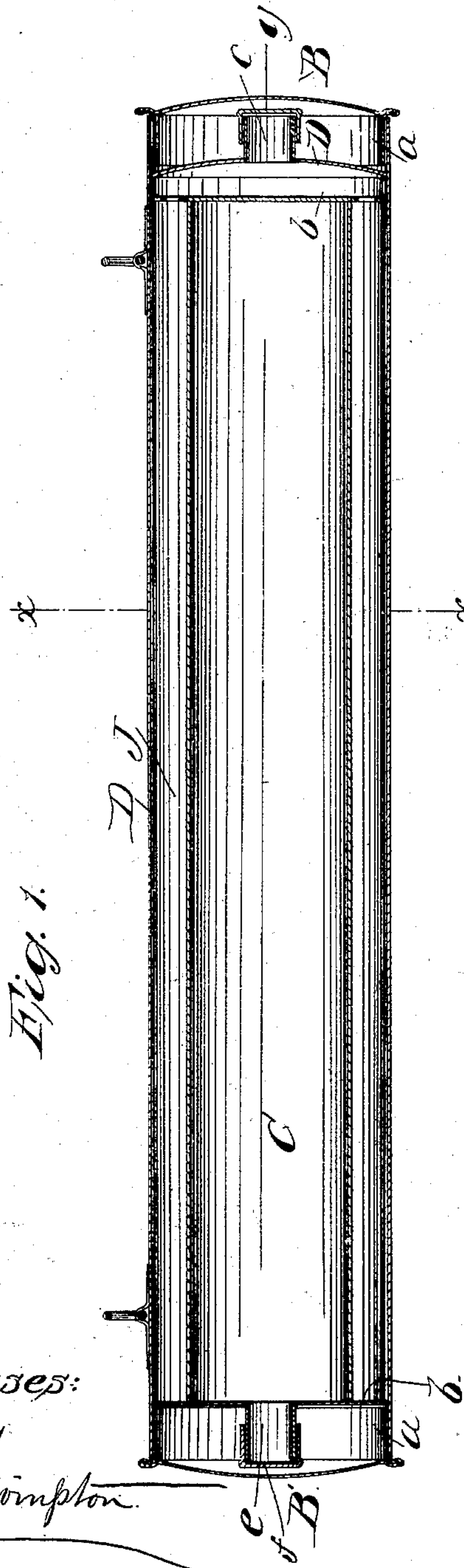


Fig. 1.

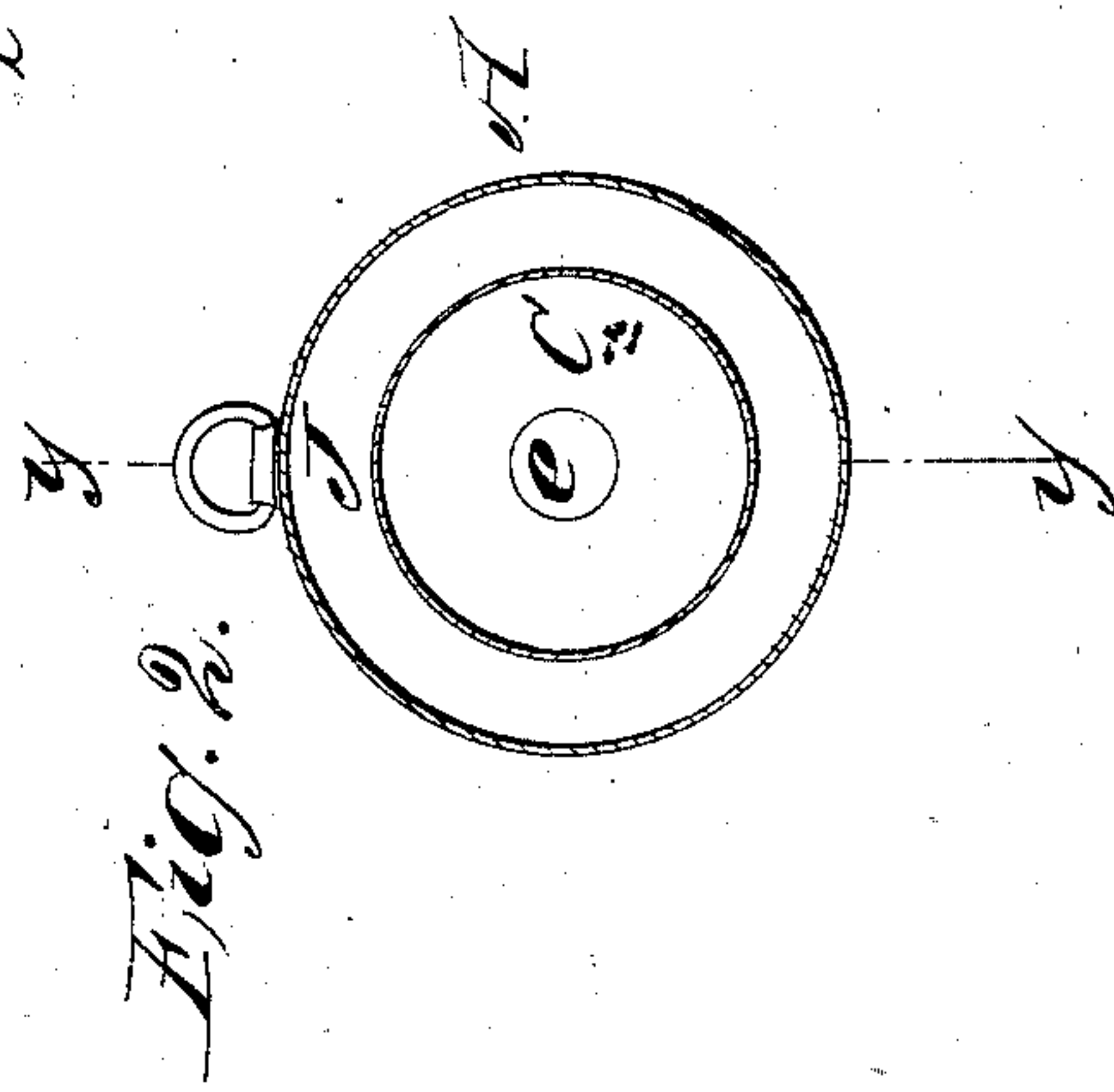


Fig. 2.

Witnesses:
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UNITED STATES PATENT OFFICE.

THEODORE R. TIMBY, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN PORTABLE WARMING APPARATUS.

Specification forming part of Letters Patent No. 36,871, dated November 4, 1862.

To all whom it may concern:

Be it known that I, THEODORE R. TIMBY, of the city of Worcester, in the county of Worcester and State of Massachusetts, have invented a new and Improved Portable Warming Apparatus; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents my improved warming apparatus by a longitudinal section taken at the line *y y*, Fig. 1. Fig. 2 is a transverse section of the same, taken at the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

The object of this invention is to obtain a light and portable warming apparatus for the use of persons traveling, for warming beds, and for like purposes; and it consists in arranging one cylinder, to be filled with hot water, within another in such a manner as to leave a space between them, which, when a mild and gentle heat is desired, is filled with air, and when a greater heat or a temperature of nearly 210° is desired is filled with boiling water.

To enable others skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a tin case of cylindrical form furnished at each end with caps or covers B B, made slightly crowning on their outer surfaces. The inner side of the covers are provided with flanges *a a*, which are fitted to the interior of the case A, and by the friction thereof hold the covers in place.

C is the inner case or cylinder, of somewhat smaller diameter than the outer case, furnished at its ends with flanges *b b'*, by means of which it is kept and fastened, by soldering or otherwise, in a central position in the outer case. The outer case, between the cover B and flange *b* of the inner case, is so divided by a partition, D, which has an opening end tube, *c*, in it, through which a communication is formed between the space surrounding the inner case and the external air. A cap, *g*, fitting over the

outer end of the tube *c*, closes the aperture therein. The flange *b*, outside of the inner case, is perforated to admit the water introduced through the tube *c* into the space J, between the inner and outer case. The opposite end of the inner case is furnished with an opening and tube, *e*, through which hot water is introduced into the case. This tube and opening are closed by a cap, *f*, fitting over the outer end of the tube. When only a mild heat is desired, the inner case only is filled with hot water, leaving an air-space between it and the outer case, which prevents the heat from passing off by conduction.

Water introduced into the inner case at a temperature of 212° , with the space between it and the outer case filled with air, parts with its heat reluctantly, throwing it off by radiation from the surface of the outer case only at a temperature of about 100° .

When both the inner and outer cases are filled with water at a temperature of about 212° , the heat is thrown off more rapidly and at a temperature of nearly or about 200° .

The apparatus is designed to be carried about by a person traveling, to be held in the lap for warming the hands by resting the hand upon it, or to be used for warming beds, and for all other purposes where a portable warming apparatus can be used. Its efficiency, simplicity, compactness, non-liability to get out of order, and the small expense at which they can be furnished recommend it where a portable warming apparatus is desired.

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

The combination of the inner and outer cylindrical cases, A C, and flange *b b'* with the openings *e c* and partition D, when arranged and operating in the manner substantially as described.

THEODORE R. TIMBY.

Witnesses:

JAMES LAIRD,
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