(No Model.)

J. J. HICKS.

CLINICAL THERMOMETER.

No. 588,796. Patented Aug. 24, 1897.

Fig. 1.

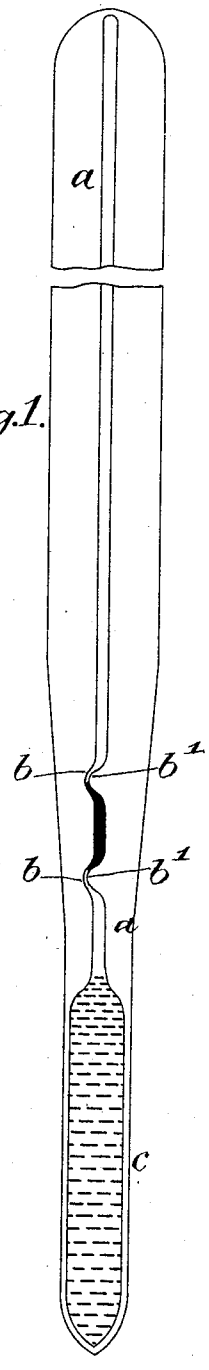
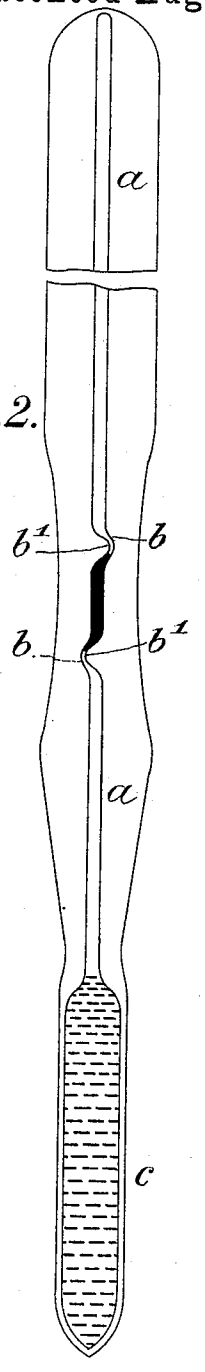


Fig. 2.



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UNITED STATES PATENT OFFICE.

JAMES J. HICKS, OF LONDON, ENGLAND.

CLINICAL THERMOMETER.

SPECIFICATION forming part of Letters Patent No. 588,796, dated August 24, 1897.

Application filed March 15, 1897. Serial No. 627,617. (No model.)

To all whom it may concern:

Be it known that I, JAMES JOSEPH HICKS, a subject of the Queen of Great Britain, residing at London, England, have invented certain new and useful Improvements in Clinical Thermometers, of which the following is a full, clear, and exact description.

The invention has for its object an improved construction of clinical thermometer with a view to render the resetting of the same more easy than is the case with clinical thermometers as heretofore constructed.

Heretofore clinical thermometers have been made with what is known as an "indestructible index," which is obtained by making a single knife-edge contraction in a chamber in the bore at a position more or less near the bulb, such contraction acting on the cooling of the mercury in the bulb to separate the portion of mercury above the contraction from that below the same. With this construction of clinical thermometer it was necessary to make the said knife-edge contraction so acute as almost to close the bore at that part, as otherwise the separation of the mercury above the contraction from that below would not take place on the cooling of the same, but the entire column of mercury would pass below the said contraction.

The above-named construction of clinical thermometer renders it very difficult to reset the same on account of the violent shaking or swinging necessary to cause the mercury in the tube to pass below the said contraction.

My present invention is illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal sectional diagram of a clinical thermometer, showing my invention applied to that class of clinical thermometers known as the "Non plus ultra," in which the contraction for producing the indestructible index is very near the bulb; and Fig. 2 is a longitudinal sectional diagram showing my invention applied to an ordinary clinical thermometer in which the contraction for producing the indestructible index is at a greater distance from the bulb.

According to my present invention I obviate the difficulty hitherto experienced in resetting clinical thermometers provided with an indestructible index by the following improved construction:

I make two chambers *b b* within the bore of the tube *a* at a short distance from each other, and within each of such chambers *b b* I make a contraction *b'*. By making two chambers within the bore of the tube each provided with a contraction, instead of only one chamber and one contraction, I am enabled to make the two contractions employed by me less acute than is necessary with the single knife-edge contraction heretofore used.

With my improved construction of clinical thermometer, by reason of the contractions employed to produce the indestructible index being less acute than the single contraction heretofore used for such purpose, the mercury is enabled, when the thermometer is swung or shaken, to pass such contractions much more readily than heretofore, thereby greatly facilitating the resetting of the thermometer.

It may be remarked that with the present improved construction of thermometer the chambers *b b*, containing the contractions *b' b'* and the portion of the bore of the tube *a* between them, will always remain filled, or nearly so, with mercury, and although the contractions *b' b'* will allow the mercury to pass more freely than the single contraction heretofore used they do not in any way interfere with the separation of the indestructible index from the column of mercury on the cooling of the latter in the bulb *c*. These chambers *b* with contractions *b'* may be made more or less near to the bulb *c*, as shown in the drawings. It will be evident that more than two chambers with such contractions may be provided, but it is unnecessary to employ more than two.

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

1. A clinical thermometer, having two distant chambers formed within the bore of the tube, and a comparatively open contraction within each chamber, the bore of the tube between such contractions always retaining a portion of the mercury, substantially as and for the purpose described.

2. In clinical thermometers, the combination with a thermometer-bulb and a tube having a bore communicating with said bulb, of two distant chambers, formed within the bore of the tube, and a comparatively open contraction within each of such chambers, the bore of the tube between such contractions, and the chambers themselves always retaining a portion of the mercury, substantially as described.

JAS. J. HICKS.

Witnesses:
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