Dec. 17, 1929. C. S. J. RUSSELL 1,739,693

THERMOMETER CASE

Filed May 4, 1928

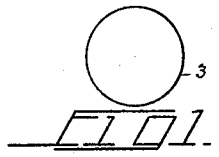

FIG 1.

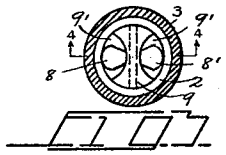

FIG 2.

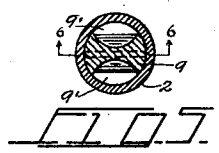

FIG 3.

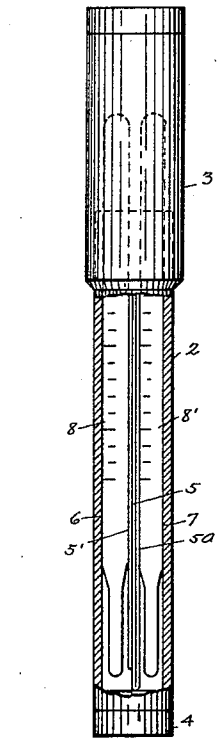

FIG 5.

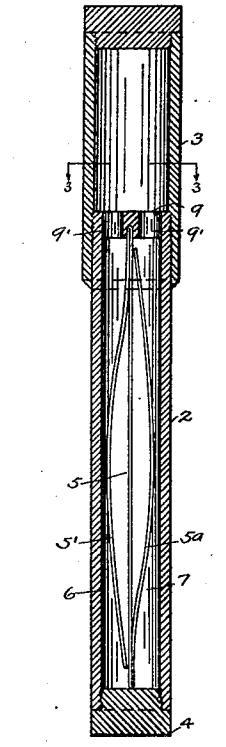

FIG 4.

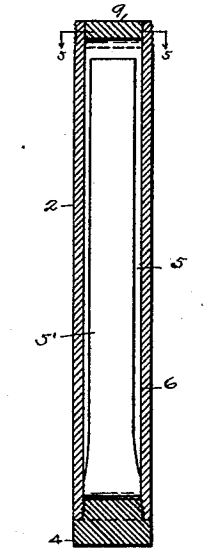

FIG 6.

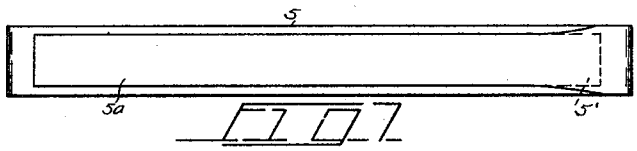

FIG 7.

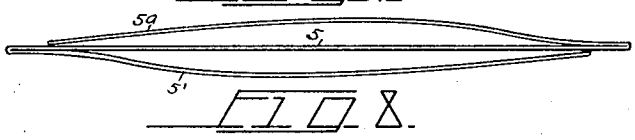

FIG 8.

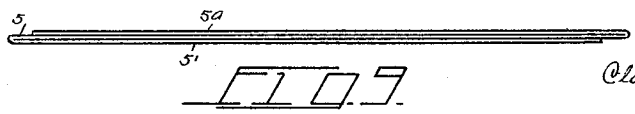

FIG 9.

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UNITED STATES PATENT OFFICE

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THERMOMETER CASE

Application filed May 4, 1928. Serial No. 275,086.

This invention relates to pocket thermometer cases, particularly of the type wherein a single tubular body is arranged for housing two clinical thermometers, either of which may be inserted and withdrawn without disturbing or contacting with the other thermometer.

The primary object of this invention is to provide novel and simple means for dividing the tubular body longitudinally into two similar compartments or pockets, the said means comprising a light flat strip of metal having a breadth equal to the inside diameter of the tube and being self-retaining when inserted therein, the said strip comprising spring metal and having its ends folded upon its opposite sides for providing novel and effective tension members that grip and hold the thermometers in the pockets. The said members being narrower than the body of the strip and being expanded or bowed laterally and being arranged to exert their tension when the thermometers are inserted and said members are flattened against said body. A further object is to provide a head for supporting the folded top end of said strip, said head being telescopically received in the mouth of said tube and having lateral sockets or recesses that register with said pockets. And a further object is to provide a closure for the bottom end of the tubular body, the inner end of said closure engaging the lower end of the strip for rendering the pockets noncommunicating.

The various features and parts of the invention will be understood from the detailed description which follows, and by reference to the accompanying drawing, in which—

Figure 1 is a top end view of the complete case. Fig. 2 is a broken elevational view of the same, showing two thermometers separated by a three-ply partition. Fig. 3 is a transverse section, taken on line 3—3 of Fig. 4. Fig. 4 is a central longitudinal section taken on line 4—4 of Fig. 3, the thermometers being removed and the tensioning members being expanded, also showing the complete separation of the twin pockets. Fig. 5 is a transverse section, taken on line 5—5 of Fig. 6. Fig. 6 is a central longitudinal section taken on line 6—6 of Fig. 5. Fig. 7 is an enlarged side view of the combined separating and tensioning members. Fig. 8 is an enlarged edge view of the same corresponding to the showing of Fig. 4. And Fig. 9 is an enlarged edge view of the partition and integral tension members as they appear in Fig. 2.

In the drawing, 2 represents the elongated tubular body of the thermometer case, the top end thereof being normally open and threaded externally for attaching the usual telescoping cap 3, and the bottom end of said body being threaded internally to receive the threaded portion of a closure 4. The cap 3 preferably extends a considerable distance above the corresponding end of body 2, to protect the projecting heads of the thermometers, as shown in Fig. 2. The interior of the body 2 is preferably divided centrally on the line of its axis by a partition 5, to provide similar oval pockets as 6 and 7 to receive two thermometers as 8 and 8′. The partition 5 comprises a strip of relatively thin spring metal preferably German silver, aluminum, or like untarnishable metal having a breadth equal to the inner diameter of the tube 2 and being self-retaining when inserted therein. The top end of the partition is preferably permanently embedded in a head 9, which snugly fits into the top end of tube 2, as shown in Figs. 3, 4, 5 and 6, the said head being formed with similar oppositely facing recesses or sockets 9′ that register with the pockets 6 and 7. The head 9 may be made of metal, rubber, or other suitable material that is not liable to chafe or otherwise disfigure or injure the thermometers. The thermometers 8—8′, are preferably held in the pockets 6 and 7 by independent tension means, which in the present case, comprises integral end portions 5′ and 5ª of the body or strip 5, the said end portions being folded upon the opposite sides of the body and being narrowed sufficiently to enable them to be expanded or bowed laterally from the opposite sides of the body, as shown in Figs. 4 and 8. The tension members or tongues 5′—5ª when flattened are substantially the length of the body 5, their free ends frictionally engaging said body, and when

flexed by their own tension, or by the insertion of the thermometers, the said ends slide upon said body. The gage of the metal comprising the partition and tongues 5′—5ª is preferably such that the tongues offer but a slight resistance to the insertion of the thermometers and yet the tension of said tongues is sufficient to safely hold the thermometers from accidental shifting or escaping from the pockets 6 and 7. The curvature of the tongues is so slight and their resistance is such as to entirely obviate all danger of breaking or otherwise injuring or destroying the delicate and extremely fragile bulbs of the thermometers when the latter are either applied to or removed from the case. It will be understood from the foregoing description and the drawing that the relatively weak or slight tension of the tongues 5′—5ª is enabled to effectively hold the thermometers due to the relatively great length of their bearing when flattened, as shown in Figs. 2 and 9. This feature is highly important, for the reason that a uniform and adequate tension is exerted throughout substantially the whole length of the tongues and tends when taken with the relatively sharp curvature of the inner walls of the tube 2 to prevent any canting or lateral shifting of the thermometers, which might cause the bulbs to contact with said walls. The tongues 5′—5ª when allowed to expand by the withdrawal of the thermometers, are incapable of exerting enough tension or force against the tips of the bulbs to injure said delicate parts. By this construction and arrangement of the tensioning members, the thermometers may be literally thrust into the pockets, without danger of destroying the bulbs, and the case may be more or less roughly handled, or even dropped, without incurring any damage to the thermometers.

Having thus described my invention what I claim is—

1. In a holder for two thermometers, the combination with a tubular casing, of a partition for dividing the casing longitudinally into compartments for separately housing the thermometers, said partition comprising a thin flat spring metal body having a breadth equal to the diameter of the casing and being self-retaining when inserted therein, the ends of said body being folded towards its opposite sides and being bowed outwardly towards the opposite inner walls of the casing to provide independent tension members adapted to exert their tension to hold the thermometers when the latter are inserted and said members are flexed towards the body.

2. In a holder for a plurality of thermometers, the combination with a tubular casing, of a partition separating said casing into compartments having one open end to receive the thermometers, said partition comprising a strip of spring metal having a breadth substantially equal to the inner diameter of the casing and being self-retaining when inserted therein, the ends of said metal being folded upon the opposite sides of the strip and being narrowed sufficiently to enable said ends to be bent to provide relatively long outwardly curved resilient tongues adapted to be forced inwardly against the flat sides of the strip by the insertion of the thermometers for holding the latter from shifting in or escaping from said compartments.

3. In a thermometer holder, the combination with a tubular casing open at both ends, of a partition dividing said casing into two compartments adapted to receive a pair of thermometers, a head partially closing the top end of said casing and supporting the corresponding end of said partition, said head having sockets that register with said compartments, the bottom end of said casing being closed by a member that engages the lower end of the partition for rendering said compartments noncommunicating, the said partition comprising a relatively thin flat resilient body and having its end portions reduced and folded upon its opposite sides and the said end portions being bowed outwardly towards the adjacent walls of the casing and exerting their tension for holding the thermometers when the latter are inserted between said end portions and the said adjacent walls.

4. As a new article of manufacture a pocket thermometer casing comprising a barrel adapted to contain two thermometers, a plug for closing the mouth of the barrel and provided with apertures for inserting the thermometers, a single member secured in said plug and held centrally in the barrel to separate the thermometers, said single member having spring portions engaging the thermometers.

5. As a new article of manufacture a pocket thermometer casing comprising a barrel adapted to contain two thermometers, a plug for closing the mouth of the barrel and provided with apertures for inserting the thermometers, a single member secured in said plug and held centrally in the barrel to separate the thermometers, said single member having oppositely disposed integral spring portions engaging the thermometers.

6. In combination with fountain pen type casing for holding pocket thermometers, of a thermometer separating and holding member therefor comprising an apertured plug for closing the barrel of the casing and a single blade carried by said plug and provided with integral oppositely disposed spring portions adapted to yieldingly engage the thermometers.

7. A holder for a pair of thermometers including a casing, and a partition for dividing the casing into separate compartments

for the respective thermometers including a spring member, the ends of which member are bent over the same in opposite directions to lie on opposite sides of the body of the member, said ends of the member having portions extending outwardly from the body of the member to provide independent tensioning means to hold the thermometers under tension.

8. A casing for a pair of thermometers including a barrel, a member disposed across the barrel to divide the latter into a pair of compartments for receiving the respective thermometers, said member having spring portions on its opposite sides to engage the respective thermometers and to force same outwardly toward the inner circumference of the barrel, and means to hold the member in position.

9. A casing for a pair of thermometers including a barrel, a member disposed across the barrel to divide the latter into a pair of compartments for receiving the respective thermometers, said member having spring tongues on its opposite sides to engage the respective thermometers and to force same outwardly toward the inner circumference of the barrel, and means to hold the member in position.

In testimony whereof I affix my signature.

CLAUDE S. J. RUSSELL.