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F. KING.

THERMOMETER ATTACHMENT FOR FOUNTAIN SYRINGES.

(Application filed Jan. 6, 1902.)

(No Model.)

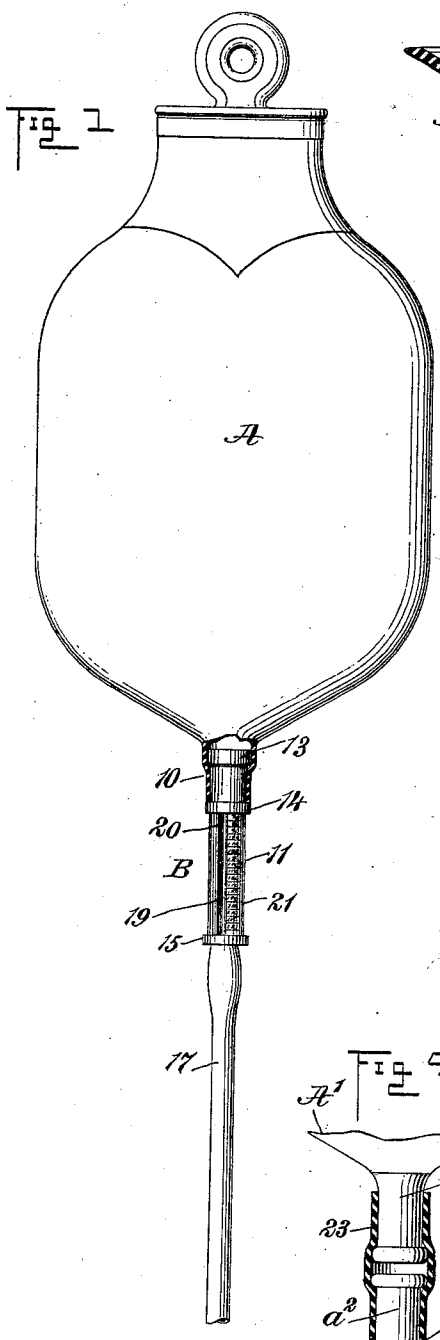


Fig. 2

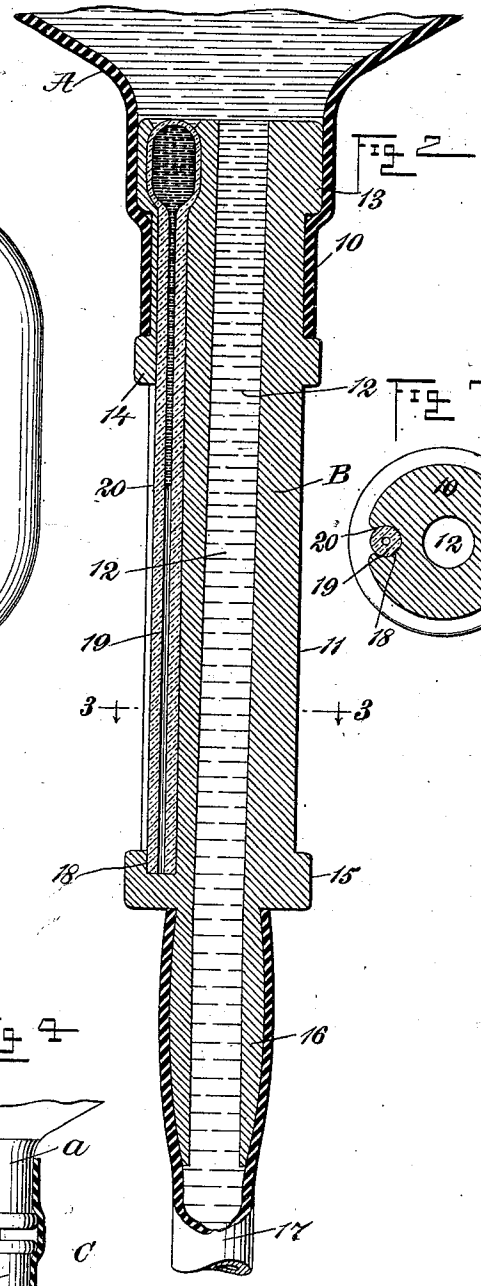
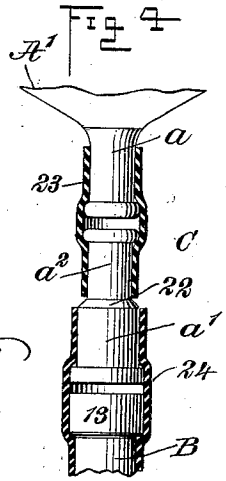


Fig. 5

Fig. 4



WITNESSES:

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THERMOMETER ATTACHMENT FOR FOUNTAIN-SYRINGES.

SPECIFICATION forming part of Letters Patent No. 711,509, dated October 21, 1902.

Application filed January 6, 1902. Serial No. 88,532. (No model.)

To all whom it may concern:

Be it known that I, FERDINAND KING, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Thermometer Attachment for Fountain-Syringes and Like Containers, of which the following is a full, clear, and exact description.

The purpose of the invention is to provide a means for applying a thermometer to fountain-syringes and similar containers in such manner that the scale of the thermometer may be conveniently read and the thermometer applied independent of the body of the receptacle and yet be in communication with the contents of the receptacle. Another purpose of the invention is to provide for the economic application of the thermometer and to thoroughly protect the thermometer when applied.

The invention consists in the novel construction and combination of the several parts, as will be hereinfter fully set forth, and pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a fountain-syringe having the improvement applied, a portion of the body of the syringe being broken away. Fig. 2 is a longitudinal section drawn on an enlarged scale, the section being taken through the lower portion of the body of the syringe, the attachment, and a portion of the outlet-tube. Fig. 3 is a transverse section taken practically on the line 3 3 of Fig. 2, and Fig. 4 is a partial side elevation and partial sectional view of a coupling adapted to connect the thermometer attachment to the container when made of glass or other non-pliable material.

In Figs. 1 and 2 the fountain-syringe A is of that type which is made of rubber, while in Fig. 4 the syringe A′ is constructed of glass or like material. The outlet 10 of the syringe A is in the form of a sleeve, as is shown in Figs. 1 and 2, and this sleeve receives the upper portion of the thermometer attachment B. The attachment is preferably made of a hard material—such as vulcanized rubber, wood, bone, metal, and the like—but it may be made of soft rubber or its equivalent, if desired.

The attachment consists of a body 11, usually circular in cross-section and having a main or outlet bore 12 extending through from end to end, as is shown in Fig. 2. At the upper portion of the body, or that end which is to enter the sleeve 10 of the syringe, two exterior collars 13 and 14 are produced, the upper collar being adapted to enter the sleeve 10 of the syringe and expand the same where it connects with the body of the syringe, while the lower portion of the sleeve will cling to the body of the attachment between the two collars and engage with the lower collar, as is shown in Figs. 1 and 2. A third collar 15 is formed upon the body of the attachment near its lower end, and below the lower collar 15 the body is reduced to form a neck 16, adapted to enter the outlet-tube 17 of the syringe. A second bore 18 is made in the body of the attachment between its outer surface and the main outlet-bore 12, which bore 18 extends from the upper end of the body of the attachment usually to a point back of the lower collar 15, as is shown in Fig. 2. This second bore 18 may be of any desired length and receives the mercury-tube 19 of the thermometer, the bulb of which is exposed at the upper portion of the body of the attachment, as is also shown in Fig. 2.

A longitudinal slot 20 is made in the body of the attachment, extending usually from the intermediate collar 14 to the lower collar 15, which slot connects with the bore containing the thermometer and exposes the mercury-column of the same.

A scale 21 is produced upon the outer face of the body of the attachment adjacent to the slot, so that the rise and fall of the column of mercury can be conveniently read.

It is evident that as the water in the syringe is in contact with the bulb of the thermometer the latter will at all times indicate the exact temperature of the water or other fluid contained in the syringe and that the thermometer is conveniently placed and thoroughly protected.

In Fig. 4 I have illustrated a coupling C used for connecting the attachment to the neck *a* of a glass syringe or a syringe made

of a hard material. This coupling consists of a hollow tubular plug 22, made, preferably, in two exterior diameters a' and a^2. The smaller end of the plug carries a flexible tube 23, which is adapted to be sprung over the neck a of the syringe, while a second flexible tube 24 is carried by the larger end portion of the plug 22, extending sufficiently beyond said end to receive the upper portion of the thermometer attachment. By means of this coupling it is evident that the attachment may be quickly, safely, and securely applied to a syringe made of glass or other non-pliable material and will act equally as well as when connected with a rubber syringe.

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

The combination with the outlet of a fountain-syringe, of a thermometer attachment consisting of a tubular body of non-transparent and non-yielding material, provided with collars formed at its upper end, which upper end is adapted to enter the outlet of the syringe and extend within the body thereof, said body being also provided with a neck at its lower end to receive a section of tubing, and a chamber parallel with the bore of the body, open for a portion of its length at one side of the body, a thermometer-tube contained in said chamber, the bulb of which tube is at the upper portion of the chamber and is exposed at the upper end of the body, and a scale produced upon the body of the attachment at its side opening and adjacent to the thermometer-tube, as described.

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

FERDINAND KING.

Witnesses:
JNO. M. RITTER,
J. FRED. ACKER.