

(No Model.)

E. M. DART.

STOPPER CAP FOR RUBBER WATER BOTTLES.

No. 362,206.

Patented May 3, 1887.

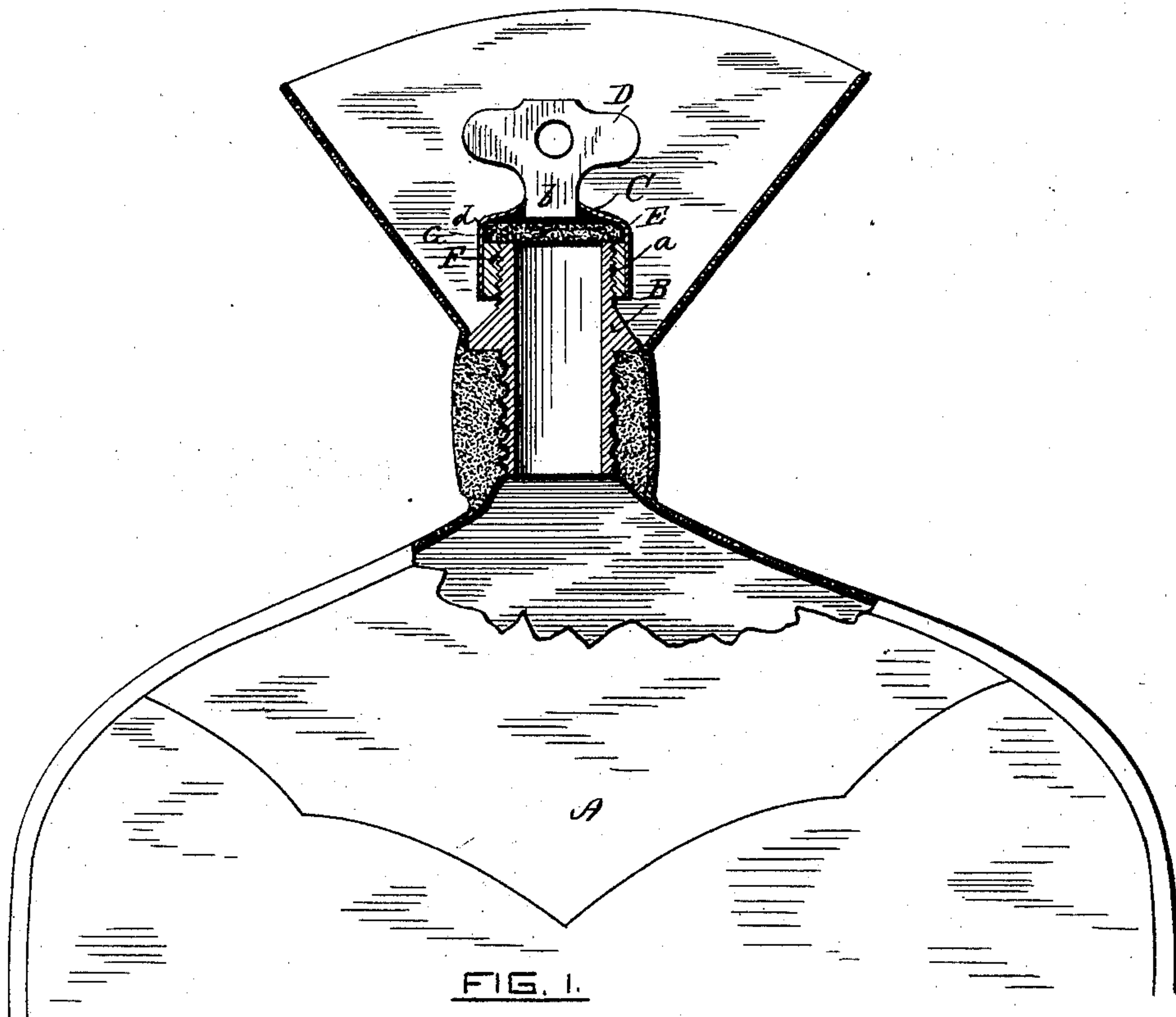


FIG. 1.

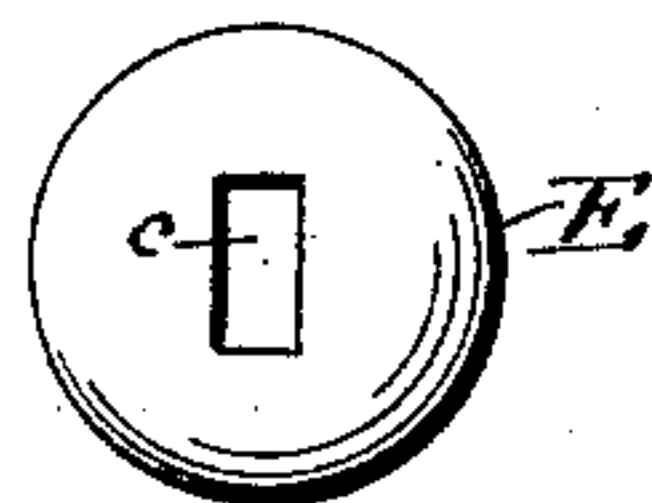


FIG. 7.



FIG. 8.

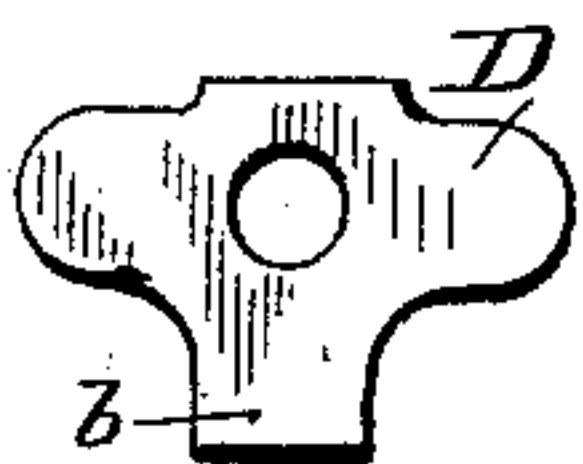


FIG. 2.

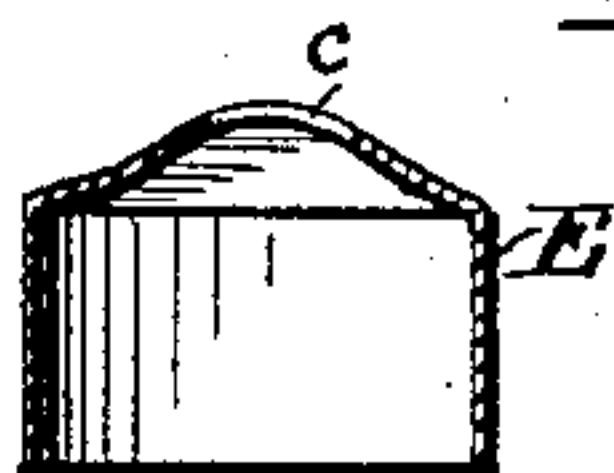


FIG. 3.



FIG. 4.

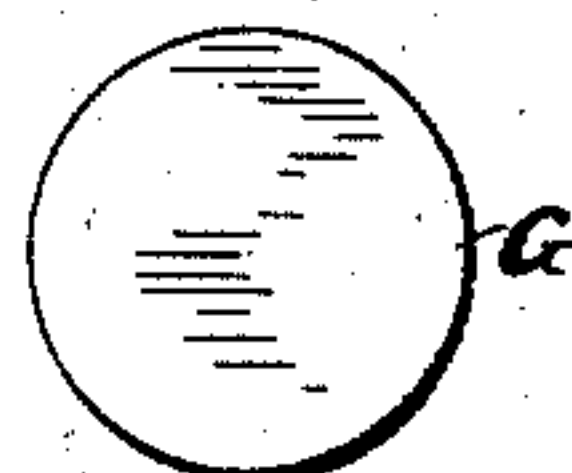


FIG. 5.

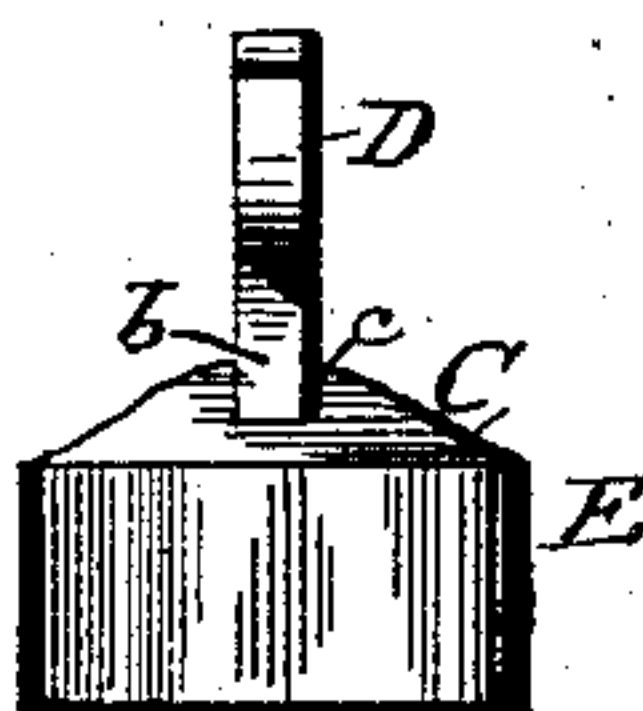


FIG. 6.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## STOPPER-CAP FOR RUBBER WATER-BOTTLES.

SPECIFICATION forming part of Letters Patent No. 362,206, dated May 3, 1887.

Application filed February 2, 1887. Serial No. 226,315. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD M. DART, a citizen of the United States, residing at Providence, in the State of Rhode Island, have invented a new and useful Improvement in Stopper-Caps for Rubber Water-Bottles, of which the following is a specification.

My invention relates to the improved construction of the stopper-cap of a rubber water-bottle, whereby a desirably finished cap may be produced at a reduced cost for manufacture; and it consists in the combination of a shell provided with an elongated perforation, a female screw, and an annular chamber adapted to receive the edge of the packing-disk, with the flat handle having a shank fitting the perforation of the shell and secured therein, as hereinafter set forth.

Figure 1 is a sectional view showing the upper portion of a rubber water-bottle provided with my improvement. Fig. 2 is a plan view of the handle-blank. Fig. 3 is an axial section of the cap-shell. Fig. 4 is an axial section of the female screw. Fig. 5 is a plan view of the rubber packing-disk. Fig. 6 is an elevation of the stopper-cap. Fig. 7 is an end view of the cap-shell, showing the elongated perforation to receive the shank of the handle. Fig. 8 represents a section of the female screw formed of spirally-coiled triangular wire.

In the accompanying drawings, A is the water-bottle; B, the metallic neck for the same, to which the stopper-cap C is secured by means of the screw-thread *a*, formed upon the projecting portion of the neck. The handle D of the cap C is preferably cut out of sheet metal in any desirable form, and is provided with a shank, *b*, of elongated cross-section, which is adapted to fit the elongated perforation *c*, made in the shell E, which shell is preferably struck up from sheet metal, but which may also be made of cast or wrought metal. The female screw F is formed in a tubular bushing, which fits the cavity in the shell E, and which is made of such length that when inserted within the cavity of the shell E flush with the outer edge of the same an annular space, *d*, will be left between the inner edge of the female-screw bushing F and the bottom surface of the cavity of the shell, for the purpose of receiving the boundary edge of the rubber

packing-disk G, which is to be forced inward past the threads of the screw F after the metal parts of the cap are soldered to each other. The rubber disk G, by bearing against the end surface of the neck B, serves to pack the joint between the said neck and the cap perfectly tight.

The female-screw bushing F, instead of being made from a continuous tube, may be formed by winding triangular wire into a continuous coil and dividing the same into suitable lengths for insertion into the cavity of the shell E, and by this method a great saving of stock will be effected, owing to the comparatively small amount of waste stock when the screws are made of spirally-wound wire.

I do not limit my invention to the employment of a separately-formed female-screw bushing, for the reason that when the shell is made of cast metal the screw and annular chamber can be readily formed therein; but I have preferred the struck-up sheet-metal shell and separate bushing on account of the desirable finish thus secured.

In securing the handle, shell, and separately-formed female screw to each other by means of solder, the shell is to be held with its open side upward and a lump of solder of the required size dropped within the shell to flush the closed end of the same and rise along the inner side of the shell to the joint to be soldered between the female screw and the shell. The operation of soldering can thus be rapidly performed.

I claim as my invention—

1. The combination, with the shell provided with an elongated perforation, the screw, and the annular chamber to receive the packing-disk, of the flat handle having a shank fitting the perforation in the shell and secured therein, substantially as described.

2. The combination, with the shell provided with the elongated perforation and the flat handle provided with the shank fitting the perforation in the shell and soldered within the same, of the separately-formed female screw, soldered within the cavity of the shell and forming with the inner end of the same an annular chamber for the reception of the edge of the packing-disk, substantially as described.

3. The combination, with the shell provided

with the elongated perforation and the flat handle fitting the perforation of the shell and soldered within the same, of the female screw formed of spirally-wound triangular wire soldered within the cavity of the shell, and forming with the inner end of the same an annular chamber to receive the edge of the packing-ring, substantially as described.

4. The combination, with the shell provided with the elongated perforation and the flat handle provided with the shank fitting the per-

foration of the shell and soldered within the same, of the separately-formed female screw, soldered within the cavity of the shell and forming with the inner end of the same an annular chamber, and the packing-disk held in the annular chamber of the shell, substantially as described.

EDWARD M. DART.

Witnesses:

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