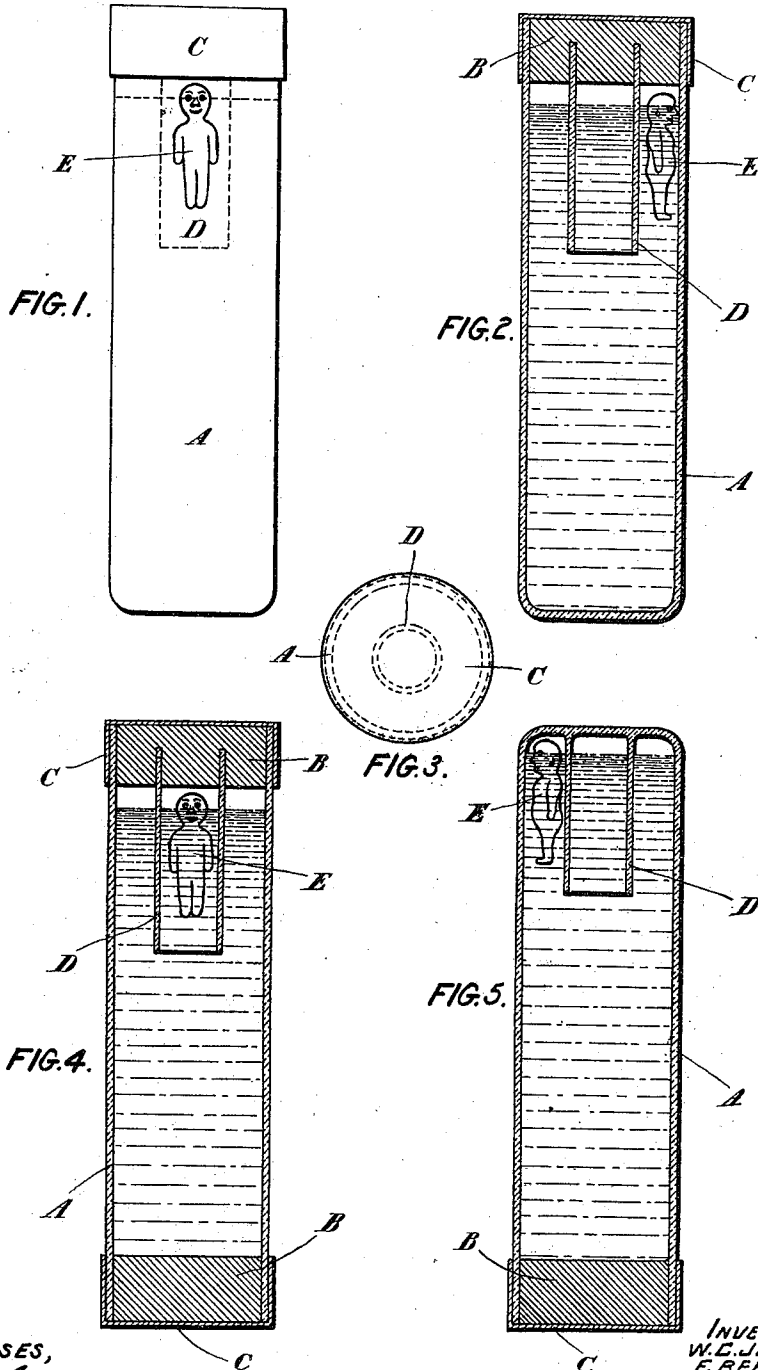


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SCIENTIFIC TOY OR PUZZLE.  
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# UNITED STATES PATENT OFFICE.

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## SCIENTIFIC TOY OR PUZZLE.

976,371.

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*To all whom it may concern:*

Be it known that we, WALTER CERRETTA JEANS and FREDERICK BEEVERS, subjects of the King of Great Britain and Ireland, residing at Leeds, in the county of York, England, have invented a new and useful Improvement in Scientific Toys or Puzzles, of which the following is a specification.

This invention relates to an improved scientific toy or puzzle.

In constructing our improved scientific toy or puzzle we provide a tube, bottle, or other vessel, preferably of glass and of any convenient shape. The vessel is closed at top and bottom, either permanently or temporarily, by means of cork plugs, metal caps, or any other convenient closures, and the upper closure carries a short central tube or chamber (of smaller diameter) which projects inwardly so as to open toward the body of the vessel. The vessel is filled or partially filled with water or other liquid, in which is a small floating object, preferably of hollow celluloid, colored glass, or like material, and which may appropriately take the form of a fish, mermaid, diver, doll, ball, or the like.

Figure 1 is an elevation of our improved scientific toy or puzzle in a convenient form, showing the short inner tube secured by means of a cork plug and metal cap. Fig. 2 is a sectional elevation of Fig. 1, and Fig. 3 a plan of same. Fig. 4 is a sectional elevation of a modification in which the vessel is formed from plain tubing with a cork plug and cap at both ends. Fig. 5 is a sectional elevation of a modification in which the short inner tube is welded into the vessel at the end opposite to the plug.

A is the vessel, B the plug, and C the metal cap, the latter being cemented or otherwise tightly fixed over the plug.

D is the short central tube or chamber, which is either fixed into the plug B (Figs. 1 to 4) or welded to the vessel A (Fig. 5).

E is the object floating in the liquid within the vessel A.

Similar letters of reference are employed to indicate corresponding parts throughout the several views.

The purpose of the toy or puzzle is to cause the floating object E to enter the small central tube D (as shown in Figs. 1 and 4), and this is found to be practically impossible under ordinary conditions, on account of the tendency of the object E to float in contact with the outer walls of the vessel A, and to thus enter the annular space surrounding the central tube D (as shown in Figs. 2 and 5).

The aforesaid purpose of the toy or puzzle can only be attained by taking advantage of the principle of centrifugal force. Thus by inverting the vessel A and imparting to it a rapid rotary movement, a kind of whirlpool is produced within the vessel A, with the comparatively light object E floating and rotating in the center. By quickly reverting the vessel A to its normal position, the rotating object E floats centrally to the top and enters the small tube or chamber D.

We claim:

A scientific toy or puzzle comprising a vessel closed at both ends and nearly filled with liquid, a short central tube projecting inwardly from the top of the vessel and open beneath the surface of the liquid toward the body of the vessel, and a small floating object within the vessel, the said floating object being adapted to enter the central tube as it rises toward the surface of the liquid only when under the influence of centrifugal force set up by rotation of the vessel, substantially as herein set forth.

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Witnesses:

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