Feb. 17, 1959 A. E. GOLDFARB ET AL 2,873,884

SQUIRTING CAMERA

Filed Nov. 5, 1956

Fig. 1.

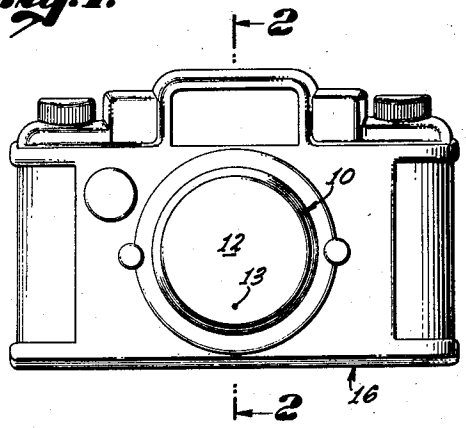


Fig. 2.

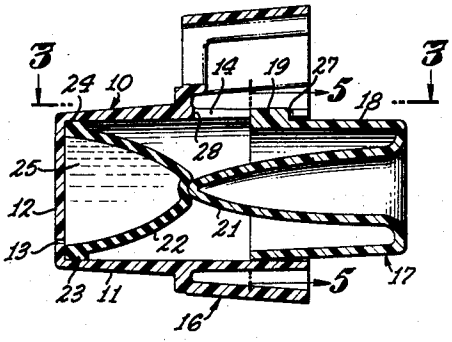


Fig. 3.

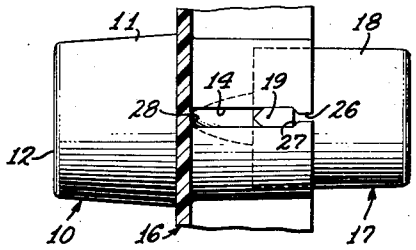


Fig. 4.

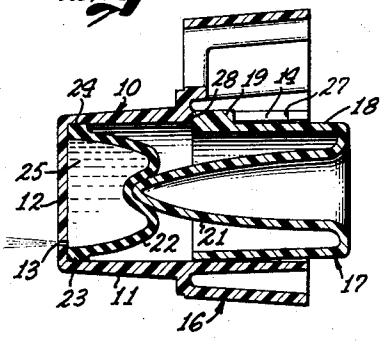


Fig. 5.

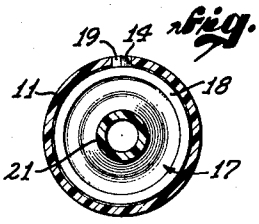
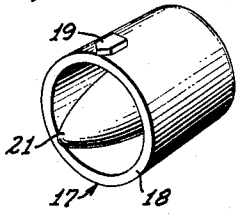


Fig. 6.



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SQUIRTING CAMERA

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Application November 5, 1956, Serial No. 620,494

4 Claims. (Cl. 222—78)

The present invention relates to a toy liquid squirting device, and more particularly to a water gun in a body simulating a camera body for ejecting a stream of water through a hole in the end of the gun barrel simulating a camera lens.

Toys and novelties should of necessity be made of rugged and economical construction. Liquid or water squirting devices, for example, should be designed for rough usage and economical mass production. This calls for relatively few parts, easily fabricated of tough, low cost materials, preferably by mass production methods, and readily assembled with a minimum of labor.

Accordingly, it is an important object of the invention to provide a liquid squirting device of rugged and economical construction.

Another object is to provide a water gun simulating a camera designed for rough usage and economical mass production.

A further object is to provide a water gun simulating a camera made of a minimum number of parts, capable of inexpensive fabrication from tough materials, and capable of ready assembly with the requirement of a minimum amount of labor.

Additional objects will become apparent from the following description.

Stated in general terms, the liquid or water squirting camera of the invention comprises the following. A barrel simulating a camera lens barrel, is provided with a pinhole through a wall in the front end thereof simulating a lens. A resilient thimble of a plastic or rubbery material is positioned in the front end of the barrel to form a liquid-tight chamber communicating with the atmosphere through the pinhole. The barrel is slidably or telescopically associated with an actuator member. The actuator member in turn is provided with a projection extending into the rear of the barrel to the thimble. As the actuator member is forced into the barrel, the projection forces the wall of the thimble toward the front end of the barrel, and liquid is squeezed from the chamber in the barrel through the pinhole to the atmosphere.

For reasons of economy in fabrication and assembly of the parts of the invention we prefer to cast the barrel and camera body as a single unit, together with the front wall and any auxiliary, guide or slide means, of a synthetic plastics material. Similarly, we prefer to cast the actuator member, together with the projection and any auxiliary, guide, slide and chamber means, as a single unit of synthetic plastics material. The thimble preferably is dimensioned to fit tightly in the barrel without the use of cement.

A more detailed description of a specific embodiment of the invention is given with reference to the drawing wherein:

Figure 1 is a front elevational view showing an assembled camera water gun;

Figure 2 is a vertical sectional view taken on the line 2—2 of Figure 1 showing the camera gun barrel fully extended relative to the actuator;

Figure 3 is a cross-sectional view taken on the line 3—3 of Figure 2 showing guide and slide means for the actuator and the barrel;

Figure 4 is a vertical sectional view similar to that of Figure 2 but showing the actuator pushed into the barrel as far as it will go;

Figure 5 is a partial vertical sectional view taken on the line 5—5 of Figure 2 showing structural features of the actuator; and

Figure 6 is a partial perspective view showing structural details of the actuator.

In the embodiment shown in the drawing, the barrel member **10** is cast as a single unit consisting of hollow gun or simulated camera lens barrel **11**, end wall or simulated lens **12** in the end of the barrel, a pinhole **13** through the end wall **12**, a guide slot **14** at the top rear of the barrel, and a simulated camera body **16**. The barrel member **10** preferably is cast from a tough synthetic plastics or synthetic resins material.

Similarly, the actuator member **17** is cast as a single unit consisting of a cylindrical chamber **18**, a guide member **19**, and a projection **21**. The actuator member **17** also preferably is cast from the same tough materials used for the barrel member **10**.

The resilient thimble **22** preferably is made of a water resistant synthetic plastic or synthetic rubber material. The thimble **22** contains an annular bead or base **23** containing a flat surface **24** adapted to forcefully engage the interior annular surface of the barrel **11**. This engagement results from an exertion of radial forces at the base **23** of the thimble because of the resiliency of the thimble material. The engagement of the interior surface of the barrel is sufficiently tight to form a water-tight seal and thus a water chamber **25** communicating with the atmosphere only through pinhole **13**.

The slot **14** at the top of the barrel **11** is provided at its rearward end with a parallel slit **26** to impart resiliency to the top of the barrel and the slot **14**. This arrangement permits slit **26** to be spread so that guide member **19** can be pushed through the slit and snapped into slot **14**, as shown in Figure 3. The front end of guide member **19** is pointed for this purpose. After being thus inserted, the cylindrical chamber **18** is telescopically slidable in barrel **11** between the forward end **28** and the rearward end **27** of the slot **14**.

It will be observed that the camera water gun is a snap assembly without the use of glue or outside fastening devices. The resilient bulb or thimble **22** acts as a spring to push the actuator member **17** out of the barrel **11** when finger pressure is released from the rear of the actuator. The thimble **22** acts as a water container, cylinder and piston device, and a return spring. It seals itself against the front end wall **12** and the sides of the barrel **11**.

When actuator **18** is pushed into barrel **10**, elongate conical projection **21** is forced against the wall of thimble **22** as shown in Figure 4. The thimble wall is forced toward the front end of the barrel **11** and water under pressure is squirted from the water-containing chamber **24** into the atmosphere through pinhole **13**. The water chamber **25** is refilled by dipping the front end of the barrel **11** beneath the surface of a body of water and releasing the pressure on actuator **17**. The resiliency in thimble **22** forces its walls back to their normal, conical shape in barrel **11**, as shown in Figure 2, and water is sucked into water chamber **25** through pinhole **13**. Thus thimble **22** again is reloaded and barrel **11** again is extended for squirting.

It will be observed that we have provided a liquid squirting device of rugged, economical construction, designed for mass production at low material cost and for ready assembly at low labor cost.

While we have herein shown and described our invention in what we have conceived to be the most practical and preferred embodiment, it is recognized that departures can be made therefrom within the scope of our invention, which is not to be limited to the details disclosed herein, but is to be accorded the full scope of the claims so as to embrace any and all equivalent structure.

What we claim is:

1. A liquid squirting device comprising a barrel provided with a pinhole through a front wall thereof, a resilient thimble of generally conical type positioned in the front end of the barrel and forming with the front wall thereof a liquid-tight chamber communicating with the atmosphere through the pinhole, and a projection means slidably mounted in the barrel and extending into the rear of the barrel to the thimble for squeezing liquid from the chamber through the pinhole as the projection means is forcefully slid into the barrel, said thimble normally urging said projection means out of said barrel and toward said rear thereof.

2. A liquid squirting device comprising a barrel provided with a pinhole through a front wall thereof, a resilient thimble of generally conical shape positioned in the front end of the barrel and forming with the front wall thereof a liquid-tight chamber communicating with the atmosphere through the pinhole, a simulated camera body integral with the barrel, and a projection means slidably mounted on the camera body and extending into the rear of the barrel to the thimble for squeezing liquid from the chamber through the pinhole as the projection means is forcefully slid into the barrel, said thimble normally urging said projection means out of said barrel and toward said rear thereof.

3. A water gun comprising a barrel provided with a pinhole through a front wall thereof, a resilient thimble of generally conical shape positioned coaxially with the barrel in the front end thereof with its apex extending toward the rear of the barrel and its base sealing off a liquid-tight chamber communicating with the atmosphere through the pinhole, a simulated camera body integral with the barrel, a generally conical projection means slidably mounted on the barrel coaxially with the thimble with its apex extending toward the front of the barrel for squeezing water from the chamber through the pinhole as the projection means is forcefully slid into the barrel, and a slot and guide means associated with the barrel and projection means for slidably associating the barrel with the projection means, said thimble normally urging said projection means out of said barrel and toward said rear thereof.

4. A camera water gun comprising a resilient thimble, a barrel member and an actuator member telescopically mounted in the barrel member, the barrel member being cast as a unit integral with a simulated camera body as a lens barrel and having a wall at the front end of the barrel simulating a lens and with a pinhole through the wall, a slit in the rear end of the barrel serving as a snap-in and guide means and a protuberance on the actuator member for snapping into the slit and serving as a slide and stop means; the thimble being of generally elongated conical shape and positioned coaxially with the barrel in the front end thereof with its apex extending toward the rear of the barrel and its annular base sealing off a liquid-tight chamber communicating with the atmosphere through the pinhole; and the actuator member being cast as a unit and having a cylindrical chamber for telescopically sliding into the barrel; and a generally elongated conical re-entrant projection extending from the rear wall of the cylindrical chamber coaxially with the thimble and with its apex adjacent that of the thimble when the actuator member is in its most withdrawn position, said thimble normally urging said projection means out of said barrel and toward said rear thereof.

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