Feb. 22, 1938. S. P. HUFF ET AL 2,108,818

PRACTICE BOMB

Filed April 21, 1937

Fig. 1.

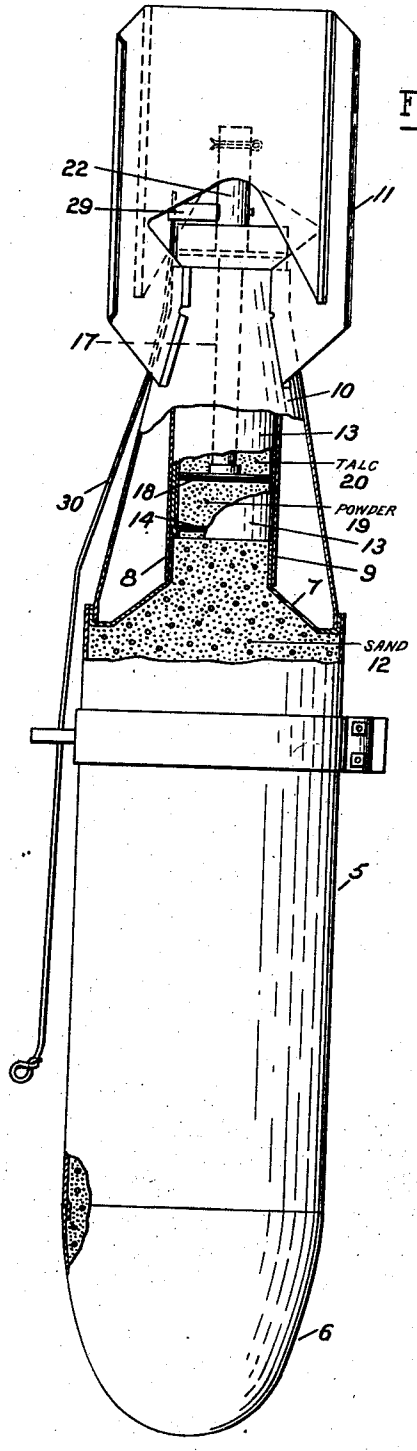


Fig. 2.

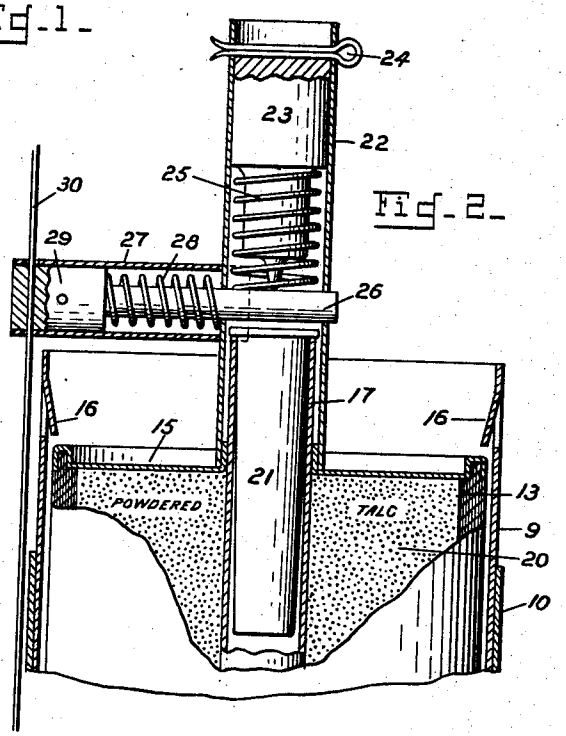
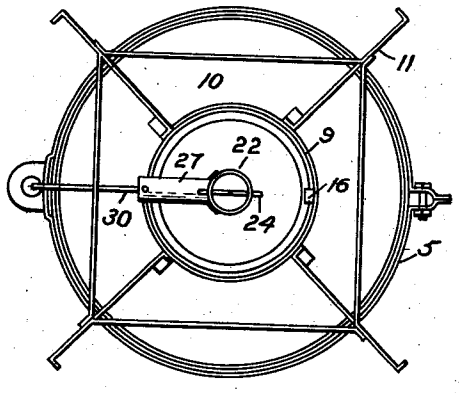


Fig. 3.



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PRACTICE BOMB

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Application April 21, 1937, Serial No. 138,180

2 Claims. (Cl. 102—2)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

The invention described herein may be manufactured and used by or for the Government for governmental purposes, without the payment to us of any royalty thereon.

The subject of this invention is a practice bomb.

The purpose of the invention is to provide a practice bomb with an inexpensive means for indicating or signalling the position of its landing and to so arrange the structure that the signalling means may be conveniently housed in a barrel through which sand or other inert material is introduced into the bomb.

A further object is to construct the signalling means as a unit so that it may be easily and quickly applied to the tail of the bomb.

To these and other ends, the invention consists in the construction, arrangement and combination of elements described hereinafter and pointed out in the claims forming a part of this specification.

A practical embodiment of the invention is illustrated in the accompanying drawing, wherein:

Fig. 1 is a view in elevation with parts in section of a practice bomb constructed in accordance with the invention.

Fig. 2 is an enlarged longitudinal sectional view of the outer portion of the signalling unit.

Fig. 3 is a plan view of Fig. 1.

Referring to the drawing by characters of reference, there is shown a practice bomb comprising a cylindrical body 5 having a rounded nose or front end 6 and a rear end 7 which is formed with a neck 8. A barrel 9 is fixed on the neck 8, its outer end supported by a conical tail-piece 10 which is secured to the periphery of the rear end 7. The tail-piece carries a conventional fin assembly 11. The bomb is filled with an inert and inexpensive material such as sand 12 which is introduced through the mouth of the barrel 9.

The unit for indicating or signalling the position of impact of the bomb comprises a container 13 which is insertable in the barrel 9 and is supported therein by having its inner end 14 rest on the rim of the neck 8. When the container is thus supported, its outer end 15 is disposed within the barrel 9 and below resilient lugs 16—16 which are formed from the wall of the barrel and are adapted to hold the container against removal.

A flash tube 17, passing through the central part of the outer end 15 and fixed thereto, extends into the container and on its lower or inner end it carries a disc 18 which is spaced from the inner end 14 of the container. A charge 19 of black powder is placed between the disc 18 and inner end 14 and a charge 20 of an indicating material, such as powdered talc, is placed between the disc and the outer end 15. A cartridge 21 is placed in the outer part of the tube with its rim resting on the rim of the tube.

A firing pin tube 22 fixed to the outer end 15 of the container 13 and surrounding the outer portion of the flash tube 17 houses a firing pin 23 which is held in place against a cotter pin 24 by means of a spring 25 which is confined between the firing pin and a removable bolt 26. The bolt extends laterally through the tube 22 between the firing pin and the cartridge and has its outer portion disposed in a housing 27 fixed to the tube 22. A spring 28 for ejecting the bolt is confined between the tube 22 and a head 29 on the bolt. The bolt is held against the action of the spring by means of a wire 30 passing through the head 29 and housing 27. This wire is associated with the launching apparatus of aircraft, as is well understood in the art, and is withdrawn from the bolt when the bomb is dropped to permit ejection of the bolt.

When the bolt is withdrawn from the path of the firing pin the spring 25 engages the base of the cartridge and holds the firing pin away from the cartridge. On impact the firing pin moves forwardly to fire the cartridge and the flash from the cartridge is directed through the tube 17 to set off the charge of black powder 19 which discharges the powdered talc 20. The talc forms a dense cloud which is clearly visible to an observer in the aircraft.

We claim,

1. A practice bomb including a body adapted to contain an inert material, a barrel on the rear of the body through which inert material is introduced into the body, a container housed in the barrel and having a flash tube, an expelling charge in the inner part of the container, a charge of powdered material in the remaining part of the container, a cartridge in the outer part of the flash tube, a firing pin tube on the container, a firing pin in said tube, an arming bolt interposed between the cartridge and firing pin and means for ejecting the arming bolt when the bomb is launched.

2. A practice bomb including a body adapted to contain an inert material, a barrel on the rear of the body through which inert material is introduced into the body, a container housed in the barrel and having a flash tube, an expelling charge in the inner part of the container, a charge of powdered material in the remaining part of the container, a cartridge in the outer part of the flash tube, and means for firing the cartridge.

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