May 6, 1952 P. H. GRIFFITH 2,595,939

HOLDER FOR FUSEES AND THE LIKE

Filed Sept. 22, 1948

FIG. 2.

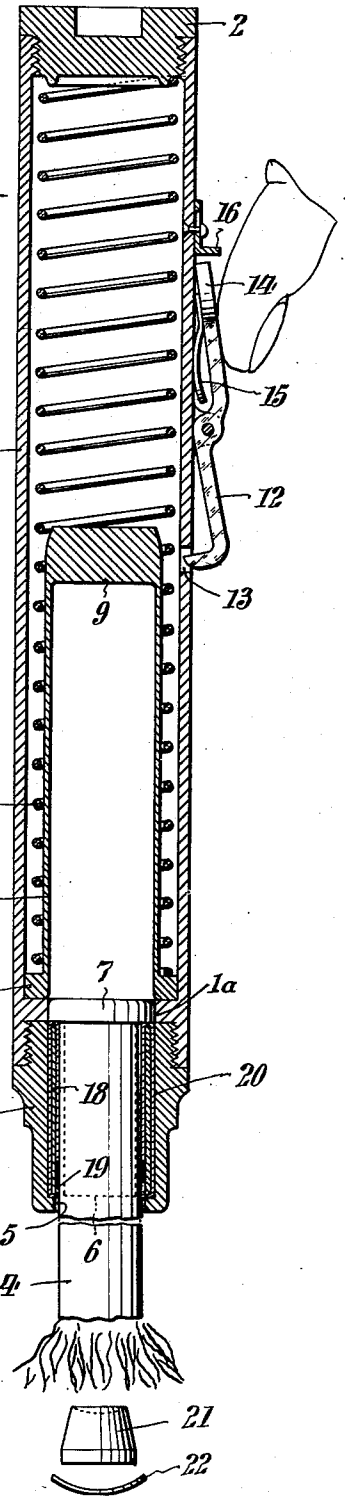
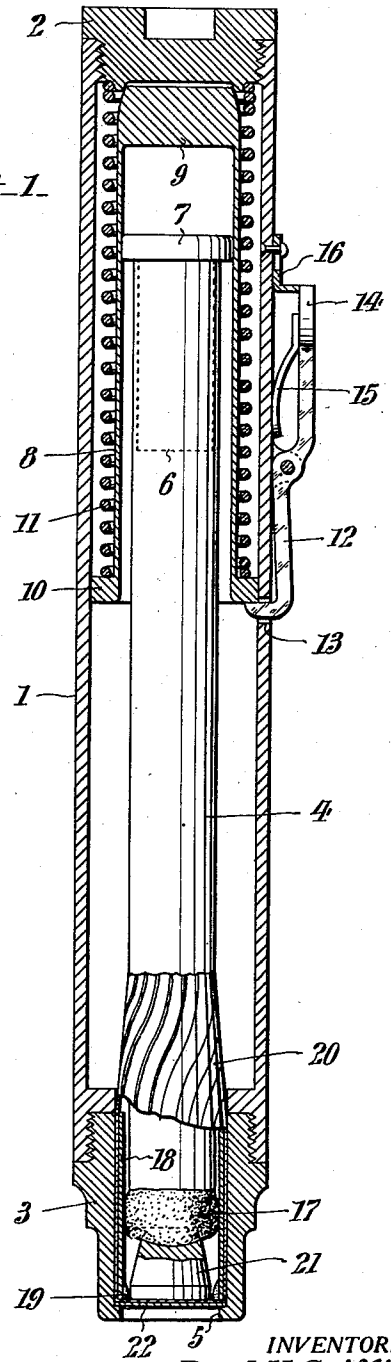


FIG. 1.



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Patented May 6, 1952

2,595,939

UNITED STATES PATENT OFFICE

2,595,939

HOLDER FOR FUSEES AND THE LIKE

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Application September 22, 1948, Serial No. 50,641

10 Claims. (Cl. 102—37.4)

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This invention relates to holders for fusees or flares and the like, i. e. to handles whereby such devices may be supported while burning without danger of injury to the user.

The chief aim of my invention is to provide an instrumentality of the kind referred to which is simple in construction; which lends itself to ready production in quantity at small cost; which ordinarily serves as a container for protection of the fusee against the possibility of accidental ignition; and which has incorporated ejecting means subject to finger control for projecting the fusee to an extent requisite for complete burning thereof.

Other objects and attendant advantages will appear from the following detailed description of the attached drawings, wherein Fig. 1 is a view in axial section of a fusee holder conveniently embodying my invention.

Fig. 2 is a view like Fig. 1 with the fusee projected from the holder and burning.

With more detailed references to these illustrations, it will be seen that my improved fusee holder has a tubular cylindric body 1 which is preferably of metal and closed at one end by a removable screw plug 2, and which, adjacent its other end, is provided with an internal stop flange 1*a*. Threaded into said other end of the tube 1 is a shouldered ferrule 3 whereof the bore is slightly larger than the body diameter of the fusee indicated at 4, and which is provided at its mouth with a narrow internal circumferential flange 5. As shown, the base plug 6 of the fusee is provided with a terminal flange 7 of a diameter which corresponds with that of the bore of ferrule 3.

Disposed within the body 1 is an ejecting element 8 likewise on the form tube and also preferably of metal but of smaller diameter, with a weighted closure plug 9 permanently secured in one end thereof as by welding or soldering, and a flange ring 10 similarly affixed around the other end thereof. The internal diameter of the ejecting element 8 is such as to receive the flanged end 7 of the fusee with a sliding fit. Surrounding the ejecting element 8 with one of its ends bearing against the closure plug 2 of the holder body 1 and the other end bearing against the flange ring 10 of said element, is a helical spring 11 which is placed in compression in preparation, for use of the holder by forcing said ejecting element upward with the aid of a rod or other implement thrust thereinto until caught by catch indicated at 12. As exemplified, the catch 12 is in the form of a finger pivotally connected to the body tube 1 at the outside with its inwardly directed end extending through a clearance aperture 13 in said tube to engage beneath the flange ring 10 of the ejecting element 8 as in Fig. 1. The catch 12 is provided with a finger press tab 14 and is normally maintained in latching position by a spring tongue 15 attached

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thereto and pressing against the side of the tube 1, it being held against accidental movement by a retractable keeper 16. As shown, the fusee 4 has a head or cap 17 of friction igniting material which extends across and around the distal end thereof, and which is protected by a guard sleeve 18 of cardboard or the like with a narrow band 19 of scratch material internally of its outer end, said sleeve being secured in place by a sheathing 20 of paper or the like wrapped around and adhered to the body of the fusee. Interposed between the cover area of the sheathing 20 and the igniting head or cap 17 is a spacing block or safety plug 21. To prevent infiltration of moisture, I place within the ferrule 3 before application of the latter to the body tube 1 after insertion of the fusee 4, a disk 22 of parafine-impregnated card board. This disk 22 is of a diameter corresponding to the bore diameter of the ferrule 3 so as to be restrained by the internal flange of 5 the latter. The safety plug 21, it will be noted, serves as a means to normally keep the igniting cap 17 well spaced from the scratch band 19.

To load the holder, the ejecting element 8 is thrust inward with the aid of a suitable rod or other implement until cocked by the catch 12 as in Fig. 1, and the spring 11 thereby compressed. With this preparation, the keeper 16 is moved beneath the press tab 14 of the catch, the fusee 4 inserted, and the ferrule 3, with the disk 22 already in place, applied to the open end of the cylindric body 1 to hold the fusee in assembly. In this loaded condition, the device may be stored with assurance against accidental firing.

When the fusee is to be used, the keeper 16 is withdrawn and the catch 12 tripped by a finger of the hand in which the device is grasped. Upon being released, the ejecting element 8 is instantaneously thrust forwardly by the spring 11 with the result that, by the closed weighted end thereof, an effective hammer blow is imparted to the fusee to insure displacement of the sealing disk 22 and rupture of the sheathing and expulsion of the plug 21, with incidental ignition of the cap 17 through rubbing contact with the scratch band 19 at the inside of the sleeve 18. By the continuing action of the spring 11, the fusee 4 is forcibly projected as in Fig. 2 until stopped by engagement of its flange head 7 with the inner end of the sleeve 18, the movement of the ejector element 8 being at the same time limited by contact of the end 10 thereof with the stop flange 1*a* internally of the tubular body 1 of the holder adjacent the open end of the latter. The device can thereinafter be held in the hand or supported in any convenient way in upright position until the fusee is completely consumed.

Having thus described my invention, I claim:

1. A holder for a fusee or the like comprising a tubular body with a closed bottom end; a tubular ejecting element with a closed bottom end,

axially slidable within the body in which a fusee is slidably received, said element being of less length and of a diameter smaller than that of the bore of the tubular body and having a circumferential flange externally of its distal end slidably fitting said bore; a helical spring surrounding the ejecting element with one end thereof bearing against the bottom of the tubular body and the other bearing against the flange of the ejecting element; a retractable catch for normally holding the ejecting element cocked with the spring under compression, whereby upon operation of the catch, the ejecting element is released to the action of the spring for forcible ejecting of the fusee; stop means for limiting the movement of the ejecting element for its retainment within the tubular body; and stop means for limiting the extent to which the fusee is projected beyond the open end of the tubular body by the ejecting element.

2. A holder for a fusee or the like according to claim 1, further including a sealing disk across the open end of the tubular body whereby the fusee is normally retained within said body, said disk having the capacity to yield to displacement as the fusee is forcibly projected by the ejecting element.

3. A holder for a fusee or the like according to claim 1, further including means automatically operative to ignite the fusee incident to its ejection.

4. A holder for a fusee or the like according to claim 1, wherein the closed bottom of the ejecting element is weighted, and wherein the parts are so proportioned that the bottom end of the fusee is spaced somewhat from the weighted bottom of said ejecting element as and for the purpose set forth.

5. A holder for a fusee or the like comprising a tubular body with a closed bottom end; a tubular ejecting element with a closed bottom end, axially slidable within the body in which a fusee is slidably received, said element being of less length and of a diameter smaller than that of the bore of the tubular body and having a circumferential flange externally of its distal end slidably fitting said bore; a helical spring surrounding the ejecting element with one end thereof bearing against the bottom of the tubular body and the other bearing against the flange of the ejecting element; a retractable catch for normally holding the ejecting element cocked with the spring under compression, whereby upon operation of the catch, the ejecting element is released to the action of the spring for forcible ejecting of the fusee; an internal stop flange adjacent the open end of the tubular body adapted to limit the movement of the ejecting element for its retainment within said body; and stop means for limiting the extent to which the fusee is projected beyond the open end of the tubular body by the ejecting element.

6. A holder for the reception of a fusee or the like, said holder comprising a tubular body with a closed end; a removable ferrule engaged upon the other end of the body and having an internal flange about its mouth; a displaceable sealing disk supported by the flange within the ferrule for normally retaining the fusee; an ejecting element backed by a spring within the body; and a retractable catch for normally keeping the ejecting element withdrawn and cocked with the spring under compression whereby, upon retraction of the catch, the ejecting element is released to the action of the spring to displace said disk and eject the fusee.

7. A fusee holder, according to claim 6, further including means for limiting the extent to which the fusee is thrust beyond the holder.

8. A fusee holder, according to claim 6, wherein the ejector element is in the form of a tube with a closed weighted end, and which is slidable within the body and adapted to receive a portion of the length of the fusee, and which has a circumferential flange at its other end; and wherein the spring surrounds the ejecting element with one end bearing against the flange of said element and with the other end bearing against the bottom of the tubular body.

9. A fusee holder, according to claim 6, wherein the ejector element is in the form of a tube with a closed weighted end, which is slidable within the body and adapted to receive a portion of the length of the fusee with the latter spaced somewhat from the weighted bottom of said element, and which has a circumferential flange at its other end; and wherein the catch extends through an aperture in the side of the body to engage beneath the flange of the ejector element when the latter is thrust inward to compress the spring as the fusee is inserted into the holder.

10. A fusee having a band of igniting material about its firing end, a protective sleeve of cardboard or the like surrounding said firing end and extending somewhat therebeyond, a sheathing of paper or the like overlying the extended end of the sleeve and extending around the latter to secure it in place on the fusee, and a safety block within the extended portion of the sleeve for normally keeping a narrow band of friction material internally of the extended portion of the sleeve spaced from the igniting material aforesaid; in combination with a holder for the fusee, said holder comprising a tubular body with a closed end, a removable ferrule at the other end of the body having a bore corresponding in diameter to that of the sleeve on the fusee and a circumferential flange internally of its mouth, a displaceable disk supported by the flange of the ferrule for normally retaining the fusee within the holder, an ejecting element backed by a spring within the body, and a normally-retracted latch for normally keeping the ejecting element withdrawn and cocked with the spring under compression whereby, upon retraction of the latch, the ejecting element is released to the action of the spring to displace said disk and project the fusee, with incidental expulsion of the sealing disk and the safety block and firing of the fusee by rubbing contact of the igniting material thereon with the function band of the sleeve restrained by the flange of the ferrule.

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