

A. TUFTS.

COMBINED TORCH AND HOLDER FOR FIREWORKS.

No. 185,147.

Patented Dec. 5, 1876.

Fig. 1.

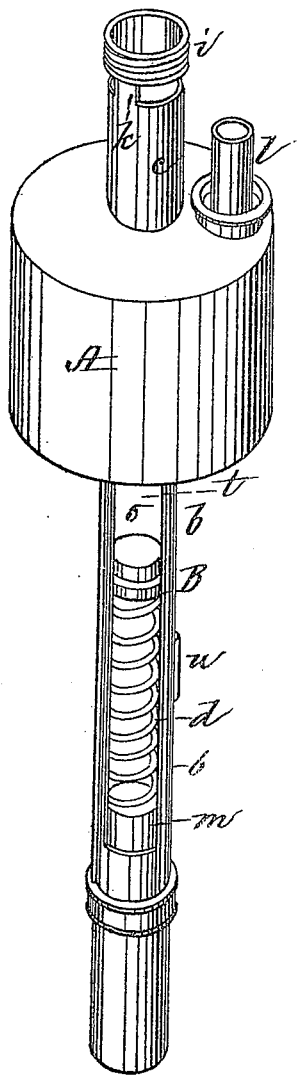


Fig. 2.

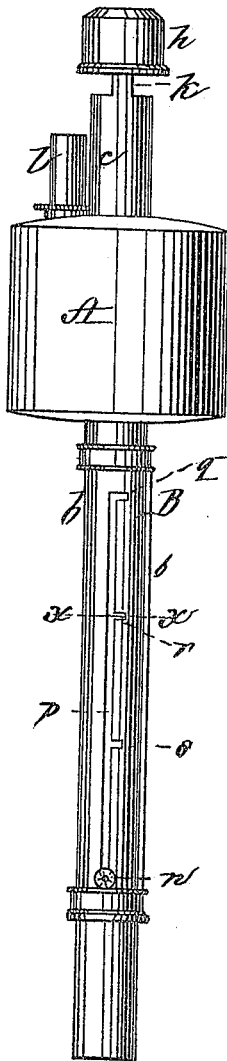


Fig. 3.

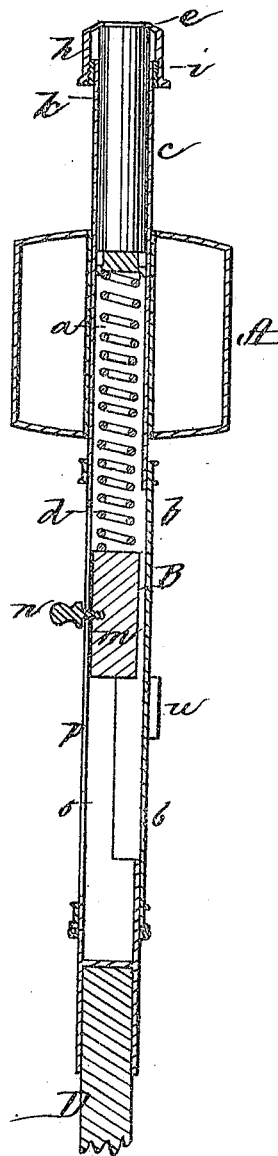
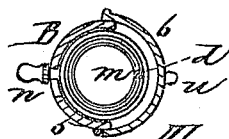


Fig. 4.



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# UNITED STATES PATENT OFFICE.

AUGUSTUS TUFTS, OF MALDEN, MASSACHUSETTS.

## IMPROVEMENT IN COMBINED TORCH AND HOLDER FOR FIREWORKS.

Specification forming part of Letters Patent No. 185,147, dated December 5, 1876; application filed September 26, 1876.

*To all whom it may concern:*

Be it known that I, AUGUSTUS TUFTS, of Malden, in the county of Middlesex and State of Massachusetts, have invented a Combined Torch and Holder for Roman Candles, Colored Lights, and Rockets, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of my combined torch and holder for Roman candles, &c. Fig. 2 is an elevation of the same. Fig. 3 is a vertical section through the center of the same, with a blue or other colored light in place ready to be ignited. Fig. 4 is a horizontal section on the line *xx* of Fig. 2.

My present invention consists in a torch provided with a holder for Roman candles, blue or other colored lights, rockets, &c., which may be ignited by the flame of the torch when a salute or signal is to be given by campaign or other clubs, or on shipboard or elsewhere; and my invention also consists in certain details of construction, to be mentioned hereafter.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, *A* is the receptacle for containing the naphtha or other fluid to be burned. Vertically through the center of the receptacle is a cylindrical passage, *a*, which, with a tube, *b*, extending below it, and a tube, *c*, projecting above it, all of corresponding diameter, forms a continuous vertical tube or holder, *B*, for the reception of the Roman candle, colored light, rocket, &c., to be used when required by the bearer of the torch for giving signals, salutes, &c., the top of the firework being kept, by a spiral spring, *d*, up against a flange or shoulder, *e*, formed on the inside of a screw-cap, *h*, which fits over a screw-thread on a ring, *i*, secured at the top of two short strips, *k*, of metal, extending up above the top of the tube *c*, the distance between the fuse of the firework and the top of the torch-burner *l* being such that its flame will extend to and readily light the firework when placed in position. The lower end of the spiral spring rests on a movable stand or support, *m*, which

may be raised or lowered within the tube *b* by means of a knob or handle, *n*, attached thereto, and projecting out horizontally through a vertical slot, *p*, formed therein, the width of the slot being increased at various points, forming recesses *q r s*, so that after applying the hand to the knob, and moving the stand up the slot against the resistance of the spring, the knob may be brought laterally into the recess desired, thus locking and supporting the stand with the spring thereon, by which arrangement the tube or holder *B* is made to accommodate pieces of fireworks of different lengths, the pressure of the spring serving to keep the fuse of the firework constantly up against the under side of the screw-cap *h* in a position accessible to the flame from the burner.

As the screw-cap *h* is liable to become so heated that it would be difficult to remove it after the torch is lighted, the firework may be placed in position on top of the spring through the tube *b*, which is formed in two portions or halves, one, *5*, being stationary, and the other, *6*, movable around and behind it, so that easy access is afforded through the opening *t* to the interior of the tube, to adjust the firework in place, the most convenient way being to direct the fuse end up the cylindrical passage *a* through the center of the torch, and slightly compress the spring *d*, to bring it down under the lower end of the firework, when the movable portion *6* of the tube is swung around, so as to close the opening *t*, by applying the fingers to a knob or projection, *u*, on its outside.

Should the support *m* be at the bottom of the tube, and the distance between the top of the spring thereon be greater than the length of the firework to be ignited—for instance, a short blue light—after being placed in position through the opening *t*, and closing the tube, the support *m* may be raised and locked in the tube at such height that the spring will constantly exert a pressure and force, and follow the blue light up the holder while it is burning.

Where Roman candles or rockets only are to be used, the tube *b* may be closed and formed in one continuous piece, and the screw-cap *h* may be dispensed with, the firework being

dropped into the holder through the top of the tube *c*, the fuse of the candle or rocket being brought up within reach of the flame of the burner by raising and locking the support in the proper recess *q r s*, and the empty shell may also be removed from the top of the tube *c* by carrying the support *m* still higher, till the top of the shell projects up a sufficient distance to be readily caught by the fingers.

Where blue or other colored lights are not to be used, the spring may be dispensed with, the top of the firework being elevated within reach of the flame by raising the support *m*; and the holder may be composed of two rings or bands connected by rods or wires, or it may consist of a socket formed in the upper end of the stick or handle *D*, without departing from the spirit of my invention.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A torch provided with a holder for Ro-

man candles, colored lights, rockets, &c., which may be ignited by the flame rising from the torch-burner, substantially as described.

2. A firework-holder, *B*, passing centrally through or to one side of the fluid-receptacle *A* of a torch, as and for the purpose set forth.

3. As an improvement in torches, the holder *B*, with its slot *p* and screw-cap *h*, in combination with the spring *d* and movable support *m*, provided with a knob or handle, *n*, as and for the purpose described.

4. In combination with a torch, the tube *b*, made in two portions, *5 6*, constructed and operating substantially as described.

Witness my hand this 19th day of September, 1876.

AUGUSTUS TUFTS.

In presence of—

N. W. STEARNS,

W. J. CAMBRIDGE.