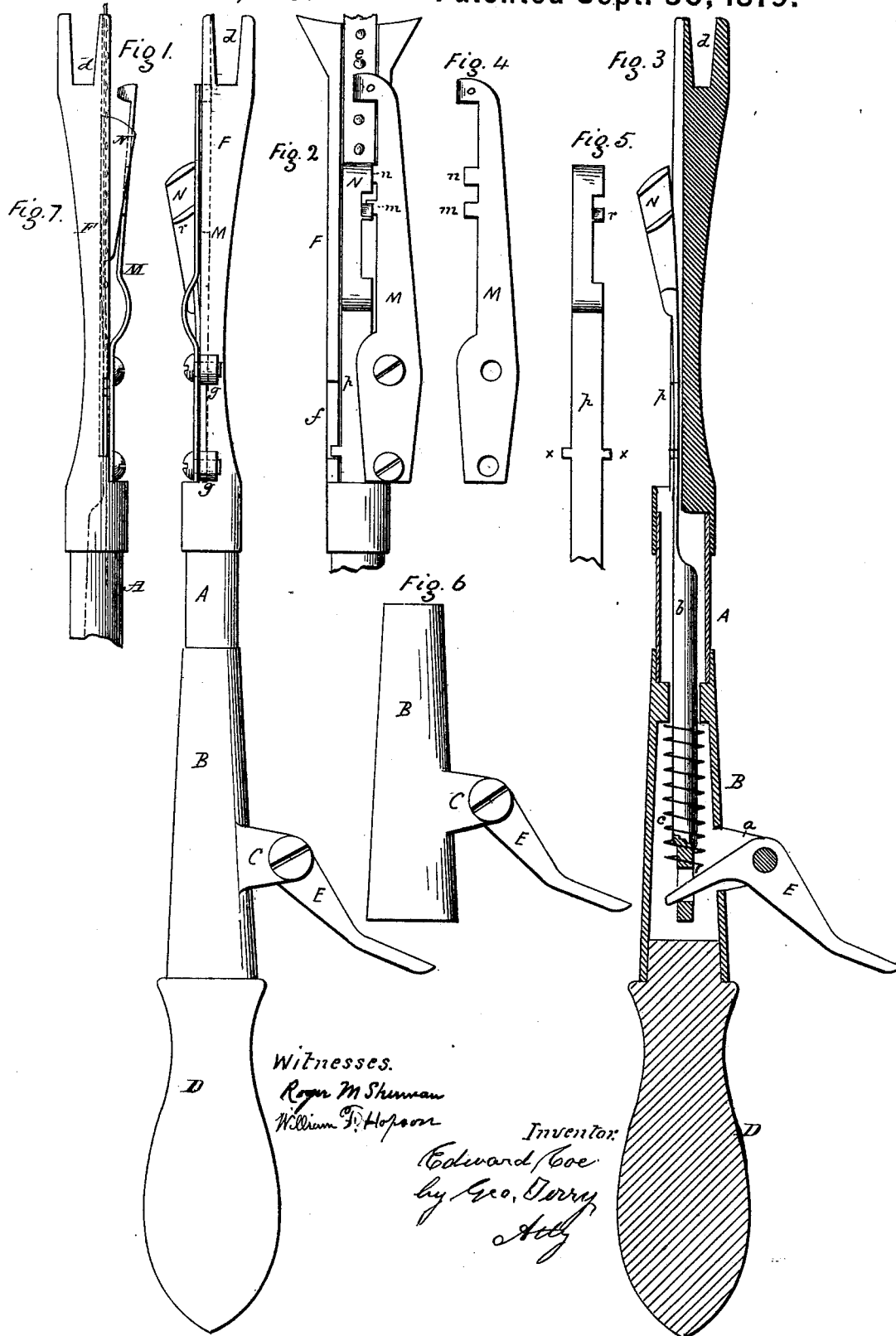


E. COE.
Gas-Torch.

No. 220,058.

Patented Sept. 30, 1879.



Witnesses.

Roger M. Shuman
William F. Hopson

Inventor.

Edward Coe
by Geo. Derry
Atty

UNITED STATES PATENT OFFICE.

EDWARD COE, OF NEW HAVEN, CONNECTICUT.

IMPROVEMENT IN GAS-TORCHES.

Specification forming part of Letters Patent No. **220,058**, dated September 30, 1879; application filed February 5, 1879.

To all whom it may concern:

Be it known that I, EDWARD COE, of New Haven, in the county of New Haven and State of Connecticut, have invented a new and Improved Gas-Torch, of which the following is a specification.

My invention relates to gas-torches; and consists in a novel construction of some of the parts of the torch, and in new combinations, which are hereinafter more fully set forth and claimed.

Figure 1 is a view of the torch, showing the slot in its upper end. Fig. 2 is a view of its upper end turned one-fourth of a revolution from the position shown in Fig. 1. Fig. 3 is a longitudinal section of the tube and the trigger, showing the parts within the tube. Fig. 4 is a view of the hammer and spring formed in one piece. Fig. 5 is a view of the feeder and of the flat spring to which it is attached. Fig. 6 is a view of the tapering tube to which the trigger and handle are attached. Fig. 7 shows the spring-hammer in raised position, the fulminate-ribbon being seen in dotted lines.

To enable others skilled in the art to which my invention belongs to make and use my improved torch, I will describe its parts and their operation.

A, Fig. 1, is a straight tube, threaded on its ends. B, Fig. 6, is a tapering tube, on which the lug C is formed. The slot *a* is made in the lug, and extends into the tapering tube, as shown in Fig. 3. Its smaller end is screwed onto the tube A, and the handle D is inserted in its larger end. Into the slot *a* the trigger E is inserted, and is pivoted to the lug, its inner end passing through a slot in the connecting-rod *b*, as shown in Fig. 3. The spiral spring *c*, also shown in Fig. 3, is placed on the connecting-rod *b*, its upper end coming against the end of the tube A and its lower end against the trigger E.

The piece F, Figs. 1 and 2, has the slot *d* in its end, has the rectangular groove *e*, in which the fulminate-ribbon moves, has the lugs *g* and notches *f*, which limit the motion of the feeder N. It is screwed onto the upper end of the tube A. The hammer *o* and spring M, Fig. 4, are made in one piece, which has the lugs *m* and *n*, and is fastened to the piece F by screws.

The lower end of the connecting-rod *b*, Fig. 3, has a slot, through which one end of the trigger passes, and the upper end of the rod is formed into a stiff flat spring, *p*, on the sides of which are formed the lugs *x*, which move in the notches *f*, for the purpose before mentioned.

To the upper end of the connecting-rod the feed or feeder N is attached. The feeder has the elongated lug *r* formed on one of its sides by cutting away the parts about it, the lug making an acute angle with the piece F. The motion of the feeder is so limited that when it is forced back by the spiral spring the lug *r* on the feeder rests on the lug *m*.

The fulminate-ribbon to be used in my torch is a long strip of paper of the right width to move in the slot *e*, and has the drops of fulminate at intervals corresponding to the feed. It is inserted into the torch between the hammer and the feeder, and passes under the feeder and spring *p* down into the tube A.

The parts of the torch being thus constructed and arranged, their operation is as follows: A pull on the trigger moves up the connecting-rod and feeder, and the lug on the feeder drops into the space between the lugs *m* and *n*, lets the feeder onto the fulminate-ribbon, and the feeder forces it forward, while the lug on the feeder, passing under the lug *n*, lifts the upper end of the spring and hammer, which drop and fire the fulminate as soon as the lug on the feeder passes the lug *n*. The pull on the trigger being relinquished, the spiral spring draws the parts back, the lug on the feeder passing over the lug *n*, when the operation of firing can be repeated.

Having described my improved gas-torch and its operation, what I claim as new, and desire to secure by Letters Patent, is—

1. The herein-described gas-torch, consisting of the handle D, trigger E, tapering tube B, tube A, spiral spring *c*, connecting-rod *b*, feeder N, piece F, spring M, and hammer *o*, all the said parts constructed and combined as shown and set forth.

2. The trigger E, spiral spring *c*, connecting-rod *b*, feeder N, piece F, and means to raise and hold in a raised position the feeder as it forced back, and to press it onto the fulminate-ribbon as it is moved forward, in combination to move the fulminate-ribbon, as set forth.

3. The trigger E, spiral spring c, connecting-rod b, feeder N, piece F, spring M, and hammer o, all the said parts constructed and in combination to fire the fulminate, as set forth.

4. In a gas-torch, the hammer o and spring M, having the lugs m and n, all the said parts made in one piece, as set forth.

5. In a gas-torch, the piece F, having the slot d, rectangular groove e, lugs g, and notches f, as set forth.

6. In a gas-torch, the feeder N, having the lug r formed on its side and attached to the upper and flat part, p, of the connecting-rod b, as set forth.

EDWARD COE.

Witnesses:

GEORGE TERRY,

WILLIAM HOPSON.