

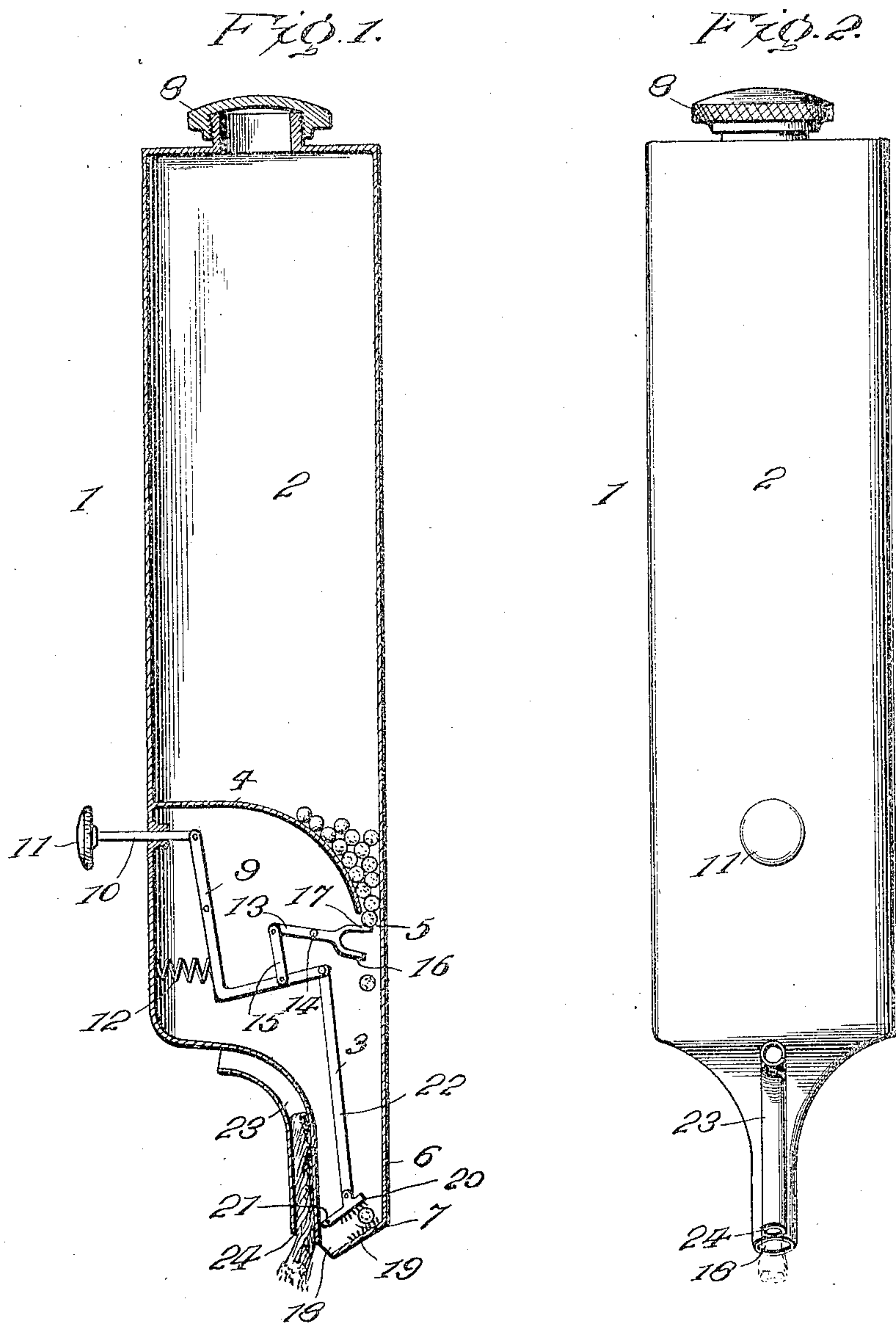
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A. E. CAUGHEY.

LIGHTER.

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# UNITED STATES PATENT OFFICE.

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## LIGHTER.

No. 808,725.

Specification of Letters Patent.

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*To all whom it may concern:*

Be it known that I, ALBERT E. CAUGHEY, a citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, have invented certain new and useful Improvements in Lighters, of which the following is a specification.

This invention embodies an improved form of lighter designed for indoor or outdoor use for lighting lamps, jets, or the like, the invention involving a device comprising a magazine or holder adapted to receive ignitable charges, percussion means for igniting the charges, and feeding mechanism of a peculiar nature for feeding the ignitable charges from the magazine or holder therefor to the percussion mechanism.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a vertical longitudinal sectional view of a device embodying the essential features of the invention. Fig. 2 is a top plan view.

Corresponding and like parts are referred to in the following description and indicated in both the views of the drawings by the same reference characters.

In carrying out the invention it is preferred that the lighter be made as small and compact as practicable, and in general form the same is of somewhat cylindrical shape, consisting of a body 1, the main or major portion of which is divided into a holder or magazine 2 and a feeding-chamber 3. A partition 4 in the body of the lighter separates the feeding-chamber 3 from the magazine 2, said partition curving at its lower portion and having a feed-opening 5, through which the ignitable charges in the magazine 2 are adapted to pass in the actual operation of the lighter. The end portion of the lighter adjacent the feeding-chamber 3 is reduced to form a hollow tubular extension 6, in the outer extremity of which is constituted a flame chamber or compartment 7 by the provision of the special construction of percussion parts utilized. The outer end of the magazine or holder 2 is provided with a cap or closure 8, through which the ignitable charges may be introduced into said holder 2, and these

charges preferably comprise small pellets, slugs, or the like of ignitable material and adapted for ignition by percussion. The charges in the magazine 2 are adapted to be individually fed through the feed-opening 5 thereof to the percussion means, so as to be separately ignited when it is desired to light a lamp or use the lighter in any analogous way. In the feeding-chamber 3 is pivoted a bell-crank lever 9, one end of which has a rod 10 connected therewith, the rod 10 passing through a side of the feeding-chamber and having a finger-piece 11 at its outer end. A spring 12 is interposed between a portion of the lever 9 and the adjacent side portion of the feeding-chamber 3, and this spring normally holds the lever 9 in a predetermined position. Disposed adjacent the mouth of the feed-opening 5 of the magazine 2 and in the feeding-chamber 3 is a charge-feeding member 13, comprising a lever pivoted between its ends, as shown at 14, one end of the lever being connected by a link 15 with an arm of the lever 9, the opposite or lower end of the lever being bifurcated to form spaced feeding-fingers 16 and 17. The space between the fingers 16 and 17 of the member 13 is sufficient to receive a single charge fed from the magazine 2, as will be pointed out more clearly as the description proceeds.

The hollow extension 6 of the body 1 of the lighter is provided with a flame-opening 18, said flame-opening communicating with the flame-chamber 7 before mentioned. In the outermost portion of the flame-chamber 7 is arranged a percussion-plate 19, and a percussor 20 coöperates with the percussion plate 19 to ignite the charge fed to the chamber 7 from the magazine 2. The percussor 20 is movable and consists of a plate pivoted at the upper end thereof, as indicated at 21, said plate virtually forming a movable partition which separates the chamber 7 from the feeding-chamber 3, though movement of the percussor 20 will admit of passage of a charge from the feeding-chamber into the flame-chamber 7 aforesaid. The percussor 20 is connected by a rod 22 with the outer extremity of the arm of the lever 9 with which the link 15 connects, so that actuation of the lever 9 will impart simultaneous movement to the feeding member 13 as well as to the percussor 20. The adjacent sides of the percussor 20 to the percussion-plate 19 are prefer-



ably roughened or toothed to facilitate the ignition of the charge received between these parts when the percussor is actuated or moved toward the plate 19. Upon the upper side of the hollow extension 6 of the lighter is secured the wick-tube 23, and a wick 24 is arranged in this tube with one of its ends proximate the flame-opening 18, so that when the charge in the chamber 7 is ignited the flame passing upwardly through the opening 18 will ignite the wick 24, and the lighter is in condition for actual use in a manner which is evident.

Describing the actual operation of the invention, the body 1 of the lighter may be readily grasped in the hand of the operator and the thumb of the hand may be used to depress the finger-piece 11 to thereby cause movement of the lever 9. When the member 11 is depressed, the lever or feeding member 13 is actuated so as to cause the finger 17 to be raised sufficient to allow one of the charge-pellets in the magazine 2 to move into the space between the fingers 16 and 17. The pressure on the member 11 being relieved the spring 12 will throw the same outwardly and cause the feeding member 13 to move so as to raise the finger 16 sufficient to allow the charge-pellet between the two fingers 16 and 17 to drop to the percussor 20. The percussor 20 in the normal position of the same has its lower end spaced from the adjacent side portion of the body 1 a sufficient distance to permit the charge fed thereto to pass into the chamber 7 between the percussor 20 and the plate 19. Further, depression on the member 11 will cause the percussor 20 to be forced toward the plate 19 and will ignite the charge and the wick 24 in a manner which will be obvious. Simultaneously with the ignition of the charge in the chamber 7 and the actuation of the percussor 20 in the manner above mentioned the feeding member 13 is also actuated to raise the finger 17 and permit a charge to drop into the space between the fingers 16 and 17, which charge will be fed to the chamber 7 on release of the member 11, after the charge already in the chamber 7 has been ignited by the percussor 20. In view of the fact that the percussor 20 virtually forms a partition separating the chamber 7 from the feeding-chamber 3, when the percussor has been actuated to ignite the charge in the chamber 7 it will be seen that all likelihood of the flame in the chamber 7 shooting back and igniting a charge or charges in the feeding chamber or magazine 2 is entirely obviated.

Having thus described the invention, what is claimed as new is—

1. In a lighter of the class described, the combination of a magazine for holding ignitable charges, a percussor or igniter for igniting charges fed from the magazine, feeding means separate from the percussor for feeding

charges from the magazine thereof, and means connected with the percussor and the feeding mechanism for positive simultaneous actuation thereof.

2. In a lighter of the class described, the combination of a magazine adapted to receive ignitable charges, a percussor, a feeding member adapted to feed charges from the magazine to the percussor, and a lever operably connected with the feeding member and the percussor for actuation thereof.

3. In a lighter of the class described, the combination of a magazine adapted to receive ignitable charges, a feeding-chamber, a flame-chamber, a percussor separating the flame-chamber from the feeding-chamber, a flame-opening for the flame-chamber, a wick at the mouth of said opening, feeding mechanism in the feeding-chamber adapted to feed charges from the magazine to the percussor, and means for actuating the feeding mechanism and the percussor.

4. In a lighter of the class described, the combination of a magazine adapted to receive ignitable charges, a feeding-chamber, a flame-chamber, a percussor separating the flame-chamber from the feeding-chamber, a flame-opening for the flame-chamber, a wick at the mouth of said opening, feeding mechanism in the feeding-chamber adapted to feed charges from the magazine to the percussor, a percussion-plate in the flame-chamber coacting with the percussor, a lever operably connected with the percussor and the feeding mechanism aforesaid, and means for actuating said lever.

5. In a lighter of the class described, the combination of a magazine adapted to receive ignitable charges, a pivoted percussor, a feeding member for feeding charges from the magazine to the percussor comprising a lever, spaced feeding-fingers carried by the lever to engage a charge received from the magazine, and an operating-lever connected with the feeding member and with the pivoted percussor for actuating the same.

6. In a lighter of the class described, the combination of a magazine adapted to receive ignitable charges, a pivoted percussor, a feeding member for feeding charges from the magazine to the percussor comprising a lever, spaced feeding-fingers carried by the lever to engage a charge received from the magazine, a percussion-plate coacting with the percussor, a spring-actuated lever, connections between the spring-actuated lever and the feeding member and percussor for simultaneously actuating the feeding member and percussor, and a finger-piece operably connected with the spring-actuated lever, as specified.

In testimony whereof I affix my signature in presence of two witnesses.

ALBERT E. CAUGHEY. [L. S.]

Witnesses:

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