No. 884,128. PATENTED APR. 7, 1908.

A. E. CAUGHEY.

LIGHTER.

APPLICATION FILED APR. 6, 1907.

Fig. 1.

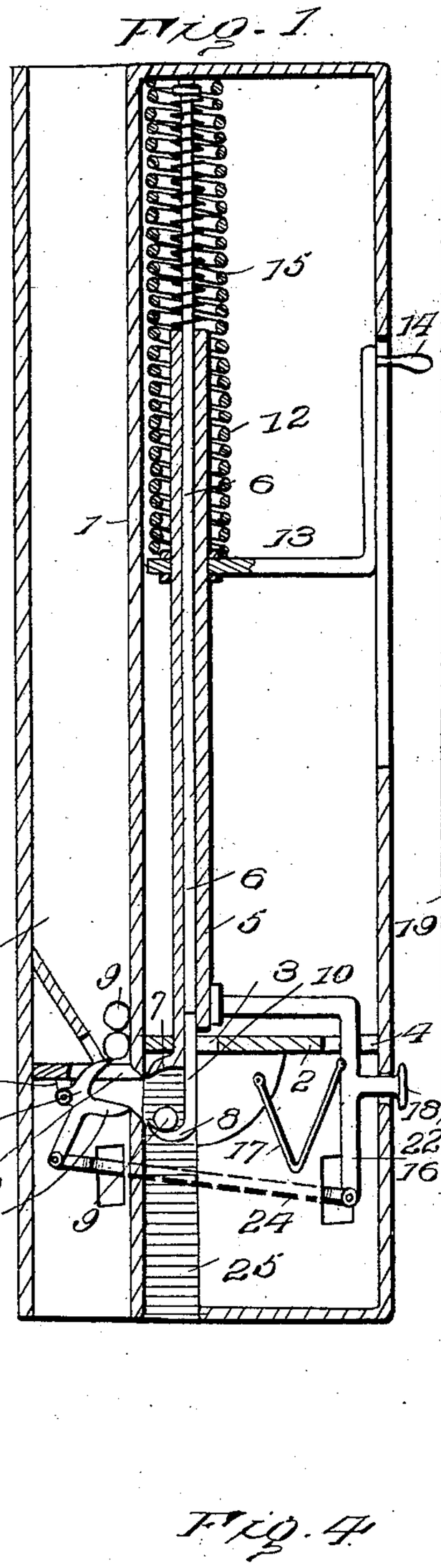


Fig. 2.

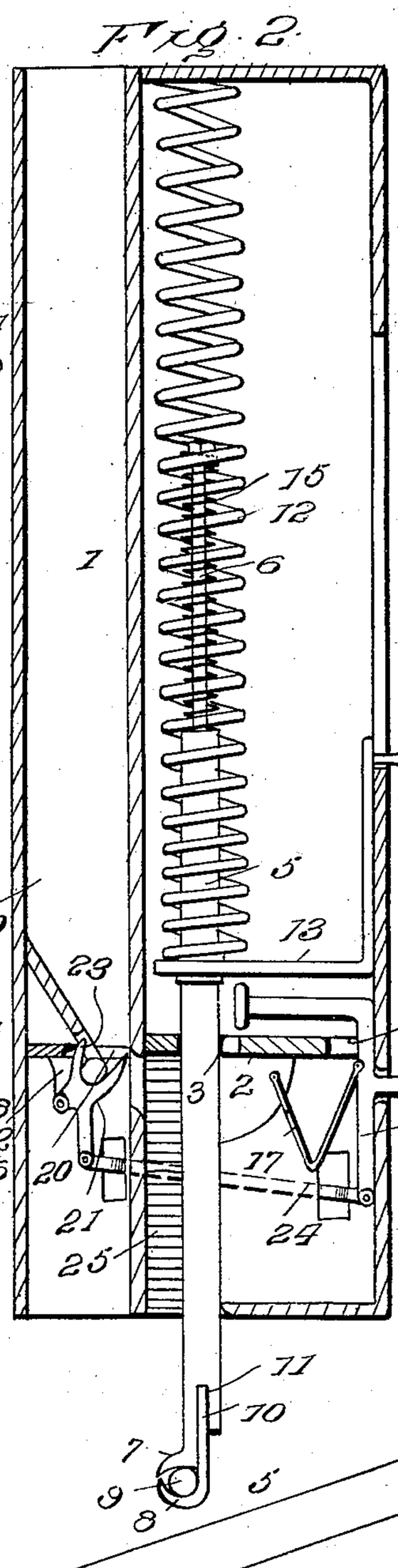


Fig. 3.

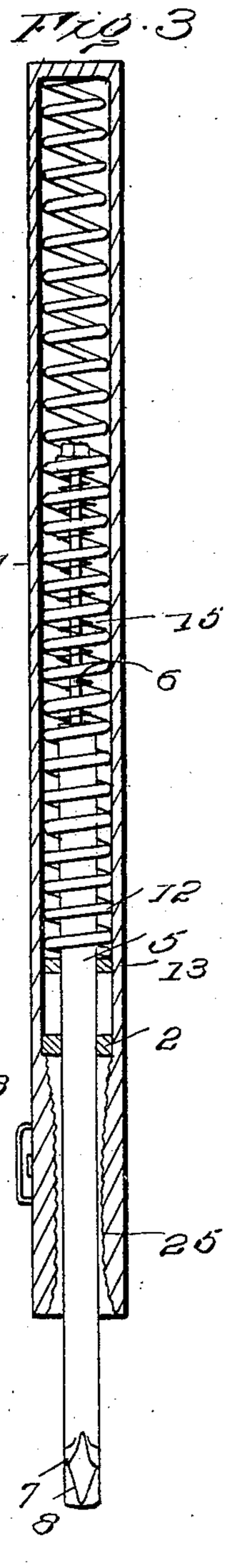
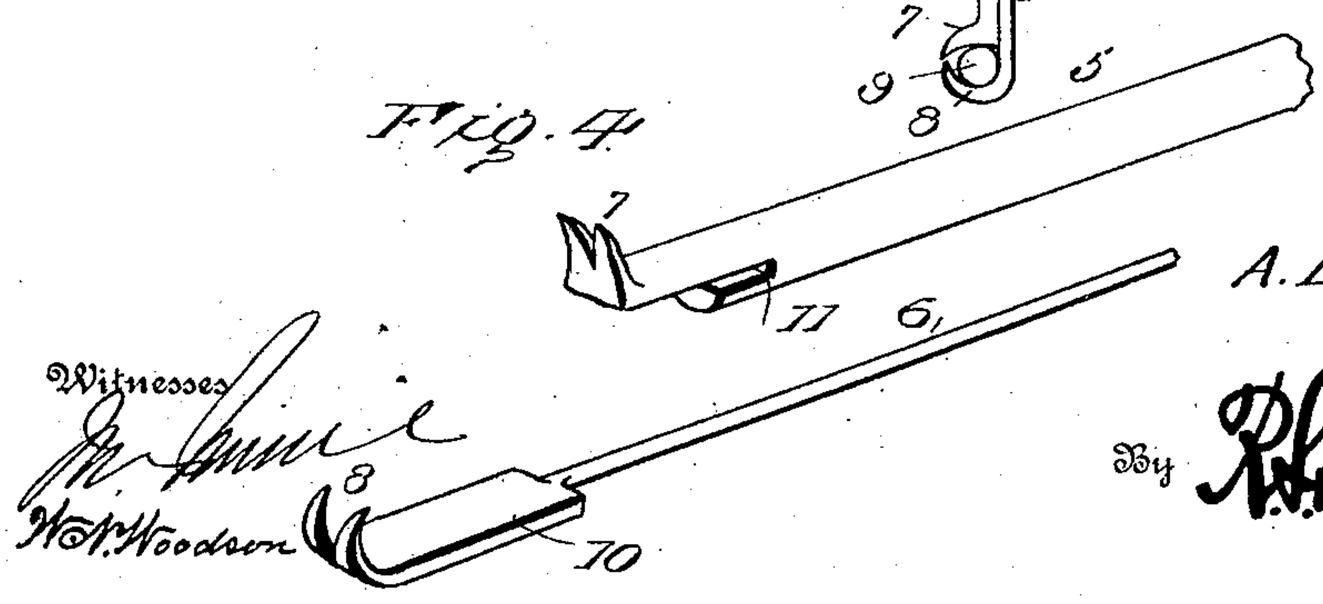


Fig. 4.



Witnesses

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LIGHTER.

No. 884,128. Specification of Letters Patent. Patented April 7, 1908.

Application filed April 6, 1907. Serial No. 366,843.

To all whom it may concern:

Be it known that I, ALBERT E. CAUGHEY, 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.

The present invention relates to a novel form of lighting device which is especially designed for use in connection with ignitible pellets or charges, the object being to provide a transportable device of this character which is simple and durable in its construction and which operates in a positive manner to produce the desired result. To this end the lighter comprises essentially a casing having a charge holder movably mounted therein, the said charge holder being formed with a pair of jaws which automatically grip the ignitible charge and carry the same over an igniting surface, novel means being provided for controlling the movements of the charge holder and also for regulating the feeding of the pellets.

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

Figure 1 is a longitudinal sectional view showing the charge carrier in a retracted position. Fig. 2 is a similar view showing the charge carrier in a projected position. Fig. 3 is a longitudinal sectional view taken at right angles to the sections shown in Figs. 1 and 2. Fig. 4 is a detail view of the charge gripping members.

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

The casing within which the charge holder and igniting mechanism are mounted is indicated at 1 and preferably has a somewhat elongated formation, being provided toward one end with a transverse partition 2 having an opening 3 formed therein and also having an edge thereof slotted as indicated at 4. The charge holding device comprises a pair of members slidably mounted one upon the other and carrying jaws which coöperate to grip the pellet. One of these slidable members is in the nature of a tube 5 passing loosely through the opening 3 in the partition 2, while the opposite member is in the nature of a rod 6 which is slidably mounted within the tube. The outer end of the tube 5 carries a jaw 7 and in a similar manner the outer end of the rod 6 is provided with a jaw 8 which coöperates with the jaw 7 to grip one of the pellets 9. It will also be observed that a pair of laterally extending wings 10 are provided at the outer end of the rod 6 and that the said wings are loosely received by slots 11 in the outer extremity of the tubular member 5 and serve to prevent any rotary movement of the rod 6 and also to guide the same in its longitudinal movement. The inner end of the rod 6 extends beyond the tube 5 and a coil spring 15 surrounds the projecting portion of the same and is interposed between the extremity of the tube 5 and the extremity of the rod 6. It will thus be apparent that this spring 15 normally operates to draw the rod 6 inwardly, thereby moving the jaw 8 toward the jaw 7 in such a manner as to grip a pellet between them. Rigidly connected to the tube 5 is an arm 13 which is slidably mounted upon one side of the casing 1 and carries a finger-piece 14 which projects through the casing and moves within a slot in the same. Interposed between the arm 13 and the inner end of the casing 1 is a spring 15 which normally tends to throw the arm 13 against the partition 2, in which position the jaws 7 and 8 are projected beyond the end of the casing and are drawn together by the action of the spring 15. By pushing backwardly upon the finger-piece 14 however the charge holding device may be withdrawn within the casing and when the extremity of the rod 6 contacts with the end of the casing it will be readily apparent that the spring 15 will be compressed and the jaw 8 moved away from the jaw 7 so that the charge 9 can be readily received between the same.

A trip mechanism in the nature of a locking bar 16 is employed for holding the charge holder in a retracted position, one arm of the locking bar extending loosely through the slotted portion 4 of the partition 2, while the

opposite arm projects toward the tube 5 and is designed to engage the outer end portion of the same when the finger-piece 14 has been pulled rearwardly to retract the charge holder. A spring 17 is provided for normally holding the locking bar 16 out of engagement with the charge holding device and the said locking bar is also formed with a finger-piece 18 serving as a means for operating the bar to engage the tube 5.

The ignitible charges or pellets are preferably contained within a magazine 19 and are discharged through a feed opening 20 therein. The device for controlling the supply of the pellets to the charge holder is in the nature of a lever 21 pivoted upon an extension 22 of the casing 1 and formed with a pair of spaced arms 23 designed to receive a pellet between the same and deliver the pellet between the jaws 7 and 8 when the lever 21 is given a rocking movement. A rod 24 connects the locking bar 16 and the lever 21 and the various elements are so arranged that when the finger-piece 18 is pressed inwardly the lever 21 is rocked so as to deliver a pellet between the jaws 7 and 8, and the inwardly extending arm of the bell crank lever 16 moved into engagement with the tube 5.

Upon the release of the finger-piece 18 the tension in the spring 15 causes the charge holding device to move outwardly so as to carry the pellet between a pair of igniting surfaces 25 and to hold the pellet in a projected position beyond the end of the casing. It will be readily apparent however that as soon as the charge holder starts to move outwardly the spring 15 will draw the rod 6 within the tube 5 and move the jaw 8 toward the jaw 7 in such a manner as to securely grip the pellet 1 which is brought into contact with the igniting surfaces 25.

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

1. In a device of the character described, the combination of a casing, a charge holder mounted within the casing and comprising a pair of jaws slidable with respect to each other, means for feeding ignitible charges between the jaws, and means carried by the casing and coöperating with the jaws for igniting the charge.

2. In a device of the character described, the combination of a casing, a charge holder mounted within the casing and comprising a pair of relatively movable jaws, means for feeding an ignitible charge to the charge holder, an igniting surface carried by the casing, and means for causing the jaws to grip the charge and carry it over the igniting surface.

3. In a device of the character described, the combination of a casing, a charge holder mounted within the casing and comprising a pair of members slidable upon each other and carrying gripping jaws, means for delivering an ignitible charge to the charge holder, an igniting surface, and means for causing the jaws to grip the charge and carry it over the igniting surface.

4. In a device of the character described, the combination of a casing, a charge gripper movably mounted within the casing, an igniting surface, means for moving the charge gripper over the igniting surface, a feeding mechanism for supplying ignitible charges to the charge gripper, a tripping mechanism for holding the charge gripper in a retracted position, and an operative connection between the feeding mechanism and the tripping mechanism.

5. In a device of the character described, the combination of a casing, a charge holder movably mounted within the casing and comprising a pair of movable jaws, an igniting surface, means for delivering a charge between the jaws, a tripping mechanism normally holding the charge holder in a retracted position, and means whereby the jaws of the charge holder automatically grip the charge and carry it over the igniting surface upon the release of the tripping mechanism.

6. In a device of the character described, the combination of a casing, a tubular member slidably mounted within the casing and carrying a jaw, a rod slidable within the tubular member and also carrying a jaw coöperating with the first mentioned jaw, an igniting surface, means for delivering a charge between the jaws, a spring carried by the rod and normally operating to hold the two jaws in engagement with each other, the extremity of the rod being designed to engage a stop and compress the spring to throw the jaws apart when the charge holder is moved into position for receiving a charge, and means for moving the charge holder over the igniting surface, the before mentioned spring operating to cause the jaws to grip the charge previous to engagement of the charge with the igniting surface.

7. In a device of the character described, the combination of a casing, a charge holder mounted within the casing, an igniting surface, means for moving the charge holder over the igniting surface, a feeding mechanism comprising a lever formed with a pair of spaced arms designed to receive a charge and deliver it to the charge holder, a tripping mechanism for the charge holder, and an operative connection between the tripping mechanism and the feeding mechanism.

8. In a device of the character described, the combination of a casing, a charge holder movably mounted within the casing, an ig-

niting surface, means for moving the charge holder over the igniting surface, a locking bar one end of which is designed to engage the charge holder to hold the same in a retracted position, a feeding mechanism comprising a lever formed with a pair of spaced arms designed to receive a charge and deliver it to the charge holder, and a link member connecting the locking bar and the lever of the feeding mechanism.

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

ALBERT E. CAUGHEY. [L. S.]

Witnesses:

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NETTIE FLOREN.