

H. W. PRAY.
Lamp and Gas Lighters

No. 148,983.

Patented March 24, 1874.

Fig. 1.

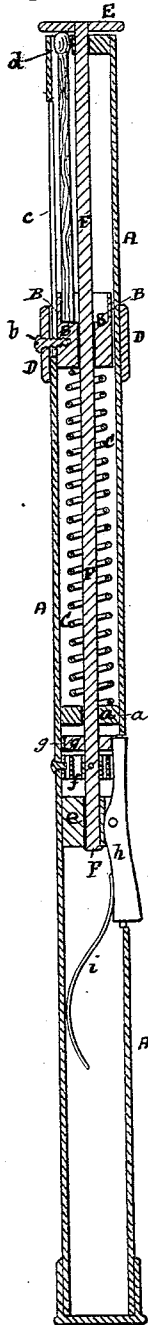


Fig. 3.

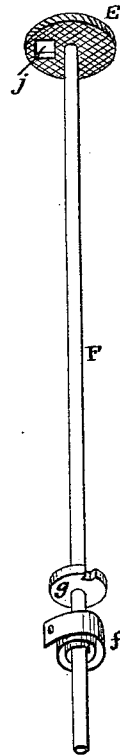
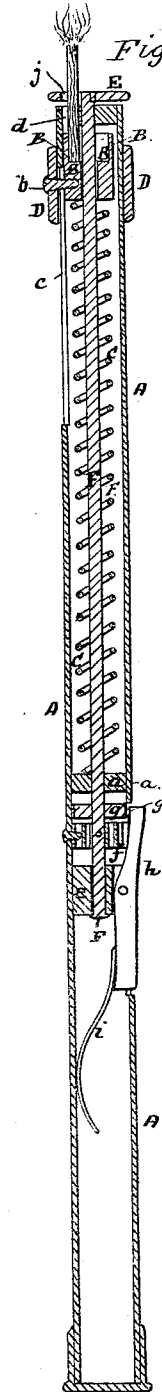


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

HARLEY W. PRAY, OF NEWPORT, RHODE ISLAND, ASSIGNOR TO SAMUEL W. FRANCIS, OF SAME PLACE.

IMPROVEMENT IN LAMP AND GAS LIGHTERS.

Specification forming part of Letters Patent No. 148,983, dated March 24, 1874; application filed March 14, 1874.

To all whom it may concern:

Be it known that I, HARLEY W. PRAY, of Newport, Rhode Island, have invented certain new and useful Improvements in Lamp and Gas Lighters, of which the following is a specification:

This invention relates to that class of lamp, gas, or candle lighters so constructed that the match may at will be ignited and projected from the body of the implement in position to be applied to the gas-tip or lamp or candle wick.

In devices of this kind it has heretofore been customary to force the match, by spring or other power, out between spring-holding jaws, by its passage through which the match would be ignited.

Under my invention I dispense with such jaws, and, instead of moving it longitudinally up between igniting surfaces, I so arrange it that its head will pass laterally or across a match-igniting surface, just as would be done were the match to be lighted by hand. After being thus ignited it may be projected beyond the end of the implement by any suitable means.

The manner in which my invention is or may be carried into effect can best be explained and understood by reference to the accompanying drawings, in which—

Figure 1 is a longitudinal central section of a lamp or gas lighter made in accordance with my invention, the match being represented as contained within the body of the implement and in readiness to be ignited and projected therefrom. Fig. 2 is a like section of the lighter, representing the position of the several parts when the match has been ignited and projected. Fig. 3 is a perspective view of the igniting device.

The several operative parts of the lighter are carried by and for the most part contained within a shell or tube, A, which forms the case of the implement. Within this case is a match receiver or holder, B, that slides freely up and down in the case, being upheld with a yielding pressure by a spiral spring, C, the lower end of which bears against a bridge, a, fixed within the case A. The receiver is depressed by means of an external sleeve, D, connected with the receiver by means of a pin, b, passing through

a longitudinal guide-slot, c, in the case of such length as to permit the receiver to be depressed to any desired or needed extent. The top of the case A has an opening, d, in it, down through which the match is inserted into the receiver B, in which the end of the match fits tightly, so that when the receiver is depressed the match will be carried down with it.

The means described above are those designed to insure the projection of the match from the case A.

The igniting device consists of a match-igniting button or disk, E, having its under face serrated or roughened, as shown in Fig. 3. This disk is just above the top of the case A, and is held in place by a stem, F, which passes loosely through and takes a bearing in the top of the case and the bridge a, and also in an under bearing-piece, e, through which its lower end passes and is upset, or provided with an enlarged part or head, which will prevent the stem from being drawn out from piece e. Below bridge a there is a volute spring, f, one end of which is fixed to stem F and the other end to the case A. If, therefore, the disk or button E be rotated to cause (through the corresponding rotation of the stem F) the compression or tightening of this volute spring, the spring, when the button is released, will recoil, and so, through the medium of stem F, cause the match-igniting disk to turn forcibly in the other direction and resume its normal position.

In order to hold the spring contracted, I fix on stem F a notched disk, g, the notch in which, when the stem is rotated so as to contract the spring, is brought opposite to a trigger or catch, h, which, by its spring, i, is caused to enter said notch and so hold the stem and match-igniting button in position against the spring, as indicated in Fig. 1. By pressing on the lower end of this trigger it will be disengaged from the notched disk, and so release the stem F.

The match-igniting button is provided with an aperture, j, so located that it will, when the disk is in its normal position, coincide with the match-opening d in the top of case A.

The implement, with its several parts in

their normal position, is shown in Fig. 2. To use it, a match is inserted down through openings *j d* into receiver B. The receiver, by means of its external sleeve D, is then lowered until the head of the match is below the match-igniting disk E. The latter is then rotated until the trigger *h* engages the notch in disk *g*. The implement is now loaded, so to speak, and the parts are in position, as seen in Fig. 1, ready to ignite the match and project it from the case A, the head of the match resting and being held against the roughened under face of disk E with a yielding pressure due to the spring C. Now, by pressing the trigger *h*, the match-igniting button will be released, and its roughened under face will, by the rotation of the button, be drawn quickly across the head of the match, which will thus be ignited. Immediately thereafter the aperture *j* in the button will come into coincidence with the opening *d* in the top of the case, and there being nothing to hold the match down it will, by the expansion of spring C, be projected in its ignited condition from the case A, as represented in Fig. 2.

The match-igniting device may, if desired, be combined with other means whereby the match after ignition will be projected from the case; and I do not, therefore, limit myself strictly to the specific arrangement of parts shown in the drawing in illustration of my in-

vention. A wrench or jaws for turning the gas-cock may be formed on or attached to the case or shell of the lighter, as, for instance, on the end of the case opposite to that on which the match-igniting disk is placed.

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

1. The rotary match-igniting button or disk, its axial supporting-stem, actuating-spring, and devices whereby it may be locked fast in position and released at pleasure, in combination with a match receiver or holder operated independently of the said match-igniting devices, to uphold the match with its head against the match-igniting surface of said button or disk, substantially as shown and set forth.

2. In combination with the case A and the match-receiver, its upholding spring and external operating sleeve, the rotating match-igniting disk provided with an aperture coinciding with a match-opening in the top of the case, its supporting-stem, actuating-spring, and locking and releasing devices, said parts operating together substantially in the manner shown and set forth.

In testimony whereof I have hereunto signed my name this 11th day of March, A. D. 1874.

H. W. PRAY.

Witnesses:

W. HARRISON NEWTON,
J. D. RICHARDSON.