

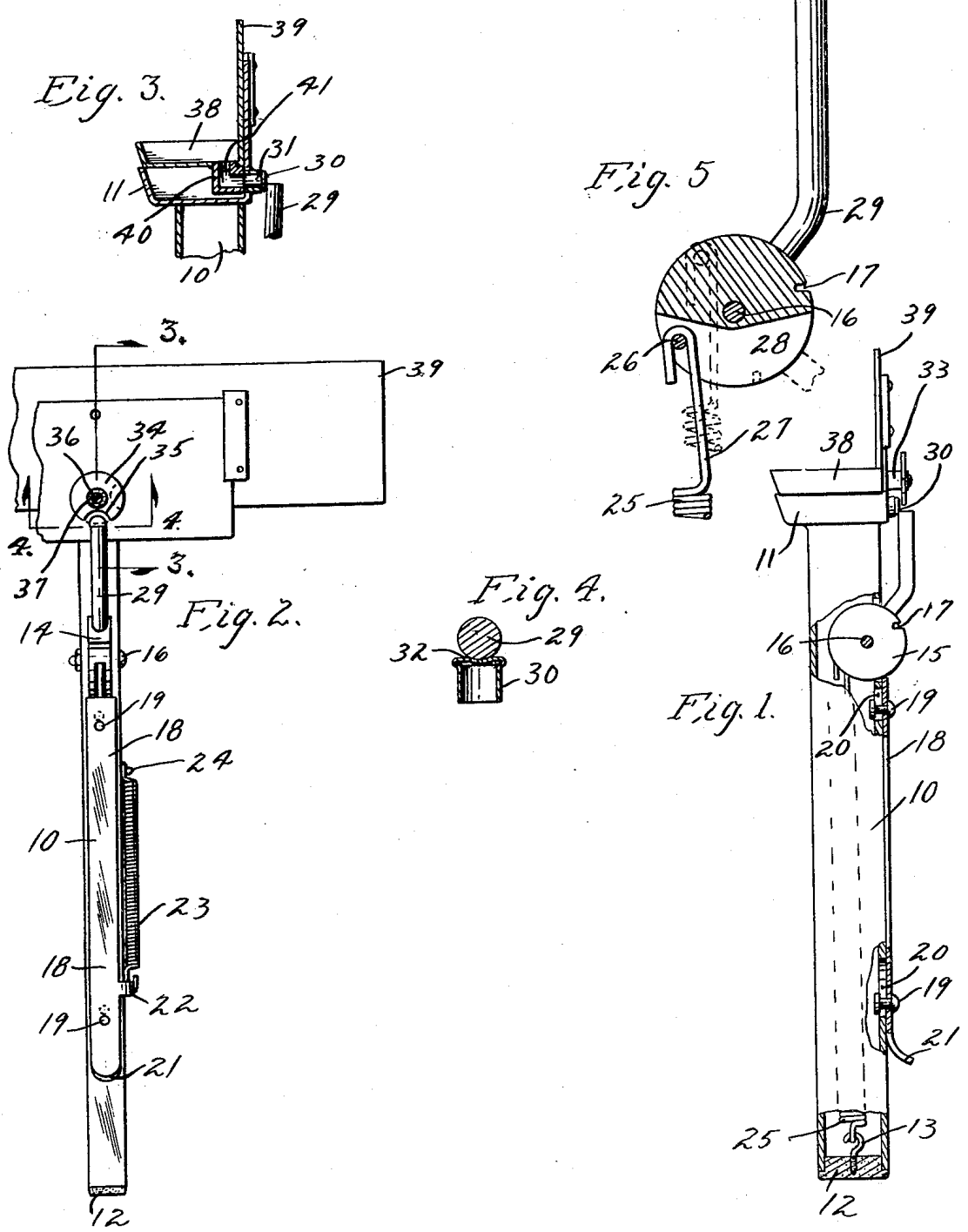
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FLASH LIGHT GUN

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UNITED STATES PATENT OFFICE

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FLASH LIGHT GUN

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The object of my invention is to provide a safe flash light gun of simple, durable and inexpensive construction, which is of light weight and accurate in its operation.

5 More specifically it is the object of my invention to provide in a flash light gun of that type employing a primer for igniting the powder, improved hammer mechanism for setting off the primer.

10 A further object is to provide in a flash light gun of the type above described, an improved auxiliary pan adapted to be easily and quickly placed in operative relation with the pan of the gun, and having means where-
15 by the primer mechanism of the gun may be utilized for igniting powder in the auxiliary pan.

A further object is to provide in a flash light gun employing a primer for igniting
20 the powder, improved means for retaining the primer in operative position.

My invention consists in the construction, arrangement and combination of the various
25 parts of the device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which:

30 Figure 1 is an end elevation of my improved flash light gun showing the auxiliary pan attached thereto.

Figure 2 is a back view of the same, one end of the pans being broken away.

35 Figure 3 is a detail sectional view taken on the line 3—3 of Figure 2.

Figure 4 is a detail sectional view taken on the line 4—4 of Figure 2.

Figure 5 is a sectional view of my improved hammer mechanism.

40 My improved flash light gun comprises a tubular handle 10, which is preferably rectangular in cross section, having a powder pan 11 fixed to its upper end. The lower end of the handle 10 is provided with a plug 12,
45 on which is mounted a hook 13. The back edge of the handle 10 is provided with a slot 14 in which is rotatively mounted a disk 15 by means of a pivot 16, which is mounted in the side members of the handle.

50 The periphery of the disk is provided with

a notch 17 for receiving the upper end of a latch bar 18, which is slidably mounted on the back edge of the handle 10 by means of suitable rivets 19. The said rivets are mounted to slide in slots 20.

The lower end of the latch bar 18 is curved
55 outwardly at 21 to serve as a thumb piece, by means of which the latch bar is slid downwardly. One edge of the bar 18 is provided with a lug 22, to which one end of a spring
60 23 is attached. The other end of the spring 23 is connected to the side of the handle 10 by means of a suitable rivet 24. The spring 23 provides means for causing the upper end of the latch bar 18 to enter the notch 17 when
65 the disk is in one position of its movement and to retain the disk against rotation imparted by means of a spring 25, one end of which is connected to the hook 13, while the opposite end is connected to a pin 26.

In the disk 15, the upper end of the spring 25 is provided with a portion 27, which is designed to enter a slot 28 formed in said disk in the manner clearly illustrated in Figure 5.

The disk 15 is also provided with a radial-
75 ly projecting rod 29 which serves as a hammer, the upper end of which is designed to engage one edge of the rim of the primer 30, which is mounted in a suitable opening or container 31 mounted in the back side of the
80 pan 11.

The hammer 29 is preferably made of a round rod so that the contact surface of the hammer with the firing rim of the primer is convexed, so that a concave depression 32
85 is formed in the rim of the primer in the manner illustrated in Figure 4. I find that this provides a very accurate and positive hammer arrangement by which the primer may be fired without any noise, which is a very
90 desirable feature in flash light guns.

For retaining the primer in position, the back side of the pan 11 is provided with a rearwardly projecting lug 33, on which is pivotally mounted a disk 34 having a notch
95 35 in its periphery. The disk 34 is pivotally mounted on the member 33 by a suitable screw 36, on which is mounted a friction washer 37 made of slightly flexible material, so that the disk 34 may be yieldably sup-
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ported in various rotative positions. The disk 34 is so mounted that when the notch 35 is moved to position opposite the primer opening 31, then the primer may be inserted in said opening, after which the disk may be rotated, having its lower edge covering the upper edge of the primer. The upper end of the hammer 29 is designed to pass beneath the lower edge of the disk and to engage the lower edge of the primer rim. In operation, the hammer 29 is moved downwardly and outwardly against the action of the spring 25 until the latch bar 18 enters the notch 17. A primer may then be inserted in the opening 31 and the disk 34 rotated to a locking position.

Powder is then placed in the pan 11 adjacent to the inner end of the opening 31. The handle 10 may then be grasped in the operator's hand with his thumb over the piece 21, the handle being supported in an upright position over the operator's head. The thumb piece is then pulled downwardly, causing the latch bar 18 to disengage the notch 17. This permits the disk 15 to be rotated through the action of the spring 25 and a quick and positive blow to be delivered to the primer by the upper end of the hammer 29.

The disk 15 is designed to set snugly between the side wall of the handle 10, and yet loose enough to move freely. The side walls serve to assist in preventing lateral movement of the hammer 29 as it swings to a striking position, thus providing means whereby the hammer is actually guided so as to strike the lower edge of the primer end centrally, thus insuring a positive firing of the primer.

A pin 26 is mounted in the disk 15 in such a manner that when the said disk 15 is moved to its open position, the pivot 26 will assume the position in dotted lines of Figure 5 near the upper edge of the disk and will assume a position shown in solid lines with the said pin 26 slightly below a horizontal line projecting through the pivot 16 where the leverage ratio between the outer end of the hammer, the pivot 16 and the pivot 26, is such as to apply the maximum power to the end of the hammer, the pivot 26 being in such position, as illustrated in dotted lines, as to impart a rapid velocity to the hammer immediately upon release of the latch bar 18, so that a quick powerful blow is imparted to the primer.

The back side of the pan 11 is higher than the the ends or the front member, so that the said back provides a shield for the flash, and, at the same time, provides means whereby an auxiliary pan 38 may be supported on the pan 11. The said auxiliary pan also has a high back 39 designed to rest in front of the back of the pan 11, and provided with grooved cleats designed to slide over the ends

of the back of the pan 11, in a manner clearly illustrated in Figures 1 and 2, the auxiliary pan being applied by simply lowering same into position on top of the pan 11.

The back edge of the bottom of the auxiliary pan 38 is provided with a boss 40, in which is provided a passage 41. One end of the passage communicates with the inner end of the opening 31 and the opposite end of said passage communicates with the interior of the pan 38, so that when powder is placed in the pan 38, the same may be ignited by a primer carried in the opening 31, thus providing means whereby a latch auxiliary pan may be easily and quickly applied to the standard size pan, and whereby the ignition mechanism of the standard pan may be utilized for igniting powder within the auxiliary pan. Thus it will be seen I have provided a flash light gun of very simple construction, which is light in weight and accurate and positive in its operation.

I claim as my invention:

1. A flash light gun comprising an upright handle, having a pan mounted on its upper end, said pan having a primer opening, and a locking disk rotatively mounted adjacent to said opening, with the edge of said disk partially covering the firing rim of a primer when placed in said opening, the edge of said disk having a notch to permit insertion of a primer in said opening.

2. A flashlight gun comprising an upright handle, having a pan mounted on its upper end, said pan having a primer opening, a locking disk rotatively mounted adjacent to said opening, with the edge of said disk partially covering the firing rim of a primer when placed in said opening, the edge of said disk having a notch to permit insertion of a primer in said opening, and friction means for retaining said disk in various positions of its movement.

3. A flashlight gun comprising a hollow upright handle, rectangular in cross section, having a pan on its upper end and a slot in one edge, a disk rotatively mounted in said slot, a hammer carried by said disk, a spring for imparting rotation to said disk, a primer opening in said pan, said opening being in alignment with said hammer, and a latch bar for retaining said disk and hammer in an open position against the action of said spring, the contact face of said hammer being convexed to form a radial concaved groove in the rim of a primer when engaged by said hammer.

4. A flashlight gun comprising a hollow upright handle, a pan on the upper end of said handle provided with a primer opening, one edge of said handle being provided with a slot, a disk rotatively mounted in said slot, the periphery of said disk being provided with a notch and a radially projecting hammer, the free end of said hammer being designed to

rest adjacent to one edge of said primer opening when the hammer is in its closed position, a slidably mounted latch bar for entering the notch in said disk, yieldable means for retaining said latch bar therein, and a spring pivotally connected to one edge of said disk for imparting rotation thereto.

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5. A flash light gun comprising a handle, a pan thereon, means for igniting powder within said pan, one of the side edges of said pan projecting upwardly to form a shield, an auxiliary pan supported above the first pan, the back of said auxiliary pan resting against the upwardly projecting portion of the first pan, said back having slotted cleats for receiving the ends of the upwardly projecting member of the first pan, and means for communicating ignition from the first pan to the said auxiliary pan.

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6. In a flash light gun an upright handle, a pan mounted thereon, said pan having a primer opening, an auxiliary pan mounted on top of the first pan, and means for detachably connecting said auxiliary pan thereto, said auxiliary pan having a primer passage communicating with the primer opening of the first pan when the said auxiliary pan is mounted on the first pan.

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7. A flash light gun comprising a hollow upright handle, rectangular in cross section, having a pan on its upper end and a slot in one edge, a disk rotatively mounted in said slot, a hammer carried by said disk, a spring for imparting rotation to said disk, a primer opening in said pan, said opening being in alignment with said hammer, and a latch bar for retaining said disk and hammer in an open position against the action of said spring.

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8. In a flash light gun, a handle, a powder pan mounted thereon, said powder pan having a primer opening, an auxiliary pan detachably mounted on top of the first pan, said auxiliary pan having a primer passage communicating with the primer opening of the first pan when the auxiliary pan is mounted thereon, whereby a single primer passage may be utilized to ignite powder in the auxiliary pan when placed on the first pan, or to ignite powder in the first pan when the auxiliary pan is removed.

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