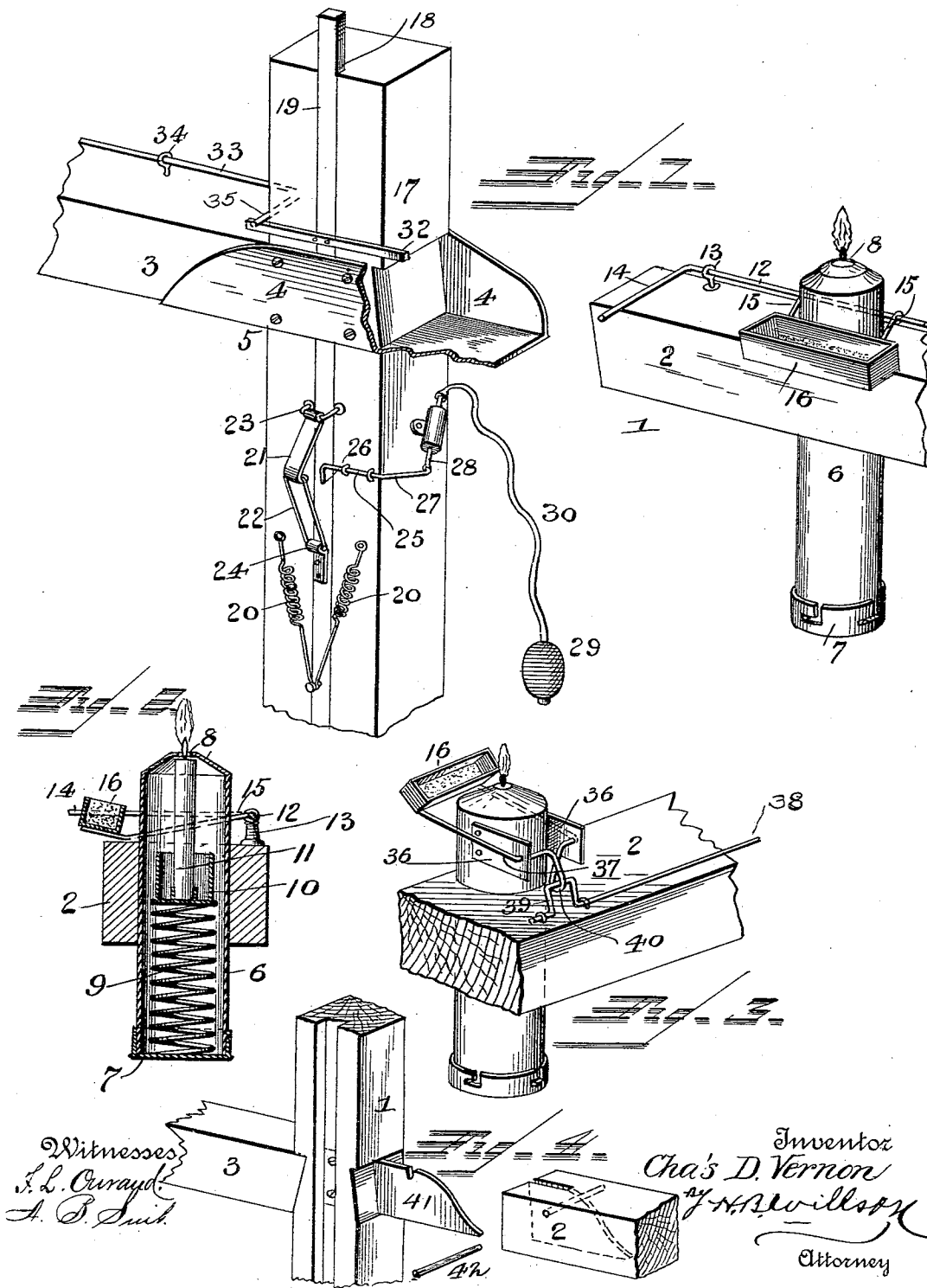


(No Model.)

C. D. VERNON.
FLASH LIGHT MACHINE.

No. 555,133.

Patented Feb. 25, 1896.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES D. VERNON, OF MINTO, NORTH DAKOTA.

FLASH-LIGHT MACHINE.

SPECIFICATION forming part of Letters Patent No. 555,133, dated February 25, 1896.

Application filed May 9, 1895. Serial No. 548,736. (No model.)

To all whom it may concern:

Be it known that I, CHARLES D. VERNON, a citizen of the United States, residing at Minto, in the county of Walsh and State of North Dakota, have invented certain new and useful Improvements in Flash-Light Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to flash-light machines employed in connection with photography.

The object of the invention is to provide a device of this character which may be easily operated and which will be simple of construction, durable in use and comparatively inexpensive of production.

With this object in view the invention consists in certain features of construction and combination of parts, which will be hereinafter fully described and claimed.

In the drawings, Figure 1 is a perspective view of my invention. Fig. 2 is a vertical sectional view through the lamp. Fig. 3 is a view of another form of my invention. Fig. 4 is a view of another form of casting.

In the drawings, 1 denotes a supporting-bar, which consists of two parts 2 and 3, secured together by the casting 4, which is provided with a central opening 5. Secured to the part 2 of the bar is a cylindrical casing 6, having a removable cap 7 at its bottom and a small hole 8 at its top. Supported in said casing is a coil-spring 9, carrying at its upper end a disk 10, upon which is supported a candle 11, the wick of which projects through the hole 8. As the candle is burned, the spring forces it upward to present the wick through the opening in the upper end of the casing. A rod 12 is journaled in bearings 13 on the bar and is provided with a crank portion 14, to which rod 12 are secured the arms 15 of the powder-pan 16. By rocking this rod the powder contained in the pan will be thrown into the flame of the candle and produce the flash-light.

The means I desire to employ to rock the rod 12 I will now proceed to describe.

A standard or upright 17 is secured in the opening of the casting and is provided with a longitudinal groove or guide 18, fitted in

which is a vertical bar 19. Springs 20 are secured to the upright and to the bar and exert their energy to thrust the bar upward. When the bar is depressed, it is retained in that position by pivoted links 21 and 22, the former of which is hinged at its upper end to the staple 23, secured to the upright, and the latter of which is hinged to an ear 24, secured to the vertical bar. When the bar is depressed, these links will be in a straight line and at a dead-center, and consequently the bar will be retained in its depressed position by the links against the action of the springs. When these links are thrown out of a straight line, the springs will then exert their energy and shoot the bar upward. To throw the links out of a straight line and thereby release the bar, I employ the following mechanism:

25 denotes a lever, which is pivoted to the upright and is provided with a crank end 26, which lies between the upright and the links. The opposite end of the lever is provided with a crank 27. A piston-cylinder is secured to the upright and has the rod 28 of its piston connected with the crank 27. A bulb 29 is connected to this cylinder by a tube 30. By squeezing the bulb the piston is depressed, the lever 25 rocked and the links thrown out of line and the vertical bar shot upward. Suitable connections are made between the vertical bar and the rod 12, so that by the upward movement of the said bar the rod will be rocked and the pan will empty its powder in the flame. As shown, I form the rod 12 with a crank end 14, which rests on a cross-strip 32 secured to the vertical bar, so that when said bar is shot upward the cross-strip 32 will throw the crank end 14 of the rod 12 upward. To return the parts to their normal position a rod 33 is provided. This rod is journaled in bearings 34 secured to the section 3 of the supporting-bar, and is provided with a crank end 35, which lies over the opposite end of the cross-strip 32. By swinging this crank end downward it will strike said strip and depress it and the vertical bar until the links come in line.

The rod 33 may be provided with a powder-pan and the outer end of the bar 3 with a candle.

In the form shown in Fig. 3 I provide the

cylindrical body of the lamp with ears 36, in which I pivot a bell-crank lever 37, to which is secured the powder-pan. The rod 38 is provided with a crank 39, which engages the leg 40 of the bell-crank lever, which, when rocked, will empty the contents of the pan in the flame of the candle.

In Fig. 4 I have shown the two parts of the bar 1 connected in a novel manner. The adjacent ends of the bars are slotted, and a plate 41 inserted through the standard has its ends fitted in said slots and secured therein by pins 42, the upper surface of the inner ends of the two-part bar being engaged with shoulders 43 on the standard.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a flash-light machine, the combination with a lamp and a rocking rod carrying a powder-pan, a vertical bar provided with means for rocking said rod, a standard for supporting said bar, links pivoted to the standard and the bar and to each other,

springs for shooting the bar upward, and a means for tripping the links, substantially as set forth.

2. In a flash-light machine, the combination with a lamp and a rocking rod carrying a powder-pan to be swung over the lamp and empty its contents, said rod being provided with a crank end, of a standard, a vertical bar mounted to move in said standard and provided with a cross-strip to engage the crank end of the rod and rock it, springs for shooting the bar upward, links pivoted to the bar and the standard and to each other, a crank-lever pivoted to the standard to operate the links and a pneumatic piston connected with said lever to actuate it, substantially as set forth.

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

CHAS. D. VERNON.

Witnesses:

W. R. DE PUY,

H. C. DE PUY.