

No. 684,499.

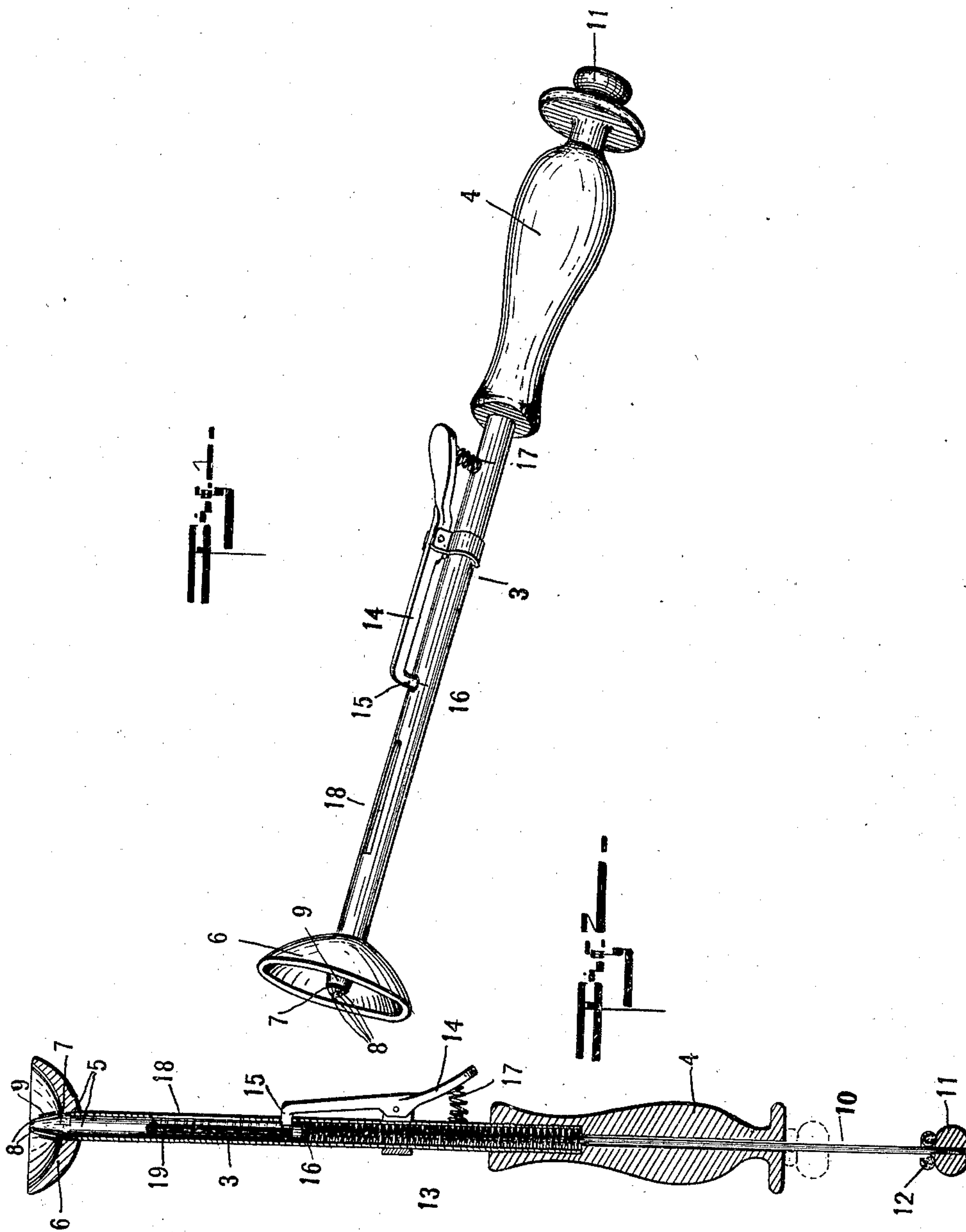
Patented Oct. 15, 1901.

A. DUTHIE.

FLASH LAMP.

(Application filed Dec. 14, 1900.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

ARCHIBALD DUTHIE, OF INDIANAPOLIS, INDIANA.

FLASH-LAMP.

SPECIFICATION forming part of Letters Patent No. 684,499, dated October 15, 1901.

Application filed December 14, 1900. Serial No. 39,863. (No model.)

To all whom it may concern:

Be it known that I, ARCHIBALD DUTHIE, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Flash-Lamp, of which the following is a specification.

My invention relates to an improved means for supporting and igniting flash-light powders.

The object of my invention is to produce a neat, compact, and easily-operated device for holding and igniting flash-light powders or charges and in which the ignition may be produced by means of ordinary matches.

The accompanying drawings illustrate my invention.

Figure 1 is a perspective view of my lamp. Fig. 2 is a central section thereof.

In the drawings, 3 indicates a tubular stem provided with a suitable handle 4. Detachably secured to the threaded upper end 5 of stem 3 is a cup-shaped head 6. Mounted in head 6 is an igniter-tube 7, the outer end of which is split longitudinally, so as to form a series of prongs 8. The periphery of tube 7 is axially tapered, so as to receive a tapered collar 9, the arrangement being such that an axial movement of said collar upon the igniter-tube will either draw together or spread prongs 8, so as to regulate the size of the opening between the ends thereof. Reciprocally mounted within stem 3 is a plunger 10, which in the present case is extended through handle 4 and provided on its outer end with a longitudinally-adjustable stop 11, above which I mount a cushion 12. Plunger 10 is normally urged toward head 6 by means of a spring 13. Pivoted upon stem 3 is a pawl 14, the end 15 of which projects through an opening 16, formed in stem 3, in position to engage plunger 10 and hold the same against the action of spring 13. End 15 of pawl 14 is normally urged inward by a spring 17, and the other end of said lever is placed adjacent handle 4 within easy access of the thumb or finger of an operator. Leading into stem 3, above the lower or "firing" position of plunger 10, is an opening 18, through which an ordinary friction-match 19 may be introduced between the igniter-tube and the plunger. It will be readily understood that plunger 10

need not be extended entirely through stem 3 and handle 4, but an operating portion thereof might be projected through a slot formed in said stem. Head 6 is made detachable in order that cups of various capacities may be attached to the single stem 3, thus providing a means for easily determining the size and character of the flash desired.

In operation plunger 10 is drawn back against the action of spring 13 until it is engaged and held by pawl 14 and a match 19 inserted through opening 18, so as to lie end on upon plunger 10. A charge of powder or material with which the flash is to be produced is then placed in the cup of head 6. By pressing pawl 14 plunger 10 is released and driven upward, so as to force the match through the igniter-tube and past prongs 8, the engagement with said prongs igniting the match and the charge lying within head 6. The amount of projection of the match through the igniter-tube may be determined by regulating stop 11.

I claim as my invention—

1. A flash-lamp consisting of a tubular stem, a charge-receiver carried by said stem, an igniter forming a continuation of said stem and projecting into said receiver, a plunger mounted in said stem, means for normally urging the plunger toward the receiver, means for holding said plunger against the action of said urging means, and an opening leading into the stem between the igniter and the retracted position of the plunger, whereby a match may be inserted between the plunger and igniter.

2. A flash-lamp consisting of a tubular stem, a charge-receiver detachably secured to said stem, an igniter forming a continuation of said stem and projecting into said receiver, a plunger mounted in said stem, a spring for normally urging said plunger toward the receiver, a pawl arranged to engage and hold the plunger against the action of said spring, an opening leading into said stem between the igniter and the retracted position of the plunger, whereby a match may be inserted between the plunger and igniter.

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Witnesses:

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