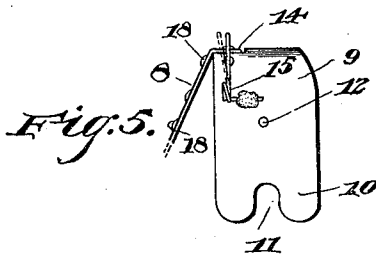
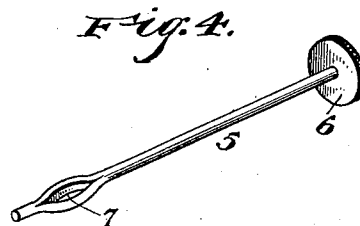
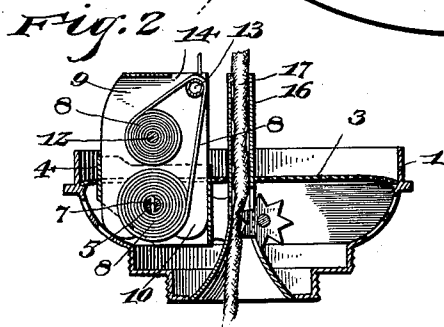
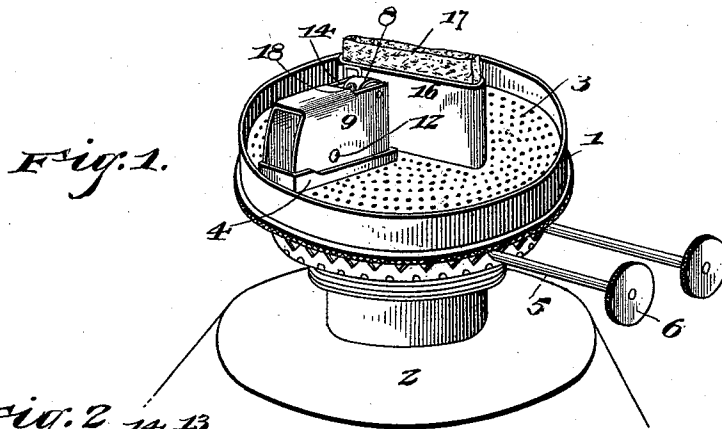


(No Model.)

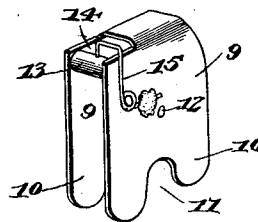
A. A. HUTCHINS, Dec'd.  
S. M. HUTCHINS, Administratrix.  
BURNER.

No. 537,156.

Patented Apr. 9, 1895.



*Fig. 3.*



Witnesses

*B. S. Ober.*

*J. D. Quene.*

By *her* Attorneys.

*Sophronia M. Hutchins,*  
*Admrx. of the estate of*  
*Adrian A. Hutchins,*  
*DECEASED INVENTOR.*

*C. Snow & Co.*

# UNITED STATES PATENT OFFICE.

SOPHRONIA M. HUTCHINS, OF CLYDE, OHIO, ADMINISTRATRIX OF ADRIAN  
A. HUTCHINS, DECEASED.

## BURNER.

SPECIFICATION forming part of Letters Patent No. 537,156, dated April 9, 1895.

Application filed July 3, 1894. Serial No. 516,496. (No model.)

*To all whom it may concern:*

Be it known that I, SOPHRONIA M. HUTCHINS, a citizen of the United States, residing at Clyde, in the county of Sandusky and State of Ohio, administratrix of the estate of ADRIAN A. HUTCHINS, deceased, late a citizen of the United States, residing at Clyde, in the county of Sandusky and State of Ohio, do hereby declare that ADRIAN A. HUTCHINS invented a  
10 new and useful Improvement in Burners, of which the following is a specification.

The purpose of this invention is to provide a superior device for effecting the lighting of lamps, and one which may be readily attached  
15 to a lamp or a lantern and form a part thereof, so that persons using the lamp will not be forced to resort to the ordinary method of lighting, namely, by means of a match or other extraneous source of flame.

20 To this end the invention consists of certain peculiar features of construction and combination and arrangement of parts that will be more fully described hereinafter and finally embodied in the claim.

25 In the accompanying drawings, Figure 1 represents a perspective view of a lamp burner supplied with the improvements, the top portion of the burner having been removed so as to show the parts therebeneath. Fig. 2  
30 represents a cross section taken through the burner and illustrating the improvements; Fig. 3, a detail perspective of the device for holding the igniting point or spring; Fig. 4, a detail perspective of the spindle or shaft  
35 for moving the fulminate tape; Fig. 5, a view illustrating the operation of the igniting point on the fulminate tape.

The reference numeral 1 indicates the burner of a lamp, which may be of any preferred form, and which is attached to the lamp  
40 body 2, and this may also be of any form. Arranged in the burner 1 and occupying a recess formed in the perforated sheet 3, is the box or casing 4, which is formed with an open  
45 upper and lower end and which has its upper end terminating a slight distance above the sheet 3. Revolvably mounted within the box or casing 4, is the spindle 5, which is provided  
50 with an operating button 6, and which projects out from the burner so that it may be

easily reached by persons operating the device.

7 indicates a slot which is formed in the spindle 5, and at that point which lies within the box 4. The purpose of the slot 7, is to furnish a means for connecting the fulminate  
55 tape 8 to the spindle 5, and this is done by passing the tape through the slot and twisting it around the spindle, as will be understood.  
60

9 indicates a frame which is formed of a plate of sheet metal having two downwardly extending portions 10, adapted to lie within the box 4, and such portions 10, have a  
65 spring tendency downward by which they are pressed into engagement with the interior of the box 4, and by which the frame is held in place.

The lower ends of the plates 10, are formed with the notches or recesses 11, therein, which  
70 are adapted to receive the spindle 5, whereby excessive downward movement of the frame is prevented. Mounted in the frame 9, and in about the center thereof is the spindle 12, which is adapted to operate as a roller or drum  
75 for the fulminate tape. To this end the tape 8, is wrapped around the spindle 12, so that it will be capable of being unwound therefrom. Journaled in the upper and inner end  
80 of the frame 9, is the roller 13, which is mounted in a recess 14, formed in the frame 9, and which is adapted to have the tape 8, pass over it. Thus it will be seen that the  
85 tape 8, passes from the spindle 12, up over the roller 13, and thence downwardly and over the spindle 5, as has been explained.

Rigidly secured to one side of the frame 9, by soldering or otherwise, is the spring arm  
90 15, which projects upwardly from its base or lower end, and thence downwardly so that its upper end will extend to a point directly above the roller 13, or practically in slight engagement therewith. When the tape 8, is  
95 passed between the spring 15 and roller 13 the upper end of the spring will engage the tape.

It will be observed that the upper end of the frame 9, and consequently the roller 13, is located in a plane equal to that in which the upper end of the burner tube 16, lies, so  
100 that the flame from the fulminate will be di-

rectly contiguous to the upper end of the wick 17, and thereby ignite it. The fulminate tape 8, consists of a cloth tape or strip provided at equidistant points throughout its length with deposits of fulminate 18, which are adapted to be engaged by the upper end of the spring 15, and to be ignited by such engagement.

By reference to Fig. 5, it will be seen that as the deposits of fulminate are drawn toward the point of the spring finger 15 the spring will engage the front side of such deposits, and temporarily bind therewith. Now, as the tape progresses, the spring will, owing to its inherent properties, move slightly toward the burner tube 16, and this operation continues until the deposit of fulminate has about passed the point in which the spring lies when normally arranged. It is at this stage of the operation that the tendency of the spring becomes so great that it will force itself past the deposit of fulminate and engage the upper surface thereof with a sharp quick movement, thereby effecting the combustion of the fulminate. As the fulminate is ignited the flame will engage the wick 17 and ignite the same. It will be observed that when the tape 8, has been used to an extent which will exhaust the deposit of fulminate it can be removed and replaced by a fresh tape, and so on until the burner is worn out. It will also be observed that the attachment of the improvements will not shorten the life of the burner since it in no way interferes with the operation thereof.

It will be observed that the device is capa-

ble of being enlarged or reduced in size, and of being applied to all kinds of lamps and lanterns. Since this will be understood, however, no further description is thought to be necessary.

Having described the invention, what is claimed is—

In a device for igniting lamps, the combination with the burner, of a box or casing located therein, a spindle journaled in the box or casing, a U-shaped frame fitted in the box or casing and provided at its lower end with notches receiving the spindle of the box or casing, the upper end of the frame being projected to the vicinity of the wick, a spindle journaled in the frame, a fulminate tape wound over the two spindles and capable of being moved thereon, a roller journaled in the frame and at the point nearest to the wick, over which roller the fulminary tape aforesaid passes, and a spring arm fixed to the frame and adjacent to the roller, said arm being capable of engaging the deposits of fulminate and firing the same, substantially as described.

In testimony that I claim the foregoing as the invention of ADRIAN A. HUTCHINS, I have hereto affixed my signature in the presence of two witnesses.

SOPHRONIA M. HUTCHINS,  
*Administratrix.*

Witnesses:

H. G. GIBBONS,  
J. J. GEIGER.