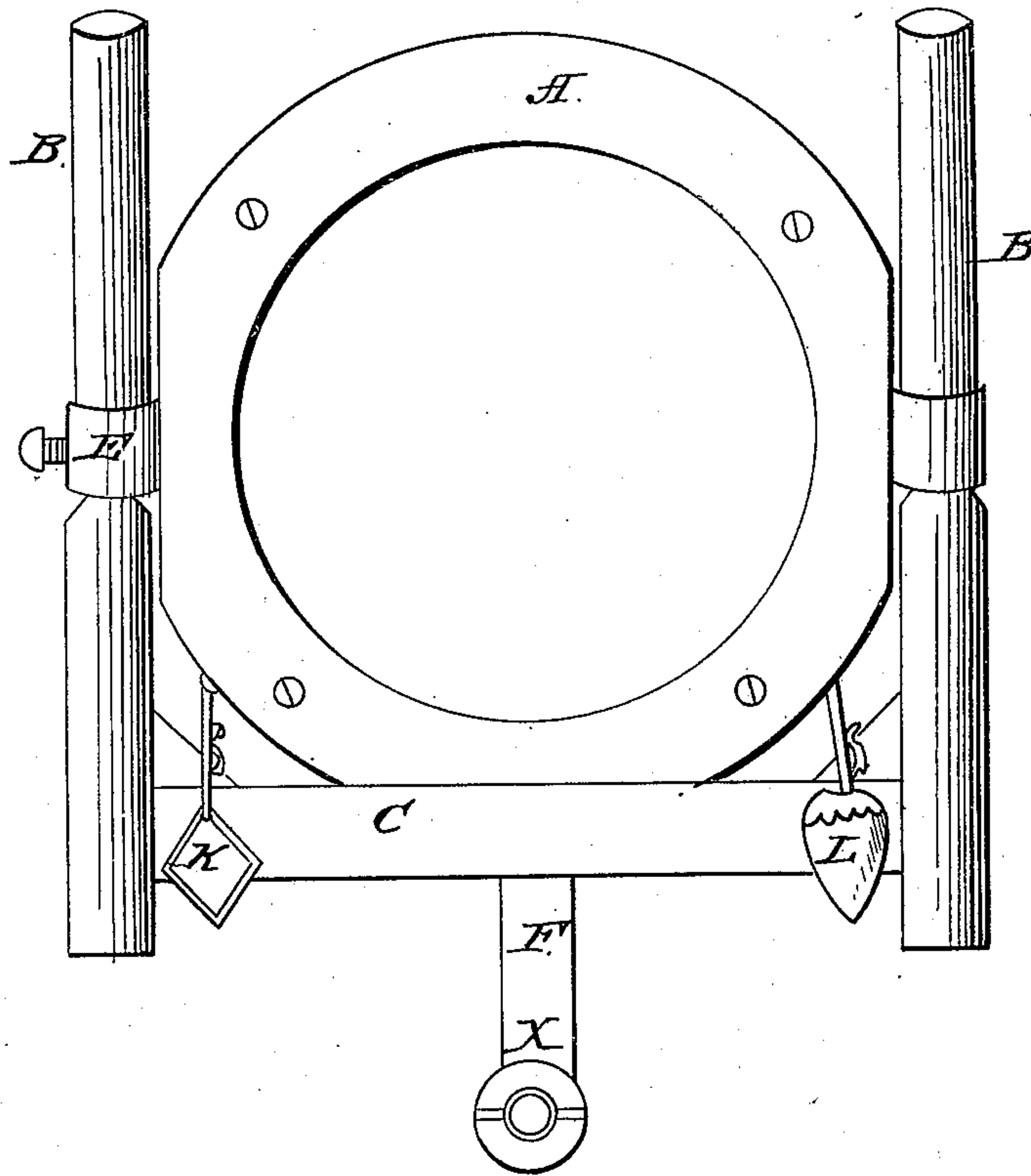


A. M. COLE.  
Mounting Fluid Lenses.

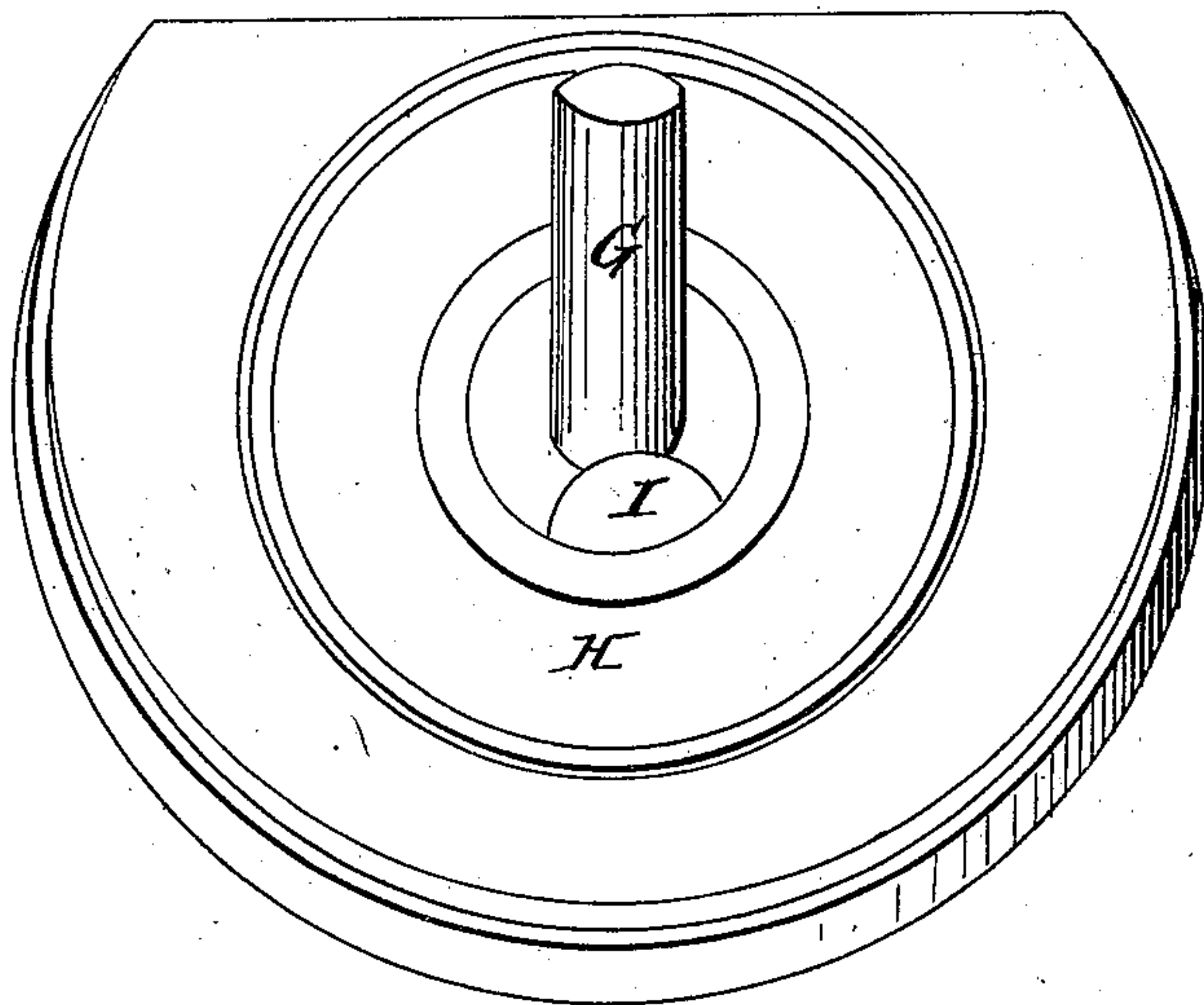
No. 19,624.

Patented March 16, 1858.

*Fig. 1.*



*Fig. 2.*



# UNITED STATES PATENT OFFICE.

ALMIRA M. COLE, OF WINDHAM, MAINE.

## MOUNTING FLUID-LENSES.

Specification of Letters Patent No. 19,624, dated March 16, 1858.

*To all whom it may concern:*

Be it known that I, ALMIRA M. COLE, of Windham, in the county of Cumberland and State of Maine, have invented a new and  
5 useful Mode of Giving Different Motions to Fluid-Lenses when Used in Combination with Women's Sewing Utensils; and I do hereby declare that the following is a full and exact description thereof, reference be-  
10 ing had to the accompanying drawing and to the letters of reference marked thereon.

The nature of my invention consists in providing a fluid lens with a shade and placing said lens and shade between two  
15 upright studs and made to slide with ease upon the same for the purpose of elevating and depressing the shade and lens to conform to the different height of tapers that may be placed in the rear of the lens. By  
20 these fixtures I am enabled to throw the light as concentrated on the object at any required angle with the taper and by a rotary motion at the base I am enabled to increase the convexity of the lens as it regards  
25 the position of the taper and consequently the intensity of the light upon the object.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

30 I construct my fluid lens either double or plano convex and apply thereto a shade A as seen in the accompanying drawing, but to obviate the necessity of adjusting the lens and shade A by blocks or similar fixtures  
35 I place my fluid lens between two upright studs B B made fast in cross bar C by mortise and tenon or otherwise. The two upright studs B B I inclose with metal from the lowest to the highest point that I wish  
40 to elevate or depress my fluid lens and shade A, for the purpose of having a hard substance for the set screw D to rest against, said set screw D being within a sliding col-

lar E as seen in the accompanying drawing, said sliding collar E being made fast in the  
45 sides of shade A by screws or otherwise; I then make fast a metallic pin F in the cross bar C which pin passes through the metallic tube G Figure 2 and fastened at the bottom by a nut as seen at X Fig. 1. To prevent  
50 the pin F from slipping out of the tube G when taken up as well as admitting of a rotary motion said tube G is made fast in step or block H which I make straight on  
55 one side for the purpose of admitting the lamp or other taper to be placed within the focal distance of the lens. I surround the  
step H with a bead or rim for the purpose of holding buttons, threads, &c., and on the  
60 steps H I place a pin and needle cushion I, and on the lower part of shade A I suspend the wax K for the purpose of waxing thread and the ball of emery L for the purpose  
of polishing needles.

I place this machine upon the table or  
65 stand with the lamp in the rear of the lens at the focal distance of the lens from it. I then by means of the set screw D in sliding collar E fasten the lens and shade A at the  
required height to throw the rays of light  
70 upon the object to be worked or looked upon; and another advantage I have over all others now in use is that when I want a  
very intense light upon the object I rotate the machine on the pin F as shown in the  
75 drawing.

What I claim as my invention and desire to secure by Letters Patent is—

The appendage to the shade of a fluid lens a woman's sewing utensils as herein de-  
80 scribed.

ALMIRA M. COLE.

Witnesses:

B. D. MORRELL,  
H. C. FREEMAN.