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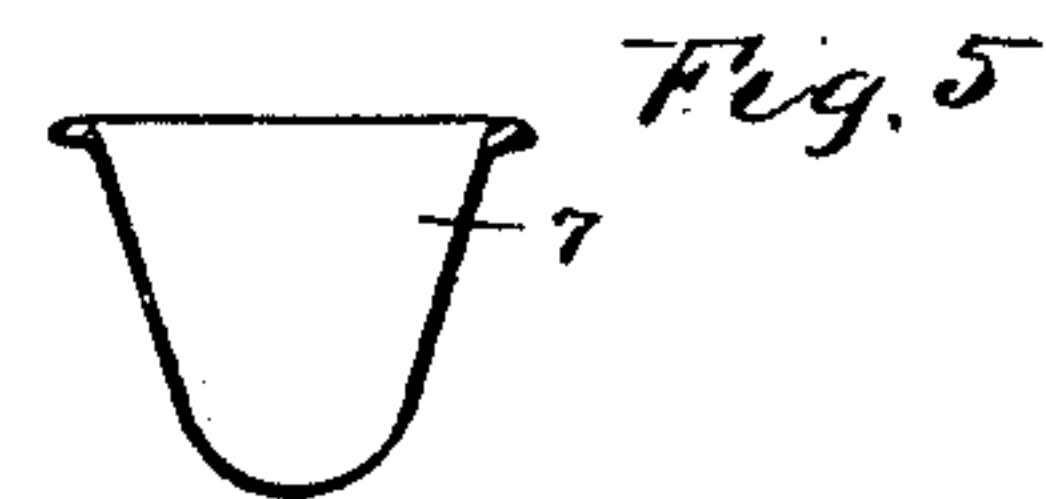
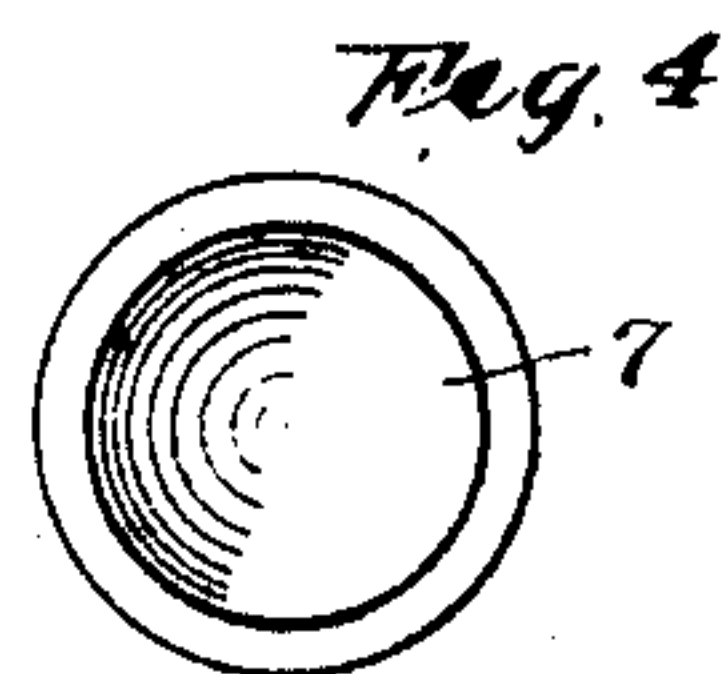
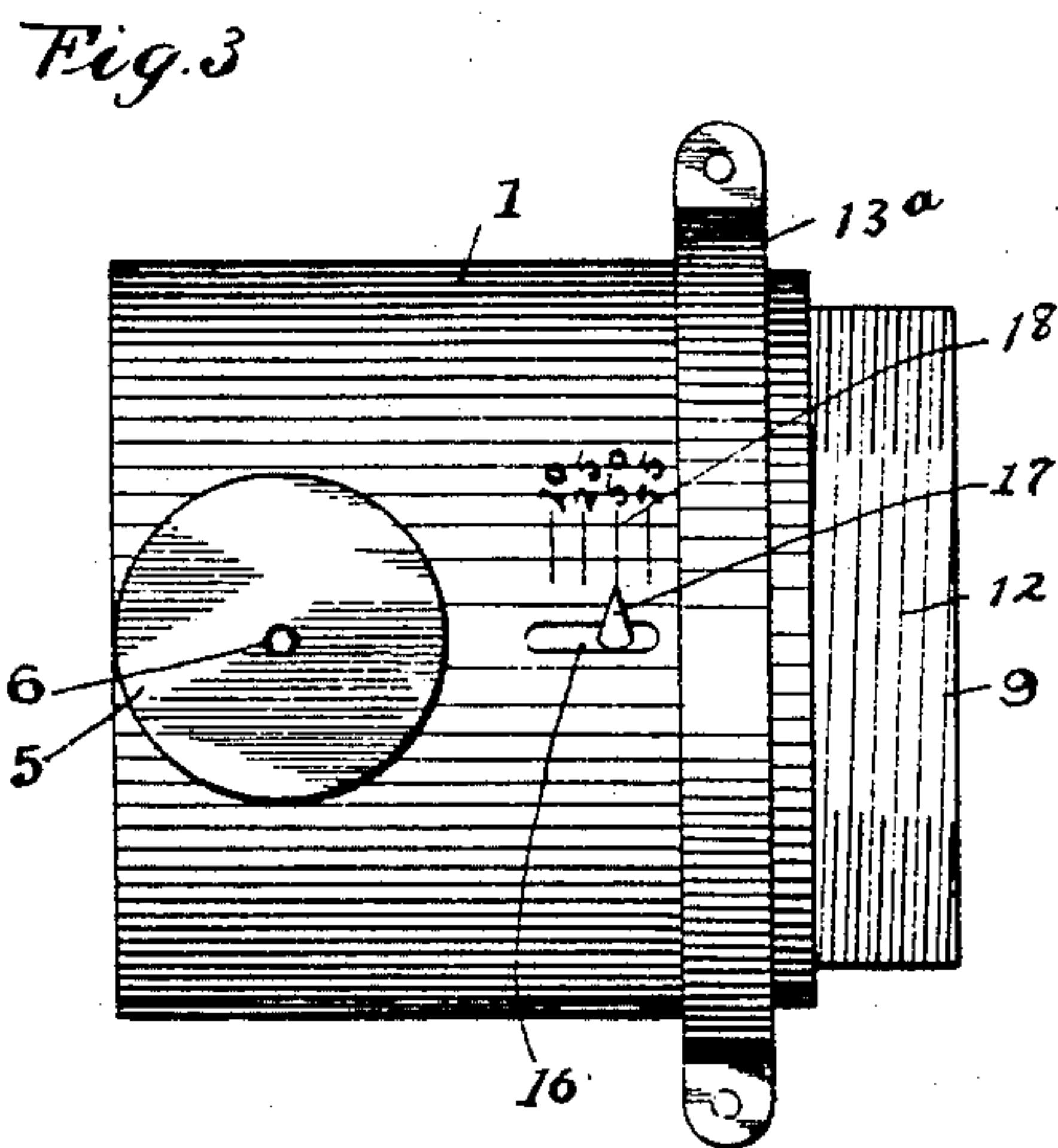
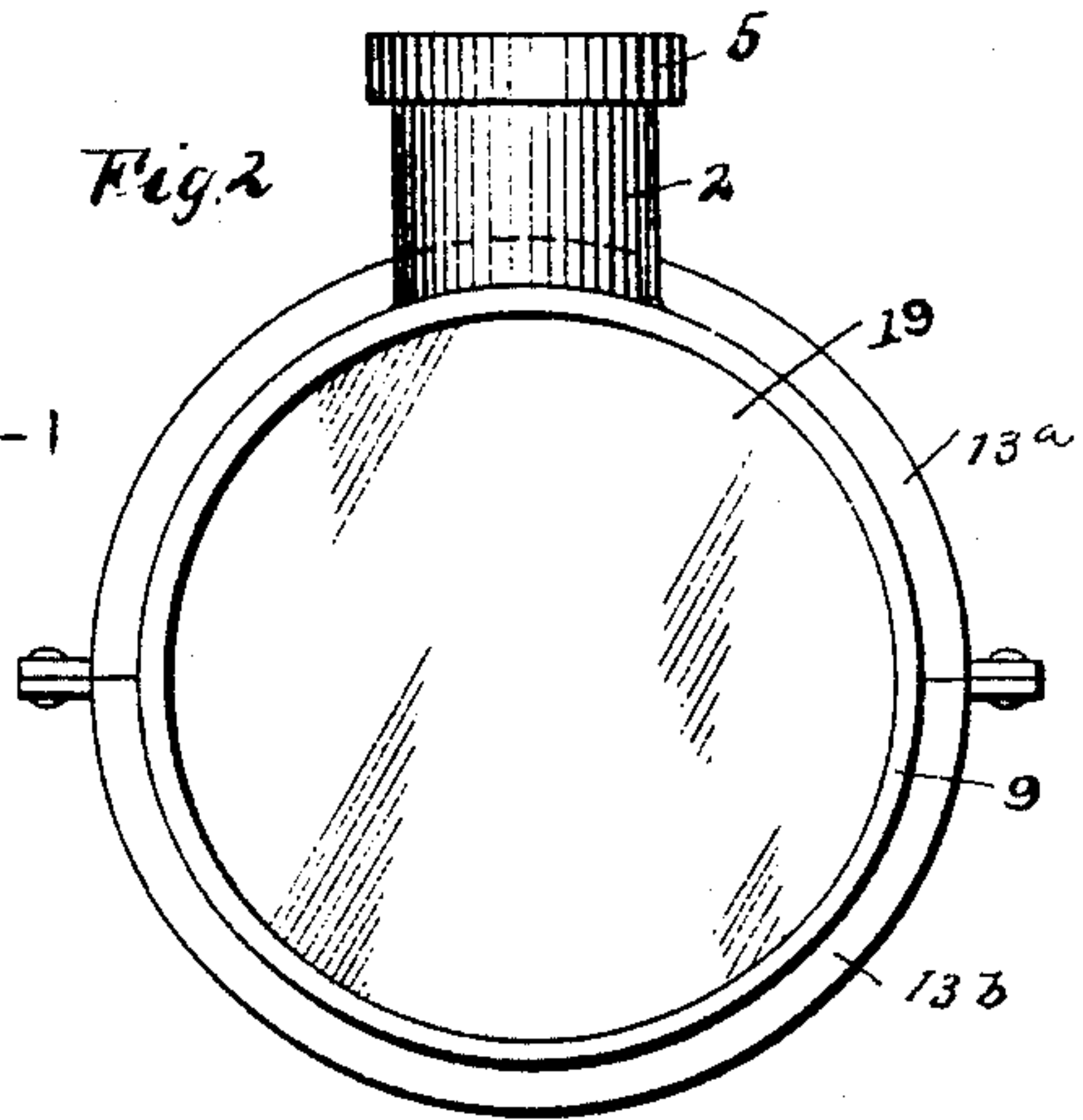
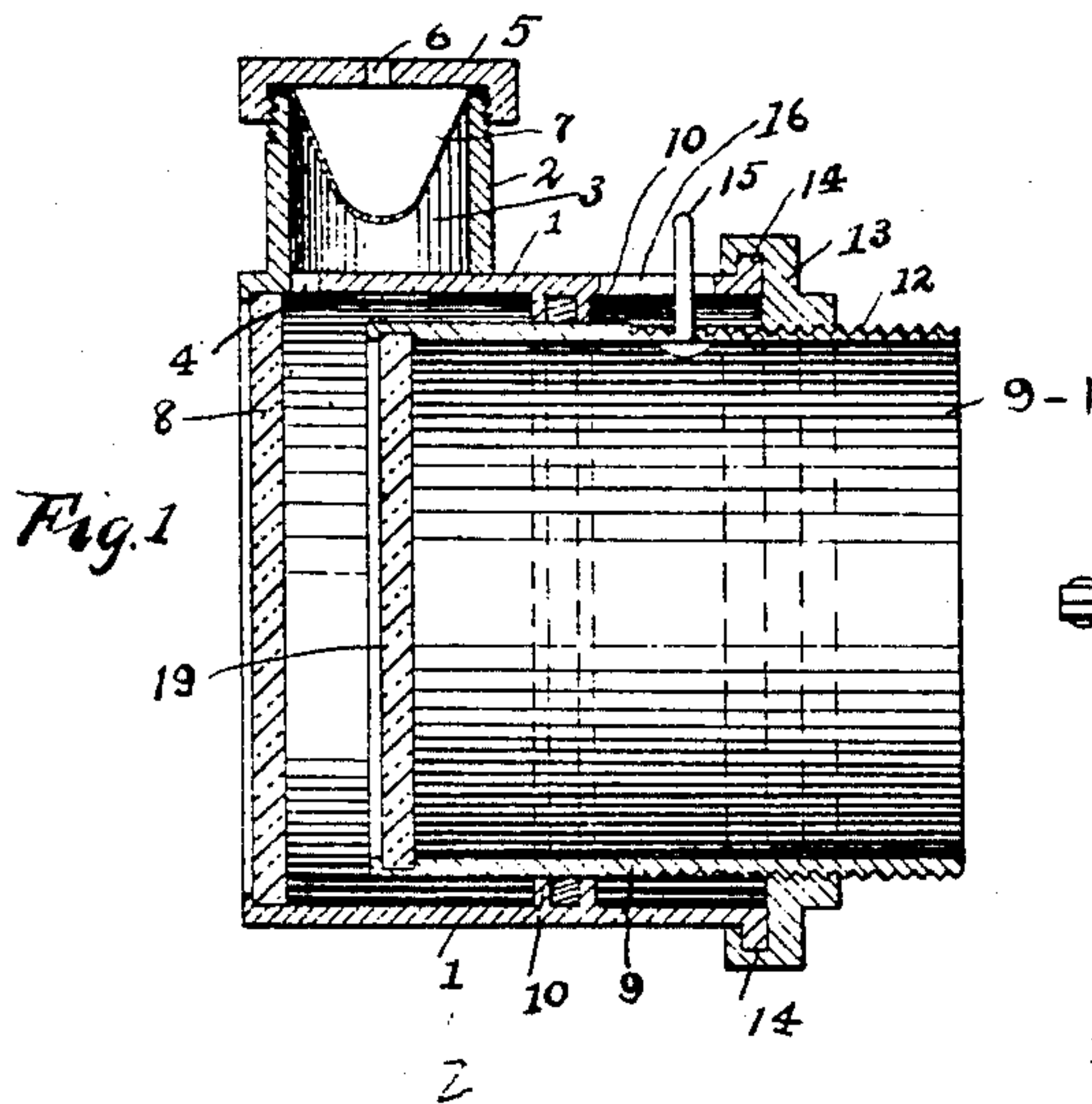
No. 612,937.

Patented Oct. 25, 1898.

C. F. UEBELACKER.
PHOTOGRAPHIC COLOR SCREEN.

(Application filed Mar. 5, 1898.)

(No Model.)



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PHOTOGRAPHIC COLOR-SCREEN.

SPECIFICATION forming part of Letters Patent No. 612,937, dated October 25, 1898.

Application filed March 5, 1898. Serial No. 672,793. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. UEBELACKER, a citizen of the United States, residing at Kingston, in the county of Ulster and State of New York, have invented a certain new and useful Improvement in Color-Screens for Photographic Work, of which the following is a specification.

My invention relates to the improvement of color-screens for photographic work; and the objects of my invention are to provide an instrument whereby improved means are employed for filtering light through a transparent fluid of any color onto a sensitive plate, and to provide improvements whereby the thickness of the fluid body through which the light passes may be regulated or varied as desired, and to produce other improvements the details of construction and arrangement of parts of which will be more fully pointed out hereinafter. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a central vertical section of my device. Fig. 2 is a front end view of the same. Fig. 3 is a plan view. Fig. 4 is a detail plan view of a combined gasket and bag which I employ in the manner and for the purpose hereinafter described, and Fig. 5 is a sectional view of the same.

Similar numerals refer to similar parts throughout the several views.

In carrying out my invention I employ an external cylinder 1, the latter having formed or rigidly connected therewith a short upwardly or outwardly extending hollow cylinder-arm 2, which results in the formation of a compartment 3, the latter communicating with the interior of the cylinder 1 through the medium of an opening 4. This hollow arm or compartment 2 3 is normally closed by a cap 5, which is provided with a central vent or opening 6. This cap, which embraces and is adapted to be screwed upon the upper or outer end of the arm 2, clamps, as shown, the upper outturned end portion of a bag 7, which depends, as shown, within the compartment 3, said upper end portion serving as a gasket between the cap and upper end of the arm 2. The bag 7 may be formed of thin rubber or other yielding material.

Within the outer or rear end of the exter-

nal cylinder 1 I employ a transparent disk of plate-glass or similar substance 8, a water-tight joint being formed between the latter and the cylinder.

9 represents an internal cylinder which, as shown in the drawings, is adapted to be caused to project through the forward end of the cylinder 1, said cylinder 9 being of less diameter than said external cylinder. On the inner wall or surface of the cylinder 1 I provide parallel inwardly-projecting ribs 10, these ribs embracing opposite sides of a suitable packing-ring 11, which forms a water-tight sliding support for the internal cylinder 9. It is obvious that the ribs 10 may be made to project from the periphery of the internal cylinder, if desired.

The external surface of the outer portion of the cylinder 9 is threaded, as indicated at 12, and on said threaded portion is adapted to be screwed an end ring or nut 13, this nut being formed of two half-sections, as shown at 13^a and 13^b in Fig. 2. This nut is provided with an internal groove, which, as indicated in the drawings, is engaged by a shoulder or front end flange 14 of the external cylinder. From the cylinder 9 projects outwardly a pin 15, which, as shown in the drawings, extends loosely through a mortise or slotted opening 16 in the wall of the cylinder 1. On its outer end portion the pin 15 carries a pointer or indicating-finger 17, which when said inner cylinder is moved inward or outward is adapted to travel to points opposite or between scale-marks 18, which are produced on the periphery of the cylinder 1. The inner end of the cylinder 9 is, as prescribed for the cylinder 1, provided with a disk of glass or other suitable transparent material 19.

In utilizing my device the threaded end portion of the internal cylinder 9 is adapted to fit over or be suitably connected with the barrel of a photographic lens.

The water-tight space within the outer end portion of the cylinder 1 which is formed between the disk 8 and the packing-ring 11 and disk 19 is adapted to be filled to the desired degree with suitably-colored fluid, through which the light must pass before reaching the photographic lens. The thickness of the body of colored fluid through which the light must thus pass is varied for different results de-

sired by screwing the internal cylinder in or out to decrease or increase the space between the disks 8 and 19. Owing to the fact that a communication is established between the port 4 and the compartment 3 it is obvious that in the inward movement of the cylinder 9 the liquid which is forced into or contained in said compartment 3 will operate to press the bag or diaphragm 7 toward the cap 5, the air which may be contained in said bag passing outward through the vent 6. It will therefore be observed that the bag or diaphragm referred to serves not only as a gasket or means for forming a water-tight joint between the hollow arm 2 and cap 5, but that the same is of such construction and material as to be forced into a comparatively short space when the space within the compartment 3 is needed for the liquid. It will be observed that the pointer-pin 15 not only serves for the purpose of carrying an indicating-finger which will indicate the distance between the disks 8 and 19, and therefore the thickness of the fluid body, but said pin will serve as a guide and stop projection for the cylinder 9 and prevent any tendency of the latter rotating when the nut 13 is turned.

From the construction and operation above described it will be seen that a simple, reliable, and effective device is provided for filtering light through water or other liquid and that by the means so employed the thickness of the body of water through which the light is thus directed may be varied as desired to produce varying shades or results.

It will be observed that the construction of my device is simple and that the parts are of such form and arrangement as to obviate any tendency of their readily getting out of order or of their becoming inoperative.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a color-screen for photographic work, the combination with a cylinder or casing 1

having a liquid-holding compartment the outer end of which is closed by a transparent plate and a supplemental liquid holding and receiving compartment 3 communicating with the cylinder 1, of a cylinder or casing 9 adjustably supported in said cylinder or casing 1 and adapted to be projected varying distances into said liquid-compartment of the transparent cylinder, said inner cylinder or case having an end disk, substantially as and for the purpose specified.

2. In a color-screen for photographic work, the combination with an external cylinder or casing having a transparent outer end, a hollow arm or compartment projecting from the cylinder-body and communicating therewith, a detachable cap on the outer end of said hollow arm, a flexible bag suspended in said hollow arm, the upper end portion of which is clamped between said cap and arm to form a gasket, of an internal sliding cylinder 9 having a transparent end plate, said cylinder 9 having a water-tight connection with said external cylinder and means for moving said internal cylinder inward or outward, substantially as and for the purpose specified.

3. In a color-screen for photographic work, the combination with an external cylinder or case 1 having a transparent end 8, a liquid-compartment in one portion of said external cylinder and a slotted opening in the wall of the remaining portion, of an internal cylinder 9 having a transparent end plate 19, a pin projecting from said cylinder 9 through the slotted opening of said cylinder 1, an indicating-finger on said pin and means for projecting said internal cylinder desirable and varying distances into said liquid-compartment, substantially as and for the purpose specified.

CHARLES F. UEBELACKER.

In presence of—

J. H. BURTON,

WILLIAM F. DECKER.