Aug. 19, 1924. 1,505,654

N. MACBETH

READING LAMP

Filed Jan. 5, 1923

Fig. 1.

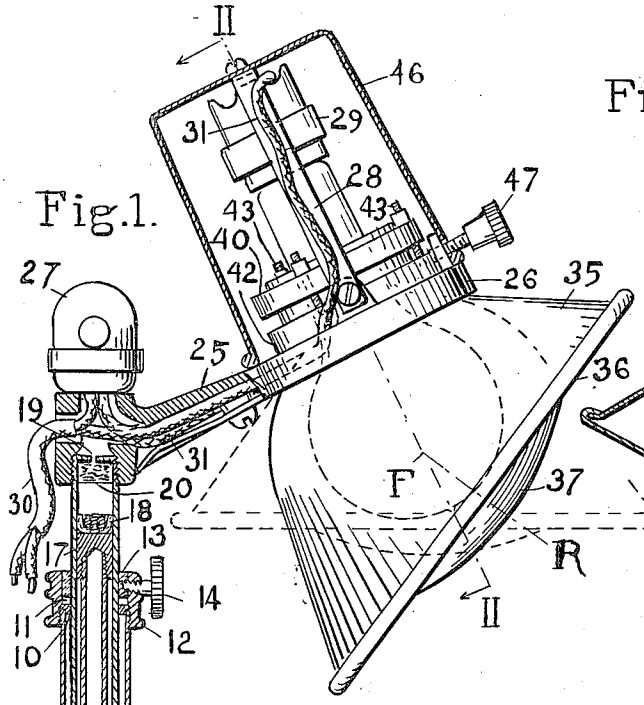



Fig. 2.

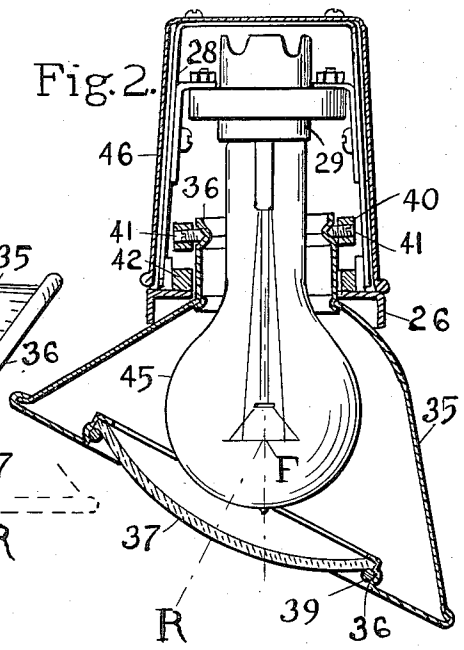



Fig. 4.

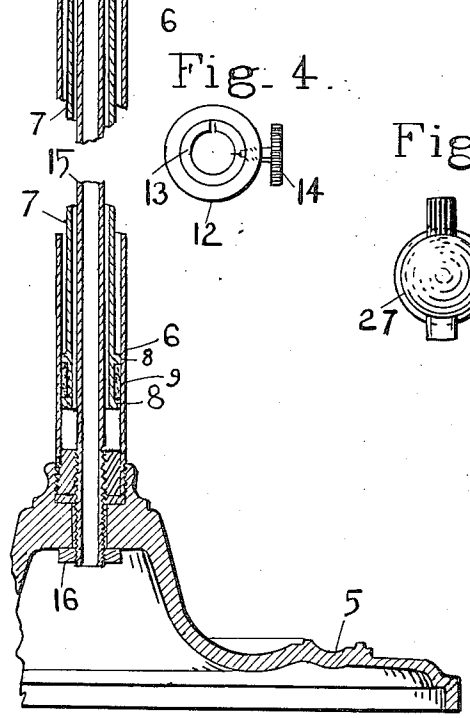
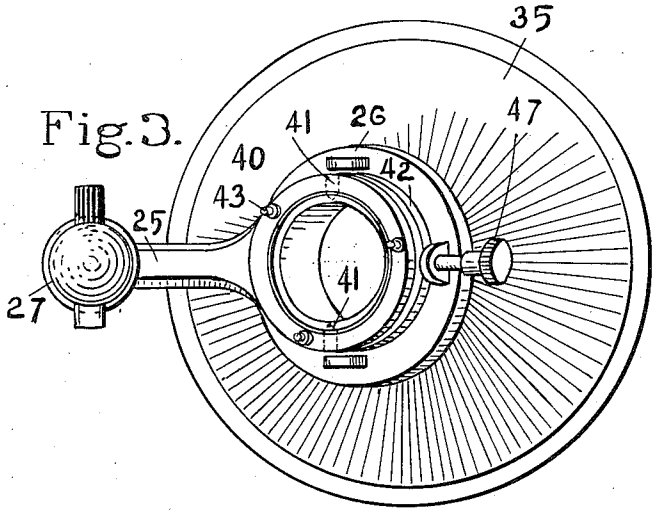



Fig. 3.




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# UNITED STATES PATENT OFFICE.

NORMAN MACBETH, OF PELHAM, NEW YORK.

## READING LAMP.

Application filed January 5, 1923. Serial No. 610,852.

*To all whom it may concern:*

Be it known that I, NORMAN MACBETH, a citizen of the Dominion of Canada, and a resident of town of Pelham, county of Westchester, and State of New York, have invented certain new and useful Improvements in Reading Lamps, of which the following is a specification.

This invention relates to a semi-portable lamp which may be suitably proportioned either to stand on the floor or on a table, and is adjustable for directing the light therefrom either directly downward or at an angle with the vertical. It is also adjustable in height so that the height of the source of light may be changed if desired. The embodiment of both of these features, however, is not essential, for either may be provided without the other. A further object is to provide for the vertical adjustment without danger of jarring or causing a blow in a too rapid lowering which would cause breakage or injury to the glass or other delicate parts of the lamp. These objects may be obtained with any source of artificial illumination for the lamp but the preferred embodiment is with an incandescent electric lamp, and with such a source of illumination a further object is to provide for the support of the lamp bulb so that it is not moved in adjusting the angular direction of its rays so that the electrical connections may be of a permanent character and not flexed in making such adjustments. Other objects are to provide an enclosure for the lamp in which there is a single opening through which the rays of light can pass in only one general direction, and for holding a colored glass in front of this opening to modify the balance of the wave lengths in the rays to that found in daylight. Other objects are to provide a simple and substantial and durable construction of ornamental form, which is easy to clean and keep clean.

In the accompanying sheet of drawings which forms a part of this specification,

Figure 1 is an elevation of one embodiment of this invention in which the base, telescoping column and cap for the supporting head are in section;

Fig. 2 is a section through the head and reflector on the line II—II of Fig. 1;

Fig. 3 is a plan view of the head; and

Fig. 4 is a detail of the clamp for the telescoping column.

A base 5 supports a hollow telescoping column which is in two parts, one of which is a tube 6 screwed into the base, and the other is a smaller tube slidable in the larger tube and constituting the telescoping element 7. At the lower end of the telescoping element are two collars 8, 8 between which is a packing 9, of felt washers, which forms a lower guide. At the upper end of the column carried by the base is a bushing 10, above which a felt washer 11 forms an upper guide. This washer is clamped in place by a collar 12 screwed to the top of the column. Within the collar is a split ring 13 which can be closed to clamp the telescoping member through a clamping screw 14.

A piston rod 15, suitably attached to the lower end of the tube 6, is threaded at its lower end and slips through the base where it is held by a lock nut 16. A tube is conveniently used for this piston rod. A head 17 is screwed to the upper end of the piston rod and carries a cup washer 18. The piston head is inside the telescoping element and forms therewith a dash-pot. Escape of air from this is through a small orifice 19 in the upper closed end of the telescoping element. A felt washer 20 underlies the closed end and strikes the head of the piston as a final stop when the parts are telescoped together.

A supporting head comprising an arm 25 with a ring 26 is screwed to the upper end of the telescoping element. This arm is tilted upwardly and carries the ring with its plane inclined at an angle of about thirty degrees with the horizontal and its axis is therefore at the same angle with the vertical. Surmounting the end of the arm which is screwed to the telescoping element is an electric switch 27. A frame 28, which is attached to the ring, supports a porcelain lamp socket 29. A flexible cord 30 carries electric wires 31, 31 which lead to the switch and along grooves in the underside of the arm and ring and up to the lamp socket.

A reflector 35 of parabolic contour has a neck 36 which leads from the side of the reflector so that its axis II—II makes an angle of about thirty degrees with the general direction or axis F—R of the reflector to which it directs the light rays. The point of intersection of the two axes is illustrated at the focus F of the reflector, though this is not essential. The angle is the same prefer-

ably as that of the axis of the ring with the vertical. The reflector is white enameled inside so that the light will be somewhat diffused in reflection and an accurate parabolic form is not essential. The reflector is provided with a grooved mouth 36 to which a curved glass 37 colored for modifying the light to daylight balance of its spectrum may be held by a wire ring 39 which rests in the groove. The convex side of the reflector fits closely against the under side of the supporting ring and the neck passes therethrough. Owing to the unsymmetrical form of the reflector with respect to the axis of the neck, this axis may be tilted slightly with respect to the axis of the ring when the reflector is brought snugly against the ring, and to hold the reflector properly in place, a ring 40 is fastened to the upper edge of the neck by set screws 41, 41 which engage a groove in the neck. A bearing ring 42 which rests on the supporting ring is connected with the other ring attached to the neck by one of three spacing screws 43, 43, 43, threaded through the ring 40 and provided with lock nuts, so that the two rings may be spaced apart and out of parallel to such an extent as may be necessary to hold the reflector to the supporting ring without undue looseness and permit it to be turned freely therein. An incandescent lamp 45 is carried by the socket. Its neck passes through the neck of the reflector and its incandescent filament comes at about the focus of the reflector, but as above stated this is not an essential of the invention. It is important to have the source of light relatively close to the mouth of the reflector for direct projection of the light in a wide angle. A cap 46 encloses the upper parts. A screw 47 serves to clamp one of the rings connected with the reflector and prevent accidental displacement of the reflector with respect to the supporting ring with consequent change of the angle at which the rays of light are directed.

By rotating the reflector in the supporting ring the general direction in which the rays are directed can be adjusted between directly downward or vertical and any angle therewith up to an angle with the vertical which is double the angle between the axis II—II and the axis F—R. The horizontal direction is adjusted by turning the stand as a whole.

The foregoing detailed description has been given for clearness of understanding only, and no undue limitation should be deduced therefrom, but the appended claims should be construed as broadly as permissible in view of the prior art.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. The combination with a supporting ring, of a source of light carried thereby, a reflector with an opening for the passage of light which incloses the source of light, a neck for the reflector, a bearing ring, means for adjusting the bearing ring with respect to the reflector whereby the supporting ring is engaged between the bearing ring and the reflector, the bearing ring and reflector being free to turn with respect to the supporting ring about an axis which is inclined to the axis of the reflector.

2. The combination with a lamp, of a telescoping column for supporting the lamp, means for clamping the telescoping parts together, and a piston cooperating with one of the telescoping parts to form a dash-pot.

3. The combination with a base, of a hollow column carried thereby, a telescoping element within the column, a lamp supported by the telescoping element, and a piston cooperating with the telescoping element to form a dash-pot.

4. The combination with a base of a hollow column carried thereby, a telescoping element within the column, a lamp supported by the telescoping element, a piston supported from the base and cooperating with the telescoping element to form a dash-pot, and a stop between the head of the piston and the telescoping element.

Signed at New York, N. Y., this 3rd day of January, 1923.

NORMAN MACBETH.