

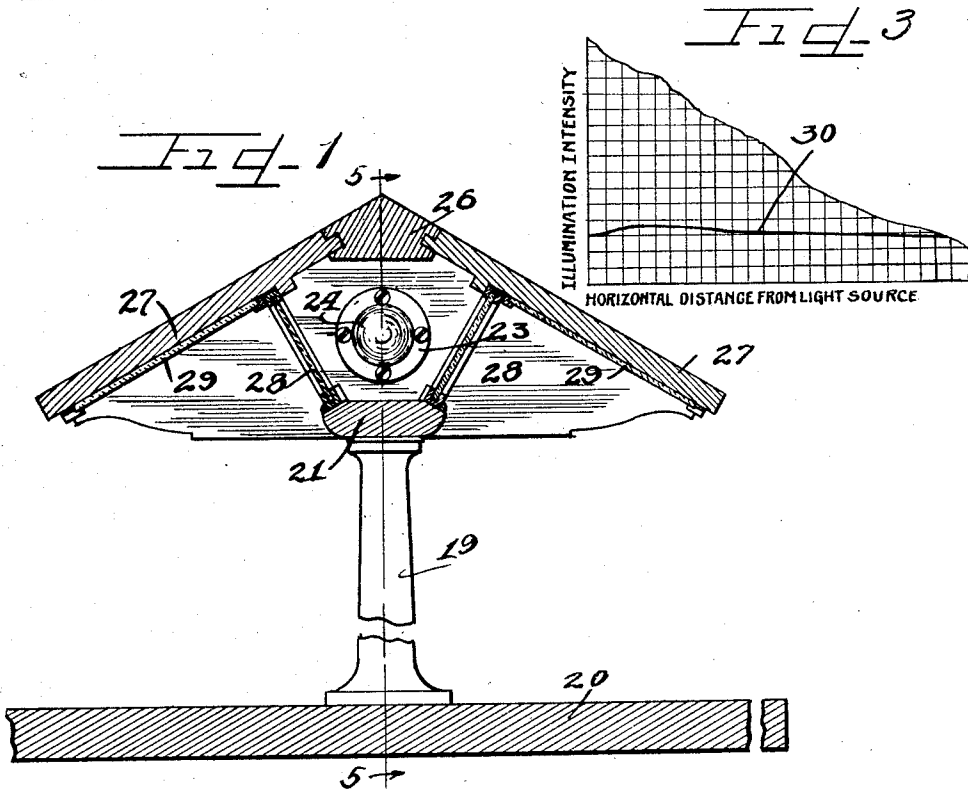
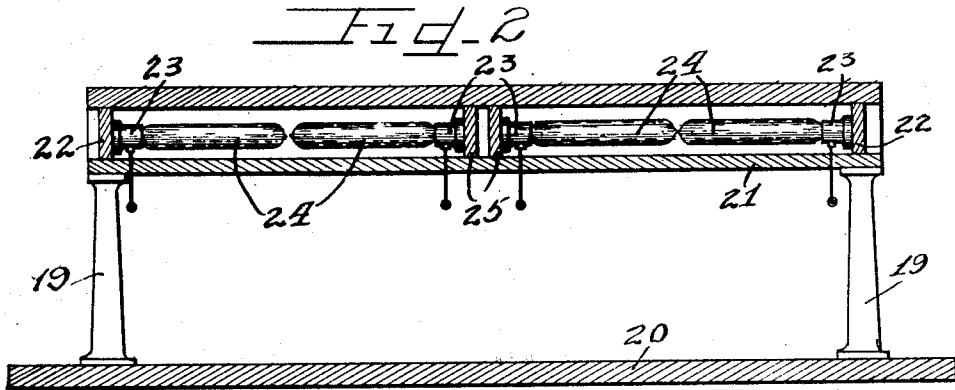
Sept. 22, 1925.

1,554,213

H. H. HIGBIE ET AL

ILLUMINATING UNIT

Filed April 11, 1921



Witnesses

J. M. Angell
Charles W. Kelly

by

Inventors
Harold H. Higbie
Otto Davidson.

Charles W. Kelly
Att'y.

UNITED STATES PATENT OFFICE.

HAROLD H. HIGBIE AND OTTO DAVIDSON, OF ANN ARBOR, MICHIGAN, SAID DAVIDSON ASSIGNOR TO SAID HIGBIE.

ILLUMINATING UNIT.

Application filed April 11, 1921. Serial No. 460,571.

To all whom it may concern:

Be it known that we, HAROLD H. HIGBIE and OTTO DAVIDSON, citizens of the United States, and residents of the city of Ann Arbor, in the county of Washtenaw and State of Michigan, have invented certain new and useful Improvements in an Illuminating Unit; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the numerals of reference marked thereon, which form a part of this specification.

This invention relates to an illuminating unit which is adapted for use with table tops, desks or other similar surfaces. In providing a lamp for these purposes it is desirable that the factors of proper light distribution on the working surface and of economy and appearance be given careful consideration.

It is an object therefore of the present invention to provide means for illuminating the tops of tables and similar surfaces in such a manner that the proper degree of illumination intensity is maintained over the entire surface.

It is another object of this invention to provide table or desk illuminating means whereby reflected glare from the illuminated surface is eliminated.

It is a further object of this invention to provide an illuminating unit which is particularly adapted for use on tables, desks or similar surfaces, and which is of such construction that the light source is not visible to an observer from the desk or table or from any part of the room in which the unit is used.

It is also an object of this invention to provide improved means for illuminating highly polished surfaces, said means being designed to eliminate objectionable reflected glare.

It is an important object of this invention to provide an improved unit for illuminating working surfaces to desired uniform intensity and in such a manner that shadows are softened and minimized.

Other and further important objects of this invention will be apparent from the disclosures in the specification and the accompanying drawings.

The invention (in a preferred form) is shown on the drawing and hereinafter more fully described.

On the drawing:

Figure 1 is a transverse vertical section through a table lamp constructed in accordance with the principles of this invention.

Figure 2 is a section on the line 5—5 of Figure 1.

Figure 3 is a graphical illustration of the light distribution afforded by an illuminating unit constructed according to the principles of this invention.

As shown on the drawing:

Figures 1 and 2 show a table lamp which is constructed in accordance with the principles of this invention, and which is particularly adapted for use on study tables, library desks, bookkeepers' desks and the like. Said lamp is supported by end posts 19 which rest on or are secured to the surface 20 which is to be illuminated, and the upper ends of said posts are connected by a rigid strip 21 of wood or other suitable material. Supported on each end of the strip 21 above the posts 19 is an end bracket 22 and mounted on the inner face of each end bracket 22 is a pull chain socket 23 which supports an elongated tubular light source 24 of a type previously described herein. Similar sockets 23 are secured to the faces of intermediate brackets 25 and each of said sockets supports a light source 24 which extends longitudinally of the lamp towards the outer ends thereof. Supported on the brackets 22 and 25 is a ridge piece 26 which together with said plates 22 affords support for shades or roof plates 27. Extending between the strip 21 and the inner sides of said shades 27 on either side of the light sources 24 is a translucent plate 28 which acts to diffuse the light emanating from said sources. This diffused light is reflected to the surface 20 by means of mirror reflectors 29 which are secured to the under side of each of the shades 27 and which extend from the outer edge of said shades inwardly to the upper edges of the diffusing plates 28.

In the graphical illustration in Figure 3 the curve 30 indicates the distribution of the illumination on the table top or other surface which is effected by the use of the

illuminating unit of this invention. It will be apparent from an examination of this curve, that there is a substantially uniform distribution of light over the entire working surface, and on account of the novel arrangement of the elongated diffusing strip and the mirror reflector, this light distribution is attained without objectionable reflected glare and without sharply defined shadows.

In the construction shown, the mirror reflecting surfaces are so arranged that the lower edges thereof are coincident with or extend below a horizontal plane through the lower edge of the diffusing strip. With this arrangement the light source is not ordinarily visible to an observer looking at the desk or positioned in any part of the room.

Due to the fact that the light source is entirely invisible to the ordinary observer, the unit adds greatly to the general appearance of the room in which it is used, and when several of the units are employed there are no objectionable visible bright spots produced by the light sources as is the case where lighting units employing semi-translucent reflecting covers are used.

On account of the simplicity of the elements which comprise the unit and on account of the fact that these elements are normally invisible, it is possible to economically manufacture illuminating units of

pleasing appearance in accordance with the principles of this invention.

We claim as our invention:

1. An illuminating unit, comprising a vertical support, light-emanating means mounted thereon, reflecting plates upon opposite sides of said light-emanating means and extending downwardly and angularly, and flat translucent diffusing means upon opposite sides of said light-emanating means each disposed at substantially a right angle to one of said reflecting plates and with their lower edges above a horizontal plane taken through the lower edge of said plates.

2. An illuminating unit, comprising a vertical support, a horizontal strip at the upper end thereof, end brackets on said strip, a ridge piece supported by said end brackets, light-emanating means between said end brackets, strip and ridge pieces, reflecting plates extending downwardly and angularly from said ridge piece on opposite sides thereof, and flat translucent diffusing means extending between and supported by said strip and reflecting plates and disposed at substantially right angles to said plates and with their lower edges above a horizontal plane taken through the lower edges of said plates.

In testimony whereof we have hereunto subscribed our names.

HAROLD H. HIGBIE.
OTTO DAVIDSON.