

Feb. 10, 1948.

W. W. HEADINGS

2,435,715

ILLUMINATING FIXTURE

Filed June 23, 1944

Fig. 2.

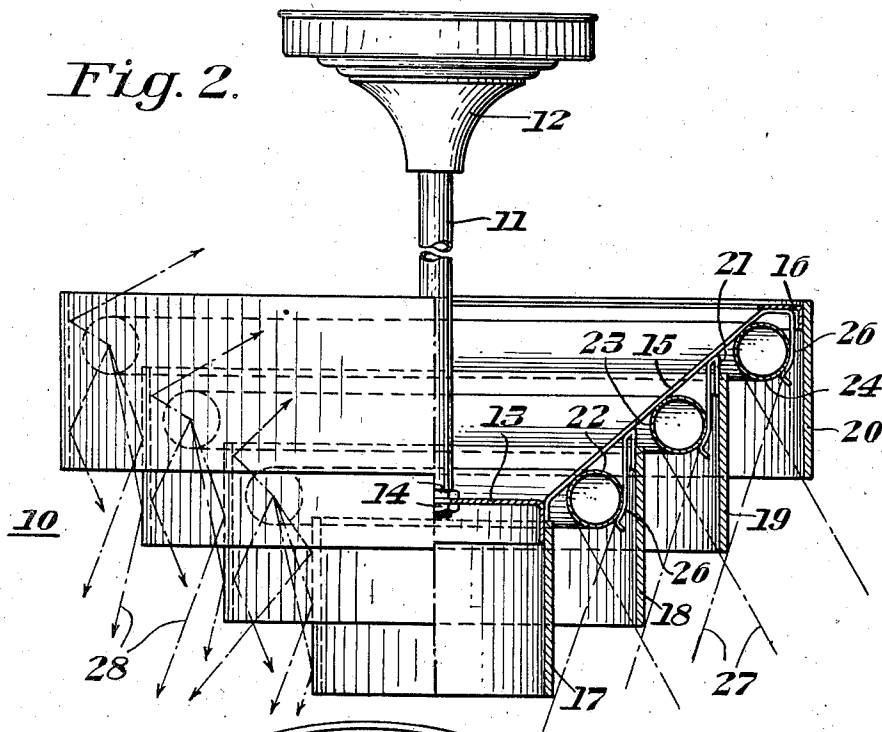
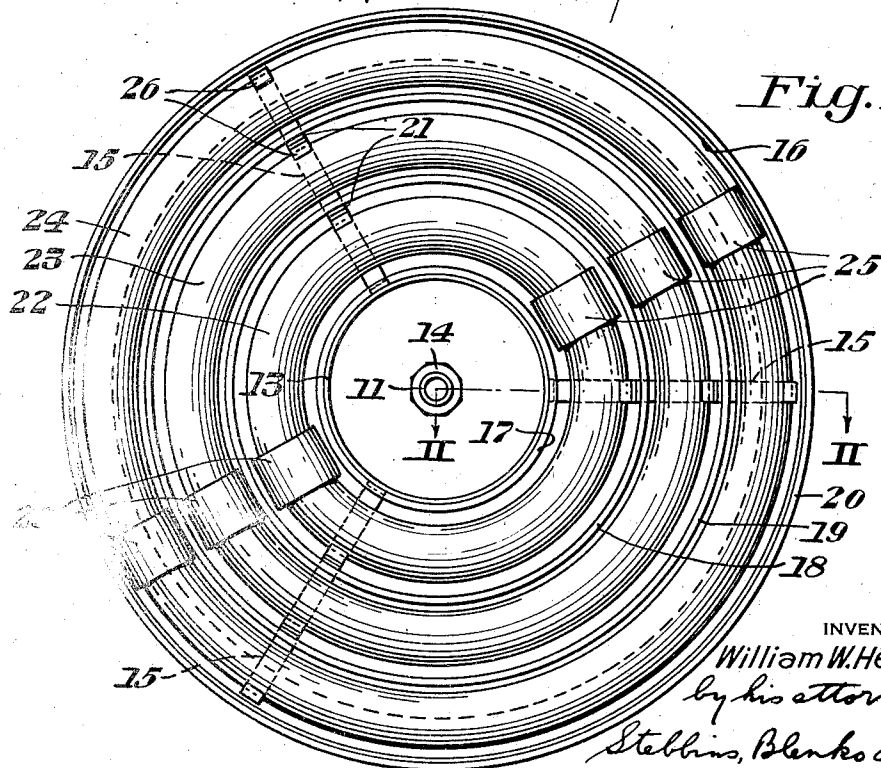


Fig. 1.



INVENTOR

William W. Headings

by his attorneys

Stebbins, Blankens & Hall

UNITED STATES PATENT OFFICE

2,435,715

ILLUMINATING FIXTURE

William W. Headings, Kirtland, Ohio: assignor to
Pittsburgh Reflector Company, Pittsburgh, Pa.,
a corporation of New Jersey

Application June 23, 1944, Serial No. 541,723

1 Claim. (Cl. 240—51.12)

1

This invention relates to illuminating fixtures and, in particular, to a fixture utilizing one or more fluorescent tubes as a light source. Fluorescent tubes have met with wide acceptance for interior illumination in recent years. Because of the relatively great length of tube required for a high output of light, however, the fixtures which have been provided for lighting by fluorescent tubes have been ungainly in appearance and quite lacking in the "eye appeal" characteristic of many designs of fixtures for incandescent lamps. I have invented a novel form of fixture particularly suited for fluorescent tubes, utilizing tubes in circular form, thereby providing a compact and attractive fixture which, at the same time, is characterized by high output and good distribution of light.

In a preferred embodiment, my invention comprises a hanger or other suitable support and an assembly of coaxial baffles of progressively increasing size, supported thereon. Between each pair of baffles, which are preferably cylindrical, I dispose an annular or circular fluorescent tube. The baffles serve to prevent glare resulting from direct rays and also tend to redirect and diffuse the light from the tubes. The baffles are open at the top and bottom, thus providing both direct and indirect illumination.

Further novel features and advantages of the invention will be pointed out in the following detailed description which refers to the accompanying drawing illustrating the preferred embodiment. In the drawing,

Figure 1 is a bottom plan view; and

Figure 2 is a view partly in section along the plane of line II—II of Figure 1 and partly in side elevation.

Referring in detail to the drawing, the fixture of my invention indicated generally at 10 is adapted to be suspended from the ceiling by means of a tubular hanger 11, for example, provided with the usual canopy 12. A flanged disc 13 is secured on the lower end of the hanger by nuts 14 and has radial arms 15 in the form of metal straps extending outwardly and upwardly therefrom. A ring 16 is secured to the upper and outer ends of the straps.

A plurality of nesting coaxial baffles 17, 18, 19 and 20 are supported on the disc 13, ring 16 and arms 15. The baffle 17 is secured to the flange of the disc 13. The baffle 20 is secured to the flange of the ring 16. The baffles 18 and 19 are secured to fingers 21 depending from the straps or arms 15. The baffles are preferably cylindrical and are stepped downwardly from the outermost

2

to the innermost, as shown in the drawing. In other words, the baffles are spaced axially as well as radially although they overlap to some extent axially. The baffles may be of any suitable material and may be opaque or translucent. They may be of metal, glass or plastic by way of example. The mode of attaching the baffles to their supports will depend on the material of which they are composed.

Circular or annular fluorescent tubes 22, 23 and 24 are disposed between each pair of adjacent baffles near the upper edges thereof. Each tube has diametrically opposite terminals 25 from which conductors extend for connecting the lamps in the known manner. The tubes are supported by spring fingers 26 depending from the arms 15. The fingers 26 supporting the tubes 22 and 23 may conveniently be formed integral with the fingers 21 and secured to the straps 15 as by spot welding.

The baffles 17, 18, etc., are open at the top and bottom so that the light emitted from the tubes 22, 23 and 24 illuminates the ceiling above the fixture as well as the floor space therebelow. On the right-hand half of Figure 2, chain lines 27 indicate the "cut-off" cones. From points beyond the outermost cone, the tubes themselves are not visible. The location of the tubes near the upper edges of the baffles keeps the size of the outermost cone within proper limits. At the same time, the tubes strongly illuminate the space immediately below the fixture in the region in which it is very unlikely that a person would have occasion to raise his eyes to an angle such as to bring the tubes into his range of vision. The light delivered upwardly from the tubes, of course, falls on the ceiling and furnishes indirect illumination. Chain lines 28 on the left-hand side of Figure 2 illustrate the redirection of both upward and downward rays from the tubes by the surfaces of the baffles. It is evident from the drawing which, of course, shows only a few of the multitude of rays, that the fixture provides excellent distribution of light both above and below it.

It will be apparent from the foregoing that the invention provides an attractive fixture provided with a sufficient total length of fluorescent tubes to produce a rather high output of light in a small space. The fixture is quite simple in construction and can therefore be manufactured at relatively low cost. There is practically no place for dirt to collect but such cleaning as may be necessary can easily be effected on removing the tubes. This is a simple operation since they are

3

supported solely by a plurality of spring fingers. The reflecting surfaces, i. e., the interior and exterior of the baffles, are all vertical and thus not likely to accumulate dirt. The stepped relation of the baffles further improves the appearance of the fixture since it provides a series of cylinders having partly exposed illuminated surfaces. This avoids the unilluminated condition of the exterior characteristic of most indirect fixtures.

Although I have illustrated and described but a preferred embodiment of the invention, it will be evident that changes may be made therein without departing from the spirit of the invention or the scope of the appended claim.

I claim:

In an illuminating fixture, a plurality of radially spaced cylindrical baffles, means for supporting the baffles in coaxial arrangement, the baffles being stepped downwardly relative to each other from the outermost to the innermost, circular

4

luminous tubes between adjacent cylinders, said tubes being spaced along the common axis of the baffles, suspending means extending through the baffles and secured to the innermost baffle, and arms extending radially therefrom supporting the remaining baffles and said tubes.

WILLIAM W. HEADINGS.

REFERENCES CITED

- 10 The following references are of record in the file of this patent:

UNITED STATES PATENTS

	Number	Name	Date
15	2,142,395	Herron	Jan. 3, 1939
	2,303,747	Kuhl	Dec. 1, 1942
	2,280,534	Masterson et al.	Apr. 21, 1942
	2,298,961	Miller	Oct. 13, 1942
	2,309,676	Schmidling	Feb. 2, 1943
20	1,935,729	Rosenbaum	Nov. 21, 1933
	2,350,462	Johns	June 6, 1944