R. L. RIZER.

DRAFTSMAN'S LAMP.

APPLICATION FILED JULY 13, 1917.

1,247,454.

Patented Nov. 20, 1917.

2 SHEETS—SHEET 1.

Fig. 1.

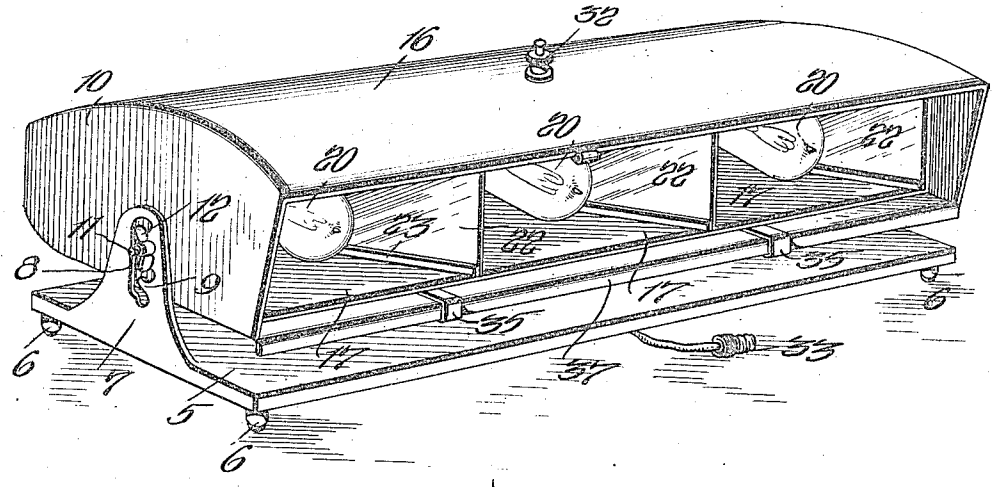
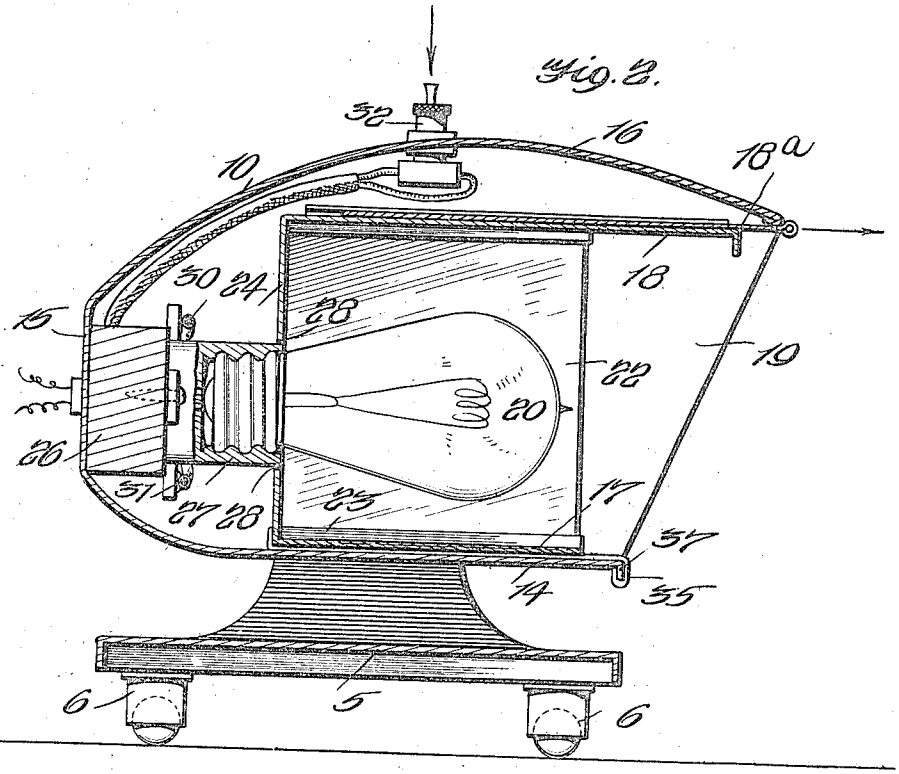


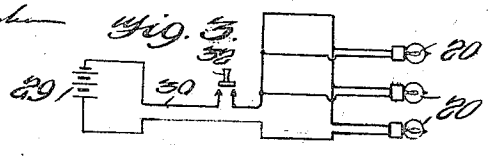
Fig. 2.



WITNESS

E. M. Cavaghan

Fig. 3.



INVENTOR

RALPH L. RIZER,

BY Munn & Co.

ATTORNEYS

R. L. RIZER.

DRAFTSMAN'S LAMP.

APPLICATION FILED JULY 13, 1917.

1,247,454.

Patented Nov. 20, 1917.

2 SHEETS—SHEET 2.

Fig. 4.

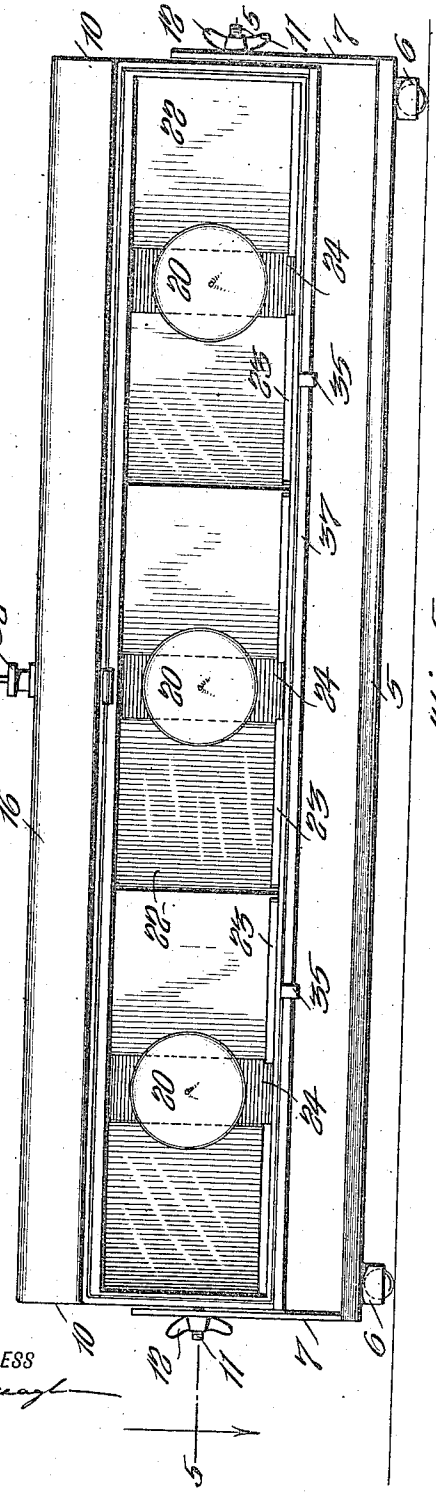
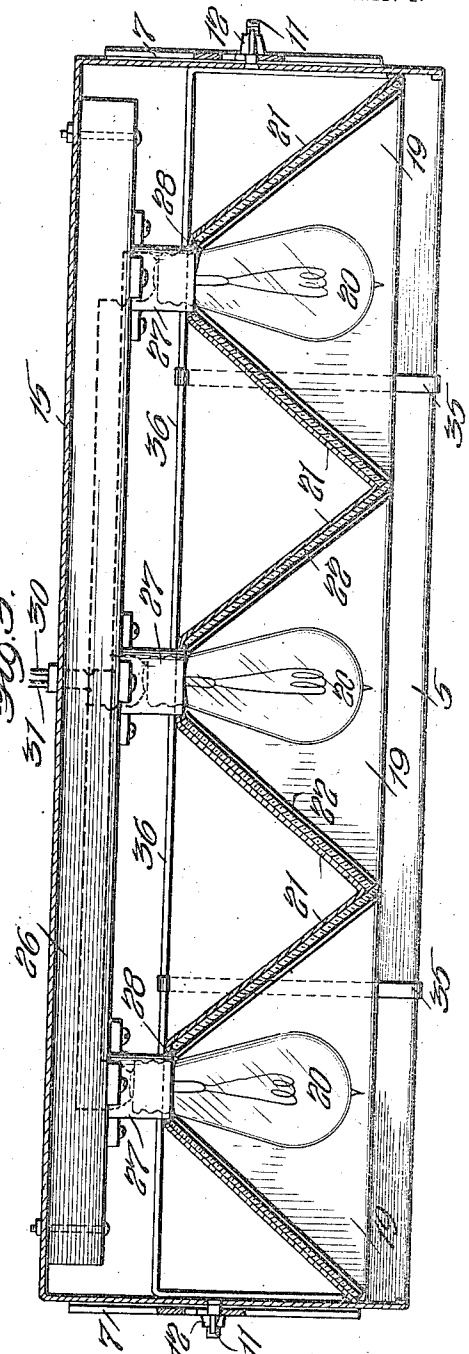


Fig. 5.



WITNESS

E. M. Cavanagh

INVENTOR

RALPH L. RIZER

BY Munn & Co.

ATTORNEYS

UNITED STATES PATENT OFFICE.

RALPH LEON RIZER, OF CUMBERLAND, MARYLAND.

DRAFTSMAN'S LAMP.

1,247,454. Specification of Letters Patent. Patented Nov. 20, 1917.

Application filed July 13, 1917. Serial No. 180,381.

To all whom it may concern:

Be it known that I, RALPH L. RIZER, a citizen of the United States, and a resident of Cumberland, in the county of Allegany and State of Maryland, have invented a certain new and useful Improvement in Draftsmen's Lamps, of which the following is a specification.

One of the principal objects of my invention is to provide an improved lighting device designed particularly for the use of draftsmen, illustrators, architects, and the like, which will operate to illuminate a drawing board or desk top in such manner as to almost completely dissipate the shadow formed by an instrument in the hands of a draftsman working before the light, the device being so constructed as to confine the light to a horizontal beam and thereby keep the light out of the draftsman's eyes.

A further object of the invention is to provide an improved draftsman's lamp designed with particular reference to advantages of simplicity, durability, efficiency in operation, and economy of manufacture and maintenance.

The details of construction, arrangement and combination of parts embodying my invention are hereinafter described and illustrated in the accompanying drawings.

Figure 1 represents a view in perspective of a lamp constructed according to my invention;

Fig. 2 represents a view in section taken vertically and transversely therethrough;

Fig. 3 represents a plan view of the lamp circuit;

Fig. 4 represents a front elevational view of the lamp;

Fig. 5 represents a horizontal sectional view taken on the plane indicated by the line 5—5 of Fig. 4.

In carrying out my invention, I provide a base plate indicated generally at 5, preferably supported by anti-friction casters 6 of suitable type arranged at the corners of the base plate. Projecting upwardly from the ends of the plate are the uprights 7, each of which is formed with a vertically extending slot 8 having lateral extensions defining hooks 9, arranged one above another for providing an adjustable support for the lamp casing indicated generally at 10. This casing is open at its front side, and the end walls of the casing are equipped with bolts 11 on which wing nuts 12 are mounted. The bolts 11 may be adjustably positioned in any of the hooks 9 whereby to hold the casing 10 in vertically adjusted position, and by tightening the nut 12 the casing may be secured in any adjusted position about its pivotal axis formed by the bolts 11.

The casing includes the end walls, the bottom wall 14, rear wall 15, and top wall 16. Between the latter and 18 there is a shade 18^a which slides in side grooves and when drawn out operates to prevent reflection of light into the eyes of the user in case the apparatus is placed at a considerable distance away. The underside of this shade is blackened.

Arranged within the casing is the reflector frame which includes the bottom plate 17, top plate 18, and a vertically arranged zig-zag plate 21 interposed between the top and bottom plate and secured thereto, which zig-zag plates define a plurality of light compartments 19 in which the electric lamps 20 are located. Each of the divergent walls of the lamp compartments is lined with a reflecting plate 22, such, for instance, as a glass mirror, which plate is mounted in suitable guideways 23 formed at the upper and lower edges of the compartment walls. The upper and lower inside surfaces of each compartment are blackened to prevent reflection of any of the rays of light, and the rear wall 24 of each compartment likewise is blackened. Thus the light will be reflected only by the vertically arranged diverging reflecting walls 22, so that the light coming from the device will be confined to a horizontal beam.

It may here be stated that the under surface of the upper casing wall 16, where that wall extends forwardly beyond the upper plate 18 of the reflector frame, is blackened, and similarly that portion of the upper surface of lower casing wall 14 which projects forwardly beyond the reflector frame is blackened. In order that there will be no possibility of any of the light being reflected into the eyes of the user, the upper surface of the base plate 5 of the device is blackened.

Secured in place against the rear wall of the casing is a strip 26 of wood or other material, and this strip is provided with sockets 27 which register with openings 28 provided in the rear walls 24 of the light compartments. The lamps 20, one of which is arranged in each compartment, extend

through the openings 28 and are screwed into the sockets 27. The strip 26 carries the wires forming the circuit for illuminating the lamps. This circuit or wiring system is illustrated in Fig. 3, and includes a source of electro-motive force, indicated at 29, from which the lines 30 and 31 lead. Across these lines in parallel are connected the lamps 20 as shown. The circuit through the lamps is controlled by a suitable switch 32 which is mounted on the upper wall 16 of the casing. When the switch is moved into position to close the circuit the lamps will be illuminated, and when the switch is moved into open position, the circuit will be broken and the lamps extinguished. The lines 30 and 31 lead into the casing through an opening in the rear wall thereof. These lines of course may be provided with the socket connection 33 of usual construction, as indicated in Fig. 1, so that the device may be operably connected with any electrical lighting socket.

The reflector frame is detachably held in place within the casing through the medium of the clips 35. These clips are each in the nature of a strip of material bent upwardly at its rear end to hook over the upstanding flanged portion 36 formed at the rear edge of the base 17 of the reflector frame. The strips 35 extend between the base 14 of the casing and the reflector frame, and at their forward ends are bent downwardly and hooked over the depending flange 37 formed at the front edge of the base 14 of the casing. When it is desired to remove the reflector frame for substituting new reflecting surfaces, or for repairs or cleaning, the lamps 20 are first removed and then the strips 35 are disengaged from the flange 37 and the reflector frame is lifted out.

In operation the lighting device is arranged on a desk or table, so that its light will be directed upon the desk top or upon the drawing board, as the case may be, and the horizontal beam of light directed from the lighting apparatus will properly illuminate the drawing surface without being directed into the eyes of the user. The arrangement of the reflecting surfaces serves to dissipate the shadows ordinarily formed by drafting instruments, so that no impediment to the progress of the drawing will be encountered through the formation of shadows.

Although I have described the preferred embodiment of my invention, I may desire to make such changes in the construction, combination, and arrangement of parts thereof, as do not depart from the spirit of the invention and the scope of the appended claims.

I claim:

1. A lighting apparatus including a casing, a reflector frame arranged within the casing and provided with a plurality of lamp compartments having forwardly diverging walls, reflector surfaces arranged on the forwardly diverging walls of the lamp compartments, the remaining walls of the lamp compartments being blackened, said casing having a portion projecting forwardly beyond the reflector frame, this portion being also blackened, lamps arranged within the lamp compartments, and means for illuminating the lamps at will.

2. A lighting apparatus including a base, a casing adjustably mounted on the base, a reflector frame arranged in the casing and having lamp compartments including forwardly diverging walls, reflector surfaces mounted on the forwardly diverging walls of the lamp compartments, the remaining walls of the lamp compartments being blackened, lamps arranged within the lamp compartments, and means for illuminating the lamp at will.

RALPH LEON RIZER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."