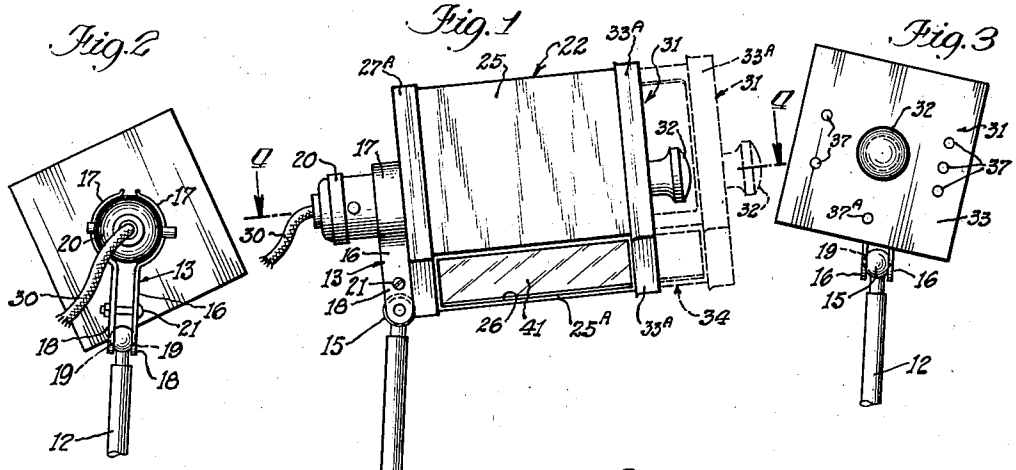
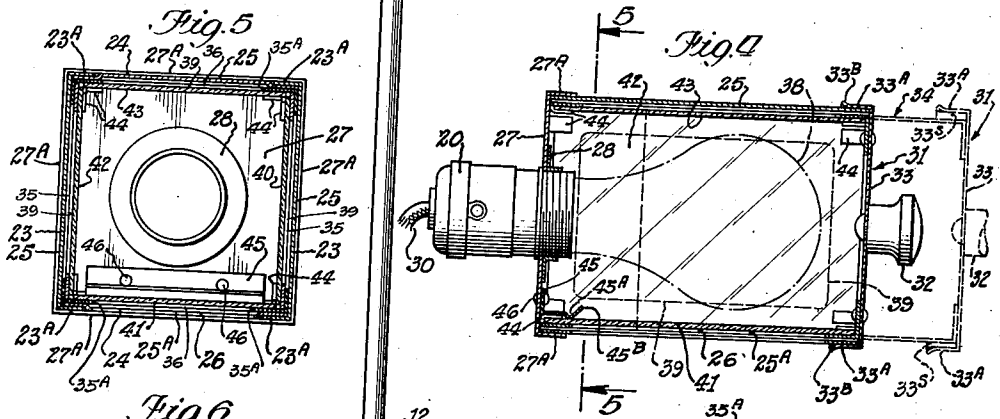
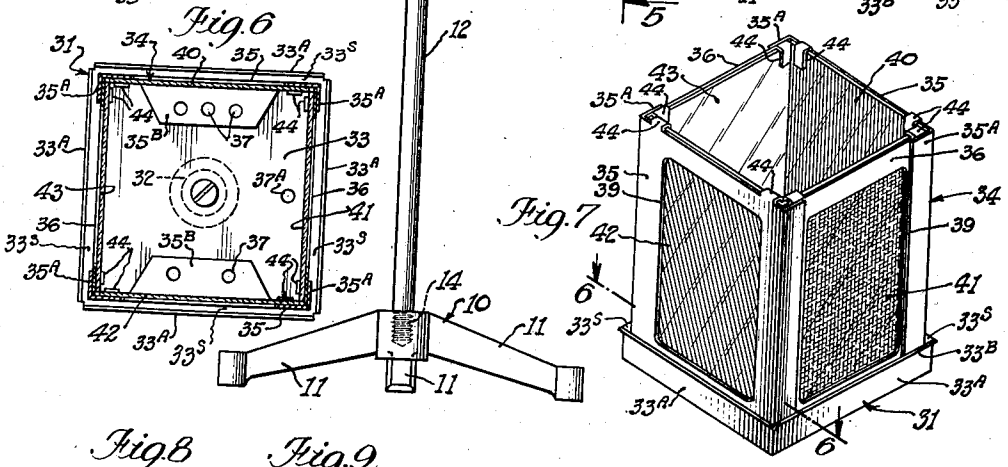
Oct. 6, 1942. F. K. MOORE 2,297,974

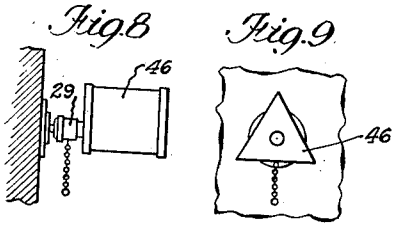
DARK-ROOM SAFELIGHT LAMP

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DARKROOM SAFELIGHT LAMP

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7 Claims. (Cl. 240—20)

This invention relates to certain new and useful improvements in darkroom safelight lamps and has particular reference to a safelight lamp especially adapted for photographic work.

The darkroom handling of various light-sensitive photographic materials, such as orthochromatic and panchromatic films and various printing papers, necessitates the provision and use of light filters of different colors. It is therefore an object of this invention to provide a novel darkroom safelight lamp having a plurality of different color light filters mounted in a single compact frame which is manually adjustable relatively to the lamp casing to provide the desired safelight for the particular photographic darkroom work engaged in.

Another object of this invention resides in the novel compact and simple construction of a photographer's darkroom lamp having a tubular casing of relatively angularly disposed sides and wherein the desired light filters are conveniently mounted in relatively angularly disposed sides of a unitary frame supported on the cover for the lamp casing, and which cover and frame are quickly manually removable, as a unit, from the lamp casing to permit change of the color of the light, and which angular construction of the lamp casing and filter-carrying frame afford simple and positive sealing of the lamp light from between the lamp-casing and the filter-carrying frame.

It is also an object of the invention to provide a simple portable support or stand for the lamp whereon the lamp is adjustably supported by a universal ball-and-socket joint and whereby the lamp is easily rendered angularly adjustable to the desired angle to facilitate the direction of the light upon the work and to eliminate objectionable light reflections.

With the above and other objects in view, the invention consists in the novel combination, construction and arrangement of the parts and members shown in preferred embodiments in the attached drawing, described in the following specifications, and particularly pointed out in the appended claims.

In the drawing, wherein like reference numerals indicate like or corresponding parts,

Fig. 1 is a side elevation of a darkroom safelight lamp embodying a preferred form of the invention;

Fig. 2 is a rear end view of the lamp showing the ball-and-socket support;

Fig. 3 is a front end view;

Fig. 4 is a longitudinal section through the lamp taken on line 4—4 of Fig. 1;

Fig. 5 is a cross-section of the lamp housing and the filter-carrying frame taken on line 5—5 of Fig. 4;

Fig. 6 is a cross-section of the filter-carrying frame taken on line 6—6 of Fig. 7 which is an isometric view of the filter-carrying frame;

Fig. 8 is a side elevation of an adaptation of the invention to a lamp housing and filter-carrying frame of triangular cross-section; and

Fig. 9 is an end view of the lamp shown in Fig. 8.

In the illustrations in Figs. 1 to 7 inclusive, the lamp-supporting stand consists of a base 10 having preferably three legs 11, a vertically disposed supporting rod 12, and a clamp 13.

The supporting rod 12 has, at its lower end, a threaded connection 14 with the base 11, and, at its upper end, is provided with a spherical or ball-shaped head 15.

The clamp 13 consists of a pair of right and left hand coacting clamp-bars 16 each having an arcuately bent portion 17 and a straight flat portion 18.

The lower ends of the clamp-bars 16 are provided with oppositely disposed transversely aligned circular concave recesses 19 adapted to clampingly receive therein opposite sides of the spherical head 15 of the supporting rod 12.

The arcuate clamp portions 17 are adapted to clampingly engage the electric light socket 20 when the tightening bolt 21 is tightened; the tightening bolt 21 also acts to clampingly secure the clamp-bars 16 to the spherical head 15.

The lamp casing 22 is screw-mounted upon the electric light socket 20 so that the lamp unit is conveniently adjustably supported on a ball-and-socket joint of the upper end of the stand.

The tubular lamp casing 22 is preferably made of light-weight sheet metal and, as shown in the preferred embodiment in Figs. 1 to 7 inclusive, consists of four assembled metallic plates 23 and 24 forming the three side walls indicated by numerals 25 and the side wall 25A which is provided with a light-emitting opening 26. The two oppositely disposed side plates 23 are provided with side flanges 23A which engage the slightly inwardly crimped side portions of the two opposite plates 24 whereby the outside faces of the tubular lamp casing is rendered substantially flat.

The tubular casing 22 is securely closed at its rear end by a closure wall plate 27 having flanged sides 27A embracing the outer sides of the side walls 25 and 25A.

The rear closure wall 27 is provided with a central opening defined by an annular flanged ring 28 of L-shaped cross-section suitably secured to the inner face of the wall 27. The inwardly disposed flange of the ring 28 is threaded on its inner face to provide a screw-connection for the electric lamp socket 29 which is provided with a flexible conductor 30 for supplying electric current to the electric light bulb 38.

The open front end of the tubular lamp housing is provided with a manually removable closure 31 having a knob-like handle 32 secured to the center of the end closure plate 33 which is provided with side flanges 33A, having slightly flared edges 33B, embracing the outer sides of the side walls of the lamp casing 22.

The carrying-frame for the colored light-filters is generally indicated by numeral 34 and, as shown in the illustrations, consists of four metallic plates indicated by numerals 35 and 36. The plates 35 are disposed on opposite sides and have flanged side portions 35A overlapping side portions of the two oppositely disposed plates 36.

The plates 35 are also each provided with a preferably integral connection flange 35B bent right-angularly and secured by rivets 37 to the end closure plate 33; thus the filter carrying-frame 34 is rigidly secured to the end closure 31. It will be noted that the flanges 33A are slightly spaced from the outer sides of the filter carrying-frame to provide space for the open end portion of the tubular lamp casing 22 to enter therein and to seal the end of the lamp casing against emission of the light from the light bulb 38 when the filter carrying-frame 34 is inserted within the lamp casing 22.

All of the filter-carrying plates 35 and 36 are provided with openings 39 which are covered by the colored light-filter plates 40, 41, 42 and 43 mounted against the inner faces of the plates 35 and 36 and securely held in position by the bent prongs 44 preferably formed integrally with the plates 35 and 36.

As shown in the illustrations, 40 indicates a red filter for orthochromatic film work, 41 a yellow filter suitable for work with certain photographic printing papers, 42 a green filter for panchromatic film work, and 43 a translucent white filter affording a diffused white light for viewing developed negatives and the like.

A resilient metallic plate 45 is secured by rivets 46 to rear end wall 27 and extends practically the full inside width of the filter-carrying frame. This resilient plate is mounted at the inner end of the lamp casing wall 25A which is provided with the light-emitting opening 26.

The resilient plate 45 is substantially of L-shaped cross-section and its free inwardly disposed leg is provided with a longitudinal crimp 45A and an upwardly angularly bent side 45B to facilitate sliding thereunder of the outer edge of the filter-carrying frame for resilient retaining engagement of the crimp 45A over a pair of the filter-retaining prongs 44 to prevent free sliding movement or accidental displacement of the filter-carrying frame from the lamp housing in the event the lamp was inadvertently tilted downwardly.

Another feature of the invention is to provide means for permitting the operator to change from the use of one filter to any one of the other filters while in the darkroom with the lamp light bulb turned off. This selection of filters is possible through the particular arrangement of the rivets 37 in the flanges 35B and an extra rivet 37A. It will be noted by reference to Fig. 6 that the filter nearest the two rivets 37 is colored green, the filter nearest the three rivets is colored red, and that no rivets appear near the side of the white filter. These indicia will readily indicate to the operator, in response to the touch of his finger, the relative location of the colored filters so that a change of the color filters may be readily made in a darkroom without the aid of light. The rivet 37A indicates the yellow filter.

From the above specification and attached illustrations it will now be readily apparent that the novel features of the invention may be embodied in darkroom lamps of various cross-sections depending upon the desired number of colored filters. An example of a darkroom lamp 46 of triangular cross-section using three colored filters, such as red, yellow, and green, is illustrated in Figs. 8 and 9 wherein the lamp is mounted on a wall socket 29.

The colored filters 40, 41, 42 and 43 may be made of any suitable colored translucent material such as Celluloid glass, or any suitable translucent plastic material such as a translucent plastic of a phenol-resin base.

Obviously, any one of the colored filters is quickly adapted for desired use by simply grasping the knob 32, withdrawing the filter-carrying member from the lamp casing, and then reinserting same into operative position within the lamp casing with the desired color filter in face-alignment with the light-emitting opening 26 of the lamp casing 22.

Another feature or object of this invention is to so construct and arrange the end closure 31 and the filter-carrying frame 34 that such closure 31 will provide means for sealing the open end of the lamp casing 22 against any possible leakage of light, hence, the end closure 31 is provided with an extended continuous or endless peripheral flange 33A, the inner face of which is spaced from the outer face of the filter-carrying frame 34 only sufficiently to receive there between the ends of the sides 25 and 25A of the lamp casing 22. This continuous light-sealing recess 33S is clearly seen in Figs. 4, 6 and 7.

In order to permit the adaptation of any one of the plurality of colored filters for use in association with the single light-emitting opening 26 of the lamp casing, all of the sides of the lamp casing 22 are of equal width, likewise, all of the sides of the operatively associated filter-carrying frame 34 are of equal width.

I claim:

1. In a lamp of the kind described, the combination of a tubular casing having a plurality of relatively angularly disposed side walls, a closure wall at one end of said casing having an opening supporting therein a lamp socket, one of said casing side walls having a light-emitting opening therein, a removable cover for the other end of said casing including a filter-carrying frame supported on said cover and telescoped with said casing and having a plurality of translucent colored light-filters, and an electric light bulb within said casing connected to said socket, said colored light-filters being disposed relatively angularly one to the other and said cover being replaceable on said casing with the angular corners of said filter-carrying frame slidably supported on and interfitted within the angular corners of the side walls of said casing and with any one of said filters selectively positioned adjacent to and in parallel alignment with said casing side wall

opening to filter the light passing therethrough from said light bulb.

2. A lamp of the kind described comprising a tubular casing having a plurality of relatively angularly disposed side walls, one of said side walls having a light-emitting opening therein, a closure wall for one end of said casing, an electric light socket supported on said closure wall, an electric light bulb within said casing connected to said socket, a removable cover for the other end of said casing, a plurality of relatively angularly disposed translucent differently colored light-filters supported on said cover and telescoped with said casing with the angular corners of said light-filters slidably interfitting within the angular corners of the side walls of said casing, said cover being replaceable on said casing with any one of said filters selectively positioned adjacent to said side wall opening to filter the light passing therethrough from said light bulb.

3. A lamp as embodied in claim 2 and including resilient means within said casing for releasably retaining said cover and light-filters in operative position.

4. A lamp as embodied in claim 2 and including a portable support comprising a vertical rod having a spherical head and a tripod base, and a clamp secured to said socket and adjustably connected to said spherical head.

5. A lamp as specified in claim 2, and including touch-perceptible indicia on said cover for indicating the relative positions of the differently colored light-filters in the absence of light in the darkroom to permit changing of the color of the light when the light in the lamp is turned off.

6. In the combination defined in claim 1, and including said cover having a continuous peripheral flange and said filter-carrying frame being spaced slightly inwardly from the inner face of said cover flange to provide a continuous recess for the open end of said tubular casing to therein seal the end of the casing against leakage of light from within said casing around said cover.

7. A lamp as embodied in claim 2, and including said cover having a continuous peripheral flange and the outer sides of said colored light-filters spaced from the inner face of said cover flange to provide a continuous recess for the open end of said tubular casing to therein seal the end of the casing against leakage of light from within said casing around said cover.

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