

[54] **LIGHTING ARRANGEMENT FOR PHOTOGRAPHIC WORK**[76] Inventor: **Ross Lowell**, P.O. Box 114,
Lincolndale, N.Y. 10540[22] Filed: **June 20, 1973**[21] Appl. No.: **371,933**[52] U.S. Cl. **240/1.3, 240/47, 240/52 R,**
240/81 BC[51] Int. Cl. **G03b 15/02**[58] Field of Search **240/1.3, 2 C, 3, 52 R,**
240/73 BA, 81 C, 81 BC, 47, 103 R[56] **References Cited****UNITED STATES PATENTS**

1,326,650	12/1919	Doerr	240/2 C UX
2,193,485	3/1940	Kenning	240/1.3 X
2,907,870	10/1959	Calmes	240/3
2,910,573	10/1959	Bing et al.	240/52 R X
3,210,531	10/1965	Neely et al.	240/3
3,258,585	6/1966	Crete	240/1.3
3,258,586	6/1966	Blizzard	240/1.3
3,604,913	9/1971	Crete	240/1.3
3,712,978	1/1973	Lowell	240/1.3

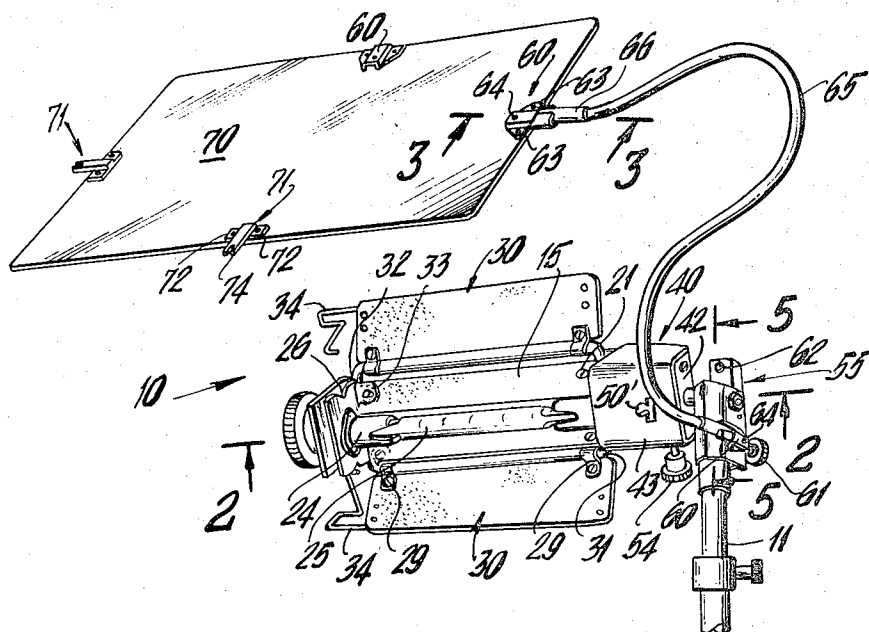
Primary Examiner—Fred L. Braun

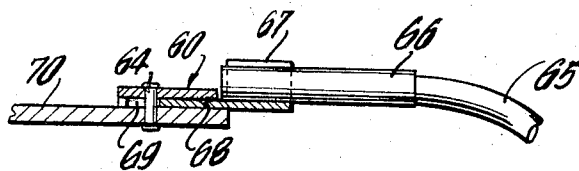
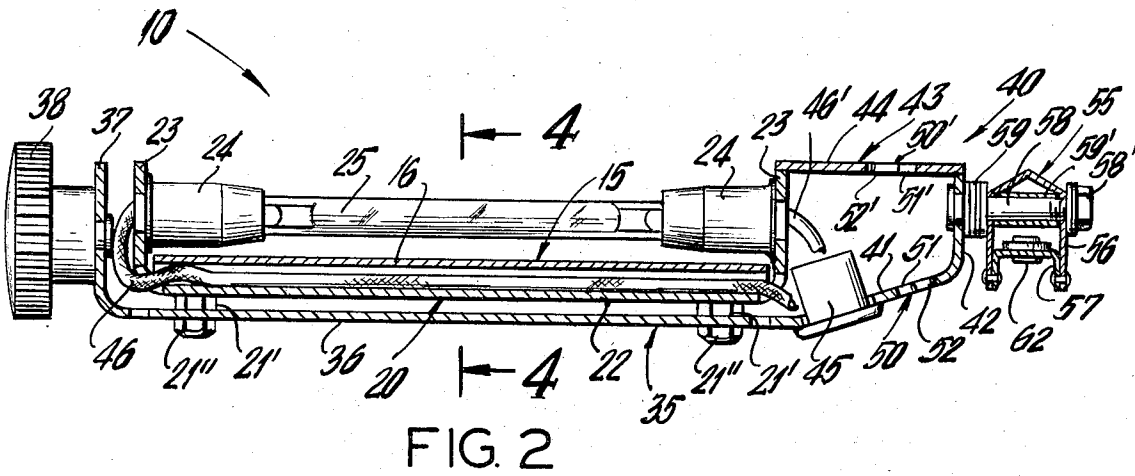
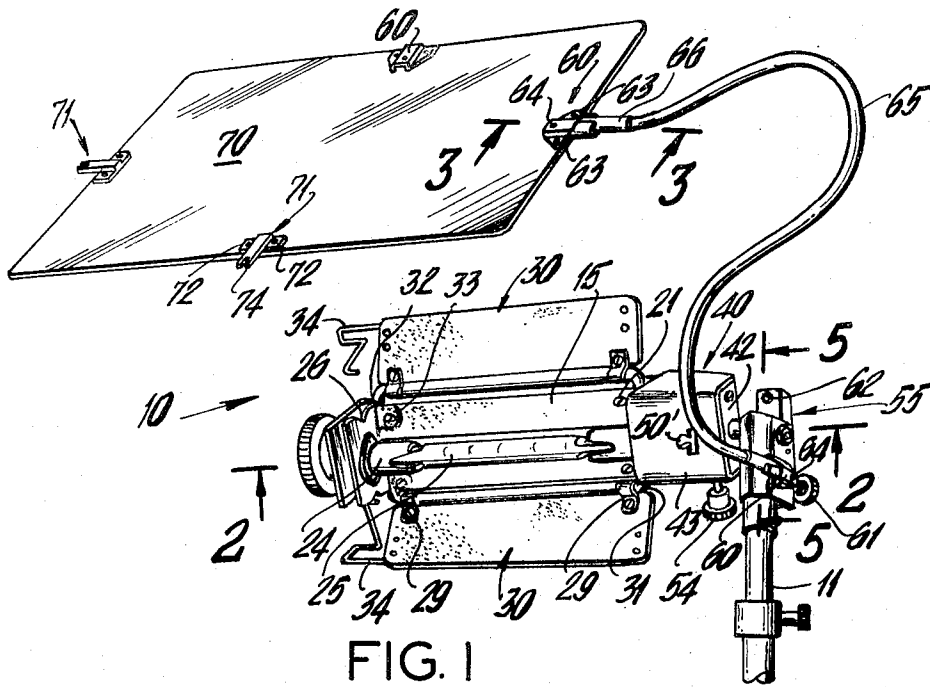
Attorney, Agent, or Firm—McGlew and Tuttle

[57] **ABSTRACT**

The principal component of the lighting arrangement is a luminaire including a relatively elongated substantially rectangular reflector, having a W-shaped cross section, and mounting a tubular lamp, such as a tungsten halogen lamp, with a bracket on one end of the reflector supporting a receptacle for connecting the

lamp to a source of electric potential. Reflector doors or wings are hinged to each longitudinally extending edge of the reflector, and a stand fitting is adjustably secured to the bracket and arranged to clampingly engage a mounting post. The bracket is formed with apertures and clamps whereby additional lighting arrangement components may be mounted thereon, and the stand fitting is also designed to mount additional lighting arrangement components. The reflector has a double housing providing an air space for cooling of the reflector. A relatively stiff flexible shaft is provided for mounting on the stand fitting, and may be used to mount flags, for shadowing a subject or a camera lens, and which, in turn, can be assembled with each other to form a flag of any selected area. A collapsible "gel" mounting frame is arranged for mounting in sets of apertures in the bracket, and additional luminaries and stand fittings may be mounted on the stand fitting of the base luminaire for the purpose of stacking several additional luminaires. Two types of clamps are provided for mounting various additional components associated with the base luminaire. Sets of apertures in the bracket of each luminaire are provided to receive a stem of an "umbrella," provided for soft light. The mounting post may be on a light stand, handle, clamp or the like, or may be a post on a collapsible frame which can be hung over the upper edge of a door or the like or, when reversed, on a pair of pegs or nails secured to a wall or other suitable vertical surface to which it may be taped. All of the components of the lighting arrangement may be carried in a case or in a compartmented bag which can be carried or which can be supported on a person's belt.

20 Claims, 24 Drawing Figures



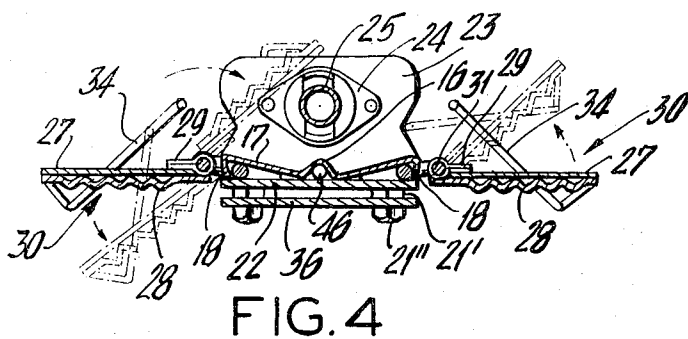


FIG. 4

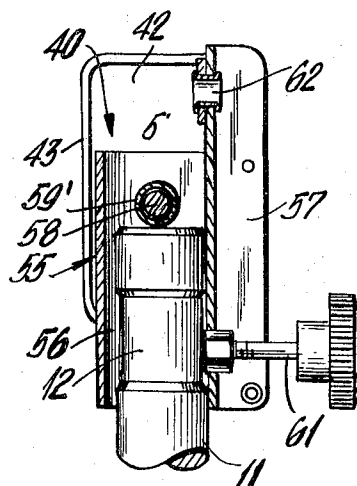


FIG. 5

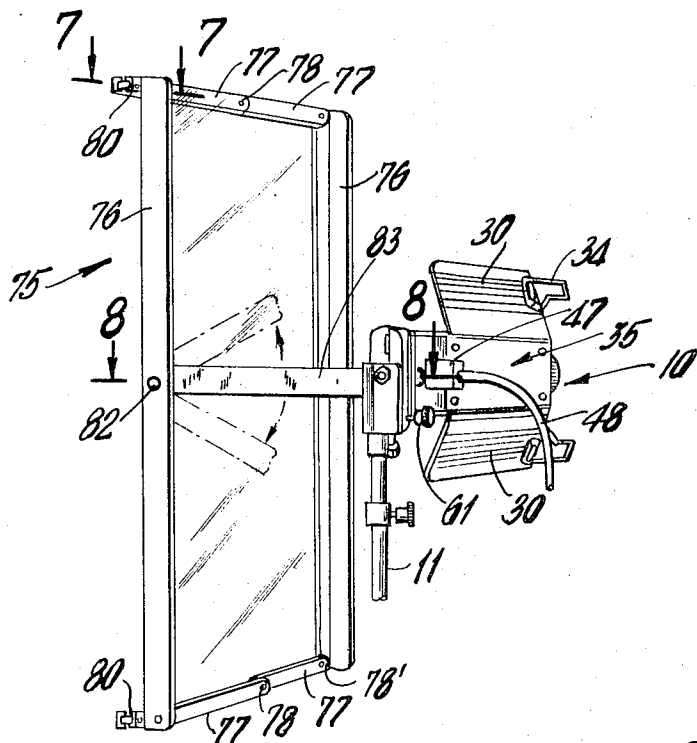


FIG. 6

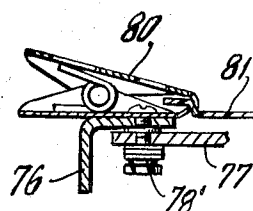


FIG. 7

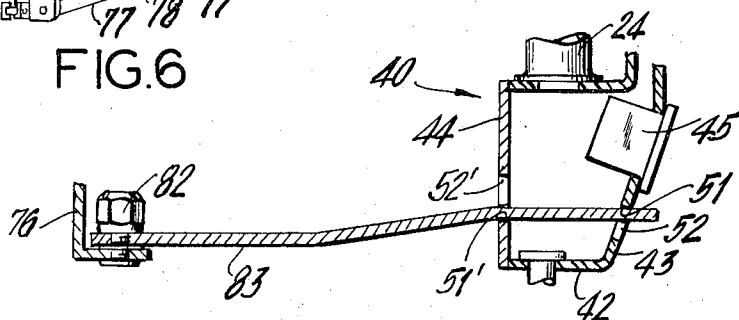


FIG. 8

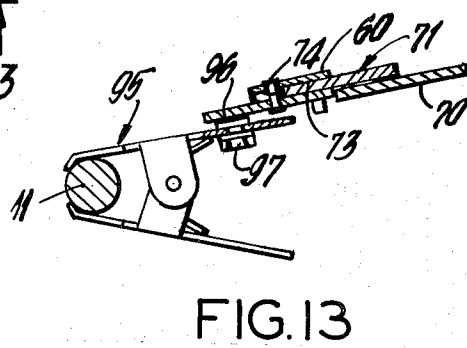
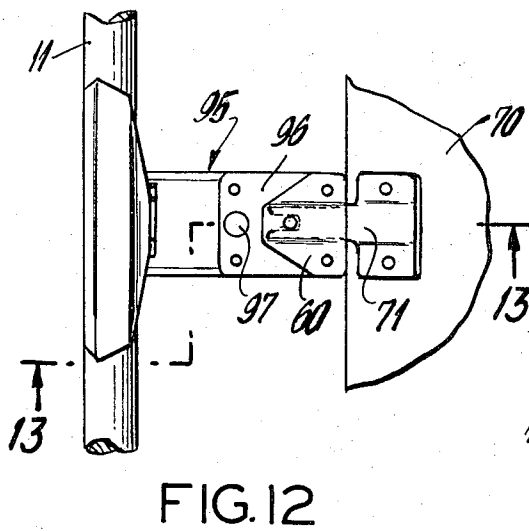
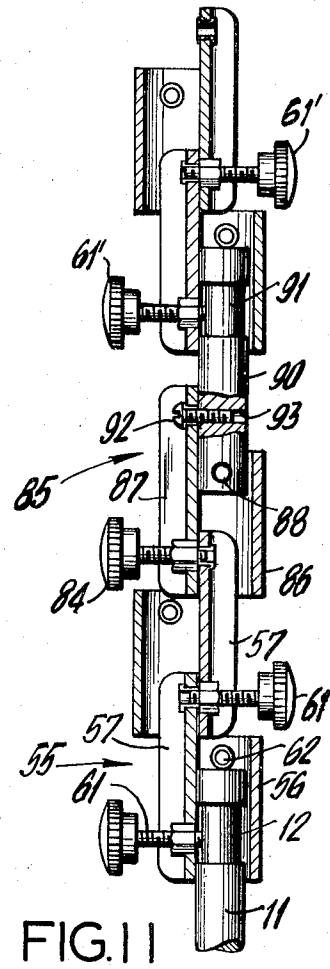
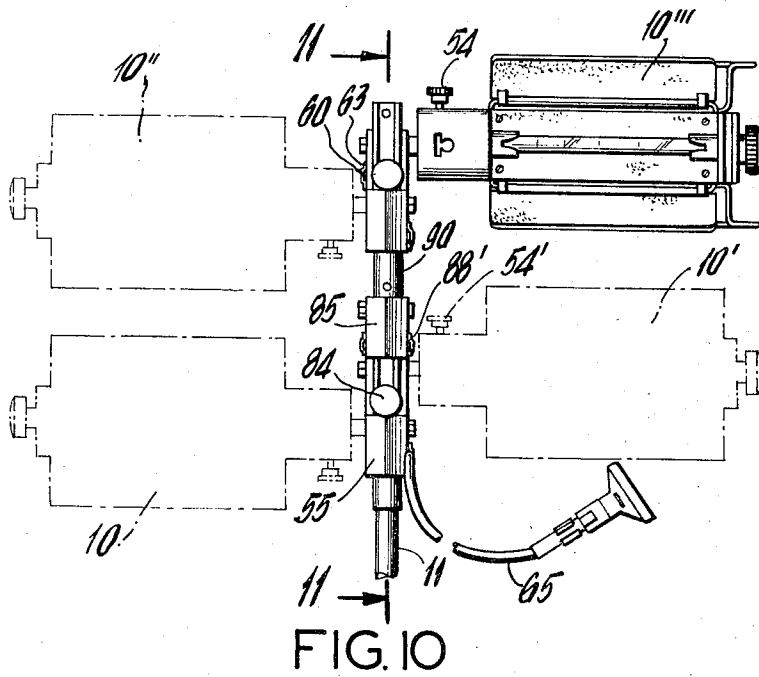
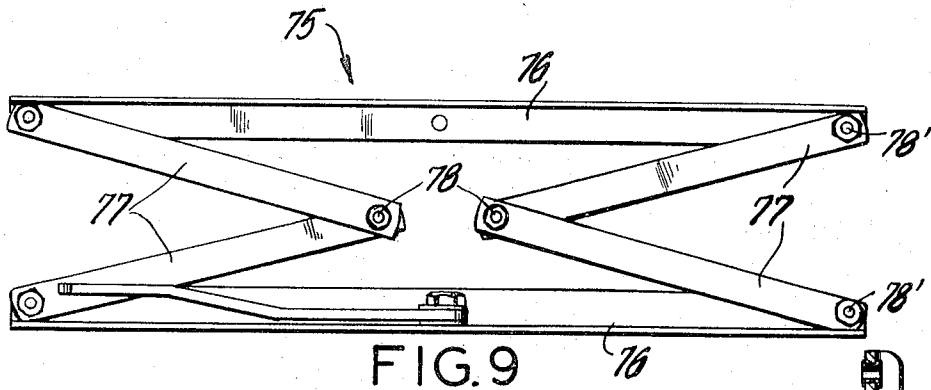


FIG. 14

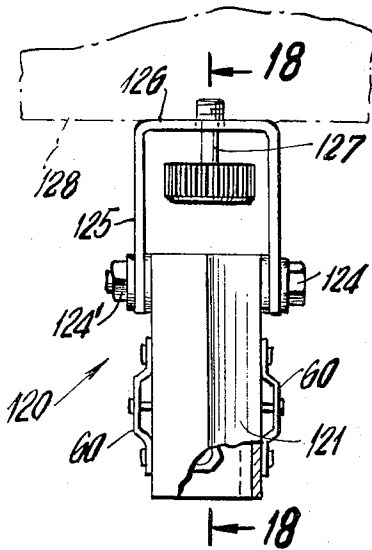
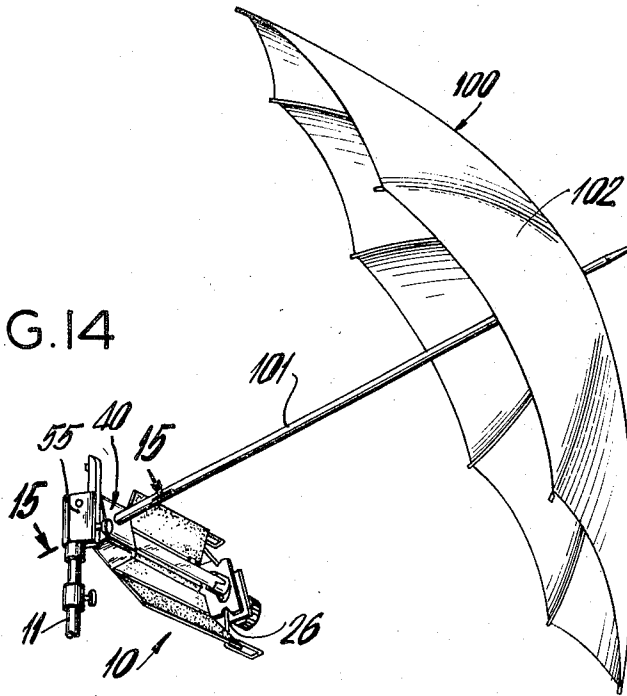


FIG. 17

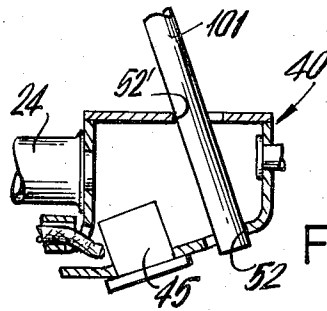


FIG. 15

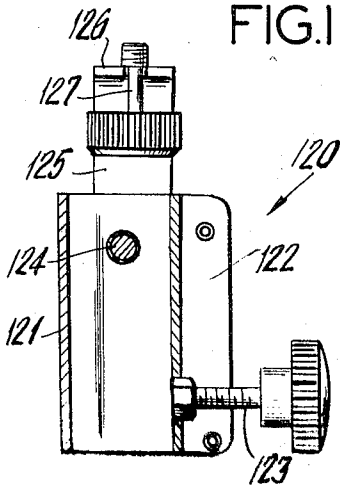


FIG. 18

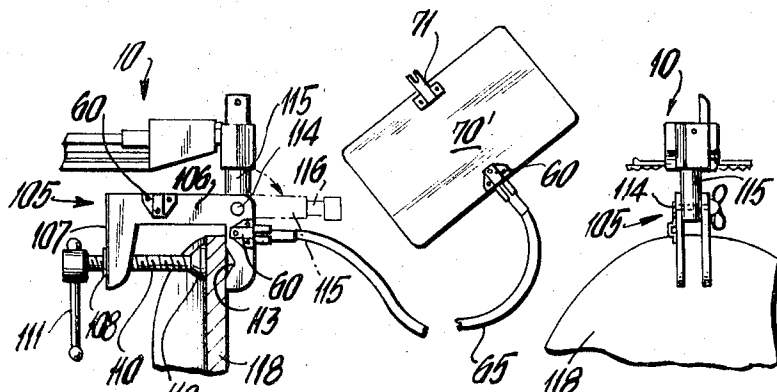


FIG. 16

FIG. 16A

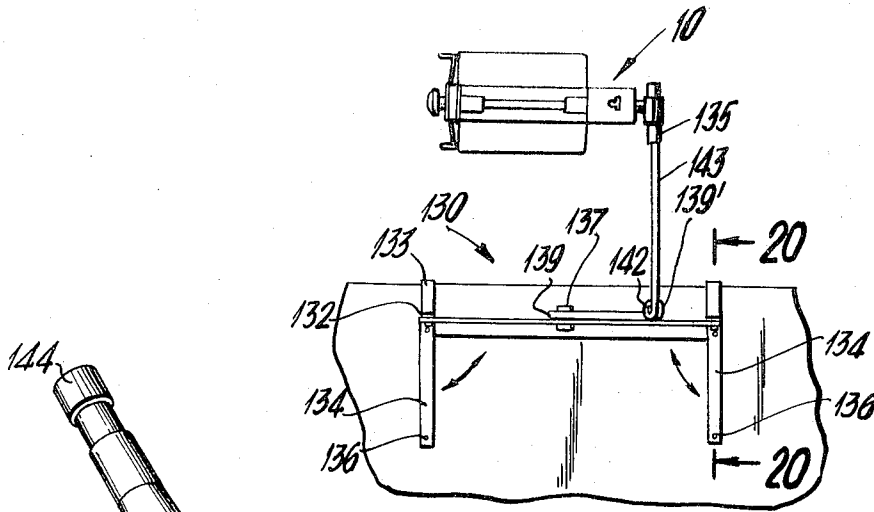


FIG. 19

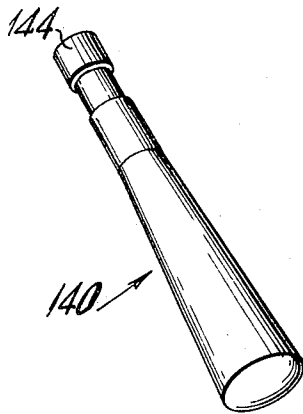


FIG. 21

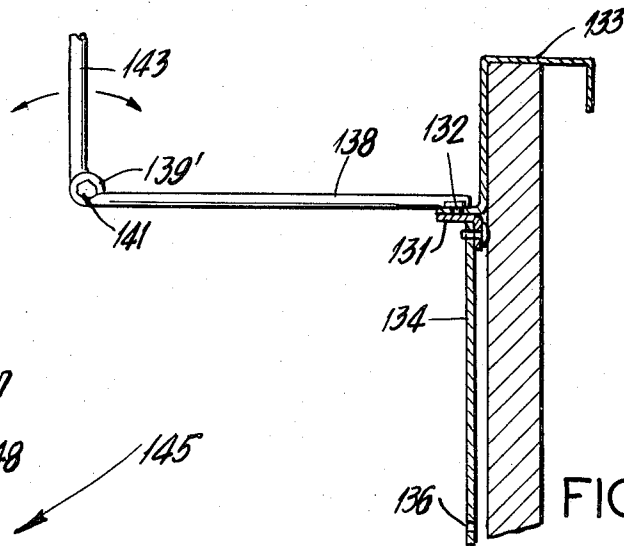


FIG. 20

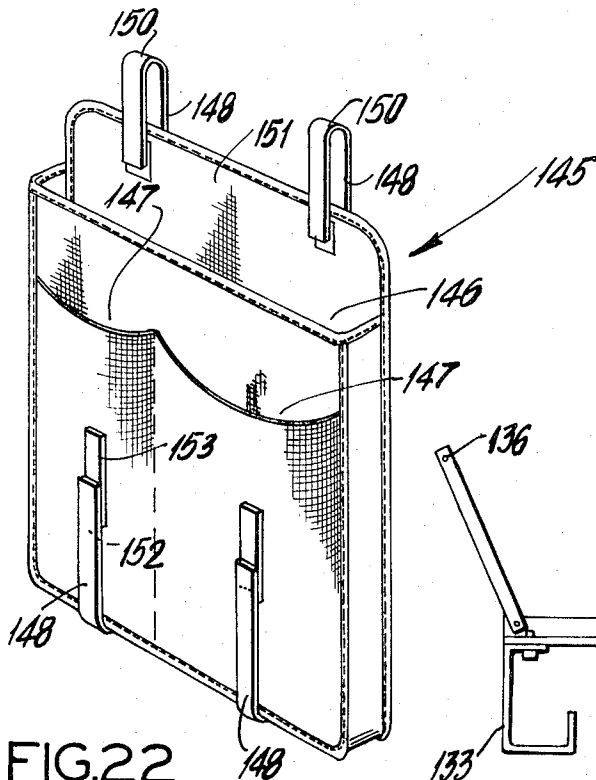


FIG. 22

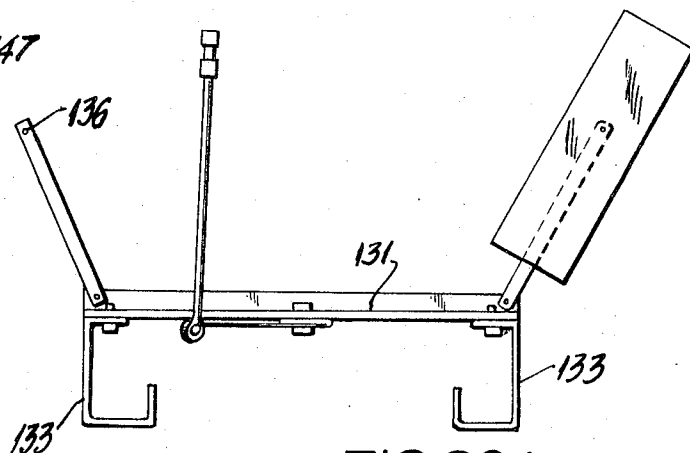


FIG. 20A

LIGHTING ARRANGEMENT FOR PHOTOGRAPHIC WORK

FIELD AND BACKGROUND OF THE INVENTION

This invention relates to photography and, more particularly, to a novel, improved and compact lighting arrangement for photographic work.

Proper lighting is of the greatest importance in professional photography, with respect to still pictures, television and motion pictures. The quantity and quality of the lighting are equally important. Mood or dramatic effects are dependent upon the light source, size, angle and control devices. Well equipped studios usually are provided with a variety of lighting equipment, including luminaires, control devices and mounting means which tend to be cumbersome, as they usually have only a single function. However, when a photographer must take still or motion picture "interiors" away from a studio, a problem is presented due to the necessity of transporting heavy and bulky lighting equipment to frequently distant or inaccessible locations.

Most location work is sufficiently distant that air transportation is used both for personnel and equipment. Thus, the equipment weight and bulk are serious drawbacks. Many locations are small, with low ceilings, so that large equipment size is a problem. Furthermore, location walls do not necessarily provide for easy mounting of luminaires, as in a studio, and stands tend to get in the way of the crew, the people being photographed and the view of the camera. However, and what is important for reasons set forth hereinafter, most locations for "interior" shots have rooms with one or more doors, with the tops of the doors generally being above the top of the compositions.

Studios have sets with walls that allow for mounting luminaires or lights on top of the walls, and generally have no ceiling. Since this is not the case on location, there is a special mounting problem. Sometimes mounting is effected by the use of stands. However, stands can create a problem by reducing working space, and often are within the field of view of the camera. Speed of set-up is also important, because of the crew size and expense, as well as the impatience of personalities being photographed and inflexible schedules.

Despite some improvements in this direction, there has been a long felt need for an extremely compact and efficient lighting arrangement which can be easily transported, is versatile, and which is readily adaptable to existing conditions at a chosen location. Additionally, there has been a demand for such lighting equipment or lighting arrangement which can be readily used with conventional power supplies and which has a great deal of flexibility with respect to the arrangement of the various components in order to provide full control for dramatic lighting, soft lighting, or a variety of other effects.

SUMMARY OF THE INVENTION

In accordance with the invention, the problem is solved by providing a compact luminaire, including a highly efficient reflector mounting an efficient tubular lamp as a light source, and in association with mounting means for not only mounting the luminaire on any suitable support but also formed for mounting of other

lighting accessories, such as filters or gels, "barn doors," "flags," "umbrellas" for soft lighting, and additional luminaires, with all of the various components being so compact that they can be transported in a compartmented flexible carrying case or the like which can be readily attached to a belt or the like so as to be easily transportable along with other photographic equipment, such as cameras and the like.

The basic component of the lighting arrangement is the luminaire which includes a substantially rectangular reflector having a W-shaped cross section. This reflector is mounted in a double housing including a first housing member which has a rectangular portion in underlying spaced relation to the reflector and a pair of upstanding ends each mounting a socket or the like to receive respective opposite ends of the tubular lamp. A second or outer housing member has a rectangular portion in spaced relation to the rectangular portion of the first or inner housing member, an end wall spaced from one end wall of the inner housing member and an outwardly extending portion at the opposite end of its rectangular portion mounting an electrical receptacle for connection of the lamp sockets to a source of electric potential, such as a convenience outlet, or a suitable portable battery or generator by an appliance cord. The outwardly extending portion of the second or outer housing forms part of a bracket whose other part is formed by a cover member secured to the projecting portion of the outer housing.

A pair of reflector doors or wings are hinged to the opposite longitudinal edges of the rectangular part of the inner housing so as to cooperate with the reflector for directing light. The bracket also has secured thereto, for angular adjustment of the luminaire, a stand fitting arranged to embrace or clampingly engage a mounting post for adjustably mounting the luminaire thereon. This stand fitting is provided with a stacking extension for disengageably receiving mounting portions of additional components of the lighting arrangement and also is formed to receive and clamp in position additional fittings, such as a fitting carrying a further mounting post for additional luminaires or a fitting carrying a thumb screw cooperable, for example, with the threaded aperture at the upper end of a camera tripod or the like. Thereby, two or more luminaires can be stacked side-by-side or one above the other, when necessary or desirable.

The W-shaped cross section of the reflector is of very great importance and provides very substantial advantages. By virtue of this particular shape, the reflector uses light which is normally wasted, that is light from the bulb, and throws this light to the side to provide a wide light pattern. The W-shaped cross section of the reflector further compensates for the shadow which would appear normally in the center of the light pattern, due to the bulb. The reflector provides a particularly wide light pattern if the reflector doors or wings are folded completely out of the way. The "waste" of light source occurs due to absorption of light by the bulb, which also results in over-heating of the bulb or in excess heating.

Another advantage accruing from the present invention is that the wings used with the reflector having the W-shaped cross section result in the ability of enabling the intensification of the light without affecting the width of the light pattern, it being noted that the luminaire and particularly the reflector normally is used in

a horizontal position. By the use of the reflector doors or wings, the light which normally would be directed to the ceiling and to the floor, and the like, is brought into the pattern without affecting the width of the light pattern. That is, the light is brought into the sitting-standing area or important area of the photography, thus increasing the intensity of the light on the subject matter to be photographed.

The bracket and the stand fitting at the end of the luminaire are also formed to receive both flat mounting portions of additional components of the lighting arrangement or a cylindrical stem of an "umbrella" for providing "soft light," and the stand fitting is provided with a clamping thumb screw for these mounting portions. The interior of the bracket, which carries the electrical connections to the lamp sockets, has a protecting bracket extending over these electrical connections to protect them from damage during mounting and dismounting additional components on the bracket. The bent end of the outer housing carries a knob whereby the angular orientation of the luminaire on its mounting post can be readily changed. Each of the additional mounting fittings also has means for receiving mounting portions of other lighting components.

A feature of the invention is the provision of a relatively stiff and elongated flexible shaft having identical ends formed for engagement in the mounting portions of a stand fitting and also for engagement in similar mounting portions on reflectors or on "flags" each of which may be provided with tongues or projections for cooperating with mounting portions of additional reflectors or flags so that a reflector or flag of any desired size can be readily formed of several unit reflectors or flags. The flexible shaft may also be used to mount other components. Through the medium of the flexible shaft, the reflectors or the "flags" can be readily adjusted to any desired orientation and position relative to the luminaire.

A further very important feature of the invention is the provision of a collapsible mounting component having hooks whereby it may be hung over the upper edge of a door, partition, or the like, and having legs whereby it may be suspended on a wall or window by the use of pegs or nails inserted through holes in the ends of the legs, or may be mounted on a wall by a special adhesive tape engaging the wall or window and the legs. The door may be open or closed, and the luminaire may be mounted either inside or outside of the room. The bracket will not fall off even if the door is opened. This collapsible mounting component carries a substantially universally adjustable mounting post whereby a luminaire may be positioned "around" a door jamb and molding, on either side of a room, and at variable angles above the door or a partition.

The ability to hang a luminaire or luminaires on the top of a door and then to close a door is very important to a photographer using equipment away from a studio, as it enables the photographer to set up the lighting equipment, keeping the floor area and the entire room clear of obstructions, such as lighting stands and the like. While the basic principle of using a hook to support something on the upper edge of a door or a partition is known, such an arrangement, in the context of the present invention, is a very important feature from the standpoint of lighting arrangements for interior photography.

The versatility of the lighting system is further enhanced by the provision of a C-clamp mounting arrangement, also containing a multi-position, swiveling mounting post, and which may be clamped onto any suitable surface such as, for example, a pipe, furniture, a door, a shelf, a windowsill, or the like, and which serves to mount a luminaire and one or more flexible shafts.

The reflector of each luminaire is capable of having its reflector doors folded inwardly to protect the lamp and to form a very compact unit and, together with the collapsibility or foldability of other components, the entire arrangement is so compact that all of the components can be carried in a compartmented flexible carrying case formed, for example, of canvas and arranged to be hung from the belt of a photographer. Thus, all of the components can be readily carried in this case in their disassembled and compact form, leaving the photographer's hands free to climb a ladder in order to mount luminaires and accessories.

An object of the invention is to provide an improved lighting arrangement for photographic work including a set of readily and easily transportable components.

Another object of the invention is to provide such a lighting arrangement including a novel and efficient luminaire as a basic unit.

A further object of the invention is to provide such a lighting arrangement which can be used in any location for the rapid and proper mounting of a luminaire as well as the proper mounting of light modifying components such as filters or "gels," "barn doors," "umbrellas" and additional reflectors.

Another object of the invention is to provide such a lighting arrangement in which the parts can be compactly folded and stored or carried in a relatively small carrying case which can be hung on the belt of a photographer.

An additional object of the invention is to provide such a lighting arrangement in which luminaires may be stacked on each other for a "single source" effect.

Another object of the invention is to provide such a lighting arrangement in which the parts can be readily mounted on closed doors to eliminate stands which interfere with movement of the photographer and placement of subjects to be photographed.

A further object of the invention is to provide such a lighting arrangement capable of achieving an exceptionally wide light spread or beam angle which can be intensified without affecting the beam width, but only the height, which latter is less important for interior photography.

For an understanding of the principles of the invention, reference is made to the following description of typical embodiments thereof as illustrated in the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

In the Drawings:

FIG. 1 is a perspective view illustrating a reflector assembly mounted on a supporting post and having a single barn door or flag mounted thereon through the medium of the flexible shaft;

FIG. 2 is a longitudinal sectional view of the reflector assembly taken on the line 2—2 of FIG. 1;

FIG. 3 is a sectional view taken on the line 3—3 of FIG. 1 and illustrating the connection of the flexible shaft to a barn door or flag;

FIG. 4 is a transverse sectional view taken on the line 4—4 of FIG. 2 and illustrating the cross section of the reflector, the reflector doors being illustrated in their almost completely open position, with the fully open and fully closed positions being shown in broken lines;

FIG. 5 is a sectional view taken on the line 5—5 of FIG. 1;

FIG. 6 is a perspective view illustrating a collapsible gel frame in its erected position and mounted on the reflector assembly;

FIG. 7 is a sectional view taken on the line 7—7 of FIG. 6;

FIG. 8 is a sectional view taken on the line 8—8 of FIG. 6;

FIG. 9 is a plan view illustrating the gel frame partially collapsed;

FIG. 10 is an elevation view somewhat schematically illustrating four luminaires mounted in adjacent and in superposed relation;

FIG. 11 is a sectional view taken on the line 11—11 of FIG. 10;

FIG. 12 is a partial elevation view illustrating a clamp, forming a component of the lighting arrangement, arranged to embrace a post, flat surface, or the like and constructed to mount another component such as, for example, a "flag," a reflector, or a flexible shaft with "flag" or reflector attached;

FIG. 13 is a view, partially in section, taken on the line 13—13 of FIG. 12;

FIG. 14 is a perspective view illustrating an umbrella mounted on the luminaire;

FIG. 15 is a sectional view taken on line 15—15 of FIG. 14;

FIG. 16 is an elevation view illustrating a C-clamp component of the invention as mounted on a flat surface and supporting a flag and a luminaire;

FIG. 16A is an end view of FIG. 16;

FIG. 17 is an elevation view, partially in section, of a further mounting component of the arrangement provided with a thumb screw for engagement with a screw of a camera tripod or the like;

FIG. 18 is a sectional view taken on the line 18—18 of FIG. 17;

FIG. 19 is an elevation view illustrating a collapsible component for mounting a luminaire on the upper edge of a door, for mounting on walls, windows, or the like, as by taping, nailing, or hanging on pegs;

FIG. 20 is a sectional view taken on the line 20—20 of FIG. 19;

FIG. 20A is a view similar to FIG. 19 but illustrating the collapsible component as mounted on a flat vertical surface by nailing or by taping;

FIG. 21 is a perspective view of a handle on which a luminaire can be mounted and manually supported; and

FIG. 22 is a perspective view of the flexible compartmented carrying case for the components of the lighting arrangement, and which can be suspended from an electrician's belt.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring first to FIGS. 1 through 5, the basic component of the lighting arrangement embodying the invention comprises a luminaire, generally indicated at 10, arranged for mounting on a suitable supporting post

such as, for example, the top section 11 of a stand on the stud on a clamp. However, luminaire 10 can be mounted on any other type of post, as will be explained more fully hereinafter.

Luminaire 10 includes a reflector 15 which has a highly reflecting inner surface and has, in cross section and as best seen in FIG. 4, a shallow W-shaped configuration. Thus, the inner reflecting surface of reflector 15 has an inverted V-shaped rectilinear ridge 16 extending along its longitudinal center line, and wings 17 extend outwardly from each edge of ridge 16 and conjointly define a shallow vee which opens in the opposite direction from the opening of ridge 16. Respective lips 18 extend outwardly from the outer longitudinal edge of each wing 17. The shallow W-shape of the reflecting surface of reflector 15 forms a highly efficient light reflector when associated with a properly positioned lamp, as described more fully hereinafter.

Reflector 15 is secured by bolt and nut or rivet assemblies 21, 21' to a substantially rectangular in plan portion 22 of housing 20 having upwardly bent ends 23. Each upwardly bent end 23 mounts an electrical socket 24, and sockets 24 serve to mount and electrically connect an elongated tubular lamp 25 which is aligned with the V-ridge 16 of reflector 15. For a purpose to be described, the two opposite edges of one of the bent ends 23 of inner housing 20 are formed with notches 26.

Reflector 15 has operatively associated therewith a pair of angularly adjustable reflector doors or wings 30, one adjacent each longitudinal edge of reflector 15. Each reflector door 30 includes a highly efficient reflector sheet 27 riveted or otherwise secured to a corrugated backing plate 28. Each backing plate 28 has a pair of longitudinally spaced hinge clips 29 secured thereto and engaging a rectilinear portion of an associated hinge rod 31 having a pair of bent ends 32 terminating in eyes 33 through which bolts 21 extend. The inner edge of each reflector sheet 27 is curved around the rectilinear portion of the associated hinge rod 31. Additionally, each reflector door has secured thereto, to project from the left end thereof as viewed in FIG. 1, a bent wire catch 34 each having a bent end normally engageable in a respective notch 26 to maintain the associated doors 30 in a preselected angular position. The doors 30 may be otherwise angularly adjusted by withdrawing the ends of clips 34 from notches 26. Reflector doors 30 enable adjustment of the angle of divergence of the reflected light to any value desired and provide intensification or brightness control.

An outer housing 35 is secured to inner housing 20 by nuts 21" secured on bolts 21 extending through apertures in a rectangular and planar portion 36 of housing 35. Bolts 21' serve as spacers spacing portions 22 and 36 of the housings 20 and 35, respectively, from each other to provide a space for cooling air flow. It will further be noted, particularly from FIGS. 2 and 4, that spaces for the flow of cooling air exist between reflector 15 and inner housing 20. Outer housing 35 has a bent end 37 at its left end, as viewed in FIG. 2, and end 37 extends in substantially parallel spaced relation to the left bent end 23 of inner housing 20. For a purpose to be described, a knob 38 is secured to bent end 37 of housing 35.

The right end of outer housing 35 extends outwardly beyond the right bent end 23 of housing 20 to form, in cooperation with the right bent end 23 of inner housing 20, a housing type bracket, generally indicated at 40.

For this purpose, a planar portion of outer housing 35 is bent upwardly, as at 41, at a small angle, and then sharply upwardly to form an end wall 42. The interior of bracket 40 is enclosed by a wall member 43 which is substantially U-shaped in transverse cross section and which fits over right end 23 of inner housing 20 and end 42 of outer housing 35. The base or bight 44 of wall member 43 is substantially flat and planar.

The sloping wall 41 of outer housing 35 has an aperture in which is secured a grounded type electrical connector 45. Leads 46 and 46' connect connector 45 to the sockets 24, and it will be noted that conductor 46 extends beneath the V-ridge 16 of reflector 15 from the right end to the left end of inner housing 20. Electrical connector or receptacle 45 is cooperable with a mating electrical connector 47 on a grounded appliance cord 48, as shown in FIG. 6, and the opposite end of appliance cord 48 is provided with a grounded type plug (not shown) for engagement in a grounded outlet receptacle.

To receive the mounting portions or elements of additional components of the lighting arrangement, walls 41 and 44 of bracket 40 are formed with cooperating aperture means 50 and 50', respectively. As the two aperture means are identical, only aperture means 50 will be described in detail. Aperture means 50 comprises a rectangular slot 51 which intersects, along a chord thereof, a circular slot or aperture 52. From FIGS. 2 and 8, it will be noted that the mounting aperture means 50 and 50' are reverse relative to each other, so that rectangular slot 51 is directly aligned with rectangular slot 51', but circular slot 52 is diagonally opposite circular slot 52'. The purpose of this will be made apparent hereinafter but, at this time, it should be mentioned that rectangular slots 51 and 51' receive flat mounting straps on components of the lighting arrangement and circular slots 52, 52' receive circular cross section mounting rods such as provided on an "umbrella." In order to prevent possible damage to, or contact with, electrical receptacle 45 and its terminals during insertion of mounting straps or rods through housing bracket 40, a channel-shaped bracket may be secured to the outer surface of bent end 23 of the right end of inner housing 20, and extends in protecting relation over electrical connector or terminals 45. To firmly secure mounting means for additional components, inserted through bracket 40, a clamping screw 54 is threadedly engaged through one side wall of U-shaped wall member 43, as best seen in FIG. 1 and FIG. 10.

Luminaire 10 is completed by a stand fitting, generally indicated at 55, arranged to engage a mounting post, such as the post 11, and further constructed and arranged to have additional mounting post support means assembled therewith for stacking of additional luminaires, for example. Clamp 55 includes an outer, relatively deep channel member 56 having a V-shaped base, and an inner channel-shaped member 57 which is flush with member 56 at one end and projects beyond member 56 at the opposite end. The two channels are riveted to each other to form a rigid unit. Outer channel member 56 pivotally receives a pivot bolt 58 extending through the end wall 42 of housing bracket 40 and having a nut 58' threaded on its outer end. Frictional spacer means 59 are interposed between wall 42 and channel 56 and between channel 56 and nut 58', and a spacer sleeve 59' surrounds bolt 58 within chan-

nel 56. When clamp 55 is secured to a supporting post or the like, luminaire 10 and its bracket 40 may be angularly adjusted relative to the post by turning knob 38. The clamp or stand fitting 55 permits relative angular adjustment of luminaire 10 through one or more complete turns without entanglement of the current supply leads to the lamp, as compared with known lamp mountings which generally have a range of adjustment of very substantially less than 360°.

For mounting purposes, post 11, as well as other mounting posts described hereinafter, are provided with portions of reduced cross section, such as indicated at 12 for the post 11, as best seen in FIG. 5. These reduced cross section portions are of relatively short axial length. To mount luminaire assembly 10 on a post such as the post 11, inner channel 57, adjacent that end which is flush with the corresponding end of outer channel 56, has a clamping screw 61 threaded through its base to engage the reduced cross section portion 12 of post 11. By slipping clamp 55 over the upper end of post 11 and tightening screw 61, luminaire 10 is firmly supported on post 11. For a purpose to be described hereinafter, inner channel 57, adjacent its projecting end, is apertured to receive a reinforcing grommet 62. The purpose of the V-shaped base of the channel member 56 is to hold undersize stand posts securely when the latter are forced into the "V" by a set screw such as 61.

Clamp 55 is also arranged to have other components mounted thereon and, for this purpose, a substantially channel-shape receptacle 60 is secured to the outer surface of the outer leg of outer channel member 56 of clamp 55. Receptacle 60 has securing flanges 63 extending from its legs, for securing the receptacle to channel member 56, and its base has, adjacent one end, an eyelet 64 for a purpose to be described.

Receptacles, such as 60, are arranged to receive flat tongues with forked ends on additional components of the lighting arrangement or on mounting means for such additional components. One such mounting means is illustrated in FIGS. 1 and 3 as a relatively stiff flexible shaft 65 having metal reinforcing sleeves 66 tightly embracing its opposite ends. Each reinforcing sleeve 66 is tightly gripped by clamping legs 67 of a tongue 68 formed with a slot 69 in its outer end. When tongue 68 is slid into a receptacle 60, its slot 69 engages the eyelet 64 of the receptacle to securely hold the tongue engaged in the receptacle. This is best seen in FIG. 3 which illustrates tongue 68 as engaged in the receptacle 60 centered at one edge of a barn door 70. The receptacles 60 on all components of the lighting arrangement are identical in construction and operation. Shafts 65 may have any desired length.

FIG. 1 illustrates a relatively large barn door 70 as mounted on the luminaire 10 by means of the flexible shaft 65. The tongue 68 on one end of flexible shaft 65 is engaged in the receptacle 60 on the clamp 55, and the tongue 68 on the opposite end of shaft 65 is engaged in a tongue 60 on barn door 70. Due to the flexibility or bendability of the shaft 65, the barn door 70 may be oriented to any particular position or relation with respect to reflector assembly 10. The barn doors 70 are generally rectangular sheets of metal, and may be various sizes. In order to provide flexibility in operation, the barn doors, as well as the flags, 70 are constructed so that two or more barn doors or flags may be secured to each other to provide a barn door of a de-

sired size. For this purpose, two adjacent edges of each barn door 70 are provided with the receptacles 60, while the other two adjacent edges are provided with slotted tongues 71. Each tongue 71 is formed with a pair of lips 72 by means of which it is secured to the associated barn door or flag, and with a tongue portion 73 extending from the lip 72 toward the edge of the barn door or flag, tongue portion 73 having a slot 74 therein cooperable with an eyelet 64 of a receptacle 60. The receptacles 60 on each barn door or flag may be provided on only one surface or may be provided on both surface of the barn door.

The lighting arrangement of the invention also includes reflectors which, in plan, are substantially identical with the barn doors 70. Each reflector has one bright or specular surface, and one embossed or patterned diffuse surface. The reflectors are made of a light metal, suitably treated to provide the specular and diffuse surfaces, so that they may be readily bent or curved by hand. The intensity and general control of the reflected light can be effected by such bending. Otherwise, the reflectors are generally similar in outline and plan to the barn doors 70 except that they have the receptacles 60 only on one pair of opposite edges.

Another component of the lighting arrangement, which can be readily mounted on the luminaire 10, comprises a gel or filter mounting frame 75, illustrated in FIGS. 6-9, and which can be readily folded to a compact transport or storage condition. Frame 75 is rectangular in its erected position, and comprises a pair of parallel and equal length angle bars 76, each having a transverse leg 77 pivotally connected to each end thereof, the legs 77 at corresponding ends of the two bars 76 being equal in length and being pivotally interconnected at pivots 78. The pivots 78 interconnecting each pair of legs 77, as well as the pivots 78' interconnecting legs 77 to angle bar 76, are provided with frictional means tending to maintain the parts of the frame in angularly adjusted position. Furthermore, each pivot 78', which may comprise a bolt and nut with interposed friction washers or the like, further serves to pivotally secure a gel holding spring clip 80 so that there are four clips 80, one at each corner of a frame 75. Clips 80 serve to mount a selected gel or filter 81, such as a sheet or transparent or translucent plastic material which may be colored, on frame 75 when the latter is erected, as shown in FIG. 6.

For the purpose of mounting gel frame 75 on luminaire 10, one angle bar 76 of gel frame 75 has pivotally secured thereto, by a frictional pivot 82, a substantially flat bar or strap 83 which may be offset intermediate its ends. Bar or strap 83 is mounted on luminaire 10 by inserting it through rectangular slots 51 and 51' of housing bracket 40. Strap 83 may be securely held in position by thereafter tightening clamping screw 54. FIG. 9 illustrates frame 75 in a partially collapsed position, and it will be noted that, when fully collapsed, frame 75 has a width equal only to twice the width of a leg of each angle bar 76, so that the frame is readily transportable and storable.

FIGS. 10 and 11 illustrate how several luminaires may be stacked and supported, as an assembly, on a single main supporting post 11. For this purpose, there are provided spacer members 85, having auxiliary support posts, which generally resemble post clamps 55 except as will now be described. Each spacer member

comprises an outer channel 86 secured to an inner channel 87 which extends, at one end, beyond outer channel 86. However, in place of pivot bolt and nut 58, 58', each member 85 has a pivot bolt 88 extending through the opposite side walls of outer channel 86 and through a diametric bore at the inner end of an auxiliary post 90 projecting beyond the outer end of inner channel 87 and having a reduced cross section portion 91. Post 90 is permanently secured by a nut 88' on bolt 88, or may be secured by rivets. A second bolt 92 extends through the aperture in inner channel 87, normally provided for a grommet 62 in clamp 55, and is threaded into a second transverse bore 93 in post 90, bore 93 extending perpendicularly to bolt 88. A clamping screw 84 is threaded through the base of inner channel 87.

To stack the luminaires, a first luminaire 10 is mounted directly on the upper end of post 11, in the manner described for the arrangement shown in FIG. 1. A second luminaire 10' then has its stand fitting or clamp 55 telescoped onto the upwardly projecting inner channel 57 of clamp 55 of first luminaire 10, with its set screw 61 engaged into grommet 62 of the lower or first clamp 55. The first and second luminaires 10 and 10', respectively, extend in opposite directions relative to the stand post 10. That is, one extends to the right and the other to the left. However, if a third and fourth luminaire are to be used in the stack, it is necessary to provide sufficient clearance between the first and third luminaire and between the second and fourth luminaire to allow for free swinging movement of the reflector doors or wings 30 for adjustment of the vertical angle of the light.

For this purpose, a spacer member 85 has the recess formed between its inner and outer channels telescoped over the inner channel 57 of the clamp 55 of the second luminaire 10' so that the clamping screw 84 is aligned with grommet screw 62, after which this clamping screw is tightened. A third luminaire 10'' is then mounted on the upper end of post 90 in the same manner as the first luminaire 10 is mounted on the upper end of post 11, with its clamping screw 61 engaged with the reduced cross section portion 91 of auxiliary post 90. A fourth luminaire 10''' is then mounted on the upwardly projecting portion of the inner channel 57 of the clamp 55 of the third luminaire 10'', so that the third and fourth luminaires extend in opposite directions, or one to the right and one to the left, relative to the post 90 of spacer member 85. The procedure is repeated, using a spacer member 85 between each pair of luminaires, until the required number of luminaires have been stacked.

Each of the luminaires as thus stacked may have additional components mounted thereon as indicated at 65 in FIG. 10. It may be noted that both legs of outer channel 86 of each spacer member 85 have secured thereto receptacles 60 for mounting additional components.

For mounting components of the lighting arrangement, such as flags or reflectors, on a main support post, on a pipe, or on furniture, rather than on a luminaire, a further component of the lighting arrangement comprises a spring clamp 95 arranged to grip a support such as a post 11. A plate 96 is pivotally secured to one arm of spring clamp 98 by a friction type pivot 97, so that plate 96 is angularly adjustable in a plane parallel to the arm of spring clamp 95. A receptacle 60, of the

type already described, is riveted or otherwise secured to the outer surface of plate 96 so as to have a snap-in engagement with a slotted tongue 71 on a barn door or flag 70 or on a flexible shaft 65.

Luminaire 10 is also designed to mount an umbrella 100. These umbrellas are used to soften the light during photography. As shown in FIGS. 14 and 15, each umbrella 100 includes an elongated circular cross section stem 101 which is essentially identical with the handle of an umbrella so that the ribbed fabric section 102 of the umbrella may be erected and collapsed at will. To mount an umbrella 100 in a luminaire 10, all that is necessary is to erect the umbrella portion 102 and then to insert stem 101 through circular apertures 52 and 52' of the aperture means 50 and 50', respectively. To maintain the umbrella in position, clamping screw 54 may be tightened. When dismantled from the luminaire and collapsed, the umbrella 100 is easily transported or stored.

It should be noted that umbrella 100, as well as gel frame 75, when mounted in slots 50, 50', remain in centered relation with respect to luminaire 10 during any adjustment of the luminaire relative to its mounting or support. The "angling" of umbrella 100 relative to bracket 40 brings the umbrella over the center of the light source.

It may be that no main support, such as a stand having a post, is available at the location where the pictures are to be taken, or cannot be used because of space limitations or stands interfering with compositions, and, in such case, another auxiliary post member, in the form of a C-clamp 105, is provided as illustrated in FIG. 16. Auxiliary post member 105 may be mounted on a pipe, beam, ladder, shelf, rod, such as a curtain rod, the back of a chair, a door, or any surface which can be adequately clamped. As illustrated, post member 105 is supporting a reflector 70, through the medium of flexible shaft 65, as well as a luminaire 10 which is only partly illustrated. Post member 105 comprises a pair of C-shaped legs 106 interconnected at one end by a web or bight 107 provided with a threaded grommet or nut 108 through which extends a clamping screw 110 operable by a handle 111 and having a seating member 112 adjustably mounted at its free end. The end of each leg 106 adjacent seating member 112 is notched, as indicated at 113, whereby clamp 105 may be secured on a rod or the like. Each leg has secured thereto a pair of receptacles 60 which are arranged at right angles to each other. A bolt 114 extends through aligned apertures adjacent the free ends of legs 106 and serves as a pivot for an auxiliary mounting post 115 having a reduced cross sectional area portion 116 adjacent its outer end. A wing nut 117 secured to bolt 114 serves to clamp post 115 in any one of four positions, of which only two positions are indicated. The inner end of post 115 is internally threaded for attaching microphones or a fitting such as the fitting 120 of FIGS. 17 and 18.

The bases of legs 106 as well as those portions having the notches 113 may be longitudinally recessed to additionally provide a firm grip on post 115. For exemplary purposes only, clamp 105 is illustrated as secured to the back 118 of a chair or the like, which could also represent a door or a window frame. However, by virtue of the provision of the notches 113, the clamp can just as easily be secured on any available rod, pipe, or the like. The auxiliary post 115 may serve to mount a luminaire

10, and the receptacle 60 may serve to mount any other component of the lighting arrangement for use with the luminaire 10.

In some cases, it may be desirable to mount a camera or the like above a reflector assembly, and for this purpose, there is provided a device 120 as illustrated in FIGS. 17 and 18. Device 120 is generally similar, in construction, to clamps 55 and 85, although differing in some details. Thus, it comprises an outer channel 121 embracing and secured to an inner channel 122 to provide a recess therebetween, the two channels being riveted together. A clamping screw 123 is inserted through the base of inner channel 122.

A bolt and nut arrangement 124 extends through the opposite legs of channel 121 adjacent one end thereof and serves as a pivot for a U-shaped bracket 125 having a base 126. Base 126 has a central aperture through which there extends the threaded stem of a mounting screw 127 of the type usually used to mount photographic cameras on the support plates on tripods, for the purpose of threading into a threaded recess in the camera to mount the camera on device 120. Screw 127 also fits the internal thread in the inner end of post 115 of device 105. The device 120 is mounted on a post, such as the post 11 or auxiliary post 90 or 115, in the same manner as previously described, by screwing in screw 123 to engage the reduced cross section portion of the post. The knurled head of screw 127 has a threaded recess to fit a threaded stud on the mounting plate of a camera tripod. A camera or any other piece of apparatus, having a threaded aperture to receive the screw 127, and as indicated schematically at 128 in FIG. 17, may be mounted on U-shaped bracket 125 and angularly adjusted to any position by virtue of the bolt and nut pivot 124, 124'. Receptacles 60, as previously described, are mounted on each outer leg of outer channel 121 for the purpose of mounting other components of the lighting arrangement.

The versatility of the lighting arrangement of the invention is enhanced further by the provision of a component for mounting other components, such as a luminaire, on the upper edge of a door, which may be either opened or closed, or on a wall or the like, by using pegs, nails, or tape. Such an arrangement is illustrated at 130 in FIGS. 19 and 20. The hanger 130 comprises an angle 131 having pivots 132 at each end thereof each pivotally connecting, to one leg of angle 131, a respective rectangular C-shaped hook 133 adapted to engage over the upper end of a door, as illustrated in FIG. 19. The other leg of angle 131 has elongated bars 134 pivoted to each end thereof and each having an aperture 136 at its outer end. By virtue of the apertures 136 in bars or straps 134, angle bar 131 may be hung from a pair of nails or pegs in a wall or the like, as illustrated at the left in FIG. 20A, or may be mounted on a wall or the like by taping straps 134 to the wall, as shown at the right in FIG. 20A. When the device is suspended over the upper edge of a door or the like, as shown in FIG. 20, the bars or straps 134 prevent the unit from falling off the door and, when the unit is mounted as shown in FIG. 20A, the hooks 133 are turned toward each other and also act to stabilize the unit by engaging the wall.

A friction type pivot 137 at the center of the horizontal leg of angle 131 extends through an eye 139 at the inner end of a rod 138 having a second eye 139' at its outer end perpendicular to eye 139. A second pivot

141 extends through eye 139' and through an eye 142 at the lower end of a second rod 143, pivot 141 also being a frictional pivot. The upper end of rod 143 has secured thereto an auxiliary mounting post 135 which is the same as those previously described and on which a luminaire 10 may readily be mounted whether the hanger 130 is hung on a door or suspended on a wall.

The purpose of the parts 138 and 143 of the suspension unit 130 is to extend around door jambs and moldings so that the unit may be used on the inside or outside of a room. They also extend the unit up and provide side adjustments. When unit 130 is inverted, part 143 is inverted 180°, for use with nails or tape, and brackets 133 are turned in 90° to provide bottom support against the leverage.

The luminaire 10 may also be manually supported on a handle 140 shown in FIG. 21 as having an auxiliary post portion 144 on its upper end on which a reflector assembly 10 may be clamped. The handle 140 is useful for news photography and the like.

For the purpose of transporting the compact components of the lighting arrangement, while leaving a photographer's or electrician's hands free, as when climbing a ladder, a carrying case 145 is provided as shown in FIG. 22. This carrying case 145 is formed of fabric, such as heavy canvas, and has a main compartment 146 on the outer wall of which are two auxiliary compartments 147. A pair of straps 148 are secured to extend along the outer surface of the back wall 151 of compartment 146, and have their ends secured to the inner surface of back wall 151 to form loops 150 whereby case 145 may be suspended from the belt of a photographer. The free lower ends of straps 148 extend beneath the bottom wall of case 145 and have gripping arrangements 152, or snap fasteners, on their inner surfaces cooperable with mating gripping arrangements, or snap fasteners, secured on the outer walls 154 of the auxiliary compartments 147, whereby straps 148 may be readily adjusted in length.

In lighting a "side" or vertical wall, in order to achieve uniform illumination, it is necessary generally to light the "side" from both the top and the bottom. With the luminaire 10 of the present invention, uniformity of illumination over a "side," from top to bottom, can be achieved by proper angular adjustment of the reflector doors or wings 30 which are hinged to the luminaire.

In the art of interior photography, the term "barn door" is generally considered to mean a device that is attached to the light or luminaire itself. By contrast, a "flag" or "cutter" is understood to be a device used for producing shadows or the like, and one which is mounted and positioned separately from the light source or luminaire. However, both a "barn door" and a "flag" are designed to perform essentially the same function, although differing in their specific relationship to the light source, or their specific positioning relative to the light source.

From the foregoing, it will be readily apparent that a novel and improved portable lighting arrangement for interior photography has been provided including a novel luminaire as a main component and auxiliary components which can be compactly folded for storage in case 145. Luminaire 10, when the reflector doors are folded inwardly, forms a compact component which can be readily carried in one hand. The lighting ar-

rangement can be used at any location, with or without a tripod or support stand, and has mounting means for providing mounting posts which can be secured to any support surface available such as the back of a chair, the top of a door, a wall, a curtain rod, a pipe, and other structural elements.

While specific embodiments of the invention have been shown and described in detail to illustrate the application of the principles of the invention, it will be understood that the invention may be embodied otherwise without departing from such principles.

What is claimed is:

1. A readily portable lighting arrangement for photographic work comprising, in combination, a luminaire, including a relatively elongated reflector, as a main component; lamp mounting and connection means on said luminaire for mounting a lamp in operative relation with said reflector; and luminaire mounting means secured to said reflector, and arranged to clampingly engage a mounting post for adjustably mounting the luminaire thereon; said luminaire mounting means being formed with aperture means adapted to disengageably receive mounting elements of additional lighting arrangement components; said luminaire including a substantially rectangular panel having a highly reflecting outer surface and constituting said reflector; an inner housing member including a substantially rectangular planar base and first and second end walls bent outwardly from said base; means mounting said reflector panel on said base with at least portions of said reflector panel spaced from said base to provide passages for flow of cooling air between said panel and said base; respective lamp sockets mounted on each of said end walls and extending toward each other in alignment to receive a tubular lamp; an outer housing member having a substantially rectangular planar base extending parallel to the base of said inner housing member and having an outwardly extending wall extending in spaced parallel relation to said first end wall of said inner housing member; and means securing said housing member bases to each other in spaced parallel relation to provide a further passage for flow of cooling air between said inner and outer housing members.

2. A readily portable lighting arrangement, as claimed in claim 1, in which said reflector panel has a shallow W-shape transverse cross section constituted by an inverted V-shape ridge extending longitudinally and centrally of said panel, in alignment with a lamp mounted in said sockets, and wings extending transversely outwardly from the edges of said ridge and extending outwardly at an angle relative to said base of said inner housing member; the interior of said inverted V-shape ridge forming a conduit for a conductor connected to the lamp socket on said first end wall of said inner housing.

3. A readily portable lighting arrangement, as claimed in claim 1, including a pair of reflector doors operatively associated with said reflector panel, each reflector door comprising a substantially rectangular panel having a substantially planar highly reflecting surface; respective hinged rods extending parallel to each longitudinal edge of said inner housing base; and means hingedly mounting each reflector door on a respective hinged rod for angular adjustment relative to said reflector panel to control the angular extent of the light reflected from said reflector panel.

4. A readily portable lighting arrangement, as claimed in claim 3, including notches formed in each lateral edge of said first end wall of said inner housing member; and respective wire latch means on each reflector door releasably engageable with the associated notch to maintain said reflector doors in a preselected angular relation to said reflector panel.

5. A readily portable lighting arrangement, as claimed in claim 1, in which said base of said outer housing member has a sloping wall portion extending outwardly beyond said second end wall of said inner housing member and sloping outwardly, said sloping wall terminating in a third end wall extending in substantially spaced parallel relation to said second end wall of said inner housing member; a substantially rectangular U-shape cover, having a substantially flat base, fitting over said second and third end walls and having outer edges substantially congruent with the outer surface of said sloping wall; said second and third end walls, said sloping wall and said cover defining a bracket forming part of said luminaire; and an electrical connector mounted in an aperture in said sloping wall and electrically connected to each of said sockets; said sloping wall and said base of said cover being formed with said aperture means.

6. A readily portable lighting arrangement, as claimed in claim 5, in which said mounting means further includes a clamp arranged to engage a mounting post; means mounting said clamp on said third end wall for frictionally restrained angular adjustment relative to said housing bracket; a luminaire adjusting knob fixedly secured to the first mentioned outwardly projecting end wall of said outer housing member; said clamp being formed to telescope over a mounting post; and a clamping screw threaded through a wall of said clamp and arranged to clampingly engage a mounting post.

7. A readily portable lighting arrangement, as claimed in claim 6, in which said clamp comprises a relatively deep outer channel; a relatively shallow inner channel secured within said outer channel with a base in spaced relation to the base of said outer channel and with the inner edges of the legs of the two channels being substantially coplanar; the bases of said inner and outer channel and the legs of said outer channel constituting a clamp recess arranged to telescope over a mounting post; said clamping screw being threaded through the base of said inner channel; said inner channel, at one end, extending outwardly beyond said outer channel to form a mounting projection; and a component locating means in the base of said inner channel adjacent the outer projecting end of the latter.

8. A readily portable lighting arrangement, as claimed in claim 7, in which said outer channel has a V-shape base whereby an undersize mounting post may be firmly secured in said clamp by engagement within said V-shape base and engagement by said clamping screw.

9. A readily portable lighting arrangement, as claimed in claim 7, in which said additional lighting arrangement components include plural auxiliary mounting post components; each auxiliary mounting post component including a clamp component comprising a relatively deep outer channel, a relatively shallow inner channel inserted in said outer channel and secured thereto with the bases of said inner and said outer channels being spaced from each other and with the outer

edges of the legs of said channel being substantially flush, and with said inner channel extending beyond said outer channel at one end; the bases of said inner and outer channel and the legs of said outer channel defining a clamping recess engageable over the projecting portion of the inner channel of said first-mentioned clamp; a clamping screw threaded through the base of the inner channel of said auxiliary post component and engageable with the locating means on the inner channel of said first-mentioned clamp; and an auxiliary mounting post inserted into the recess defined by said inner and outer channels of said auxiliary mounting post component and secured to the base of the inner channel thereof and to the legs of the outer channel thereof; whereby, by mounting an auxiliary mounting post component on said first-mentioned clamp and by "stacking" said auxiliary mounting post components, plural luminaires may be stacked.

10. A readily portable lighting arrangement, as claimed in claim 9, including at least one substantially elongated and rectangular snap-in receptacle secured on an outer surface of said outer channel.

11. A readily portable lighting arrangement, as claimed in claim 10, in which said additional lighting arrangement components include an elongated relatively stiff but bendable flexible rod having, at each end thereof, a snap-in flat tongue releasably engageable in a snap-in receptacle; whereby the tongue on one end of said rod may be disengageably secured in such receptacle; said additional lighting arrangement components further including plural substantially flat panels constituting flags for performing a shadowing function in the lighting arrangement; each flag having secured thereto at least one snap-in receptacle identical to the snap-in receptacles on said outer channel, for cooperation with the snap-in tongue on the opposite end of said bendable rod; each flag further having secured thereto at least one snap-in tongue engageable in a snap-in receptacle on another flag; whereby plural flags may be interconnected to form a flag assembly of a preselected overall area, with said flag assembly being disengageably mounted on said bendable rod and adjustable relative to said luminaire by bending of said rod.

12. A readily portable lighting arrangement, as claimed in claim 10, including a spring biased clamp having a pair of pivotally interconnected arms having cooperating clamping ends arranged to grip a mounting surface; a plate pivotally connected to at least one of said clamp arms; and a substantially rectangular snap-in receptacle; identical with said snap-in receptacles on said first-mentioned clamp, secured on the outer surface of said plate to disengageably receive a tongue on a flag; whereby said flags may be mounted on any suitable supporting surface for cooperation with said luminaire.

13. A readily portable lighting arrangement, as claimed in claim 10, in which said additional lighting arrangement components include a screw-operated C-clamp arranged to grip a supporting surface; an auxiliary mounting post pivoted to said C-clamp for mounting of a luminaire on said clamp; and at least one substantially rectangular snap-in receptacle secured on an outer surface of said C-clamp for snap-in mounting of further components on said C-clamp.

14. A readily portable lighting arrangement, as claimed in claim 10, in which said additional lighting arrangement components include an auxiliary mount-

ing component arranged to telescope over the projecting portion of the inner channel of said clamp; a clamping screw threaded through a wall of said additional mounting component and engageable with said inner channel of said clamp; a substantially rectangular U-shaped bracket pivotally secured to an end of said auxiliary mounting component; and a mounting screw extending rotatably through the base of said U-shaped bracket and having a thread on its outer end engageable in a threaded recess in a camera and the like, and an operating knob on its inner end; and at least one substantially rectangular snap-in receptacle identical with said snap-in receptacles on said clamp, on the outer surface of said additional mounting member.

15. A readily portable lighting arrangement, as claimed in claim 5, in which each aperture means in said sloping wall and in said cover base comprises a substantially rectangular slot extending transversely relative to said luminaire and intersecting a circular slot chordally; the relative orientation of the two aperture means being such that the two rectangular slots are aligned with each other in a direction perpendicular to said cover base, and the two circular slots are aligned with each other in a direction at an angle to a perpendicular to said cover base; said rectangular slots being adapted to disengageably receive rectangular mounting tongues of additional lighting arrangement components, and said two circular slots being arranged to disengageably receive circular cross section mounting elements of at least one additional lighting arrangement component; and a clamping screw threadedly engaged through a wall of said cover and arranged to engage and clamp mounting elements inserted through said aperture means.

16. A readily portable lighting arrangement, as claimed in claim 15, in which said additional lighting arrangement components include a substantially rectangular gel mounting frame; retaining means on said mounting frame arranged to secure a gel in position thereon; and a relatively elongated substantially rectangular cross section tongue pivotally secured at one end to said mounting frame; said tongue being engageable through the rectangular slots of said housing bracket for mounting of said mounting frame on said luminaire.

17. A readily portable lighting arrangement, as claimed in claim 16, in which said gel mounting frame includes a pair of relatively elongated frame members of substantially angular cross section; respective pairs of pivotally interconnected links interconnecting corresponding ends of said frame members, whereby said gel frame may be collapsed to juxtapose said frame members; said tongue being pivotally secured to one of said relatively elongated frame members at substantially the center thereof; said retaining means being pivotally mounted at the corners of said gel frame.

18. A readily portable lighting arrangement, as claimed in claim 15, wherein said additional lighting arrangement components include a light-softening umbrella having a relatively elongated circular cross section stem which, when said umbrella is erected, may be inserted through said circular apertures in said housing bracket for mounting of said umbrella on said luminaire.

19. A readily portable lighting arrangement for pho-

tographic work comprising, in combination, a luminaire, including a relatively elongated reflector, as a main component; lamp mounting and connection means on said luminaire for mounting a lamp in operative relation with said reflector; and luminaire mounting means secured to said reflector, and arranged to clampingly engage a mounting post for adjustably mounting the luminaire thereon; said luminaire mounting means being formed with aperture means adapted to disengageably receive mounting elements of additional lighting arrangement components; said additional lighting arrangement components including a support assembly for said luminaire; said support assembly comprising an auxiliary mounting post cooperable with said mounting means of said luminaire; hook means articulated to said support assembly for engagement over the upper end of a door and the like for suspending said support assembly on the door; and substantially flat strap means articulated to said support assembly and each having an aperture in its free end whereby said support assembly may be suspended from pegs, nails and the like in a vertical surface, or by taping said strap means to said vertical surface; said support assembly further comprising a relatively elongated angle bar; said hook means including a pair of hooks pivotally secured to one leg of said bar adjacent the respective ends thereof for engagement over the upper end of a door and the like for suspending said angle bar on the door; said strap means including a pair of straps pivotally secured on the other leg of said angle bar adjacent respective opposite ends thereof and each having an aperture in its free end whereby said angle bar may be suspended from pegs, nails and the like in a vertical surface, and by taping said straps to the vertical surface; a first rod having a pair of eyes at opposite ends thereof with their axes at right angles to each other; a first pivot connecting one eye of said first rod to said angle bar adjacent its center; a second rod having an eye at one end thereof; a second pivot interconnecting the eye of said second rod and the other eye of said first rod; both of said pivots frictionally resisting relative movement of said rods; said auxiliary mounting post comprising the free end of said second rod.

20. A readily portable lighting arrangement for photographic work comprising, in combination, a luminaire, including a relatively elongated reflector, as a main component; lamp mounting and connection means on said luminaire for mounting a lamp in operative relation with said reflector; and luminaire mounting means secured to said reflector, and arranged to clampingly engage a mounting post for adjustably mounting the luminaire thereon; said luminaire mounting means being formed with aperture means adapted to disengageably receive mounting elements of additional lighting arrangement components; said additional lighting arrangement components including plural reflector panels each having a reflecting surface and being manually bendable to reflect light in a desired pattern; interengageable snap means on said reflector panels providing for interconnection of said panels to each other; and a relatively elongated flexible shaft formed to have a snap engagement with said panels, at one end, and having an opposite end disengageably receivable in said aperture means.

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