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BOOM LIGHT

Filed March 12, 1947 2 Sheets-Sheet 1

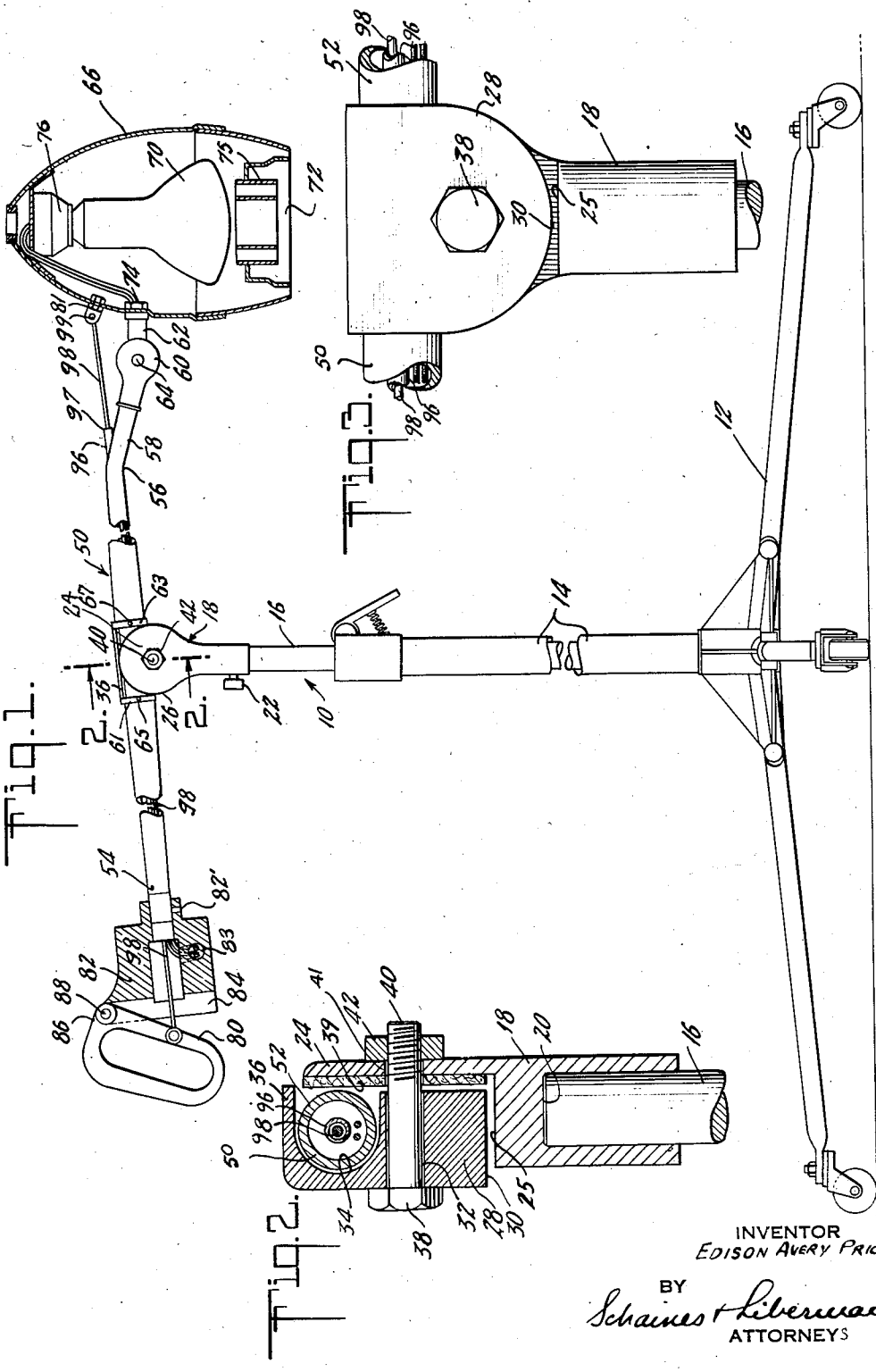


Fig. 1.



Fig. 3.



Fig. 2.

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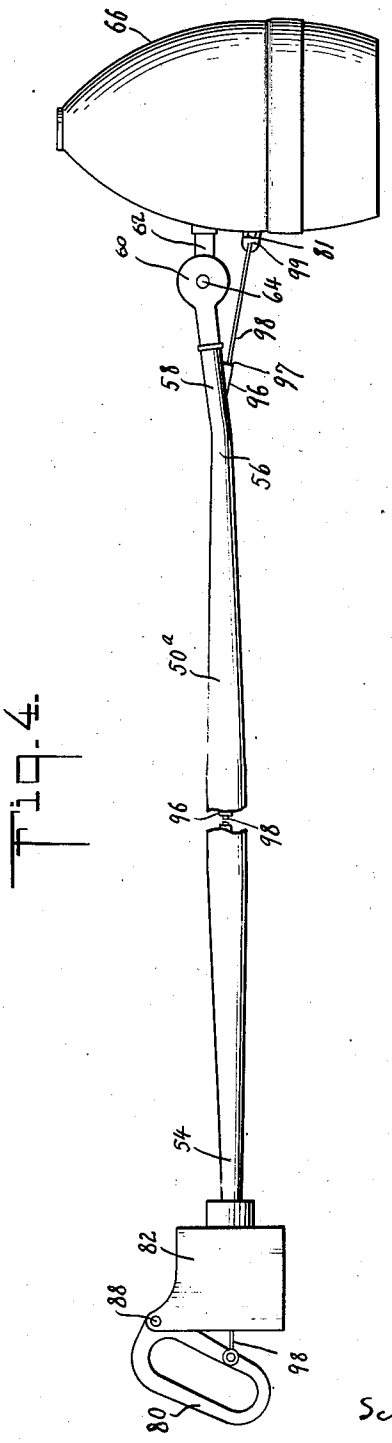



Fig. 4.

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## BOOM LIGHT

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5 Claims. (Cl. 248—124)

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The present invention relates generally to the field of lighting. In particular, the present invention relates to devices for supporting a light on an elongated rod, and for directing same from a point spaced from the light source.

Devices of this type have been known in the art for some time, and are commonly referred to as "boom" lights, particularly when mounted on an upright support. Most of the conventional boom lights are rather clumsy and awkward devices, with the light source housing secured to one end of the rod or boom, and adjustable only when the rod is lowered within reach each time it is desired to change the throw of the light rays.

The main object of the present invention is the provision of a boom light device of the character described, so constructed that all movement of the light source housing may be directed from a single point remote from the housing.

Still another object of the present invention is the provision of a boom light so constructed that the light source housing may be raised or lowered, tilted back and forth about its point of securement to the boom, and rotated from a point at the opposite end of the boom rod, and in which all of these movements may be combined.

Still another object of the present invention is the provision of a boom light of the character described which comprises a hollow elongated tubular rod, a tiltable hand control at one end thereof, a tiltable light source housing at the other end of the rod, means extending from the control to the housing operating through the hollow rod so that by application of turning movement to the handle, the rod and the housing may be rotated in the same direction, and tilting movement of the handle in a straight line direction tilts the housing in the same or in the opposite straight line direction.

Still another object of the present invention is the provision of a device of the character described which comprises a boom light having an elongated hollow tubular rod, a counterweight at one end, a light source housing at the other end, a manual control secured to the counterweight, and means to support the rod upwardly of the ground, whereby upon proper actuation of the handle, the light source housing may be raised or lowered, rotated in either direction, and tilted back and forth along a straight line path in a single plane.

Still another object of the present invention is the provision of a boom light which comprises an elongated rod, a support therefor, the rod being rotatably and pivotally mounted with respect to

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the support, a light housing pivotally secured to one end of the rod, a control handle pivotally secured to the other end of the rod, a cable extending through the rod, actuation of the handle at one end of the rod causing movement of the housing in response thereto, the housing being thereby movable up and down, rotatable with the rod, and tiltable about its connection to the housing.

In the drawings annexed hereto, and forming a part hereof,

Figure 1 is a side elevational view, partly broken away and partly in section of one form of device constructed according to and embodying my invention;

Fig. 2 is a vertical section on the line 2—2 of Fig. 1;

Fig. 3 is an elevational view of a portion of the other side of the device illustrating the swivel block construction device opposite that illustrated in Fig. 1; and

Fig. 4 is a view similar to Fig. 1 of a modification of the device also constructed according to and embodying my invention.

The device of my invention, as illustrated in Figure 1, is indicated generally by reference numeral 10, and comprises a multi-footed support 12, and a hollow tubular upright 14. Slidably and telescopically disposed within upright 14 is an elongated round rod or shaft 16. Rod 16 may be either a solid elongated round member, or may be hollow, as desired. The support 12, the upright 14 and the rod or shaft 16 all may be formed of metal or any other suitable material. The structure and operation of support 12, the upright 14 and the telescopic arrangement therewith of shaft 16, as shown herein, form no part of the present invention, and their specific nature and operation will be specifically described and claimed in separate applications.

Atop rod 16, I dispose a circular cap member 18, formed as by casting or otherwise of suitable metallic material, which is recessed axially thereof up from the underside, as at 20, and of such cross sectional dimension as to fit over and onto rod 16. A wing nut or thumb screw 22 may be provided on the dependant wall portion of the cap in order to fasten cap 18 onto rod 16 while permitting rotation thereof about the rod. If desired, an annular groove (not shown) may be provided about rod 16, near the top thereof, to receive the inner end of the wing nut. Other expedients may be employed, as desired, to rotatably secure cap 18 atop rod 16. An upstanding wall portion 24, round in front elevation as

in Fig. 1, at 26, is formed integrally with cap 18, and extends upwardly therefrom on one side thereof, defining an inwardly extended shelf or platform 25. A swivel-block casting 28 is provided, adapted to cooperate with wall portion 24 to support the boom rods as 50, 50a therebetween. The lower edge 30 of block 28 is curved on a circle whose radius is the distance between the edge 30 and a transverse bore 32 through block 28 (see Figs. 2, 3). Casting 28, below bore 32, may either be solid or hollow, as desired. Above bore 32, block 28 is recessed in from one side thereof as at 34, the outline of the recess in section being so shaped as to form a semicircular saddle 34 to receive the boom rod 50 therewithin. The height and depth of saddle 34 must be of such size as to receive booms 50, 50a therewithin. Block 28 is so proportioned with respect to wall 24, that the flat upper edge 36 thereof extends slightly above the top of wall 24, and inwardly thereof.

When it is desired to assemble the parts, the boom rods 50, 50a are rested within the saddle portion 34 of the swivel block 28. The rods are so positioned within the saddle in swivel block 28 that a longer portion thereof extends forwardly of the saddle 34 than rearwardly thereof. The threaded shaft 40 of a headed screw bolt 38 is passed through bore 32 in block 28, the shaft 40 being formed of such length as to extend out of block 28 on the side towards which the saddle recess opens. If desired, a split tension washer (not shown) may be interposed between bolt head 38 and the outer side of block 28. A washer 39 of leather or the like is then threaded over the shaft 40 extension, which is then inserted through a circular opening 41 laterally through wall 24. Opening 41 is located higher on wall 24 than the distance from tapping 32 to the lower edge 30 of the block 28, so as to raise block 28 to such height as to clear shelf 25 on its pivoting movement, as will be explained below. Lock nut 42 is then secured into the end of shaft 40 to lock the swivel head to wall 24 with the boom rod therebetween, as shown in Fig. 2, nut 42 being preferably tightened to such extent as to permit ready rotation of boom rod 50 within saddle 32, as well as to permit swivelling movement of head 18 about the pivot of bolt shaft 40. A pair of spacer rings 61, 63 are provided and mounted about rod 50 on opposite sides of block 28, provided respectively with set screws 65, 67 to lock them in position as shown in Fig. 1, to prevent boom rod from slipping or sliding with respect to block 28 except as desired.

The boom rods 50, 50a according to my invention, comprise an elongated, hollow, round tubular member, of metal or the like tapered at its ends from a middle part 52 or 52a (Fig. 4) of uniform section. Thus, for example, if the rod is seventy-two inches in length, the tips will be tapered downwardly towards the ends thereof. This disparity in relative thickness along the boom rod length not only reduces weight but also increases rigidity thereof.

In the modification of Fig. 1, the forward end 56 of boom rod 50 terminates in an angulated reach 58, to the end of which is secured a hollow swivel head 60. One end of a hollow housing rod 62 is secured to swivel head 60 as by pin 64, the other end thereof being backed or otherwise fastened to the underside of a light housing 66 as by a screw-nut 74. A light bulb 70 is mounted within housing 66 so as to project its rays through opening 72 in the front of the housing, at which point suitable lenses, baffles, filters, etc., as indicated at 75, may be mounted. The wirings to the bulb socket 76 may be led through the hollow rod 62, hollow swivel head 60 and through reach 58 into the hollow boom rod 50, and out adjacent the opposite handle end of the device.

An elongated hollow, tubular sleeve, as 96, is provided and disposed within rod 50 so that one end 97 thereof terminates in proximity to the point of angulation of reach 58, and a metallic wire cable 98 is provided, the forward end 99 of which is pivotally secured to housing 66 at the underside thereof as at 81, rearwardly of the point of connection of rod 62 to the housing. Cable 98 is threaded through the open end 97 of the sleeve 96 which extends into and through hollow boom rod 50 and along the length thereof past the rear end 54 just short of handle member 80.

A heavy counterweight as 82, formed as by casting or otherwise of suitable metallic material, is fixed onto the rear end 54 of boom rod 50. Counterweight 82 is axially apertured to permit cable 98 to be threaded therethrough to a hand grip 80 secured to the rear of the counterweight. A groove 84 is formed in counterweight 82 extending from top to the bottom thereof at the rear end, and the upper end 86 of the handle is pivotally secured therewithin by means of a pin 88 which passes through registering apertures in the groove walls and the handle. Cable 98 is preferably formed of rigid metallic material of some flexibility, so that any movement of handle 80 at one end of the boom rod will be transmitted to the light housing 66 pivotally mounted at the other end of the rod. In assembling the parts, groove 84 in counterweight 82 may, but need not necessarily, be aligned with the connecting points of cable 98 at 81 and rod 62 to the underside of light housing 66. When they are aligned, it may facilitate actuation of the housing 66 in response to handle 80 operation.

Counterweight 82 is formed of such weight as to balance boom rod 50 at the off-center point wherein it is rested in the saddle 34 of swivel block 28. This off-center positioning is desirable since it permits a smaller movement at the handle end to cause a larger or greater movement at the other end of the boom, at which other end the housing with the light source therein is secured. Thus, when handle 80 and counterweight 82 are elevated, it pivots boom 50 and swivel block 28 about shaft 40 so as to depress housing 66. When the handle 80 is pulled outwardly and away from its groove 84, pivoting about pin 88, cable 98 is retracted, pivoting the light housing 66 about the point of connection 64 of housing rod 62 to swivel head 60, so that the front of the housing is tilted forwardly. In like manner, when handle 80 is pushed inwardly, towards the counterweight, cable 82 tilts housing 66 downwardly about pivot 64. The connection of handle 80 to counterweight 82, between the walls defining the groove 84, is such that boom 50 may easily be rotated within saddle 34, by twisting handle 80 about the axis of boom 50 rotating light housing 66 along with it, and in the same direction.

The angulated reach, offsetting housing 66, is important in my device, since it permits substantially straight line movement of cable 98, and eliminates wear thereof across the mouth 97 of sleeve 96, with resultant prolongation of its useful life. There is some movement of the cable back and forth across the mouth 97 of sleeve 96, but this will not particularly cause such

damaging wear to the cable as would be caused by repeated bending or flexing thereof.

A suitably positioned aperture **83** is provided in counterweight **82**, through which the electrical wiring may be led out of boom rod **50** for connection to the power source, and the switch may be positioned, as desired, on the counterweight as well, for convenience in manipulation.

In the modification of my device illustrated in Figure 4, wherein parts similar to those of the modification of Fig. 1 are identified by similar reference numerals, rod **50***a*, the counterweight **82** and handle **80** assembly, and cable **98**, sleeve **96**, offset arm **58**, etc., are identical with those parts as shown in Fig. 1. In the form of Fig. 4, however, the cable end **99** is secured to an ear **81** at the underside of housing **66** at a point in front of the connection of the housing to the rod, rather than rearwardly thereof, as in Fig. 1. Thus, when handle **80** is pushed towards counterweight **82**, the front of housing **66** will be tilted upwardly, and when handle **80** is pulled out of counterweight **82**, away therefrom the housing **66** will be tilted upwardly.

Of course, it will be seen that with both modifications of my device, the results are the same to the extent that the direction of the light throw may be controlled from a single point remote from the light housing, and also to the extent that the handle need not be aligned with the points of connection of the housing to the rod and cable. Also, in both forms of my invention, the housing **66** need not be lowered within reach in order to change its direction of light throw, and all single or compound direction changes may be effected from one point through manipulation of a single handle **80**.

My device, in all its modifications, is of simple construction and operation, its assembly requiring no particular skill or tooling. Its ease of operation renders the device very useful for photographic lighting, although it may well be used for other and different purposes.

Having now described my invention, what I claim and desire to secure by Letters Patent is:

1. A boom light and support therefor, the boom comprising an elongated, hollow tubular rod, a housing pivotally secured to one end thereof, a light bulb within the housing, a counterweight at the other end of the rod, a handle pivotally secured by one end thereof to the counterweight, a cable connection from the handle spaced from the pivotally secured end thereof to the housing extending through the hollow rod, whereby swinging movement of the handle about its pivot is transmitted directly through the cable to the housing so as to cause pivoting movement of the housing in response thereto.

2. A boom light and support therefor, the boom comprising an elongated, hollow tubular rod, an angulated reach at one end of the rod, a housing pivotally secured to the end of the reach, a light bulb disposed within the housing, a counterweight at the other end of the rod, a handle pivotally secured by one end thereof to the counterweight, a straight, elongated hollow sleeve disposed within the rod and terminating in proximity to the point of angulation of the reach, a rigid, flexible cable within the sleeve, one end of which cable is secured to the handle at a point spaced from its pivoted end, the other end of the cable being secured to the housing at a point spaced from the point of securement thereof to the reach, whereby swinging movement of the handle about its pivot towards and away from the counterweight causes pivoting movement of the housing in response thereto.



3. A boom light and support therefor, the boom comprising an elongated, hollow tubular rod, an integral, hollow angulated reach at one end of the rod, a housing pivotally secured to the end of the reach, an electric light bulb disposed within the housing, a counterweight at the other end of the rod, a handle pivotally secured by one end thereof to the counterweight, a straight, elongated hollow sleeve disposed within the rod and extending outwardly therefrom at the point of angulation of the reach, a rigid, flexible cable within the sleeve, one end of which cable is secured to the handle at a point spaced from its connection to the counterweight, the other end of the cable being secured to the housing at a point spaced from the point of securement thereof to the reach, whereby swinging movement of the handle about its pivot towards and away from the counterweight pivots the housing in response thereto, and electric conducting wire extending from the light bulb within the housing through the reach and rod and out of the counterweight adjacent the handle.

4. A boom light and support therefor, the boom comprising an elongated, hollow tubular rod, an angulated reach at one end of the rod, a housing pivotally secured to the end of the reach, a light bulb disposed within the housing, a counterweight at the other end of the rod, a groove at the end of the counterweight, a handle disposed within the groove and pivotally secured by one end thereof to the counterweight for pivotal movement into and out of the groove, a straight, elongated hollow sleeve disposed within the rod and terminating adjacent the point of angulation of the reach, a rigid, flexible cable within the sleeve, one end of which cable is secured to the handle at the end thereof remote from its connection to the counterweight, the other end of the cable being connected to the housing, whereby movement of the handle into the counterweight groove swings the housing in one direction about its pivot, and movement of the handle out of the groove swings the housing in the opposite direction about its pivot.

5. A boom light and a support therefor, the boom comprising an elongated, hollow tubular rod having a manually operable handle at one end thereof and a light housing mounted at the other end thereof for rotary movement with the rod and for pivotal movement with respect thereto, and a light within the housing, the support comprising a pair of opposing and cooperating members between which the rod is disposed and secured at a point between the ends thereof while permitting rotative movement of the rod and housing and tilting movement of the housing and rod in response to handle movement one of said opposing and cooperating members comprising an upright and flat wall member, and the other thereof comprising a block pivotally secured thereto, the block being recessed to receive the tubular rod therewithin.

EDISON AVERY PRICE.


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