July 11, 1939. B. STECHBART 2,165,681

PROJECTION LAMP HOUSE AND LAMP MOUNTING ADAPTED THEREFOR

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Fig. 1

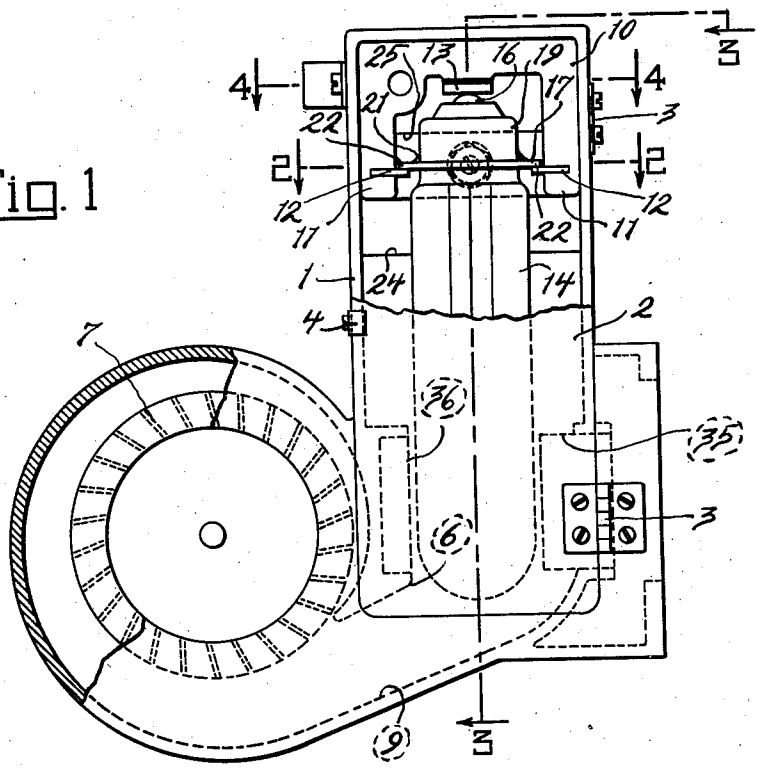
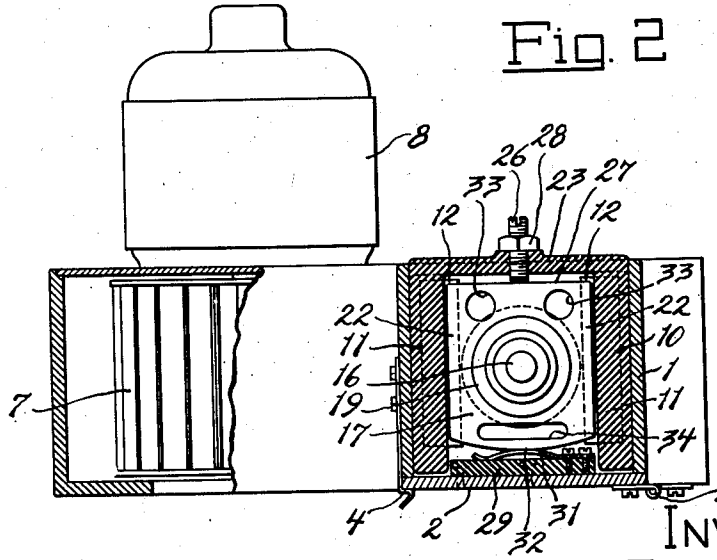


Fig. 2



INVENTOR
BRUNO STECHBART
BY Robert F. Mickle, Jr.
ATTY

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Fig. 3

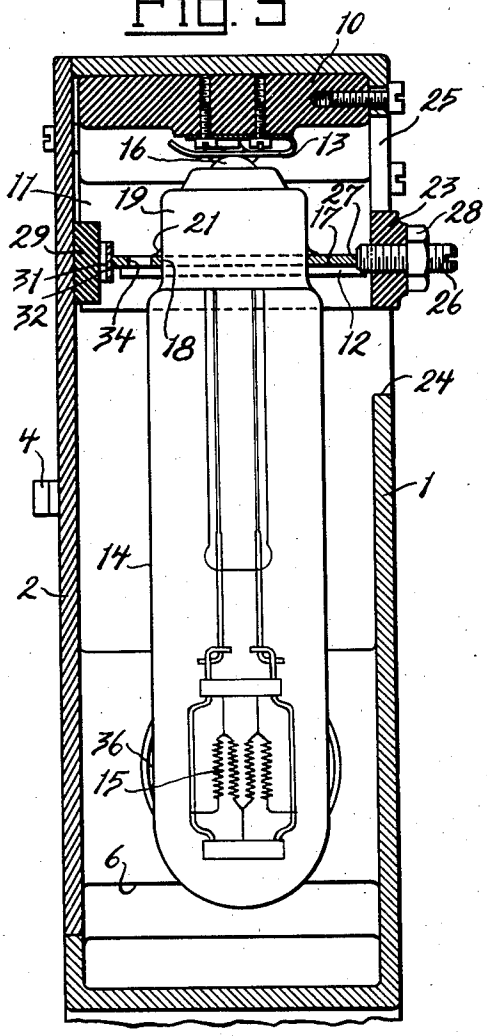


Fig. 4

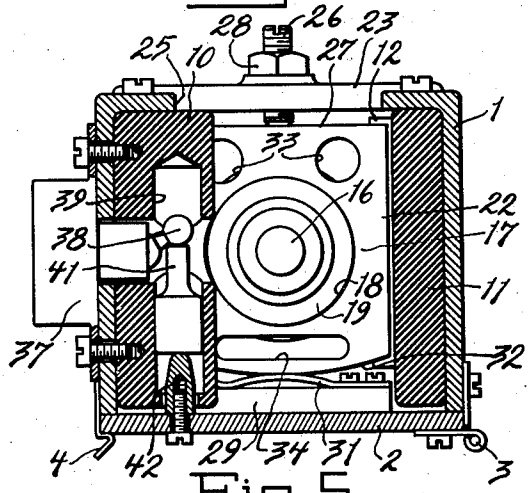


Fig. 5

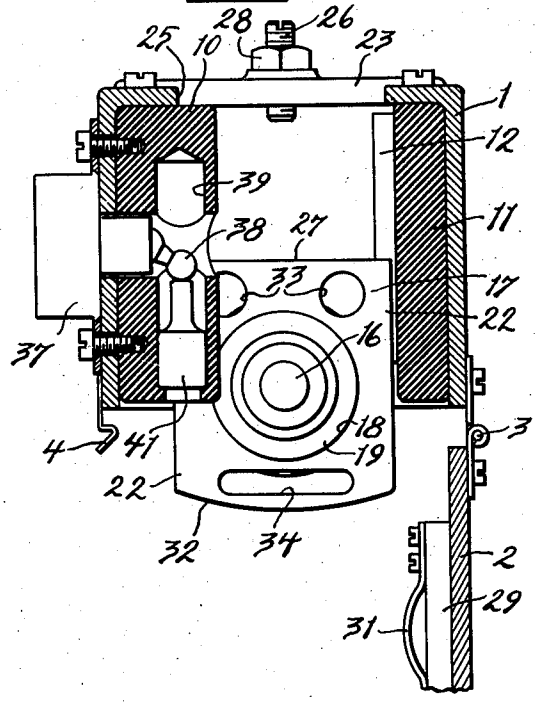
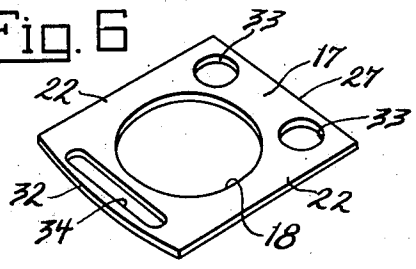


Fig. 6



INVENTOR
BRUNO STECHBART
BY Robert F. Michel, Jr
ATTY.

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2,165,681

PROJECTION LAMP HOUSE AND LAMP MOUNTING ADAPTED THEREFOR

Bruno Stechbart, Chicago, Ill., assignor to The Bell & Howell Company, Chicago, Ill., a corporation of Illinois

Application December 10, 1936, Serial No. 115,257

1 Claim. (Cl. 88—24)

My invention relates particularly to lamp houses of motion picture projecting machines, although not limited to this use alone.

One feature of my invention relates to a lamp house adapted for motion picture projection purposes with a view toward convenience and desirability, adequate ventilation and ease and convenience in the installation and removal of lamps.

Another feature relates to an incandescent electric lamp mounting which is particularly adapted for a lamp house of the above character, which is particularly adapted for the prefocused mounting of concentrated filament type lamp, which provides for ease and convenience in the installation and removal of lamps, and which provides ventilation for the mounting.

With these features in view my invention consists in certain features of novelty in the construction, combination and arrangement of parts by which the said features and certain other features, hereinafter appearing, are effected, all as fully described with reference to the accompanying drawings and more particularly pointed out in the appended claim.

In the said drawings:

Figure 1 is a partial side elevation of a projection lamp house embodying my invention, with parts broken away;

Figure 2 is a sectional view substantially on the line 2—2 of Figure 1, with parts broken away and shown in section;

Figure 3 is a section substantially on the line 3—3 of Figure 1;

Figure 4 is a section substantially on the line 4—4 of Figure 1;

Figure 5 is a section similar to Figure 4, but showing parts in different positions; and

Figure 6 is a perspective view of the lamp base mounting element, hereinafter described.

Referring to the drawings, 1 designates the main portion or body of a lamp house, which is vertically disposed and which is rectangular in horizontal cross section. One side of the main portion 1 is open to form an access opening which is closed by a door 2, this door being hinged to the main portion 1, as designated at 3, for movement to open and close the access opening and being retained in closed position by a releasable latch 4.

The lamp house is provided with a lower ventilating opening 6. An air blower, generally designated at 7, and driven by an electric motor 8, is connected with the lower ventilating opening by a closed passage 9 and serves to force air through the lower ventilating opening 6 and upwardly through the lamp house and out of upper ventilating openings of the lamp house, hereinafter described to maintain the temperature in the lamp house within practical limits.

Mounted within the upper end of the lamp house, is an incandescent electric lamp mounting which consists as follows.

A body 10 of molded insulating material is secured within the upper end of the lamp house body 1 and is of generally inverted U-shape and has its channel extending normal to the plane of the open side of the lamp house body.

Metallic or conductive slide contact members 12 are molded in the downwardly projecting legs 11 of the body 10 and, extending therefrom toward each other, form spaced parallel contact slides disposed in a common horizontal plane and having their slide plane intersecting the plane of the aforesaid access opening.

A resilient conductive contact 13 is mounted on the transverse portion of the body 10 and has its contact portion disposed intermediate and above the plane of the slide contact members 12 and faces downwardly.

The lamp base of my invention is adapted to be mounted in the aforesaid mounting and consists as follows.

As shown, a concentrated filament lamp, as is utilized for projecting purposes, embodies a body 14 in which is disposed a concentrated filament 15. The base of the lamp involves conductive contacts insulated from each other and comprising a usual centrally disposed conductive end contact 16 and a generally rectangular laterally extending conductive contact 17 provided with a central aperture 18 engaged over a metallic cylindrical portion 19 of the lamp base and secured thereon as by solder 21 in pre-focusing relation with the filament 15 of the lamp.

The lamp is installed in and removed from the lamp house through the aforesaid access opening, and the mounting of the lamp involves downward sliding engagement of opposite edge slide mount portions 22 of the laterally extending contact 17 and downward engagement of the conductive contact 13 with the end contact 16 of the base of the lamp, the resiliency of the contact 13 maintaining the contact 17 in pressure engagement with the slide contact members 12.

The contact 17 is secured on the base of the lamp in prefocused relation with the filament 15 of the lamp for the purpose of effecting an accurate prefocused mounting of the lamp, the contact 17 being adjustably and predeterminately

located along the slide contact members 12 in a manner now to be described.

A horizontal bridge 23 is formed integrally with the mount body 10 and is connected with the sides of downwardly projecting legs 11 of the mount body remote from the access opening of the lamp house.

The upper portion of the side of the lamp house opposite the aforesaid access opening side thereof is provided with an opening in which the bridge 23 lies, thus forming vertically spaced upper ventilating openings 24 and 25 forming upper ventilating outlets for air forced upwardly in the lamp house by the blower 7.

A stop screw 26 is screwthreaded through the mid portion of the bridge 23 and is disposed longitudinally of the slide provided by the slide contact members 12 to engage an edge 27 of the contact member 17, extending between the edge slide mount portions 22, to predeterminately position the lamp along the slide contact members 12, adjustment of this screw serving to provide adjustable positioning of the lamp along the slide contact members 12, and the screw being provided with a lock nut 28 to retain the same in longitudinally adjusted position.

A block of insulating material 29 is secured in a suitable manner on the inside of the door 2, and a bow spring 31 is secured on the block 29 and is so arranged that, upon closure of the door, the spring engages an edge 32 of the contact member 17, which edge is opposite the edge 27, and yieldably urges the contact member 17 inwardly into engagement with the screw 26 and thus predeterminately positions the lamp longitudinally of the slide contacts 12. This action is illustrated in Figures 4 and 5, Figure 4 illustrating the door closed and the lamp predeterminately positioned, and Figure 5 illustrating the door open and the lamp in partially installed position. The lamp is, of course, installed and removed through the aforesaid access opening of the lamp house which is closed by the door 2.

The contact member 17 is provided with ventilating apertures 33 and 34 therethrough, thus providing for ventilation through the ventilating opening 25 as well as through the ventilating opening 24. The aperture 34 is elongated and disposed adjacent the edge 32 to form a grip for convenience in installation and removal of the lamp.

As so mounted the body of the lamp projects downwardly from the base thereof and the air current first passes the region of the filament of the lamp for the effective cooling thereof.

Light from the filament of the lamp is projected through a condenser, indicated at 35 in Figure 2, with which the lamp filament is focused and a focusing reflector, indicated at 36 in Figure 2, serves to reflect light from the lamp filament through the condenser.

A usual electric switch 37, which is in circuit with the aforesaid lamp mounting, is secured on the lamp house and has its operating handle 38 projecting into a bore 39 of the mount body 10, which bore is disposed normal to the plane of the aforesaid access opening of the lamp house.

The operating handle 38 is yieldably urged as usual into open circuit position, as shown in Figure 5, to de-energize the lamp mounting and the lamp mounted thereon.

A plunger 41 is slidably mounted in the bore 39 for engagement with the operating handle 38 to move it into closed circuit position to energize the lamp mounting and the lamp mounted thereon, as shown in Figure 4.

A stud 42 is mounted on the inner face of the door 2 and projects into the bore 39 upon closure of the door to engage the plunger 41 and move it and the operating handle 38 to closed circuit position upon closure of the door, as shown in Figure 4.

Thus, opening of the door de-energizes the lamp and closing of the door energizes the lamp with obvious convenience in the installation and removal of the lamp.

Having thus described my invention, I do not wish to be limited to the precise details described as changes may be readily made without departing from the spirit of my invention, but having thus described my invention, I claim as new and desire to secure by Letters Patent the following:

In a device of the character described, the combination with a lamp house comprising a main portion provided with an access opening and a door pivotally mounted on said main portion for face-wise movement to open and close said opening, of a releasable latch for maintaining said door in closed position, an incandescent electric lamp mounting associated with the interior of said lamp house including spaced slides extending in a direction intersecting the plane of said opening, at least one of which slides is conductive, adapted to be slidably engaged by a laterally extending conductive portion of a lamp base for removal and installation of the lamp through said opening, said mounting also including a resilient conductive contact having its contact portion disposed intermediate said slides and facing substantially normal to the slide plane of said slides, and opposing positioning devices mounted on said main portion and said door adapted to engage said laterally extending portion of a lamp base to position the lamp along said slides, one of said positioning devices being adjustable and the other of which is resilient.

BRUNO STECHBART.