

What is claimed is:

1. In a spotlight apparatus having a high powered light source which generates great heat in the form of radiant heat energy, and including a manually adjustable iris shutter apparatus spaced a predetermined distance from said light source for determining the diameter of the light spot and for cutting off the spot altogether when the iris shutter apparatus is in a closed position, and manual means for adjusting said iris shutter between its closed position and positions in which a substantial spot of light of adjustably variable diameter is transmitted through the iris shutter apparatus, in combination, a heat absorbing shutter mounted in said spotlight apparatus between said light source and said iris shutter apparatus along the path of light and radiant heat energy from said light source, and movable into and out of a position to intercept radiant energy from said light source, so as to protect said iris shutter apparatus when it is adjusted to its closed position aforesaid, means for moving said heat absorbing shutter to a position to protect said iris shutter apparatus from damage by radiant heat from said light source at the closed position of said iris shutter apparatus, and mechanical means interconnecting said means for adjusting said iris shutter and said means for moving said heat absorbing shutter for preventing movement of said heat absorbing shutter to a position such that it will intercept light through the iris when the iris is at any one of its open positions at which a substantial spot of light is provided by the spotlight apparatus.

2. In a spotlight apparatus having a high powered light source which generates great heat in the form of radiant heat energy, and including a manually adjustable iris shutter apparatus spaced a predetermined distance from said light source for determining the diameter of the light spot and for cutting off the spot altogether when the iris shutter apparatus is in a closed position, in combination, a heat absorbing shutter mounted in said spotlight apparatus along the path of light and radiant heat energy from said light source, and movable into and out of a position to intercept radiant energy from said light source, so as to protect said iris shutter apparatus when it is adjusted to its closed position aforesaid, and a single common control means accessible to an operator of the spotlight apparatus mechanically connected to adjust said iris shutter apparatus between its closed position and any of its open adjusted positions and also mechanically connected to move said heat absorbing shutter to and from a position to protect said iris shutter apparatus from damage by radiant heat from said light source at the closed position of said iris shutter apparatus.

3. In a spotlight apparatus having a high powered light source which generates great heat in the form of radiant heat energy, and including a manually adjustable iris shutter apparatus spaced a predetermined distance from said light source for determining the diameter of the light spot and for cutting off the spot altogether when the iris shutter apparatus is in a closed position, in combination, a heat absorbing shutter mounted in said spotlight apparatus between said light source and said iris shutter apparatus along the path of light and radiant heat energy from said light source, and movable into and out of a position to intercept radiant energy from said light source, so as to protect said iris shutter apparatus

when it is adjusted to its closed position aforesaid, a rotatable handle accessible from outside said spotlight apparatus, a mechanical linkage between said rotatable handle and said iris shutter apparatus so constructed and arranged that rotation of said handle will be effective to adjust said iris shutter apparatus between the closed position thereof and its several open adjusted positions, means mounting said heat absorbing shutter for movement about a fixed axis, and a second linkage connected to and actuated by the first named linkage for rotating said heat absorbing shutter about its axis to move it as aforesaid, the second named linkage being so constructed and arranged that said heat absorbing shutter will be moved to a position to protect said iris shutter apparatus from damage by radiant heat from said light source at the closed position of said iris shutter apparatus.

4. In a spotlight apparatus having a high powered light source, which generates great heat in the form of radiant heat energy, reflecting means for directing radiant energy from said light source along a predetermined light axis, and including a manually adjustable iris shutter apparatus spaced a predetermined distance from said light source along said axis for determining the diameter of a light spot and for cutting off the spot altogether when the iris shutter apparatus is in a closed position, in combination, a heat absorbing shutter mounted in said spotlight apparatus for movement about an axis eccentric of the first named axis and parallel therewith and movable between said light source and said iris shutter apparatus along the axis of the path of light from said source to intercept radiant energy from said light source, so as to protect said iris shutter apparatus when it is in its closed position aforesaid, an adjusting rod arranged for rotation about an axis substantially parallel to said light axis and having a handle means secured thereto outside said spotlight apparatus accessible to an operator thereof, crank means secured to said adjusting rod, a link extending between said crank means and a point on said iris shutter apparatus for adjusting the iris shutter apparatus between its closed position aforesaid and positions at which it determines the diameter of a light spot, and a link connecting a point on the first named link with a point fixed in respect to said heat absorbing shutter so as to move said heat absorbing shutter in a manner which is a function of the adjusted movement of the adjustment of said iris shutter apparatus, said links being so proportioned, constructed and arranged that said heat absorbing shutter will always be maintained out of the path of light through said iris shutter apparatus when the latter is open at any position at which a usable spot of light is provided, and so that said heat absorbing shutter will be moved to a position to protect said iris shutter apparatus from damage by radiant heat from said light source at the closed position of said iris shutter apparatus.

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#### REFERENCES CITED

The following references are of record in the file of this patent:

#### UNITED STATES PATENTS

Number	Name	Date
1,937,379	Berg	Nov. 28, 1933
2,076,240	Levy	Apr. 6, 1937