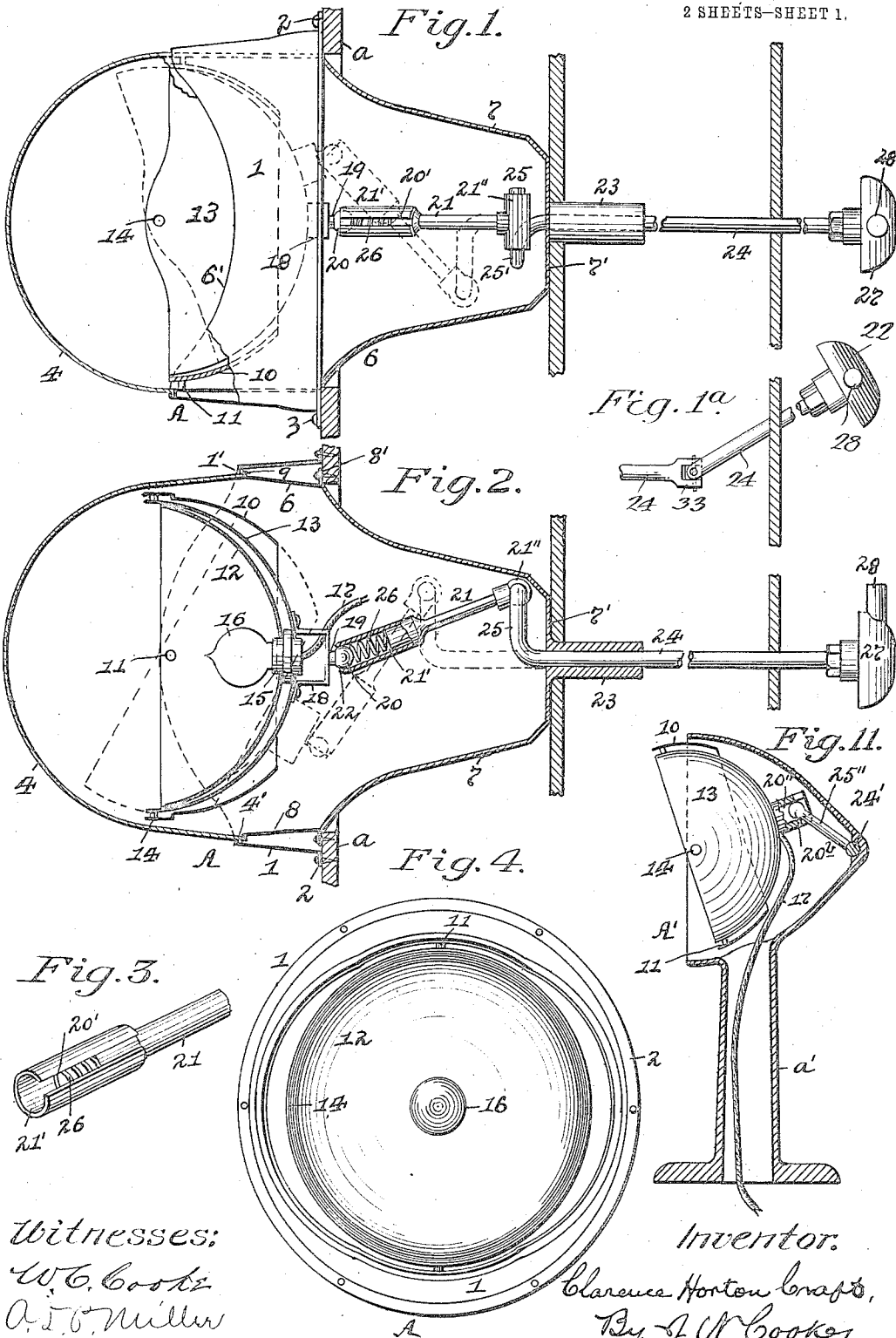


1,124,112.

Patented Jan. 5, 1915.

2 SHEETS—SHEET 1.

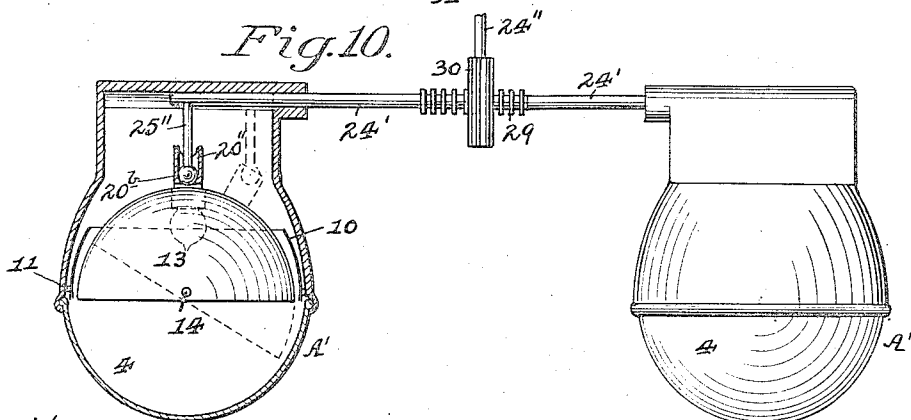
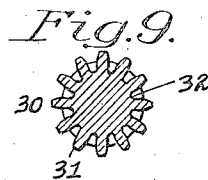
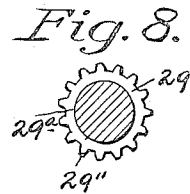
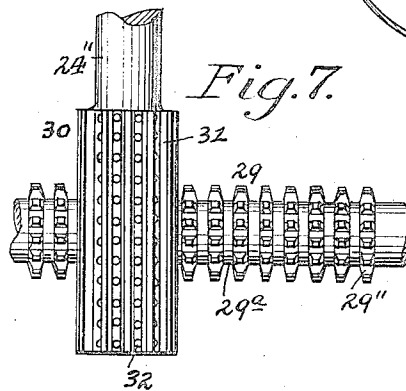
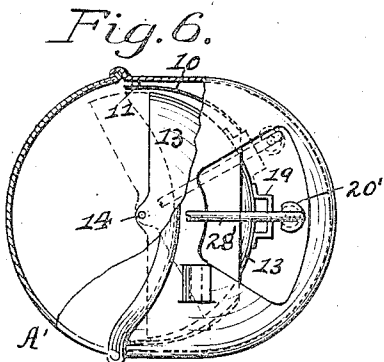
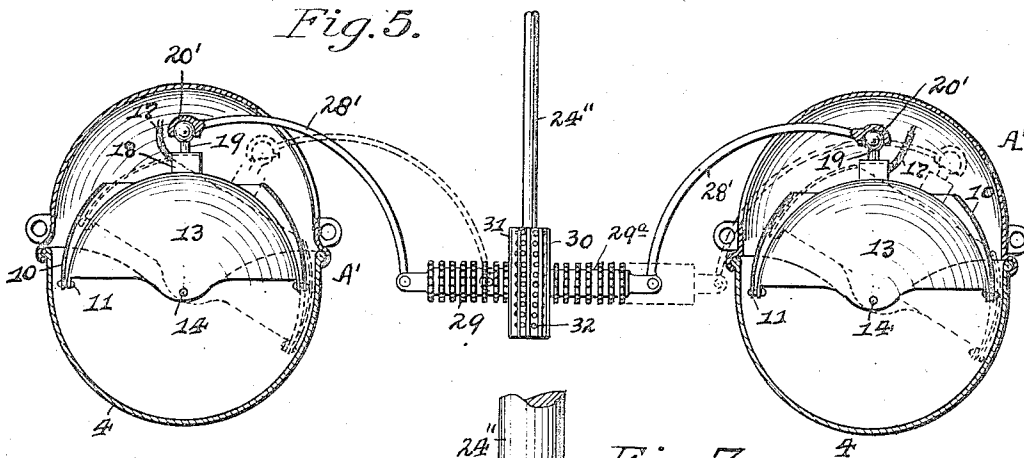


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1,124,112.

2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

CLARENCE HORTON CRAFT, OF UNIONTOWN, PENNSYLVANIA, ASSIGNOR OF ONE-HALF
TO ANDREW P. COOPER, OF UNIONTOWN, PENNSYLVANIA.

ADJUSTABLE LAMP.

1,124,112.

Specification of Letters Patent:

Patented Jan. 5, 1915.

Application filed May 26, 1914. Serial No. 841,006.

To all whom it may concern:

Be it known that I, CLARENCE HORTON CRAFT, a citizen of the United States, and a resident of Uniontown, in the county of Fayette and State of Pennsylvania, have invented a new and useful Improvement in Adjustable Lamps; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to operating devices for lights, and has special reference to such that are used on moving objects, such as vehicles, automobiles, locomotives, boats, etc.

The object of my invention is to provide a cheap, simple and efficient device for operating lights, such as incandescent lights, so that such lights can be shifted to different angles, as desired, and for different purposes, at the will of the operator, while at the same time such light can be maintained in the position as set and will not be required to be held by the operation in its set position.

To these ends my invention consists, generally stated, in the novel arrangement, construction and combination of parts as hereinafter more specifically set forth and described and particularly pointed out in the claims.

To enable others skilled in the art to which my invention appertains to construct and use my improved operating devices for lights, I will describe the same more fully referring to the accompanying drawings, in which—

Figure 1 is a side elevation partly in section of my improved operating device for lights showing the lamp in its normal or straight line position. Fig. 1^a is a detailed view of another form of operating rod. Fig. 2 is a sectional view showing the lamp in the same position with the dotted lines showing another position. Fig. 3 is a perspective view of one of the members of the ball and socket joint shown in Fig. 1. Fig. 4 is a front view of the lamp. Fig. 5 is a sectional view partly in full lines showing the device for operating two lamps. Fig. 6 is an elevation partly in section of one of the lamps shown in Fig. 5. Fig. 7 is a plan view of the connecting gear shown in Fig. 5. Figs. 8 and 9 are sectional views of the gears shown in Fig. 7. Fig. 10 is a view showing another form of connecting two lamps, with

one lamp shown in full lines and the other in section. Fig. 11 is a vertical section of one of the lamps shown in Fig. 10.

Like symbols herein indicate like parts in each of the figures of the drawings.

As illustrated in the drawing my invention is shown and will be described in connection with its use on an automobile, although it will be evident that it can be used on other moving objects or vehicles, and as shown in Fig. 1 a single lamp A is applied to and supported centrally by the radiator front *a* of the automobile and at the top of the same. The lamp A is provided with the annular inclosing casing 1, which is secured to the supporting front *a* in any suitable manner, such as through the flange 2 on the inner end of said casing by bolts or screws 3, and at the outer end of said casing is the lens or glass 4, which is connected or supported in front of said casing, as hereinafter described, and is of hollow or globular shape to permit the movement of the parts of the lamp within the same, as hereinafter described.

Within the casing 1 and extending back from the same and front *a* is the annular supporting member 6 for the lamp A and operating devices for such lamp, as hereinafter described, and such member is provided with the hollow extension 7 for such devices and ring or collar 8. This ring or collar 8 fits within the casing 1 by being secured to the front *a* through its flange 8', and its outer end is provided with a flange 9, which fits against a flange 4' on the lens or glass 4 for holding said glass in position in the casing, with such flange 4' being held thereby against a flange 1' on the outer end of said casing.

Within the front of the member 6 is the annular tilting member 10, which is of curved shape and is pivoted on each side to the member 6, as at 11. Within the tilting member 10 is the reflector plate 12, which is of the usual concavo-convex shape and secured at its outer edge to the tilting support 13. This tilting support 13, which is of bowl-shape surrounds the reflector plate 12, and is pivoted to the tilting member 10 by the pivots 14 diametrically opposite each other and at an angle of ninety degrees (90°) to the pivots 11. The tilting reflector support 13 is secured centrally to and around a lamp socket 15 which extends

through the reflector plate 12 for the usual electric lamp bulb 16 to be connected thereto, and the usual wire connections 17 are made to said socket from any suitable source of supply. A bracket 18 is connected to the rear of the socket 15 and extending back from the same is a bar 19 having a ball 20, which is adapted to fit within the hollow portion 21' of a lever 21 and engage with a rounded portion 22 at the open front end of said hollow portion, said lever being slotted as shown at 20' in Fig. 3. Extending back from the rear end 7' of the extension 7 is a bearing 23 which has an operating rod 24 mounted within the same, and at the front end of said rod and within said extension is a V-shaped arm 25 to which is pivoted the rear end of the lever 21 by a bearing 21'' on said lever fitting around the free angle portion 25' on said arm, while a spring 26 fits within the hollow portion 21' on said lever and bears against the ball 20 to hold said ball in engagement with the rounded portion 22' on said lever. The rear end of the rod 24 is provided with a circular handle 27 for turning and moving said rod longitudinally, which handle is removably secured to said rod, and has an arm or projecting portion 28 extending out therefrom to assist in turning the handle.

The use and operation of my improved operating device for lights is as follows:—When the device is used in connection with automobile lights, and where the light is placed centrally of the radiator front, as shown and described, the operating rod 24 can extend through the radiator and under the hood to a position where the handle 27 on such rod can be positioned in front of the dash and within easy position and reach of the driver or operator on the automobile. In the position as shown in Figs. 1 and 2 the lamp A is placed for going straight ahead, and the member 10, support 13, reflector 12, and light 16 are in the position thus shown in said figures, while the rod 24, arm 27 and rod 21 are in their rearward or normal positions. When it is desired to shift such lamp A to throw the light 16 to either side or up or down positions, the operator pushes forward the rod 24 by the handle 27 to the position shown by dotted lines in Fig. 2, and upon turning said rod by said handle will throw or shift the member 10, tilting support 13, reflector plate 12 and light 16 of the lamp to either of the positions named above, as desired, through the medium of the ball connection 20, lever 21 and arm 25, and each of such positions will be indicated and be regulated by the position of the arm 28 on the handle 27. It will be evident that when the lever 27 is thus thrown to its extreme forward position that the greatest angle of the lamp A will be obtained in any of its shifted positions, and the casing 1 and

supporting member 6 have their two sides cut away as at 6', in order to allow the light 16 from such lamp to obtain its greatest amount of throw to either side, while the throw of the lamp can also be made in lesser angles by different positions of the rod 24 and lever 21 intermediate of those shown, and during all these positions of the lamp, the deflector 12 and its support 13 can swing on the member 10 by its pivots 14 and such member can swing on the member 6 by its pivots 11.

In Figs. 5 and 6 my improved operating device for lights is shown as applied to two lamps A' such as those located on each side of an automobile radiator, and in such case a ball and socket joint 20^a is used the socket being on a curved arm 28' and the ball being on the rod 19, while the rear end of such arm is pivotally connected to the gear member 29 which is engaged by the operating gear member 30, as shown in Figs. 7, 8 and 9 and such gear 29 is provided with circumferential grooves 29^a therein to form the rack teeth 29' having the teeth 29'' cut upon the periphery of the same. The gear member 30 has the operating handle or rod 24'' connected thereto and such gear has the long teeth 31 formed lengthwise of the same and the holes 32 cut into the metal between such teeth. In operation the gear teeth 31 of gear 30 work into the grooves 29^a between the rack teeth 29' in the gear 29 and cause said gear to move longitudinally when gear member 30 is rotated by the operator through the rod 24'' and may be moved in either direction, while the movement of the gear 30 longitudinally the teeth 29'' of gear 29 will engage the holes 32 in the gear 30 and the gear 29 will be rotated thereby, so that the lamps A' and their connecting parts can thus be shifted to either side or up or down by such movements, as shown, and through the medium of the rods 19, levers 21, arms 25'' and rods 24' connected to said gears.

In Figs. 10 and 11, operating rods 24' are connected to gear 29 and gear 30 is connected to gear 29 for operating the two lamps A' which are generally mounted on the standards a' on each side of an automobile, and in such case the arm 25'' on said rods is provided with a ball 20^b at its end which works within a socket 20'' on each of such lamps, so that by the same movements of said gears as previously described, the lamps and their connecting parts can be shifted to either side or up or down as shown.

If desired, as shown in Fig. 1^a an ordinary universal joint 33 can be placed in the rod 24 beyond the bearing 23, so that the handle 27 on such rod can be set at a different position than a straight line for operating, and as shown by dotted lines in Fig. 1

the light when turned will act as a "dimmer."

Various other modifications and changes in the design, construction and operation, as well as in the application of my improved operating devices for lights may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

It will thus be seen that my invention is of great utility when applied to automobiles, as it will enable the operator on the machine or car to throw his light toward the direction that he wishes to turn or see before the car reaches such point, as well as in going down hill where the road or street has a curve leading down or up another hill the light can be thrown ahead, in order to see what is ahead or coming in either case and thereby avoid collisions or injuries. It will also be seen that my invention can be used in shifting lights for a number of different purposes and such shifting can be made to put the light straight or at any angle at any time desired, which can be done readily, conveniently and quickly and without any liability of any of the parts getting out of order or breaking, while at the same time the device is positive in its movements, and can be operated by any unskilled person. It will further be seen that my device will enable the lights to be shifted when desired to avoid the blinding effect to persons in a machine when two automobiles are coming toward each other, and such shifting will also enable the lights to be used for repairs to the automobiles on which the devices are used or upon other machines not using the same but which may need such lights to be thrown upon the same when adjacent for repairs, as well as for other purposes.

What I claim as my invention and desire to secure by Letters Patent is:—

1. An operating device for lamps, comprising a stationary member having a movable support within the same and pivoted thereto, a reflector within said support and pivoted thereto, said reflector having a light within the same, and means connected to said reflector for shifting said support and reflector to project the light to the position desired.

2. An operating device for lamps, comprising a stationary member having a movable support within the same and pivoted thereto, a reflector within said support and pivoted thereto, said reflector having a light within the same, and a lever connected to said reflector for shifting said support and reflector to project the light to the position desired.

3. An operating device for lamps, comprising a stationary member having a movable support within the same and pivoted

thereto, a reflector within said support and pivoted thereto, said reflector having a light within the same, and a lever connected to said reflector by a universal joint for shifting said support and reflector to project the light to the position desired.

4. An operating device for lamps, comprising a stationary member having a movable support within the same and pivoted thereto, a reflector within said support and pivoted thereto, said reflector having a light within the same, a lever connected to said reflector by a universal joint, and a rod pivotally connected to said lever for shifting said support and reflector to project the light to the position desired.

5. An operating device for lamps, comprising a stationary member having a movable support within the same and pivoted thereto, a reflector within said support and pivoted thereto, said reflector having a light within the same, a lever connected to said reflector by a universal joint, and a rod pivotally connected to said lever by a V-shaped arm for shifting said support and reflector to project the light to the position desired.

6. An operating device for lights, comprising a stationary member having a movable support within the same and pivotally connected thereto, a reflector within said support and pivotally connected thereto, said reflector having a light within the same, a lever connected to said reflector by a universal joint, and a rod pivotally connected to said lever by a V-shaped arm, said rod being adapted to be moved longitudinally and rotatably for shifting said support and reflector to project the light to the position desired.

7. An operating device for lights, comprising a stationary member having a movable support within the same and pivotally connected thereto, a reflector within said support and pivotally connected thereto, said reflector having a light within the same, a lever connected to said reflector by a universal joint, a rod pivotally connected to said lever by a V-shaped arm, and means connected to said rod for moving the same longitudinally and rotatably to shift said support and reflector for projecting the light to the position desired.

8. An operating device for lamps, comprising a stationary member having a movable support within the same and pivoted thereto on each side, a reflector within said support and pivoted thereto at points diametrically opposite each other and at right angles to the first named pivots, said reflector having a light within the same, and means connected to said reflector for shifting said support and reflector to project the light to the position desired.

9. An operating device for lamps, comprising a stationary member having a mov-

able support within the same and pivoted thereto on each side, a reflector within said support and pivoted thereto at points diametrically opposite each other and at right angles to the first named pivots, said reflector having a light within the same, and a lever connected to said reflector for shifting said support and reflector to project the light to the position desired.

10 10. An operating device for lamps, comprising a stationary member having a movable support within the same and pivoted thereto on each side, a reflector within said support and pivoted thereto at points diametrically opposite each other and at right angles to the first named pivots, said reflector having a light within the same, and a lever connected to said reflector by a universal joint for shifting said support and reflector to project the light to the position desired.

11. An operating device for lamps, comprising a stationary member having a movable support within the same and pivoted on each side, a reflector within said support and pivoted thereto at points diametrically opposite each other and at right angles to the first named pivots, said reflector having a light within the same, a lever connected to said reflector by a universal joint, and a rod pivotally connected to said lever for shifting said support and reflector to project the light to the position desired.

12. An operating device for lamps, comprising a stationary member having a movable support within the same and pivoted thereto on each side, a reflector within said support and pivoted thereto at points diametrically opposite each other and at right angles to the first named pivots, said reflector having a light within the same, a

lever connected to said reflector by a universal joint, and a rod pivotally connected to said lever by a V-shaped arm for shifting said support and reflector to project the light to the position desired.

13. An operating device for lights, comprising a stationary member having a movable support within the same and pivotally connected thereto on each side, a reflector within said support and pivotally connected thereto at points diametrically opposite each other and at right angles to the first named pivots, said reflector having a light within the same, and a lever connected to said reflector by a universal joint, and a rod pivotally connected to said lever by a V-shaped arm, said rod being adapted to be moved longitudinally and rotatably for shifting said support and reflector to project the light to the position desired.

14. An operating device for lights, comprising a stationary member having a movable support within the same and pivotally connected thereto on each side, a reflector within said support and pivotally connected thereto at points diametrically opposite each other and at right angles to the first named pivots, said reflector having a light within the same, a lever connected to said reflector by a universal joint, a rod pivotally connected to said lever by a V-shaped arm, and means connected to said rod for moving the same longitudinally and rotatably to shift said support and reflector for projecting the light to the position desired.

In testimony whereof, I, the said CLARENCE HORTON CRAFT have hereunto set my hand.

CLARENCE HORTON CRAFT.

Witnesses:

T. B. HUMPHRIES,
J. N. COOKE.