

No. 619,849.

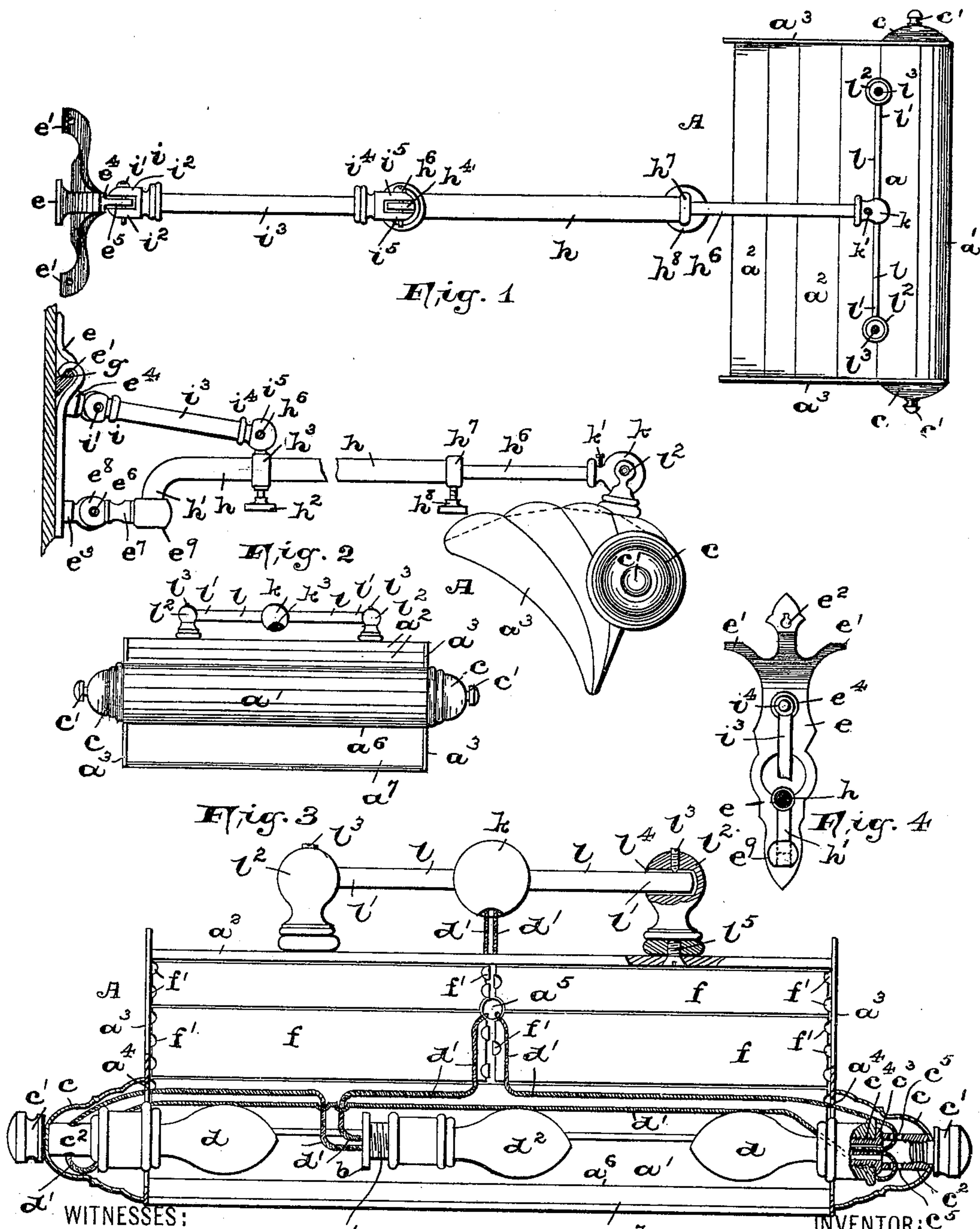
Patented Feb. 21, 1899.

G. F. SPENCER.
REFLECTOR FOR ART GALLERIES.

(Application filed July 15, 1898.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:
Walter H. Kalmage.
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INVENTOR: George H. Spencer,
BY
Fred L. Fraentzel,
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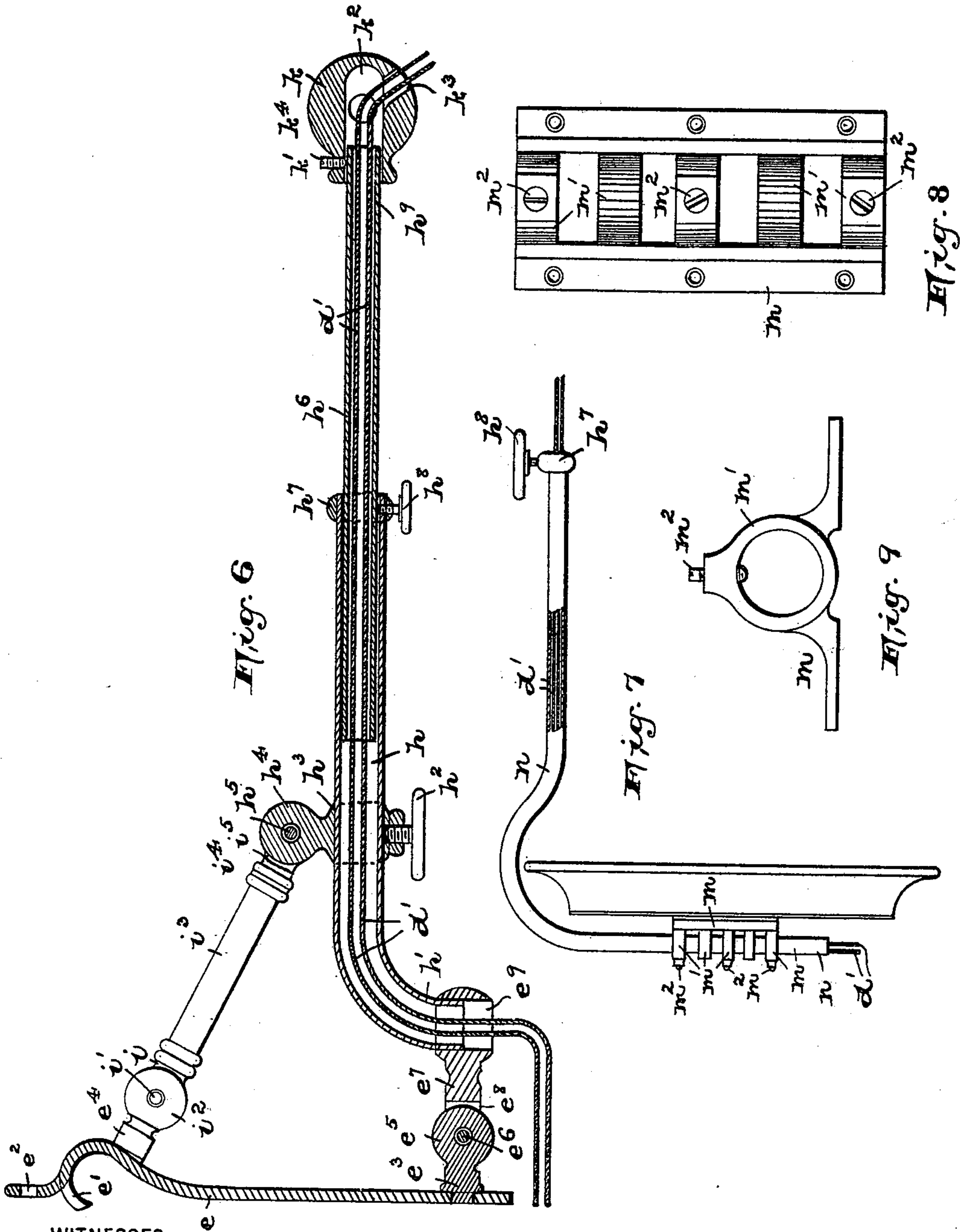
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UNITED STATES PATENT OFFICE.

GEORGE F. SPENCER, OF NEWARK, NEW JERSEY.

REFLECTOR FOR ART-GALLERIES.

SPECIFICATION forming part of Letters Patent No. 619,849, dated February 21, 1899.

Application filed July 15, 1898. Serial No. 685,988. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. SPENCER, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Reflectors for Art-Galleries, Show-Windows, &c.; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention has reference to improvements in reflectors, such as are used more particularly in art-galleries to illuminate the pictures or to light up show-windows in stores to display the goods to their best advantage.

The present invention, therefore, which is in the nature of an improvement upon the construction of reflectors described and claimed in former Letters Patent of the United States numbered 581,093 and dated April 20, 1897, has for its principal objects to provide a reflector which may be used in connection with electric or other lights and which is provided with a guard or shield to entirely conceal the direct light from the observer.

A further object of this invention is to provide in connection with my novel form of reflector an adjustable bracket and support which may be attached directly to the wall or may be suspended from the picture-molding or may be secured to the back of the frame of the picture, such bracket and support permitting the adjustment of the reflector horizontally closer to or farther away from the picture and also vertically in front of the picture, the reflector itself having a rotary motion to enable the proper adjustment of the latter in front of the picture after the adjustment of the bracket and support, and thereby producing the best lighting effect to illuminate the picture and displaying the same to its best advantage.

Other objects of this invention will be evident from the accompanying specification.

My invention therefore consists in the novel construction of reflector and adjusting mechanism to be used in connection therewith for illuminating pictures in art-galleries and for

lighting show-windows, &c., all of which will be fully described in the accompanying specification and finally embodied in the clauses of the claim.

The invention is clearly illustrated in the accompanying drawings, in which—

Figure 1 is a plan or top view of the adjustable reflector and bracket and support embodying the principles of my present invention, and Fig. 2 is a side view of the same. Fig. 3 is a front view of the reflector, illustrating more particularly the arrangement of a guard or shield to conceal the direct light from the eyes of an observer. Fig. 4 is a front view of one form of adjustable bracket and support to be used in connection with the reflector. Fig. 5 is a view, on an enlarged scale, of the inner portions of the reflector, illustrating certain details of the construction in vertical section. Fig. 6 is a longitudinal vertical section, on an enlarged scale, of the adjustable bracket, illustrating also in connection therewith an arrangement of electric-light wires. Fig. 7 is a side view of a portion of the reflector-carrying bracket and its socket for adjustably attaching the bracket against the back of the frame of a picture. Figs. 8 and 9 are a front and top edge view, respectively, of the socket which is used in connection with the form of bracket represented in said Fig. 7.

Similar letters of reference are employed in all of the above-described views to indicate corresponding parts.

In said drawings, A indicates the reflector, which consists, essentially, of a sheet-metal apron a , having the lower arc-shaped portion a' and angularly-arranged straight portions a^2 . Said portions a' and a^2 are all formed integral with each other and are arranged in such a manner that they provide an open front. The ends of the reflector are closed by ornamental side pieces a^3 , which, as will be seen from Fig. 5, are provided with openings a^4 , over which I have secured in any well-known manner suitably-ornamented caps c . In the perforated end of each cap is a set-screw c' , on the threaded end of which I have screwed a nipple c^2 , provided with a shoulder c^3 and a screw-threaded end c^4 . Each nipple c^2 has one or more openings c^5 for the reception of electric-light wires d' , which lead

through said nipples to incandescent lamps d , said lamps being screwed directly upon the screw-threaded ends c^4 and against the shoulder c^3 , as clearly indicated in said Fig. 5. The reflector can thus be provided at each end with an incandescent electric light, as shown.

If desired, a bracket-bar b , having a screw-nipple b' , may be fastened upon the inner surface of said arc-shaped portion a' and provided with an incandescent light d^2 . The back or angularly-formed portion of the reflector has an opening a^5 , through which the wires d' are passed to be connected with the several lamps d and d^2 , as clearly illustrated in said Fig. 5. Against the inner surface of each one of said angularly-arranged portions a^2 I have secured by means of prongs f' certain silver-plated glass or polished-metal plates f , which are for the purpose of reflecting the light-rays inward and downward. Said fastening devices for securing said plates in position and the arrangement and construction of said plates are preferably such as are set forth in said Letters Patent numbered 581,093 and hereinabove mentioned. Connected directly with the lower edge a^6 of the said arc-shaped portion a' is a downwardly-extending part a^7 , which forms a guard or shield, the same being connected with portions of the said side pieces a^3 , as indicated more particularly in Figs. 2 and 3, and its arrangement being such that at all positions of the rotary adjustment of the reflector it will protect the eyes of the observer from the direct light-rays of the lights within said reflector. The reflector is usually arranged in front of a picture by being suspended from a bracket, preferably of the construction illustrated in said Figs. 1 to 6, inclusive. This form of bracket and support consists, essentially, of a main plate e , which is formed at or near the top with hooks e' for arranging it over the usual picture-molding g , (see Fig. 2,) or it may be provided with a perforation e^2 for suspending it from a nail. As will be seen from said Figs. 1, 2, and 6, said plate e is provided with a pair of ornamental posts e^3 and e^4 , which are provided with perforated ears or lugs e^5 . Pivotally arranged on a pin e^6 in the ear or lug of the post e^3 and embracing the ear or lug of said post are a pair of ears e^8 of a short arm e^7 , which is provided with a socket e^9 , open both at the top and bottom. Suitably secured in the said socket e^9 is the end h' of a tubular arm h . Pivotally arranged on a pin i' in the said lug or ear e^5 of the upper post e^4 , as will be seen from Fig. 1, and embracing the said lug are a pair of ears i^2 of an ornamental joint or connection i , the latter being attached to a rod or tube i^3 , which has a similar joint or connection i^4 at its opposite end. Said joint or connection i^4 is provided with a pair of perforated lugs or ears i^5 . Slidably arranged upon an arm h and adapted to be secured in any fixed position on said arm by means of a set-screw h^2 is a sleeve h^3 . Said sleeve has an upwardly-projecting lug

or ear h^4 , which is provided with a hole and is secured by means of a pintle or pin h^5 between the said ears i^5 , hereinabove mentioned. It will thus be seen that the said arm h can be raised or lowered on these hinge-joints connected with the plate e and can be held in its adjusted position by tightening up the screw h^2 of the sleeve h^3 . Telescopically arranged within said arm h is another tubular arm or rod h^6 and a sleeve h^7 and set-screw h^8 for locking said arms h and h^6 in their adjusted positions in relation with one another. Secured upon the free end h^9 of the arm h^6 , by means of a set-screw k' or in any other well-known manner, is a ball k , which is provided with a chamber k^2 , having a downwardly-extending opening k^3 and a pair of oppositely-arranged openings k^4 , in which I have secured in any well-known manner the ends of certain rods l . The opposite ends l' of said rods l , as will be seen from Fig. 5, are secured by means of set-screws l^3 in certain socketed portions l^4 of ornamental posts l^2 , which are secured by means of screws l^5 or otherwise upon the upper portion of the reflector-casing. It will be seen that while the arm h is adjustable vertically and the arm h^6 can be moved in or out in the arm h to bring the reflector closer to or farther away from the picture said reflector is also rotatably connected with said bracket-support when the said set-screws l^5 are properly manipulated.

When the reflector is to be used with electric lights, the wires are passed through the tubular arms h and h^6 , through the opening k^3 in the ball k , and through the hole or opening a^5 in the reflector-casing to be properly connected with the lights, as will be clearly understood from an inspection of the several figures of the drawings.

In lieu of the form of bracket-support illustrated in said Figs. 1 to 6, inclusive, I may secure against the back of the frame of the picture a socket m , which is provided with several ring portions m' and set-screws m^2 . Secured in said ring portions m' , by means of said set-screws m^2 , is a bracket-rod n , which is tubular and extends over the top of the frame of the picture, as indicated in Fig. 7. In this rod I have slidably arranged the arm h^6 , hereinabove mentioned, to which the reflector A may be secured in the manner previously described. Of course it will be evident that the reflector may be used with ordinary gas-jets or other lighting means, if desired.

I am fully aware that many changes may be made in the several arrangements and combinations of the parts and in the details of the construction thereof without departing from the scope of my present invention. Hence I do not limit my invention to the exact arrangements and combinations of the several parts as herein described, and illustrated in the drawings.

The essential feature of my invention is the

construction of a reflector for the purposes stated, which comprises an arc-shaped portion a' , angularly-arranged straight portions a^2 , and a downwardly-extending shield or guard a^7 , all arranged in such relation to each other that the light-rays from a light connected with the reflector will have the rays which strike the parts a^2 properly reflected over the entire surface of the picture, while the guard or shield serves to cut off all direct rays to the eyes of the person viewing the picture.

Having thus described my invention, what I claim is—

1. A reflector for art-galleries, store-windows, &c., consisting of an apron, comprising an arc-shaped portion having end portions, and arranged concentric with the center of the light connected with the reflector, a reflecting-surface above said arc-shaped portion, a downwardly-extending guard or shield connected with the lower part of said arc-shaped portion, ornamental caps c connected with said end portions of said arc-shaped portion, perforated nipples in said caps, and electric lamps secured to said nipples, substantially as and for the purposes set forth.

2. A reflector for art-galleries, store-windows, &c., consisting of an apron comprising an arc-shaped portion having end portions, and arranged concentric with the center of the light connected with the reflector, a reflecting-surface above said arc-shaped portion, consisting, of angularly-arranged straight portions a^2 , to throw the reflected light inward and downward, a downwardly-extending guard or shield connected with the lower part of said arc-shaped portion, ornamental caps c connected with the end portions of said arc-shaped portion, perforated nipples in said caps, and electric lamps secured to said nipples, substantially as and for the purposes set forth.

3. The combination, with a reflector, of a bracket, comprising pivotally-connected sections capable of vertical adjustment, and means connected with said reflector and one of said sections, whereby said reflector is rotatably connected with said section for adjustment, consisting, essentially, of a ball at the end of said section, rods l secured in opposite openings in said ball, socketed posts l^2 on said reflector, and set-screws for securing the opposite ends of said rods l in said socketed posts, substantially as and for the purposes set forth.

4. The combination, with a reflector, of a bracket comprising a suspension-plate e , an arm h pivotally connected with said plate, capable of vertical adjustment, and means connected with said reflector and said arm, whereby said reflector is rotatably connected for adjustment, consisting, essentially, of a ball connected with the end of said arm h , rods l secured in opposite openings in said ball, socketed posts l^2 on said reflector, and set-screws for securing the opposite ends of

said rods l in the sockets of said posts l^2 , substantially as and for the purposes set forth.

5. In combination, a reflector for art-galleries, store-windows, &c., consisting of an apron, comprising an arc-shaped portion having end portions, and arranged concentric with the center of the light connected with the reflector, a reflecting-surface above said arc-shaped portion, a downwardly-extending guard or shield connected with the lower part of said arc-shaped portion, ornamental caps c connected with the end portions of said arc-shaped portion, perforated nipples in said caps, electric lamps secured to said nipples, and a bracket, consisting, essentially, of a pair of tubular and adjustable arms, a socketed ball k connected with one of said arms, means for attaching the reflector to said ball, and electric-light wires extending through said arms and ball k and connected with the lamps in said reflector, substantially as and for the purposes set forth.

6. In combination, a reflector for art-galleries, store-windows, &c., consisting of an apron, comprising an arc-shaped portion having end portions, and arranged concentric with the center of the light connected with the reflector, a reflecting-surface above said arc-shaped portion, a downwardly-extending guard or shield connected with the lower part of said arc-shaped portion, ornamental caps c connected with the end portions of said arc-shaped portion, perforated nipples in said caps, electric lamps secured to said nipples, and a bracket, consisting, essentially, of a pair of tubular and adjustable arms, a socketed ball k connected with one of said arms, rods l secured to said ball k , socketed posts l^2 on said reflector, set-screws for rotatively securing the opposite ends of said rods l in the sockets of said posts l^2 , and electric wires extending through said main bracket-arms and ball k and connected with the lamps in the reflector, substantially as and for the purposes set forth.

7. In combination, a reflector for art-galleries, store-windows, &c., consisting of an apron, comprising an arc-shaped portion having end portions, and arranged concentric with the center of the light connected with the reflector, a reflecting-surface above said arc-shaped portion, a downwardly-extending guard or shield connected with the lower part of said arc-shaped portion, ornamental caps c connected with the end portions of said arc-shaped portion, perforated nipples in said caps, electric lamps secured to said nipples, and a bracket, consisting, essentially, of a plate e , a tubular arm h and a pivotal connection between said plate e and arm h , a socketed ball k connected with said arm h , means for attaching the reflector to said ball, and electric-light wires extending through said arm h and ball k , and connected with the lamps in the reflector, substantially as and for the purposes set forth.

8. In combination, a reflector for art-gal-

series, store-windows, &c., consisting of an apron, comprising an arc-shaped portion having end portions, and arranged concentric with the center of the light connected with
5 the reflector, a reflecting-surface above said arc-shaped portion, a downwardly-extending guard or shield connected with the lower part of said arc-shaped portion, ornamental caps
10 c connected with the end portions of said arc-shaped portion, perforated nipples in said caps, electric lamps secured to said nipples, and a bracket, consisting, essentially, of a
15 plate *e*, a tubular arm *h* and a pivotal connection between said plate *e* and arm *h*, a socketed ball *k* connected with said arm *h*, rods *l*

secured to said ball *k*, socketed posts *l*² on said reflector, set-screws for rotatably securing the opposite ends of said rods *l* in the sockets of said posts *l*², and electric-light
20 wires extending through said main bracket-arm *h* and ball *k* and connected with the lamps in the reflector, substantially as and for the purposes set forth.

In testimony that I claim the invention set forth above I have hereunto set my hand this
25 11th day of July, 1898.

GEORGE F. SPENCER.

Witnesses:

FREDK. C. FRAENTZEL,
WALTER H. TALMAGE.