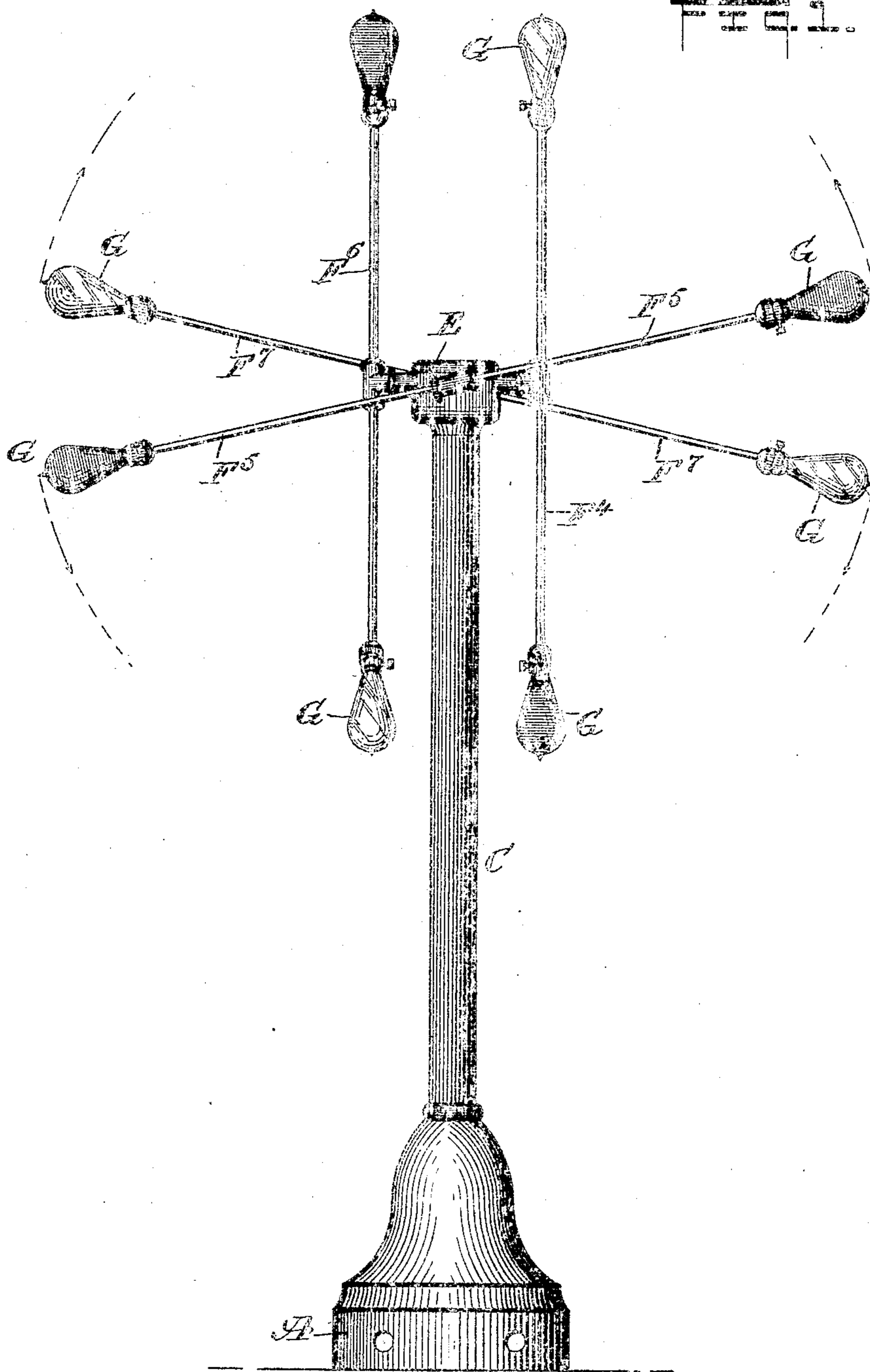


No. 786,709.

PATENTED APR. 4, 1905.

C. F. ALLINE.  
ILLUMINATING DEVICE.  
APPLICATION FILED MAY 23, 1904.

2 SHEETS—SHEET 1.



WITNESSES:

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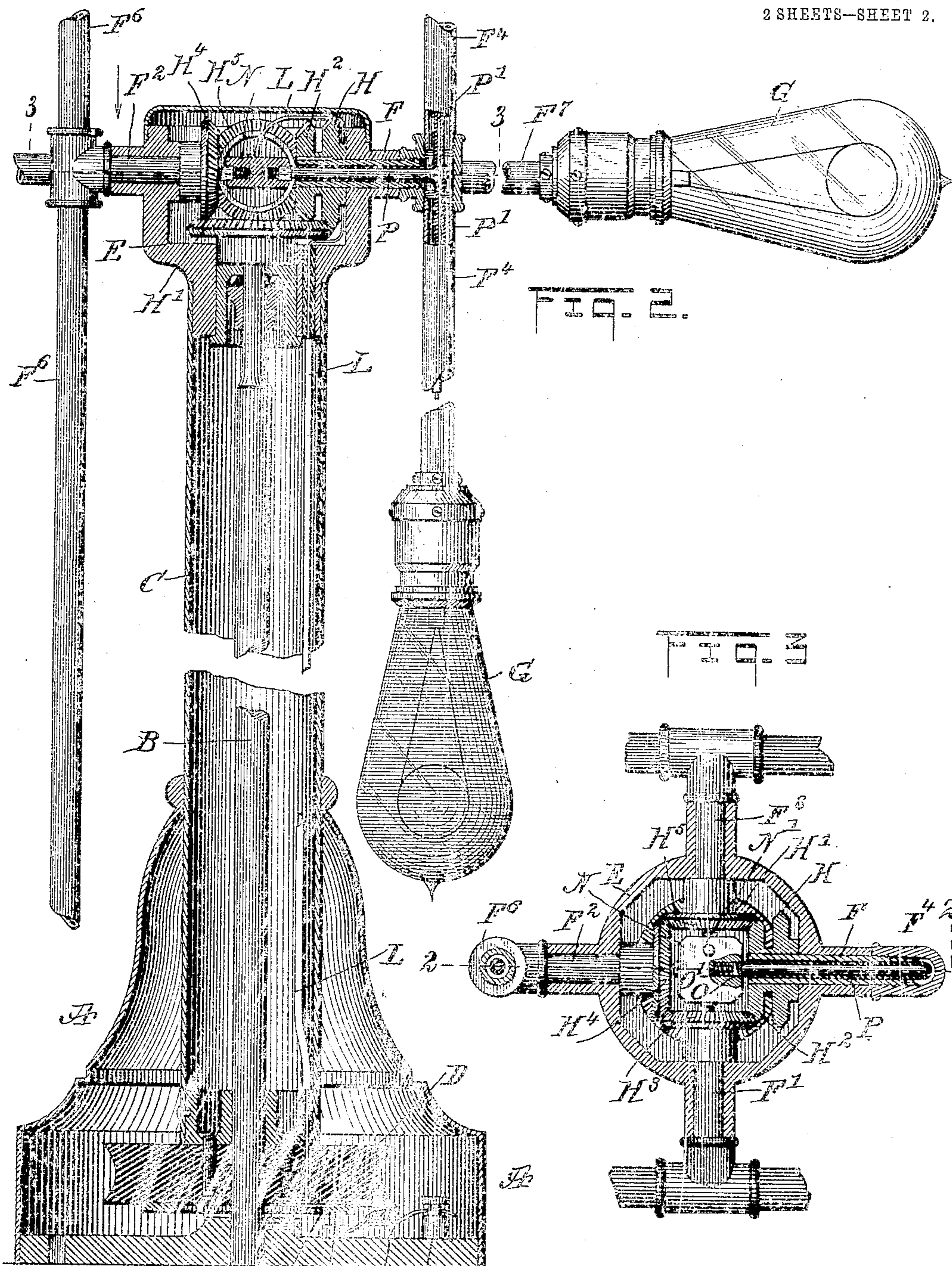
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# UNITED STATES PATENT OFFICE.

CHARLES FREDERICK ALLINE, OF FORT DODGE, IOWA, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO ALLINE PHOTOCYCLE COMPANY, OF WASHINGTON, DISTRICT OF COLUMBIA, A CORPORATION OF THE DISTRICT OF COLUMBIA.

## ILLUMINATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 786,709, dated April 4, 1905.

Application filed May 23, 1904. Serial No. 209,251.

*To all whom it may concern:*

Be it known that I, CHARLES FREDERICK ALLINE, a citizen of the United States, and a resident of Fort Dodge, in the county of Webster and State of Iowa, have invented a new and Improved Illuminating Device, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved illuminating device for use in show-windows and other places and arranged to attract the attention of passers-by and other persons.

The invention consists of novel features and parts and combinations of the same, as will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the improvement. Fig. 2 is an enlarged sectional side elevation of the same on the line 2 2 of Fig. 3, and Fig. 3 is a sectional plan view of the same on the line 3 3 of Fig. 2.

In a suitably-constructed base A is secured a post B, on which is mounted to turn a tubular support C, carrying at its lower end a grooved pulley D, connected by belt with other machinery for imparting a turning motion to the upright hollow support C. The latter is provided at its upper end with a head E, in which are mounted to turn the spindles F, F', F<sup>2</sup>, and F<sup>3</sup> of hollow arms F<sup>4</sup>, F<sup>5</sup>, F<sup>6</sup>, and F<sup>7</sup>, respectively, the spindles F F<sup>2</sup> and F' F<sup>3</sup> being arranged diametrically in the head E, as plainly indicated in Fig. 3, the spindles F F<sup>2</sup> standing at right angles to the spindles F' and F<sup>3</sup>. On the outer ends of the arms F<sup>4</sup>, F<sup>5</sup>, F<sup>6</sup>, and F<sup>7</sup> are secured electric lamps G of any approved construction, connected with a suitable source of electric energy, so that when the lamps are lighted and the device is set in motion by rotating the support

C then a swinging motion is given to the several arms F<sup>4</sup>, F<sup>5</sup>, F<sup>6</sup>, and F<sup>7</sup>, carrying the lamps G, to produce a very attractive effect.

In order to rotate the arms F<sup>4</sup>, F<sup>5</sup>, F<sup>6</sup>, and F<sup>7</sup> from the revolving support C, the following device is provided: On the spindle F for the arm F<sup>4</sup> is secured a bevel gear-wheel H, in mesh with a bevel gear-wheel H', fastened on the upper end of the fixed post B, and hence when the support C is rotated the spindle F is carried around so that the bevel gear-wheel H turns by being in mesh with the stationary gear-wheel H' to rotate the spindle F and the arm F<sup>4</sup> thereon. On the inner end of the spindle F is secured a bevel gear-wheel H<sup>2</sup>, in mesh on one side with a bevel gear-wheel H<sup>3</sup>, fastened on the inner end of the spindle F', and the said bevel gear-wheel H<sup>3</sup> is in mesh with a bevel gear-wheel H<sup>4</sup>, fastened on the spindle F<sup>2</sup>. The bevel gear-wheel H<sup>4</sup> is in mesh with a bevel gear-wheel H<sup>5</sup> on the spindle F<sup>3</sup>, and this bevel gear-wheel H<sup>5</sup> is also in mesh with the bevel gear-wheel H<sup>2</sup> on the side opposite the one in mesh with the bevel gear-wheel H<sup>3</sup>. When the spindle F is rotated as described, then the other spindles, F', F<sup>2</sup>, and F<sup>3</sup>, are rotated in unison with the spindle F, but in such a manner that the arms F<sup>4</sup> and F<sup>6</sup> turn in opposite directions relative to each other, and a similar movement is given to the arms F<sup>5</sup> and F<sup>7</sup> to rotate the latter in opposite directions relative one to the other. At the same time, however, the several arms revolve with the support C, so that each lamp G approximately describes a figure similar to that of the numeral 8 during each complete revolution of the support C.

The lamps G have globes which are preferably of differently-colored glass, as indicated in Fig. 1, to heighten the effect produced by the revolving and swinging lamps G.

In order to supply the electricity to the filaments of the lamps G, a binding-post I is arranged within the base A, and this binding-post is connected with a suitable source of electric energy and also by a wire J with a

brush K in contact with a contact-ring K', attached to the under side of the pulley D, preferably made of an insulating material, such as hard rubber. The contact-ring K' is  
 5 connected with an insulated wire L, extending up and in the hollow support C and in the head E thereof to connect with a binding-post N' on a block N, arranged in the space between the four bevel gear-wheels H<sup>2</sup>, H<sup>3</sup>, H<sup>4</sup>,  
 10 and H<sup>5</sup>, as plainly shown in Figs. 2 and 3. In this block N and in axial alinement with the several spindles F, F', F<sup>2</sup>, and F<sup>3</sup> are mounted to slide contact-pins O, pressed on by springs O' to hold the outer ends of the contact-pins O  
 15 in engagement with the inner ends of conductors P, held insulated in the hollow spindles F, F', F<sup>2</sup>, and F<sup>3</sup>, as plainly indicated in the drawings. From the outer ends of the conductors P lead branch conductors P' in opposite  
 20 directions in the hollow arms F<sup>4</sup>, F<sup>5</sup>, F<sup>6</sup>, and F<sup>7</sup>, respectively, to the lamps G at the outer ends of the said arms. The return-wire of the electric lamps G is grounded on the support C of the device.

25 The arms F<sup>4</sup> and F<sup>6</sup> are so disposed on their spindles F and F<sup>2</sup> relative to the arms F<sup>5</sup> and F<sup>7</sup> on the spindles F' and F<sup>3</sup> that the arms do not interfere with each other on setting the device in motion.

30 The device is very simple and durable in construction, can be cheaply manufactured, and is more especially designed for use in show-windows and other places for attracting the attention of passers-by and other persons.

35 Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. An illuminating device having a revolving support, and lamps revolving on the support, in opposite directions and in unison with  
 40 the said support.

2. An illuminating device having a support, lamps revolving on the said support, and means for revolving the lamps in opposite directions.

3. An illuminating device having a revolving support, oppositely - arranged pairs of  
 45 lamps revolving on the said support, and means for revolving one pair of lamps in an opposite direction to the opposing pair.

4. An illuminating device, comprising a base  
 50 carrying a fixed post, a support mounted to revolve on the said post, pairs of oppositely-arranged arms having spindles journaled on the said support, the arms carrying lamps, and a gearing connecting the said spindles  
 55 with the stationary post, to rotate the arms of each pair in opposite directions on rotating the support.

5. An illuminating device comprising a base carrying a fixed post, a support mounted to revolve on the said post and having a head, a  
 60 plurality of arms having hollow spindles journaled on the said head, a gearing connecting the several spindles with each other, a gear-wheel on one of the spindles, and a fixed gear-wheel on the said post, in mesh with the said  
 65 last-named gear-wheel, for rotating the several spindles in unison on rotating the support.

6. An illuminating device comprising a base carrying a fixed post, a support mounted to  
 70 revolve on the said post and having a head, a plurality of arms having hollow spindles journaled on the said head, a gearing connecting the several spindles with each other, a gear-wheel on one of the spindles, a fixed gear-  
 75 wheel on the said post, in mesh with the said last-named gear-wheel, for rotating the several spindles in unison on rotating the support, electric lamps on the outer ends of the  
 80 said arms, and means for conducting electricity to the said lamps by way of the support, the spindles and the arms.

7. An illuminating device comprising a support mounted to revolve, a plurality of hollow arms having hollow spindles mounted to  
 85 turn in the head of the said support, electric lamps carried on the outer ends of the said arms, a block connected with a source of electricity by way of the said hollow support, and  
 90 spring-pressed pins in the said block, in engagement with conductors carried by the said spindles and leading to the said electric lamps.

8. An illuminating device comprising a support mounted to revolve, a plurality of hollow arms having hollow spindles mounted to  
 95 turn in the head of the said support, electric lamps carried on the outer ends of the said arms, a block connected with a source of electricity by way of the said hollow support, spring-pressed pins in the said block, in en-  
 100 gagement with conductors carried by the said spindles and leading to the said electric lamps, a revolving contact-ring carried on the said support and connected by an insulated wire with the said block, and a fixed brush con-  
 105 nected with a source of electricity and in contact with the said contact-ring.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES FREDERICK ALLINE.

Witnesses:

LOUIS B. ERWIN,  
 J. W. HARDY.