

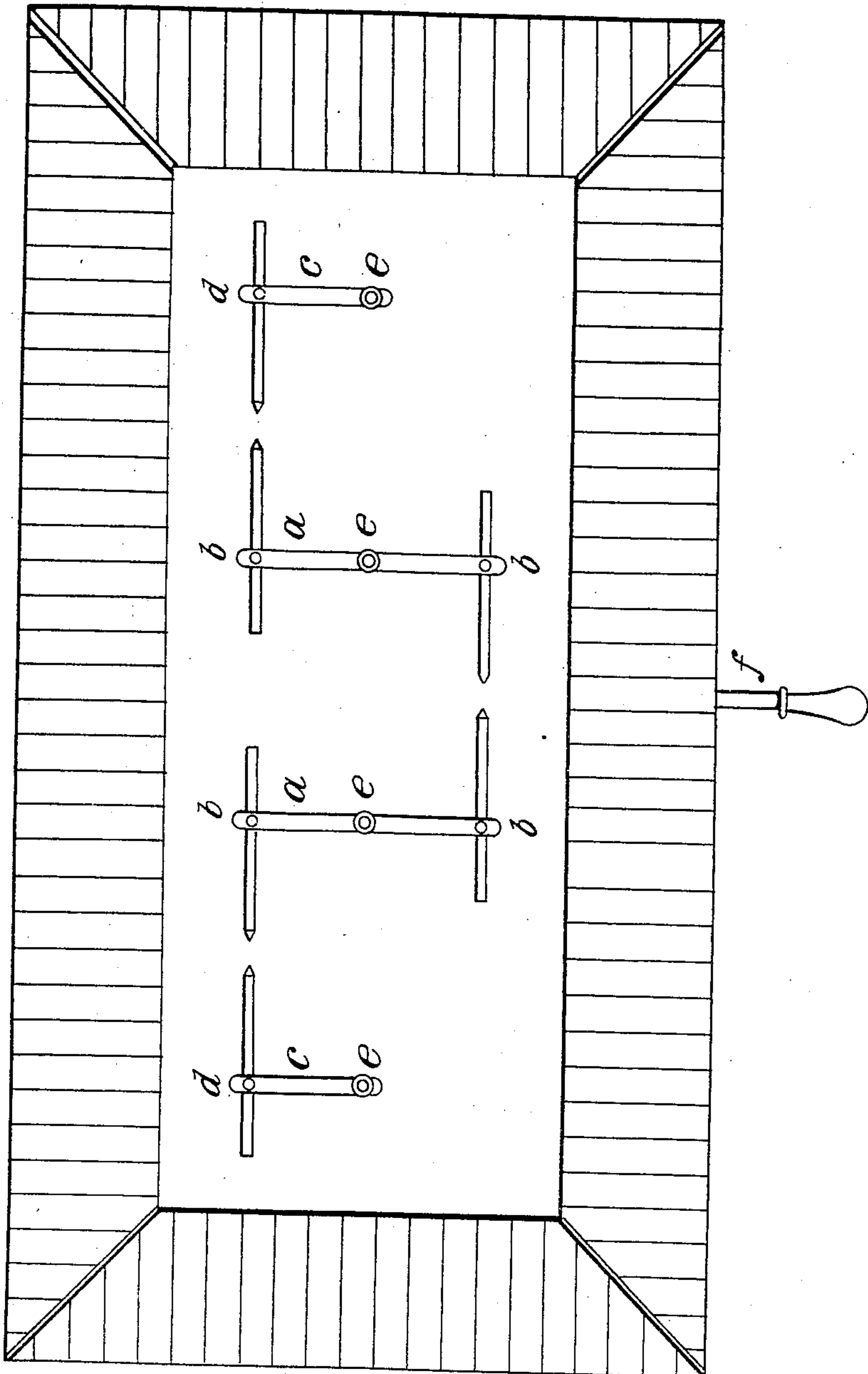
898,607.

J. SCHMIDT.  
ILLUMINATING APPARATUS.  
APPLICATION FILED MAY 8, 1907.

Patented Sept. 15, 1908.

3 SHEETS—SHEET 1.

Fig. 1



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Inventor:  
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3 SHEETS—SHEET 2.

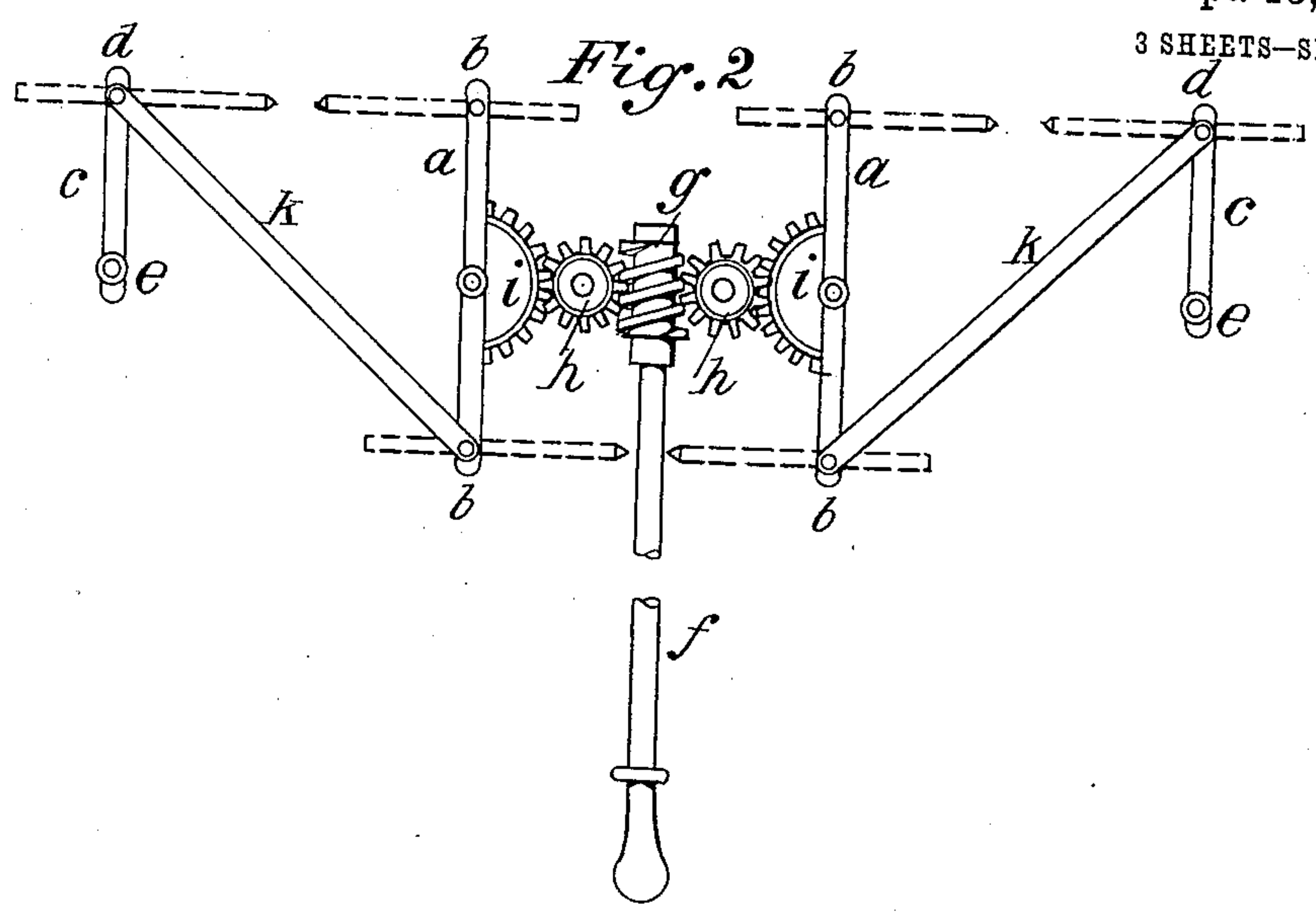


Fig. 3

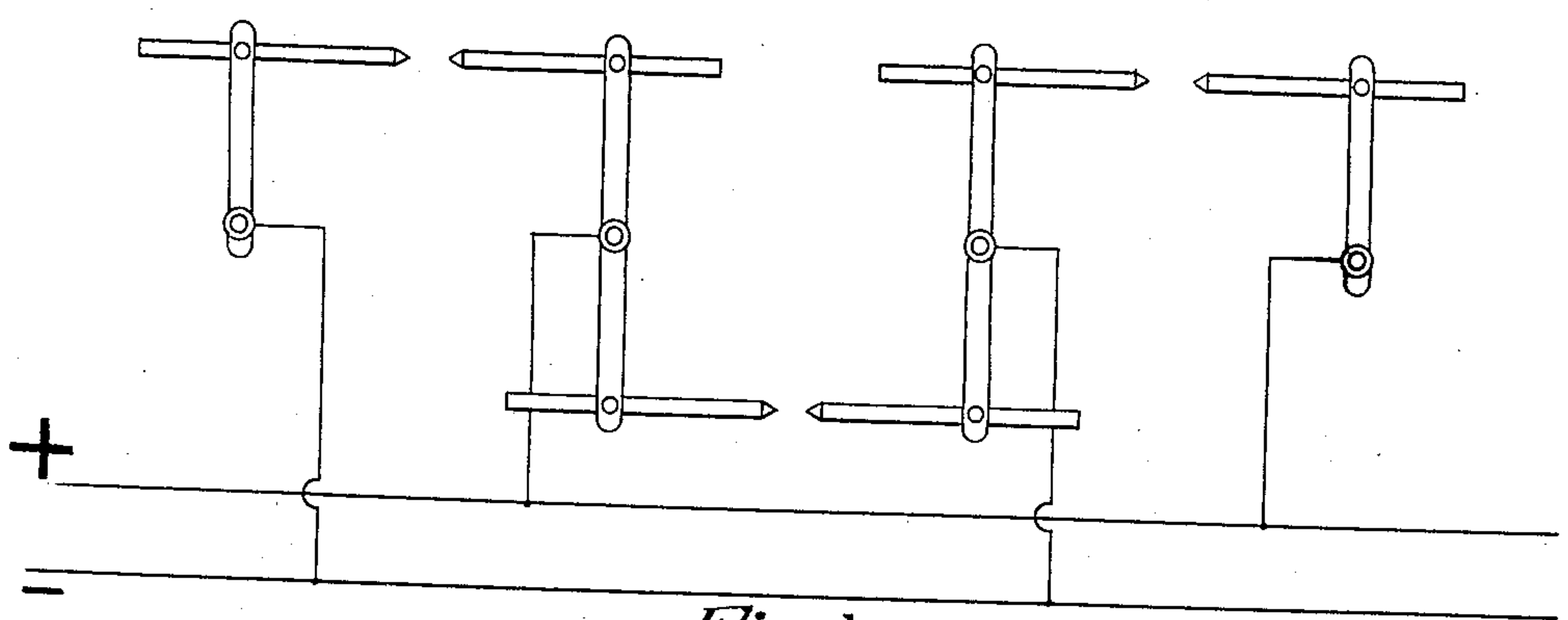
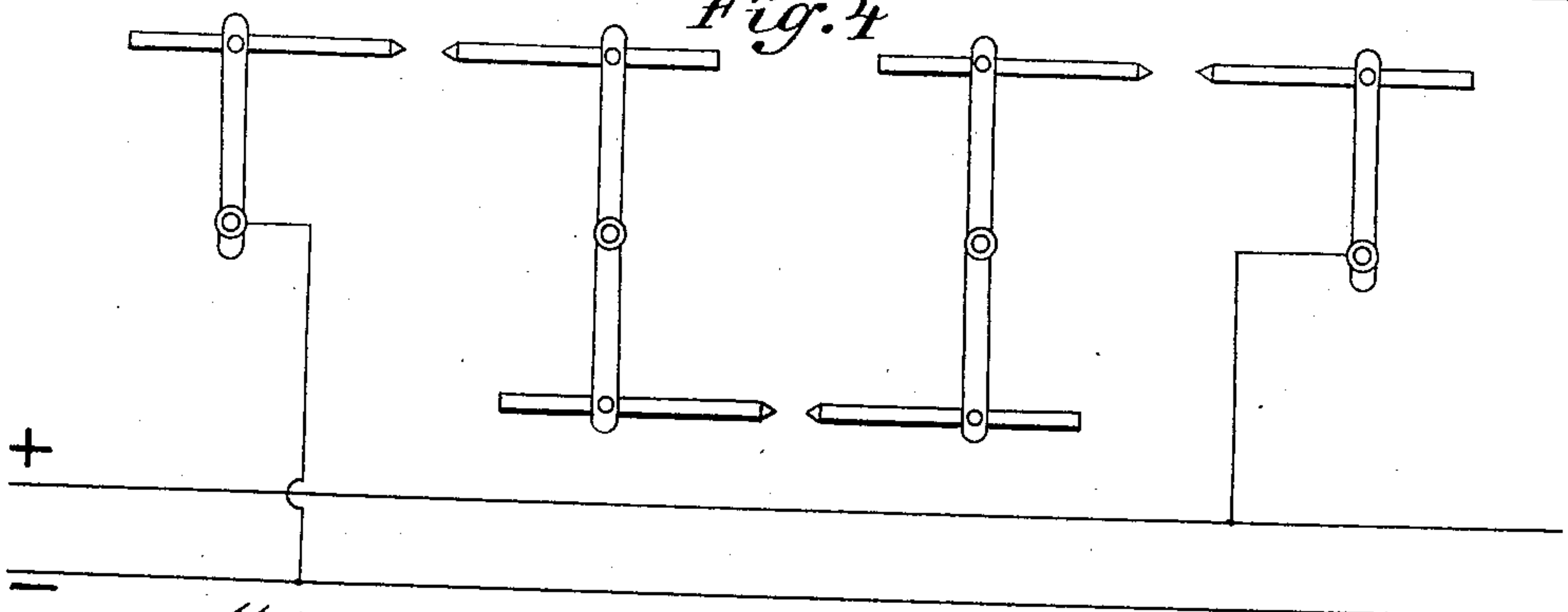


Fig. 4



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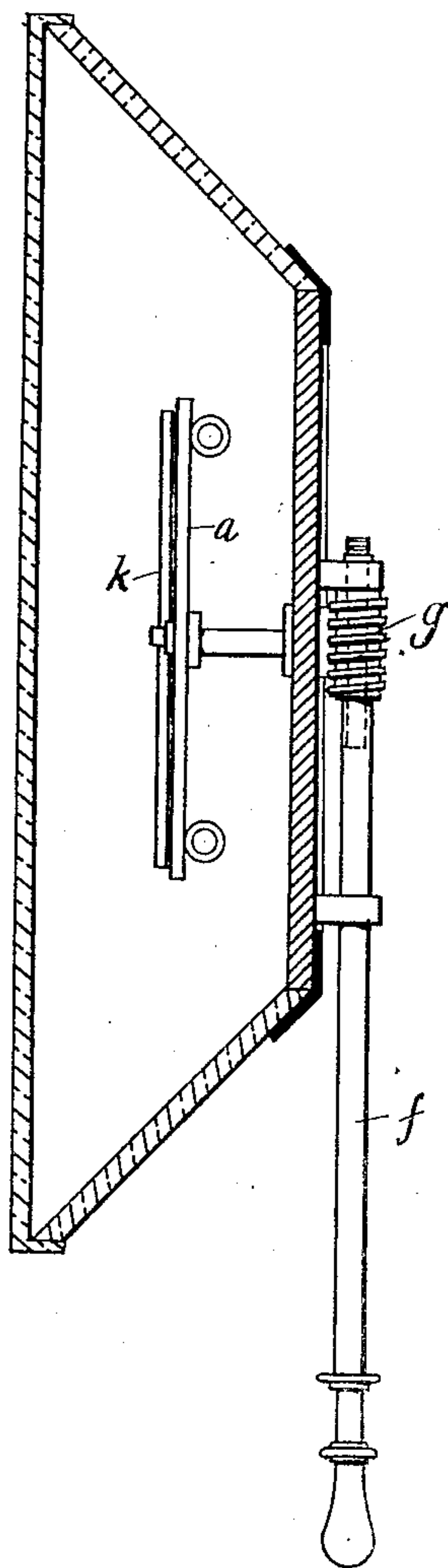
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3 SHEETS—SHEET 3.

*Fig. 5*



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# UNITED STATES PATENT OFFICE.

JEAN SCHMIDT, OF FRANKFORT-ON-THE-MAIN, GERMANY.

## ILLUMINATING APPARATUS.

No. 898,607.

Specification of Letters Patent.

Patented Sept. 15, 1908.

Application filed May 8, 1907. Serial No. 372,513.

*To all whom it may concern:*

Be it known that I, JEAN SCHMIDT, a subject of the German Emperor, and a resident of Frankfort-on-the-Main, Germany, have invented certain new and useful Improvements in Illuminating Apparatus, of which the following is a specification.

This invention relates to illuminating apparatus, which is more particularly intended for illuminating objects to be photographed, and which comprises a plurality of pairs of electrodes inclosed in a single casing. Illuminating apparatus of this type is already known, but heretofore the several pairs of electrodes or carbons have been arranged parallel, so that the arcs produced by each pair are too close together; consequently the distribution of light is not satisfactory for the purpose required. In the present invention this disadvantage is removed by placing the carbon pairs, and consequently the arcs, at different levels and at comparatively large distances apart, so as to secure a favorable distribution of light and good lighting effects for photographic purposes.

A construction embodying the invention is illustrated in the annexed drawing, in which

Figure 1 is a front view of the apparatus, Fig. 2 a view of the regulating mechanism arranged at the rear of the casing. Figs. 3 and 4 are circuit diagrams and Fig. 5 is a vertical sectional view through the apparatus.

In the construction illustrated three sets of carbons are provided, for producing three arcs. The carbons are carried by pivoted lever arms all arranged in the same vertical plane. The two central arms *a* carry at each end *b* a carbon, and the lateral arms *c* carry carbons at their ends *d*. The carbons carried by the arms *c* are in alinement with the carbons at the upper ends of the adjacent arms *a*, and the carbons at the lower ends of the arms *a* are in alinement with each other. The arcs are struck and regulated by actuating the arms *a* by means of worm and toothed gear *f*, *g*, *h*, *i* arranged at the rear of the case. The worm *g* at the upper end of the spindle *f* meshes with two pinions *h*, which it rotates in opposite directions. Each of these pinions meshes with a toothed segment *i* fixed outside the case to the pivot or axle *e* of one of the arms *a*, so that the arcs can be struck and regulated by actuating the spindle *f* by means of the handle *f'*. The arms *c* are at the same time actuated by means of rods *k*

which connect their ends *d* to the lower ends *b* of the arms *a*.

An indefinite number of additional arms and connecting rods may be provided for carrying and controlling additional carbons, the connections being so made that all the arms can be controlled by means of a single regulating device. The provision of a plurality of sets of carbons or lamps enables the apparatus to be used with different voltages, since the lamps can be connected in series or in parallel, as shown in Figs. 3 and 4.

As has already been mentioned the arrangement of the arcs at different levels causes the light to be very effectively distributed, and the distribution may be improved by covering the inclined walls of the case *h* with ribbed or corrugated mirrors and by placing frosted glass or gauze screens in front of the lamps.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. An illuminating apparatus comprising a casing, a plurality of pairs of electrodes supported within the casing and arranged in different parallel planes, and means for simultaneously adjusting an electrode of each pair to regulate all of the arcs.

2. An illuminating apparatus comprising a casing, a plurality of pairs of electrodes pivotally supported within the casing and forming arcs arranged at different elevations, the electrodes of one pair lying in a different plane from those of another.

3. An illuminating apparatus comprising a casing, a plurality of pairs of electrodes pivotally supported within the casing at different elevations, and means for simultaneously adjusting a plurality of the electrodes to vary all of the arcs.

4. An illuminating apparatus comprising a casing, a plurality of pairs of electrodes arranged at different elevations in the casing, the electrodes of the several pairs being supported by parallel, pivotally mounted, arms, and means connecting the electrode-supporting arms, whereby they will all be moved to the same extent when any one thereof is adjusted to regulate one of the arcs.

5. An illuminating apparatus comprising a casing, a plurality of pairs of electrodes arranged at different elevations in the casing and pivotally supported to move about par-

allel axes, a rotary spindle, gearing connected with the supports of one pair of electrodes and said spindle, and connections between the supports of said pair of electrodes and the  
5 supports of the other electrodes, whereby by turning the spindle all of the arcs will be simultaneously regulated.

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

JEAN SCHMIDT.

Witnesses:

FRANZ HASSLACHER,  
ERWIN DIPPEL.