

(No Model.)

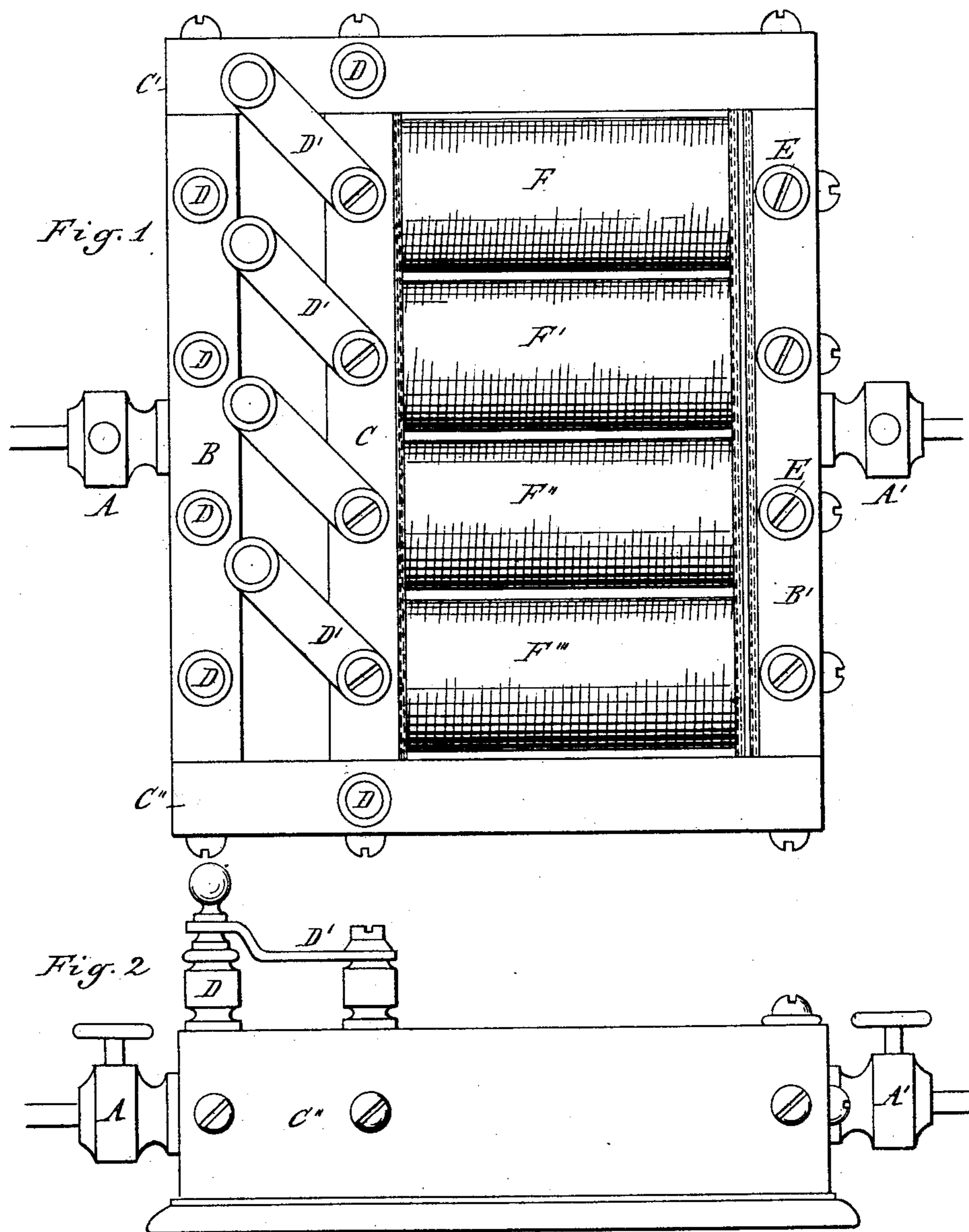
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C. J. VAN DEPOELE.

SHUNTING DEVICE FOR ELECTRIC LIGHTS.

No. 257,988.

Patented May 16, 1882.



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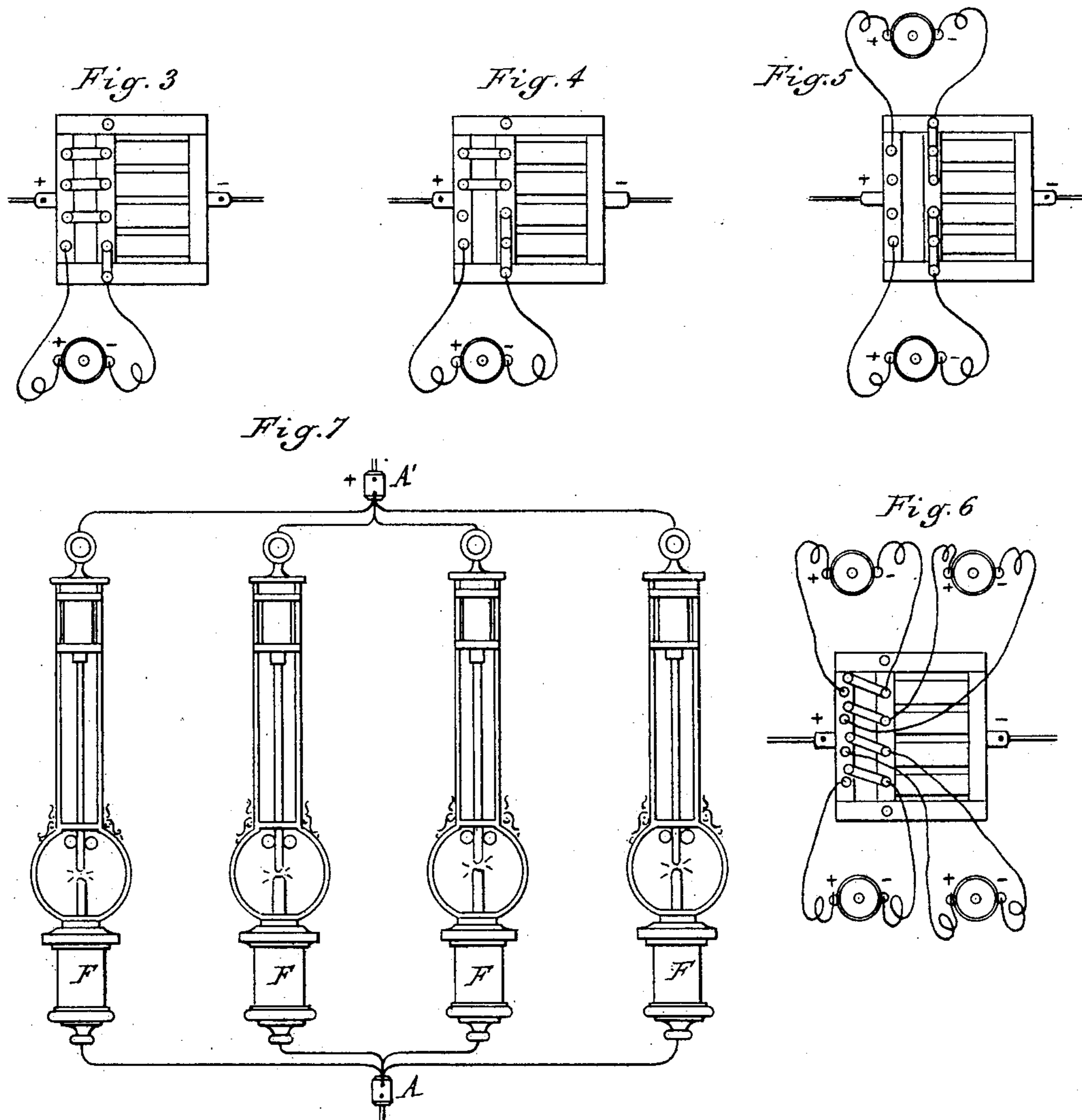
Inventor:  
Charles J. Van Depoele  
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# UNITED STATES PATENT OFFICE.

CHARLES J. VAN DEPOELE, OF CHICAGO, ILLINOIS.

## SHUNTING DEVICE FOR ELECTRIC LIGHTS.

SPECIFICATION forming part of Letters Patent No. 257,988, dated May 16, 1882.

Application filed May 4, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES J. VAN DEPOELE, of Chicago, in the county of Cook and State of Illinois, have invented a Shunting Device for Electric Lights, of which the following is a specification.

The nature of my invention relates to a certain new and useful shunting device for electric lights to be used in producing electric-arc light, whereby I am enabled to run lights of different power singly or in series in one circuit by the use of a distributor, constructed according to my invention, at each lighting-station without the necessity of the employment of any complicated or wasteful device to obtain such division, and at the same time by the same system enabling me with perfect ease to run a large number of lights all of equal power and requiring no derived or "shunt" currents to govern said lamps.

The invention consists in the peculiar construction and operation of my improvement, as more fully hereinafter described.

Figure 1 is a front elevation of my new distributor. Fig. 2 is a side elevation of the same. Figs. 3, 4, 5, and 6 show the same construction of distributor-operating lamps in different combinations and of more or less power. Fig. 7 shows the mode of connecting several lamps in one chandelier or cluster.

In the accompanying drawings, which form a part of this specification, A A' represent binding-posts. B B' are cross-bars, either wholly or partially metallic, which form two sides of a frame. C' C'' are bars of non-conducting material, which form two other sides of said frame. C is a similar bar connecting the bars C' C'', thereby dividing the frame into two divisions, as shown in Fig. 1. D are connecting-posts, and D' are switches. E are connecting-screws and washers. F F' F'' F''' are distributing-coils.

The distributor being connected by its posts A A' with the wires of a dynamo or other electrical battery, let us suppose that the single circuit of certain power has to furnish currents for lights of different intensities. Then instead of sending the whole current directly through the lights consecutively I send it first through the distributor. Now, since the coils in the distrib-

uter, each considered alone, offer a certain resistance to the passage of the current, the resistance of each coil being exactly the same as its fellows, a certain number of coils having their total conductivity equal to the capacity of the main conductor are placed in the frame, as shown in Fig. 1. Now, by connecting a lamp, as in Fig. 3, with one of the posts D and one of the switches D', all the switches being adjusted as shown in said figure, part of the current will pass through the lamp, but the greater portion will pass through the other checks to the next distributor. In Fig. 4 a larger light is produced by adjusting the switches so that the current from two checks will pass through the lamp and the rest of the current through the balance of the coils of the regulator independent of the lamp. This arrangement diminishes the resistance in the lamp-circuit and increases it in the side current.

Fig. 5 shows how the switches are to be adjusted for running two lights, each of the same intensity, as one-half of the total current is passed through each of the lamps after first passing through two of the coils of the regulator.

In Fig. 6 is shown the manner of arranging the switches and the wires for running four lamps, each of which is of equal intensity with the others.

I do not desire to confine myself to the exact construction and arrangement of the distributor as hereinbefore described, for the division of the current may be obtained in various ways without departing from the spirit of my invention—as, for instance, in the manner shown in Fig. 7. In this figure four lights are shown in a cluster or chandelier, each lamp being provided with a coil, F, independent of the coil for feeding the carbon, each check forming a fraction of the carrying capacity of the conductor connecting with the posts A A', and all the coils combined representing the total capacity of the said conductor.

In my system of lighting, when it is necessary to run a large number of lights all of the same intensity in one circuit I send the current through two lamps simultaneously, or, in other words, divide the current at each series of two lights and send part through each lamp, bring-

ing the divided current together again after the lamps have been passed. This is rendered possible by so constructing and proportioning the operating-magnets of the lamps that all  
5 the lamps will be of the same resistance. Thus one lamp will have a certain and perceptible resistance, while the conductive capacity of two lights or lamps combined will offer an easy passage of the current. By this construction the  
10 current divides itself between the two lamps very evenly, as the moment the current flows through one lamp faster than the other the latter will be made to "feed" instantly and re-establish equilibrium.

What I claim as my invention is—

A distributor for dividing electric currents, consisting of the frame B B' C C' C'', carrying the checks or coils F F' F'' F''', all connected with the main line by posts A A', and the switches D' and posts D, substantially as de- 20 scribed.

CHARLES J. VAN DEPOELE.

Witnesses:

JOHN SCULLY,  
ALBERT WAHL.