

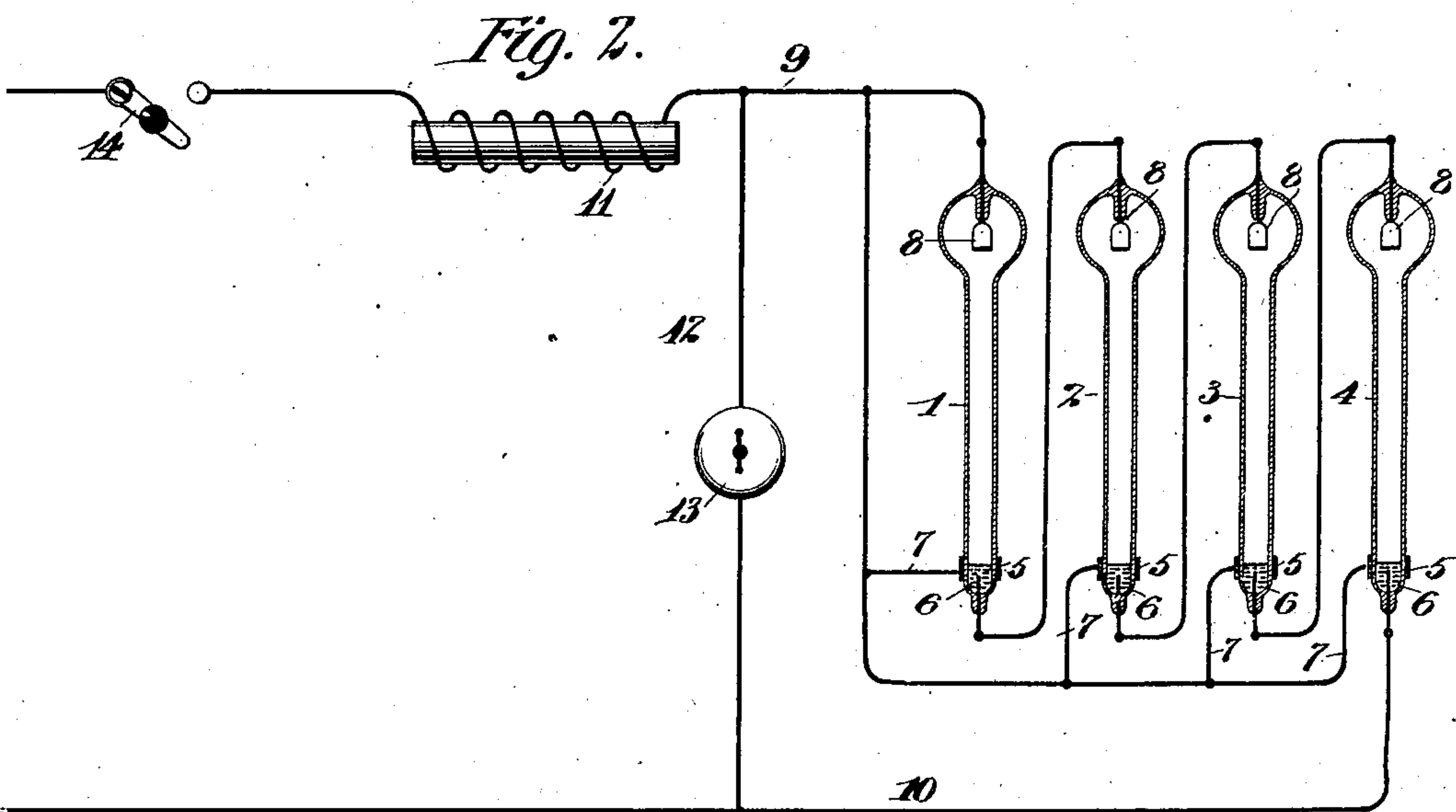
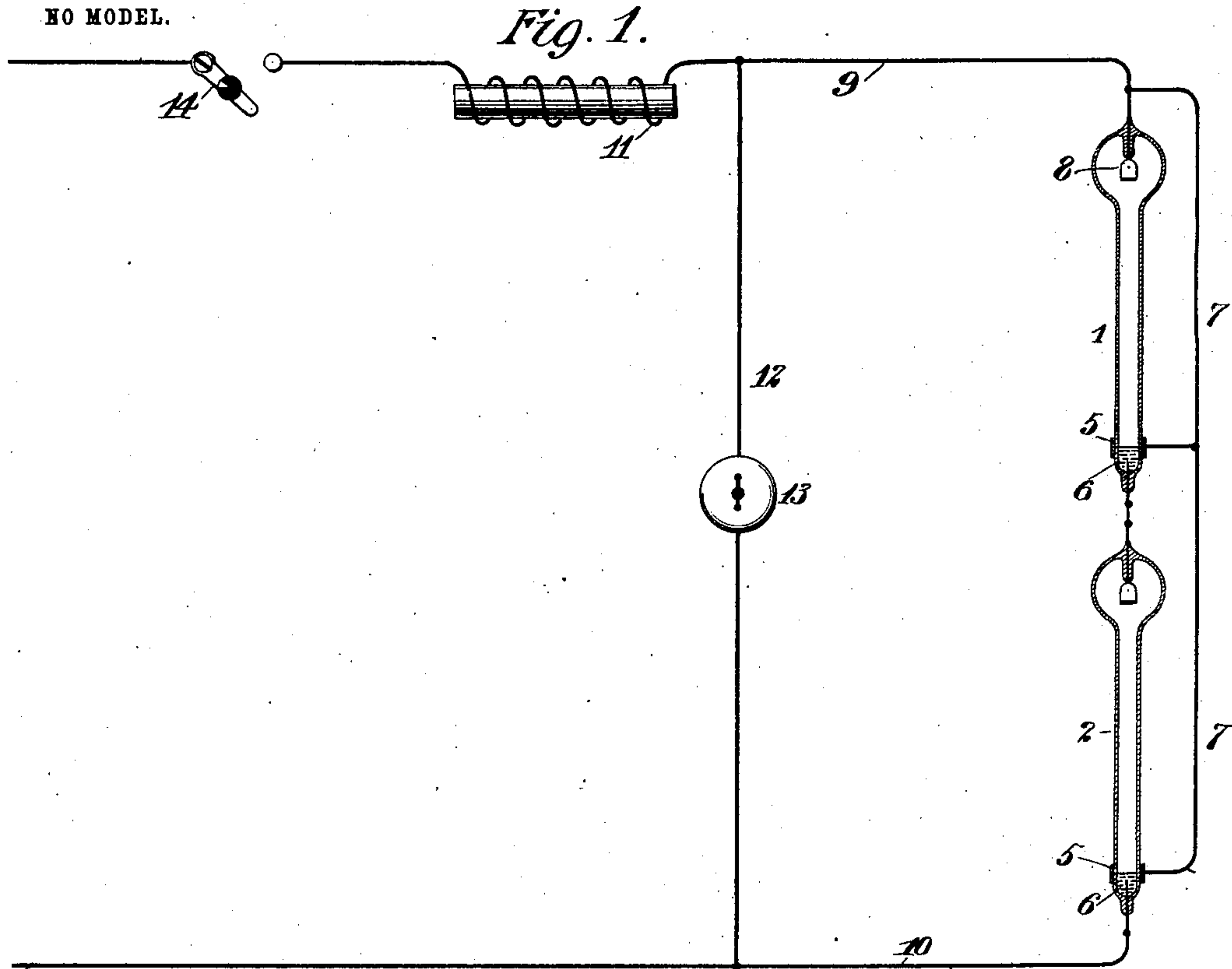
No. 728,891.

PATENTED MAY 26, 1903.

S. E. FLICHTNER & C. W. DENNY.
STARTING MEANS FOR VAPOR ELECTRIC LAMPS.

APPLICATION FILED AUG. 23, 1902.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

STANWOOD E. FLICHTNER, OF ENGLEWOOD, NEW JERSEY, AND CHARLES W. DENNY, OF NEW YORK, N. Y., ASSIGNORS TO GEORGE WESTINGHOUSE, OF PITTSBURG, PENNSYLVANIA.

STARTING MEANS FOR VAPOR ELECTRIC LAMPS.

SPECIFICATION forming part of Letters Patent No. 728,891, dated May 26, 1903.

Application filed August 23, 1902. Serial No. 120,756. (No model.)

To all whom it may concern:

Be it known that we, STANWOOD E. FLICHTNER, a resident of Englewood, county of Bergen, State of New Jersey, and CHARLES W. DENNY, a resident of New York, in the county and State of New York, citizens of the United States, have invented certain new and useful Improvements in Starting Means for Vapor Electric Lamps, of which the following is a specification.

It is well known that the Hewitt gas or vapor electric lamp is generally provided with a starting-band of metallic foil or its equivalent arranged near the negative electrode and that this band is joined by a suitable conductor with the lead-wire passing to the positive electrode. It is also known that one of these lamps is usually started by the action of a reactive coil in series with the lamp, creating an impulse of higher potential in the lamp-circuit whenever a shunt across the circuit between the lamp and the reactance-coil is quickly ruptured, as by a snap-switch operating under oil.

Hitherto every lamp has been provided with a separate starting apparatus or else some sort of switching apparatus has been employed, whereby a single reactance-coil could be made to operate successively upon several lamps. Prior to our invention it has not been possible to start simultaneously two or more lamps arranged in series by means of a single reactance device. The means by which we accomplish this result are illustrated in the accompanying drawings, in which—

Figures 1 and 2 are diagrams illustrating our mode of starting two or more Hewitt lamps at the same time and by means of a single reactance device.

Referring to the drawings in detail, 1 and 2 represent two Hewitt lamps in series in Fig. 1, and 1, 2, 3, and 4 represent four such lamps in series in Fig. 2. Each lamp is provided with a starting-band 5, arranged near the negative electrode 6, and from each starting-band runs a wire 7, which under the former practice would in every instance run to the lead-wire passing to the positive electrode 8 of its own lamp. As shown, however, we connect all the starting-bands to the positive wire 9, leading to the first lamp in the series, and it is by virtue of this arrangement that

we are able to secure with certainty the starting of all the lamps in the series at once.

The negative circuit-wire is shown at 10, the reactance device at 11, the shunt at 12, and the snap or quick-break switch at 13. The last-named piece of apparatus is usually adapted to break contact under oil, as will be understood.

Now when the main circuit is closed, as by a hand-switch 14, the only operation necessary to start the lamps is that of operating the switch 13, so as to cause a sudden rupture of the shunt-circuit, whereupon the current which has been passing through the reactance device 11 by way of the shunt-circuit will create an impulse of higher potential, which will find its way through the lamps and set them into operation.

It will be understood that the snap-switch 13 is normally open and that when operated to start the lamps, as described above, it is first closed and then opened again, with the result set forth above.

We claim as our invention—

1. In a starting apparatus for gas or vapor electric lamps, two or more lamps arranged in series, a starting-band for each lamp, arranged in proximity to the negative electrode thereof, and conductors connecting all the starting-bands to the positive main at a point in advance of where it enters the first lamp of the series.

2. The combination with two or more gas or vapor electric lamps arranged in series, of a starting-band for each lamp located in proximity to the negative electrode thereof, a reactance device in series with the lamps, and a shunt across the circuit between the reactance device and the series of lamps, and means for causing a quick rupture of the said shunt, the said starting-bands being all electrically connected with the positive main at a point in advance of where it enters the first lamp of the series.

Signed at New York, in the county of New York and State of New York, this 21st day of August, 1902.

STANWOOD E. FLICHTNER.

CHARLES W. DENNY.

Witnesses:

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