(No Model.) 2 Sheets—Sheet 1.

# M. FEILBOGEN.

## SYSTEM OF ELECTRICAL DISTRIBUTION.

No. 456,888. Patented July 28, 1891.

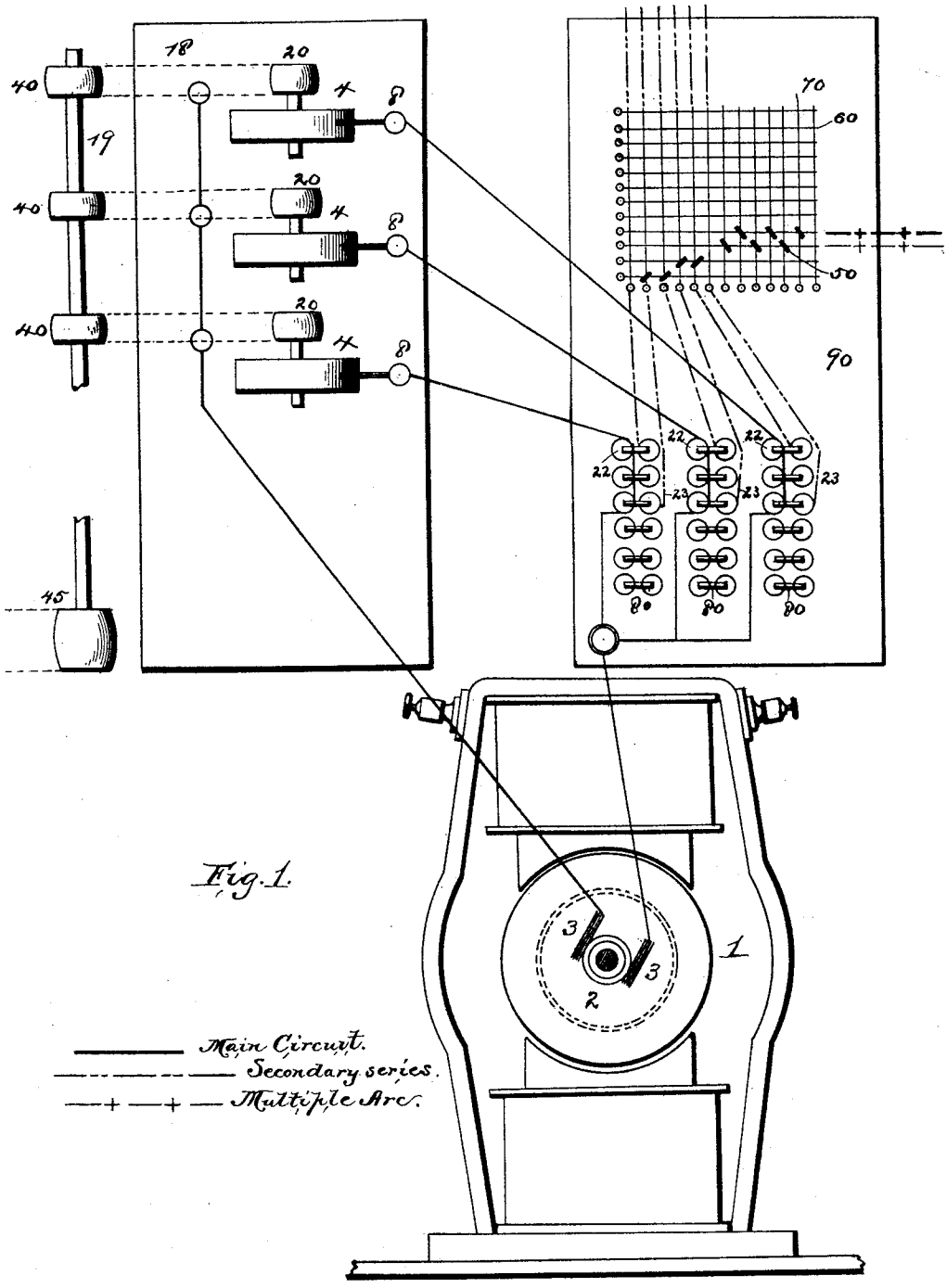



Fig. 1.

——— Main Circuit.
– – – – – – Secondary series.
—+—+— Multiple Arc.

WITNESSES
F. L. Ourand
W. M. Sterling

INVENTOR
M. Feilbogen
by R. N. Dinsmore
Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

# M. FEILBOGEN.

## SYSTEM OF ELECTRICAL DISTRIBUTION.

No. 456,888. Patented July 28, 1891.

Fig. 2

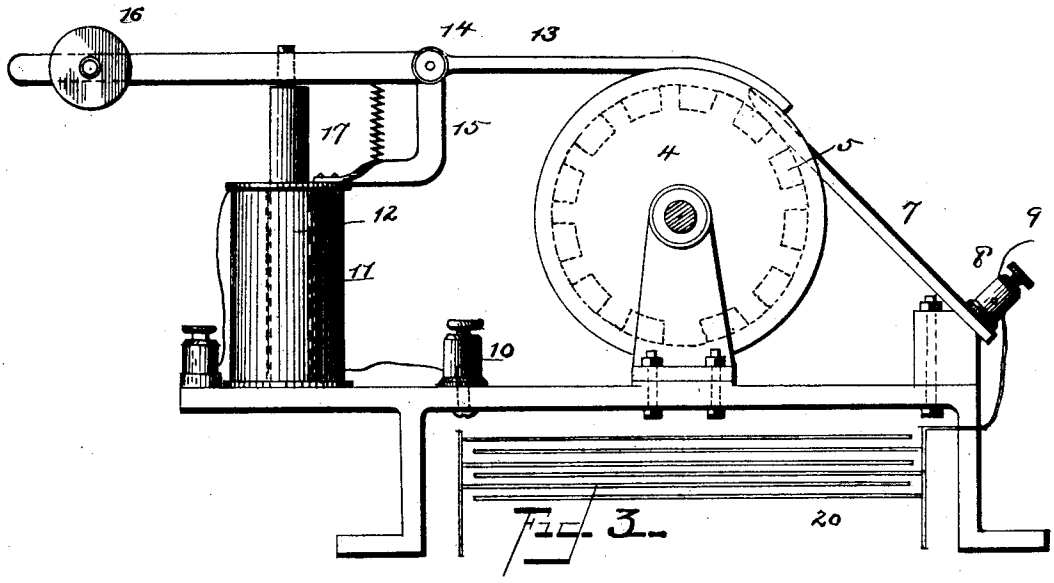
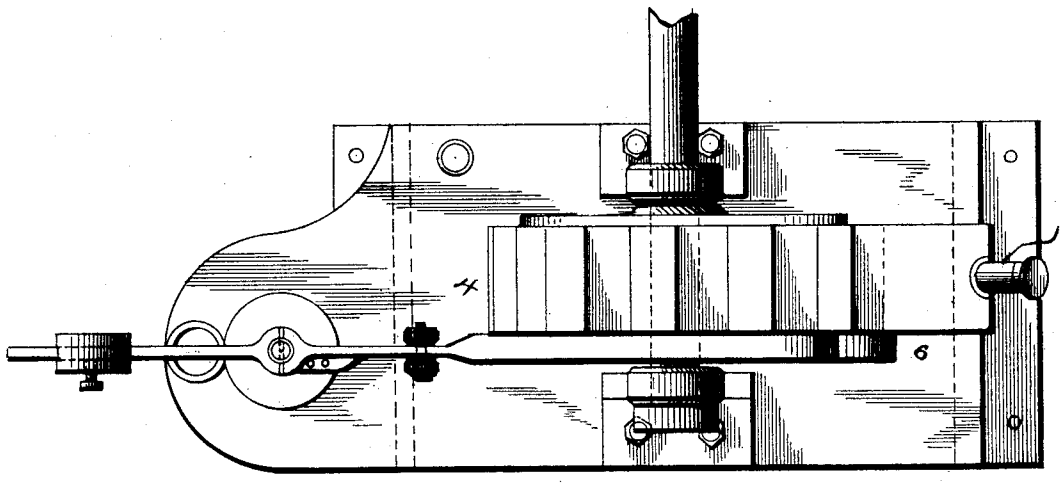



Fig. 3.




WITNESSES
F. L. Ourand.
W. M. Sterling

INVENTOR
M. Feilbogen
By E. B. Smeaton
Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

MORRIS FEILBOGEN, OF NEW YORK, N. Y., ASSIGNOR TO GUSTAV LINDENTHAL, OF PITTSBURG, PENNSYLVANIA.

## SYSTEM OF ELECTRICAL DISTRIBUTION.

SPECIFICATION forming part of Letters Patent No. 456,888, dated July 28, 1891.

Application filed September 22, 1890. Serial No. 365,834. (No model.)

*To all whom it may concern:*

Be it known that I, MORRIS FEILBOGEN, of New York, in the county of New York and State of New York, have invented new and useful Improvements in Systems of Electric Distribution; and I do hereby declare the following to be a full, clear, and exact description of said invention, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to an improved system of electric distribution; and it has for its objects to provide for interrupting the current of a constant electric generator or dynamo-electric machine generating a constant current, so as to give the proper impulses to an inductorium or a series of such devices to generate a secondary current or a series of secondary currents to be employed in an electric-light or working circuit or a series of such circuits, as more fully hereinafter explained. The above-mentioned objects I attain by the means illustrated in the accompanying drawings, in which—

Figure 1 represents a diagram showing the parts of my invention and the proper electrical connections. Fig. 2 represents a side elevation of a disrupter or circuit-breaker forming part of my invention, and Fig. 3 a top or plan view of the same.

Referring to the drawings, the numeral 1 indicates a dynamo-electric generator of that class in which a constant current is generated. To the shaft of said generator are secured the usual rings 2, against which the brushes 3 bear to convey the current from the generator.

The numeral 4 indicates the disrupter or circuit-breaker. This consists of a disk of insulating material having a series of equidistant recesses in which are set radially segmental blocks of conducting material 5, the outer surfaces of which are flush with and form a continuation of the arc of the circle of the periphery of the disk. The said blocks or segments are in metallic connection with a disk 6, which is in metallic connection with the metallic shaft carrying the disrupter or circuit-breaking disk.

The numeral 7 indicates a brush, which is secured to a support of insulating material mounted upon the frame of the disrupter at one side thereof. The said brush is provided with a binding-post 8, to which one of the terminals 9 of the main circuits of the generator is connected. The disrupter-frame is also provided with a binding-post 10, which may be connected with the other terminal of the main circuit of the system.

The numeral 11 indicates a coil, in the interior space of which is set a core of soft iron 12. The said core is attached at its upper end to a lever 13, fulcrumed at 14 to a bracket 15, secured to the upper end of the coil-spool. The said lever at one end is curved and caused to bear upon the periphery of the disk of the disrupter or circuit-breaker and at the other end is provided with a weight 16, by which said lever is held normally. Instead of the weight a spring 17 may be employed for the same purpose. The coil when in use is in electrical connection with the main circuit of the generator or dynamo and by its action on the core gives a variable pressure to the brake-lever, so as to regulate automatically the movement of the disrupter-disk. The variable pressure of the brake-lever upon the disk of the disrupter will permit the disrupter-disk to travel at a variable speed, and thus regulate the rapidity of the impulses of the circuit.

Any number of disrupters or circuit-breakers may be employed in connection with the system, three being shown in the present instance. The shaft of each disrupter is provided with a pulley 20, and each pulley is connected by means of a belt 18 on a shaft 19 with a friction-pulley 40, which receives its motion from the motor which drives the dynamo or generator by the fast pulley 45.

The numeral 20 indicates a condenser of the usual construction, which is connected in shunt with the brush and the binding-post, and which may be placed in the main circuit or cut out therefrom, as may be desired.

The numeral 22 indicates a series of coils the cores of which are each secured to one end of a soft-iron bar 29, and to the opposite ends of said bars are secured cores of similar coils 23. The coils 22 constitute the primary coils of a series of induction-coils, which are con-

nected in the main circuit with the disrupters or circuit-breakers, and the coils 23, constituting the secondary circuit, are connected with the binding-posts of a switch-board 90, of the ordinary construction, the bars 60 and 70 of which may be connected by means of removable pins 50, so as to connect the secondary circuit or circuits in series or multiple-arc circuits, as may be desired.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

In a system of electric distribution, the combination, with a constant electric generator and an inductorium or a series of the same, of a series of circuit-breakers having their brushes connected with the primary coils of the inductoriums, a series of brake-levers by which the circuit-breakers are regulated, a driving-shaft having a pulley connected with the motor by which the dynamo is driven, and a series of pulleys connected with the pulleys of the disrupters or circuit-breakers by means of suitable bands, substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two subscribing witnesses.

MORRIS FEILBOGEN.

Witnesses:
B. LEWINSON,
GEO. R. HALL.