

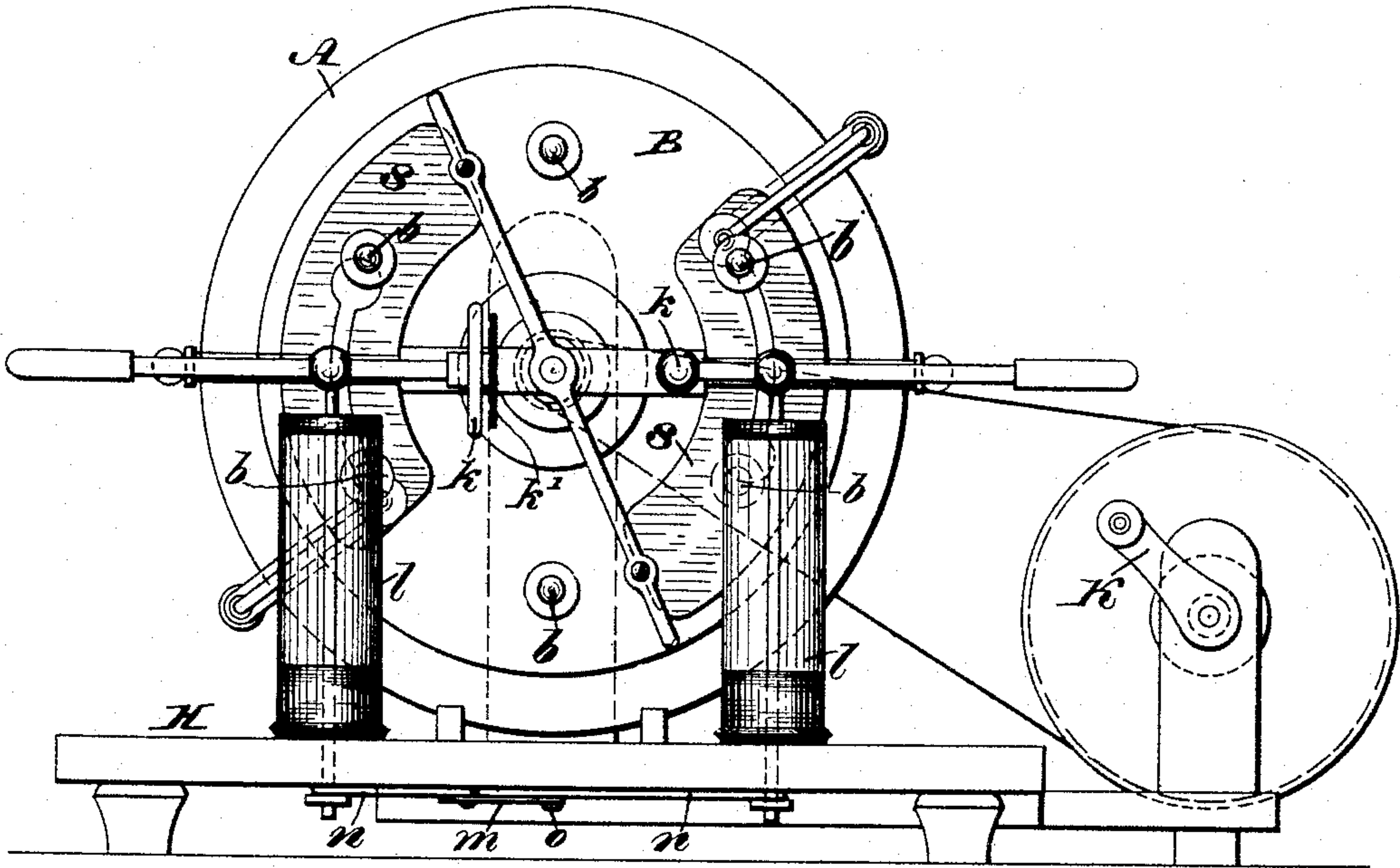
(No Model.)

R. VOSS.  
INFLUENCE MACHINE.

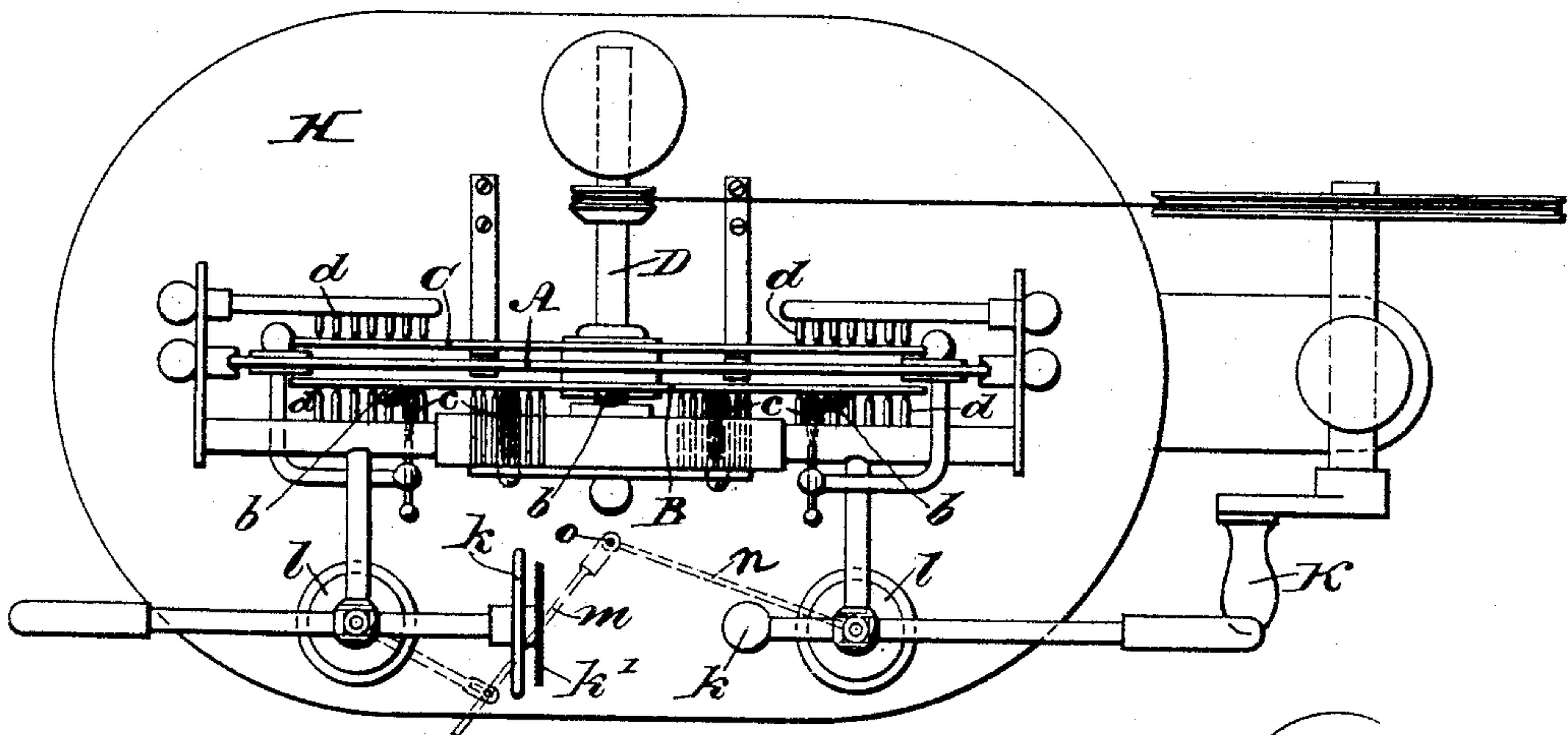
No. 410,053.

Patented Aug. 27, 1889.

*fig. 1.*



*fig. 2.*



WITNESSES:

*L. Douville,*  
*P. H. Chagel.*

INVENTOR:

*Robert Voss.*  
BY *Dieterheim & Kuntner*  
ATTORNEYS.



# UNITED STATES PATENT OFFICE.

ROBERT VOSS, OF BERLIN, GERMANY, ASSIGNOR TO JAMES W. QUEEN & CO.,  
OF PHILADELPHIA, PENNSYLVANIA.

## INFLUENCE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 410,053, dated August 27, 1889.

Application filed January 21, 1889. Serial No. 297,066. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT VOSS, a subject of the King of Prussia, German Emperor, residing at the city of Berlin, in the Kingdom of Prussia, German Empire, have invented certain new and useful Improvements in Influence-Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention has reference to improvements in double-acting electrical influence-machines; and it consists in an arrangement of three circular glass disks, two of which are rotary and on the same axis, one of these receiving any electricity that may escape on its side from the fixed or third disk and also generating electricity by friction with the air.

It also consists in certain details of construction hereinafter described, and particularly pointed out in the claims which follow this specification.

I carry out my invention in the way shown in the accompanying drawings, in which—

Figures 1 and 2 are respectively front and top views of a machine provided with my improvements.

Similar letters of reference indicate like parts in both of the figures.

A is a fixed glass disk having on it two paper sectors *s s*, placed diametrically opposite each other.

B and C are the two rotary glass disks, B being set out at equal distances from its center with small metal knobs *b b*, which, in conjunction with small metal brushes *c c*, serve to generate the electricity to be originally communicated to the influence-machine.

*dd* are metallic points serving as conductors.

*k k* are electrodes, which are for the purpose of producing a continuous spark, and they are in communication with two Leyden jars *ll*. I provide either one or both of these electrodes *k k* with a flat circular or disk-like attachment *k'* of insulating material, as rosin, gum, or hard rubber, which is secured to the metal electrode by a central stem, as shown, leaving an air-space between the two parts.

With such a surface having this air-space

between it and the metal electrode I obtain marked efficiency in the dispersion of the spark and avoid the troublesome brush-discharge.

Underneath the base-plate II is an arrangement by which the two Leyden jars *ll* may be placed in electric communication with each other. It consists of a metal bar *m*, turning on a point *o*, and of the metal wires *n n*, each connected to one of the Leyden jars. The bar *m*, as shown in the drawings, may effect a connection between the two wires *n n*, which may again be disconnected by turning the bar *m* on point *o*. The disk C is uncovered and serves for the reception of any electricity escaping on the rear side from the disk A, and also for generating a small quantity of electricity by its friction with the air when in rotation. This central disk A, being stationary and located in close proximity to the rotary disk on either side, acts after the manner of a plate in a condenser, tending to hold the electricity bound on both surfaces. The electricity thus held in tension appears to react upon the rotary plates to give increased effect. The two disks B C are mounted on one common axis D, receiving rotary motion from the crank K.

I am aware that for a long time past influence-machines have been produced having for their object to obtain by influence a larger quantity of electricity than that obtainable with the Holz machine. While this latter consisted mainly of a pair of circular varnished glass disks, one fixed and the other rotating, the improved construction had a number of such pairs of glass disks. By this arrangement the machine was very large and expensive.

By my machine a relatively larger quantity of electricity is obtained in a very simple way by influence through the back second wholly uncovered disk serving both as a protecting-body against any escape of electricity and as a generator of electricity by reason of its generating a small quantity of electricity by friction when rotating with the air present between it and the fixed disk, such electricity being then re-enforced by influence.

I am aware that influence-machines have



been constructed in which two rotary disks are adapted to rotate on opposite sides of two centrally-located fixed disks, said fixed disks having space between them. In this construction, however, of two fixed disks the space between said fixed disks is not utilized, and much of the influence of the intervening bound of electricity is lost. I therefore do not claim a double arrangement of such mechanism collectively; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. In an influence-machine, the combination of a central fixed disk and two rotary disks attached to a shaft extending through the fixed disk, with two electrodes, one of which consists of a non-conducting surface attached to a conducting-surface, but separated therefrom by an air-space, the other electrode being of usual form, and both elec-

trically connected to the influence-machine, substantially as described.

2. In an influence-machine, an electrode consisting of a non-conducting surface attached to the conducting-electrode, said parts being separated by an air-space, substantially as shown and described.

3. An electrode for an influence-machine, consisting of a flat or disk-like conductor, in combination with a flat or disk-like conducting-surface connected to the conducting part by a central stem, as shown and described.

In testimony whereof I signed this specification in the presence of two subscribing witnesses.

ROBERT VOSS.

Witnesses:

B. ROI,

ADOLPH SCHWABE.