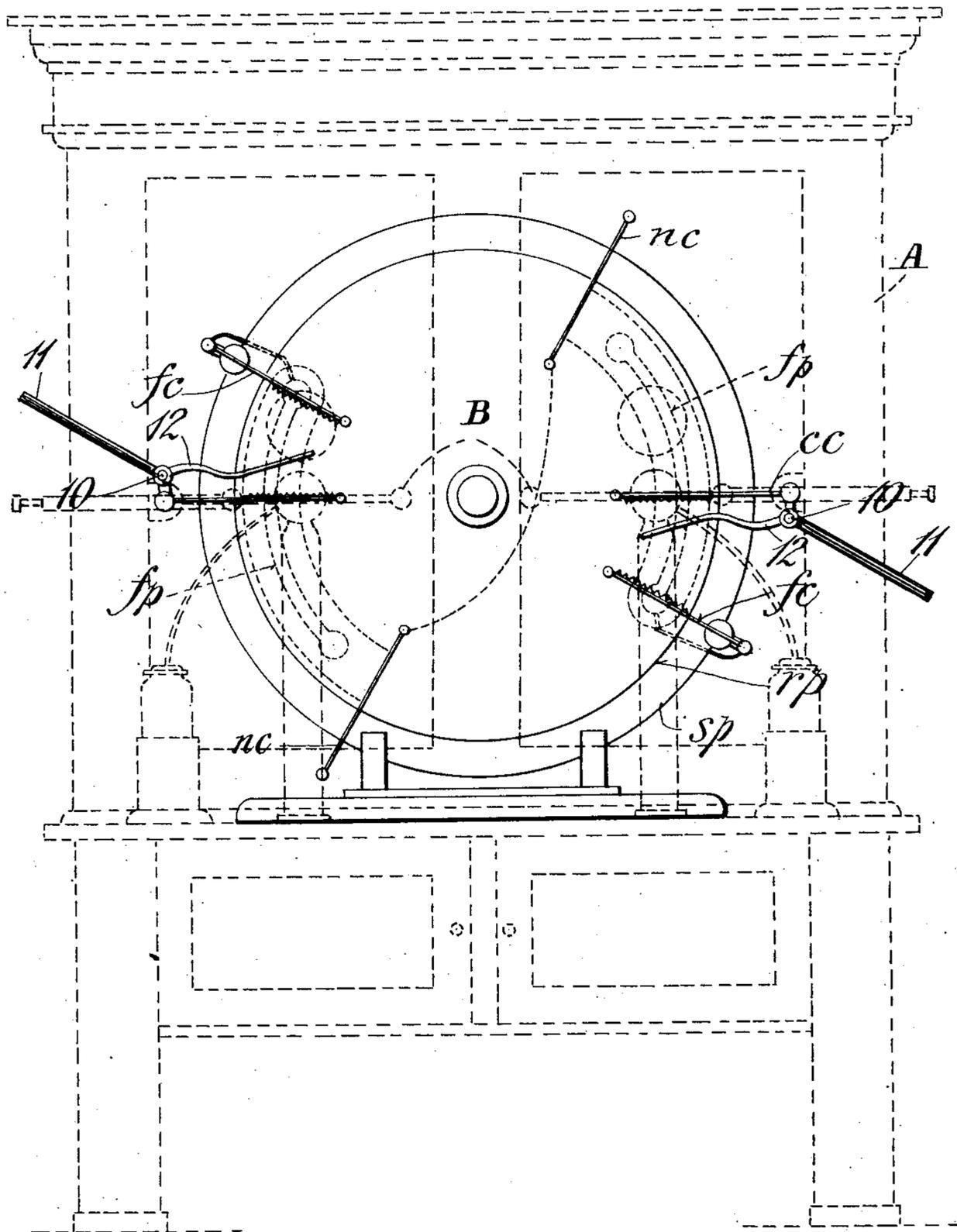


B. E. BAKER.
INFLUENCE MACHINE.
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1,086,010.

Patented Feb. 3, 1914.



WITNESSES:
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BURTON E. BAKER, OF HARTFORD, CONNECTICUT.

INFLUENCE-MACHINE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, BURTON E. BAKER, a citizen of the United States, and a resident of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Influence-Machines, of which the following is a specification.

The object of the invention is to provide a simple and efficient regulating and controlling device for influence machines.

In the drawings a machine of the Toepler-Holtz type is represented for the purpose of illustrating and describing my invention. With minor changes this invention may be adapted to any other known type of machines, as Wimshurst, Holtz, and others.

A is the case and B the main discharge terminals. As is well known a machine of the Toepler-Holtz type comprises a stationary plate *sp* on which are the field plates *fp*; a rotating plate *rp* arranged adjacent to the stationary plate; neutralizing combs *nc*, field combs *fc* connected with the field plates *fp*, collecting combs *cc*, and main terminals connected with said collecting combs. These parts are all arranged in the usual manner.

At the present time influence machines are used very largely in electro-therapeutical work and for the excitation of X-ray tubes. In this work and particularly in work where a patient is being subjected to the effects of the electric current produced by the influence machine it is necessary to vary the electrical effects in different ways for the treatment of different ailments.

The object of this invention is to provide a device by means of which an influence machine can be regulated, especially in varying the amount of current delivered by the machine, without changing the speed of the machine. Generally speaking I accomplish this by depleting the charge on the field plates mounted on the stationary plate, and especially in providing means for depleting the fields to any desired extent.

In the embodiment of my invention illustrated in the drawings and as applied to a Toepler-Holtz machine I mount a short shaft 10 in the case of the machine securing to its outer end a handle 11 and to its inner end an arm 12. This arm is electrically connected with the collecting combs and by the handle the shaft may be rotated to cause this arm to approach the field combs, drawing

the charge from the field onto the collecting comb and short circuiting through the main discharge terminals to the other collecting comb which is charged with electricity of the opposite sign. The amount to which the charge on the fields is depleted depends of course upon the position of the regulating arm 12 with respect to the field comb.

It will be understood from the foregoing that there is no direct electrical connection between the arms 12, the regulating of the machine taking place through the external working circuit, and since the voltage of the machine varies with the resistance in this external circuit, it is evident that without changing the speed of the machine, the voltage may be maintained, while by moving the arms 12 near to the field-combs the charge on the field plates will be depleted. This makes it possible to maintain a high voltage with a low current. I prefer to use two of these regulators, one at each side of the machine, by means of which the amount of current can be varied from maximum to practically nothing. This provides a very satisfactory and successful method of regulating these machines and enables a physician in using such a machine for electro-therapeutical purposes to readily fix the amount of current to suit any given case or condition. The device is also useful in connection with the operation of X-ray tubes.

It will be apparent that the invention herein described can be utilized through different combinations of the parts and I desire it understood that it is not the intention to limit the claims to the exact structure described.

It being a well known fact that if the charges on the field plates of an influence machine are entirely depleted the machine will usually pick up in the opposite direction, that is to say, what was formerly the positive side of the machine will become the negative and the negative side will become the positive. By the use of these regulators the machine can be momentarily "killed" and will pick up again with the parts charged oppositely to what they were originally.

I claim:—

1. In an influence machine the combination with the generator plates, field combs, collecting combs and main discharge terminals connected with the latter, and an inclosing case, of pivotally mounted arms lo-

cated between said field combs and collecting combs, and means whereby said arms may be moved for the purpose of establishing a short circuit of greater or less extent between the said field combs.

2. The combination with an influence machine comprising generating plates, field combs, collecting combs, and main discharge terminals connected with the latter, of adjustably mounted members electrically connected with one of said sets of combs and adapted for movement toward and away from the other set of combs whereby the field plates are depleted to a greater or less extent through the main working circuit.

3. The combination with an influence machine comprising generating plates, field combs, collecting combs, and main discharge terminals connected with the latter, of adjustably mounted members electrically connected with said main discharge terminals and adapted for movement toward and away from said field combs whereby the field

plates are depleted to a greater or less extent through the main working circuit. 25

4. The combination with an influence machine comprising the generating plates, field combs, neutralizing combs, collecting combs, a case for inclosing said parts, main discharge terminals connected with said collecting combs, shafts mounted in a wall of said case, a handle connected with each shaft on the outside of said case, an arm secured to each shaft within said case, electrical connections between said arms and said main collecting combs, said arms normally lying adjacent to said collecting combs and adapted for movement toward or away from said field combs, substantially as described and for the purposes set forth whereby the field plates are depleted to a greater or less extent through the main working circuit. 35 40

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
