

UNITED STATES PATENT OFFICE.

JOHANN KRANNICHFELDT, OF COLOGNE, GERMANY.

PROCESS FOR PRODUCING ELECTRIC RESISTANCE BODIES.

No. 881,010.

Specification of Letters Patent.

Patented March 3, 1908.

Application filed November 1, 1907. Serial No. 400,162.

To all whom it may concern:

Be it known that I, JOHANN KRANNICHFELDT, a subject of the King of Prussia, residing at Cologne-on-the-Rhine, in the Kingdom of Prussia and German Empire, have invented new and useful Improvements in Processes for Producing Electric Resistance Bodies, of which the following is a specification.

If electric conductors of the first class are mixed with those of the second class or with semi or non-conductors—either alone or with the assistance of suitable binding agents or filling material—and then formed into solid integral bodies in suitable manner, for example, by melting, casting, molding, pressing, burning, binding, or by evaporating or driving off the binding or dissolving agent, by the action of acids or in any other manner, such bodies will contain the particles of the conductors of the first class more or less irregularly mixed with the other particles. As a consequence, such bodies must contain a number of irregular circuits, so that the electric resistance of such a body is always comparatively high. According to the present invention, resistance bodies are produced, the resistance of which is regulated or reduced according to desire. For this purpose, the conducting particles of the mixture, before it binds or before it finally solidifies, are directed or adjusted, similar to particles of a coherer, by the electric current or by electric impulses or undulations. By doing this in one or more operations the electric resistance of the body is reduced, and this condition is fixed or becomes permanent by the subsequent solidification or binding thereof.

The particular method adopted, the electromotive force, and the duration of the electric impulses or undulations depend on the material used, on the form and size of the body and on the degree to which the resistance is to be reduced. The resistance

bodies produced in this manner from a mixture of conductors of the first class with those of the second class or with non-conductors or of good and bad conductors with or without a binding or filling agent, can be used for regulating, measuring, comparing purposes or for making electric igniters, incandescence or heating bodies or for any other purpose.

What I claim and desire to secure by Letters Patent in the United States is:—

1. The described process for producing electric resistance bodies, which consists in mixing good and bad electric conductors, subjecting said mixture to an electric influence, while in a condition of mobility of particles to establish a definite position of the conducting particles, and then permanently fixing said condition, substantially as, and for the purpose, set forth.

2. The described process for producing electric resistance bodies, which consists in mixing good and bad electric conductors, subjecting said mixture to an electric influence, while in a condition of mobility of particles to establish a definite position of the conducting particles, and then causing said mixture to unite to form a single solid body, substantially as, and for the purpose, set forth.

3. The described process for producing electric resistance bodies, which consists in mixing good and bad electric conductors, subjecting said mixture to an electric influence, while in a condition of mobility of particles to establish a definite position of the conducting particles, and then causing said mixture to solidify, substantially as, and for the purpose, set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHANN KRANNICHFELDT.

Witnesses:

LOUIS VANDORN,
M. KNEPPERS.