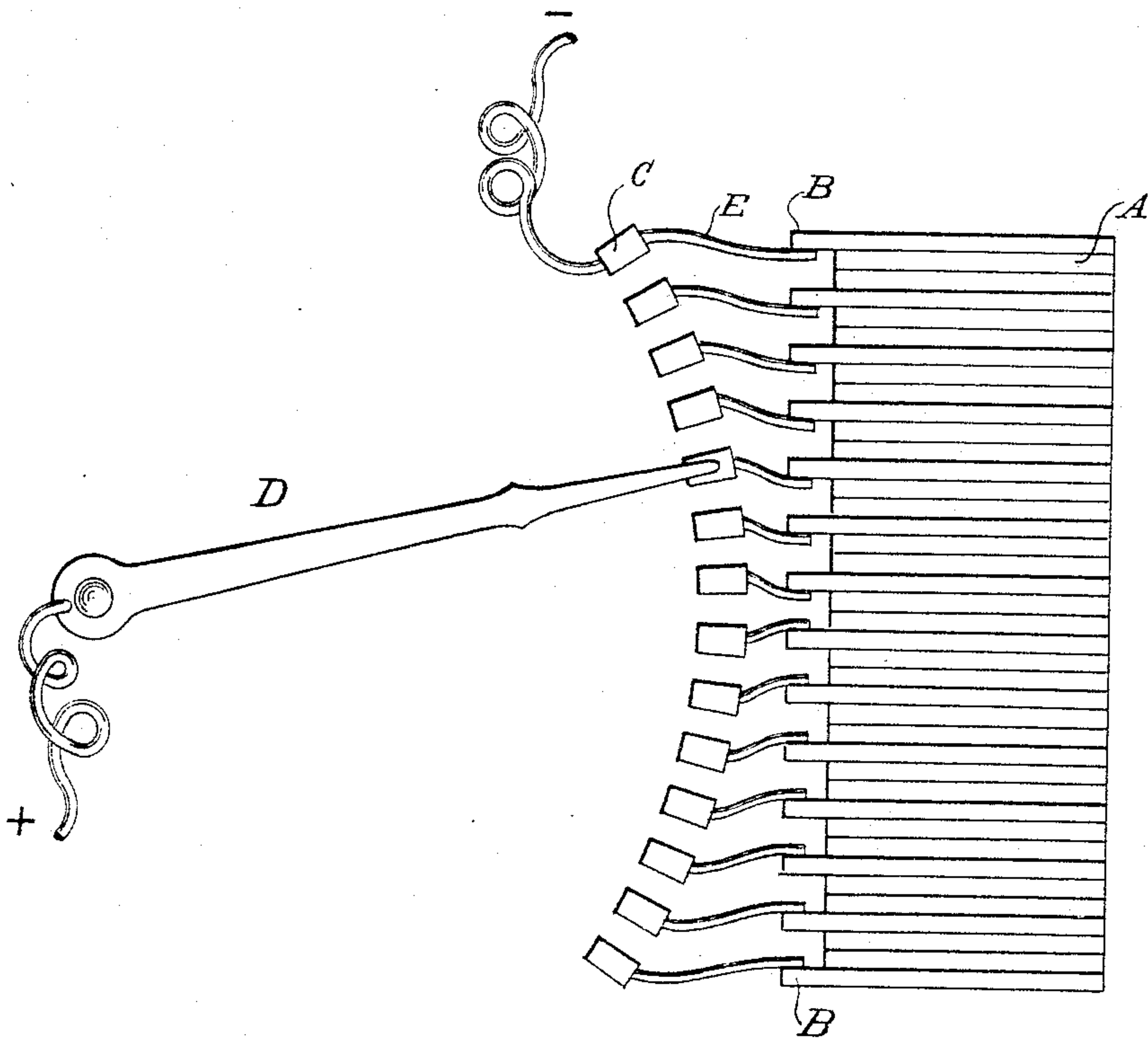


(No Model.)

E. M. BENTLEY.
ARTIFICIAL RESISTANCE.

No. 437,011.

Patented Sept. 23, 1890.



WITNESSES

Julien M. Elliot
W. O. Blackwell

INVENTOR

Edward M. Bentley
by Bentley & Knight
attys.

UNITED STATES PATENT OFFICE.

EDWARD M. BENTLEY, OF NEW YORK, N. Y.

ARTIFICIAL RESISTANCE.

SPECIFICATION forming part of Letters Patent No. 437,011, dated September 23, 1890.

Application filed August 25, 1888. Serial No. 283,781. (No model.)

To all whom it may concern:

Be it known that I, EDWARD M. BENTLEY, a citizen of the United States, residing at New York, in the county of New York, State of New York, have invented certain new and useful Improvements in Artificial Resistances, of which the following is a specification.

My invention relates to artificial electrical resistances which may be varied at will; and it consists in a series of metallic plates in superficial contact, which form the resistance and which are provided with a series of contact-points electrically connected to certain ones of the series of plates, and a contact-arm adapted to make connection with the points to bring any desired amount of the resistance into circuit.

My invention is illustrated in the accompanying drawing, in which—

A represents a series of metallic plates, preferably of oxidized iron or steel, placed in superficial contact, so that they may present a resistance to the passage of any electricity through them. To certain plates B in the series are attached conductors E, terminating in contacts, themselves independent of and removed from the plates, and over which sweeps the contact-arm D. The circuit is always from plus wire to lever D, to resistance A, to final plate, and thence to minus wire. By this means D may be turned to any one of plates C. The amount of resistance in circuit may be regulated at will.

In practice the use of the additional set of contact-points C is often a more desirable construction than those hitherto used in which the arm sweeps directly over the re-

sistance-plates, for in the latter case the arm is liable to become stuck between the edges of the metal plates and push them slightly out of place, thereby destroying the uniformity of resistance throughout the series. Furthermore, as the number of contact-points is considerably smaller than that of the plates a shorter range of movement for the contact-arm is possible, thereby making a less cumbersome construction and at the same time one capable of regulating the resistance with sufficient nicety.

I claim—

1. A variable electrical resistance comprising a series of metallic plates in contact with one another, a series of contact-points independent of and removed from the said plates, conductors electrically connecting said contact-points with the plates at various points along the series, and a moving contact-maker for engagement with the contact-points, as set forth.

2. The combination, in an electrical resistance, with a series of resistance-plates in contact with one another, a series of contact-points independent of and removed from the plates, and intermediate conductors connecting the contact-points, respectively, with the plates at various points in the series, of a pivoted contact-arm adapted to sweep over the said contact-points and thereby bring more or less of said resistance-plates into circuit, as described.

EDWARD M. BENTLEY.

Witnesses:

F. O. BLACKWELL,
JULIEN M. ELLIOT.