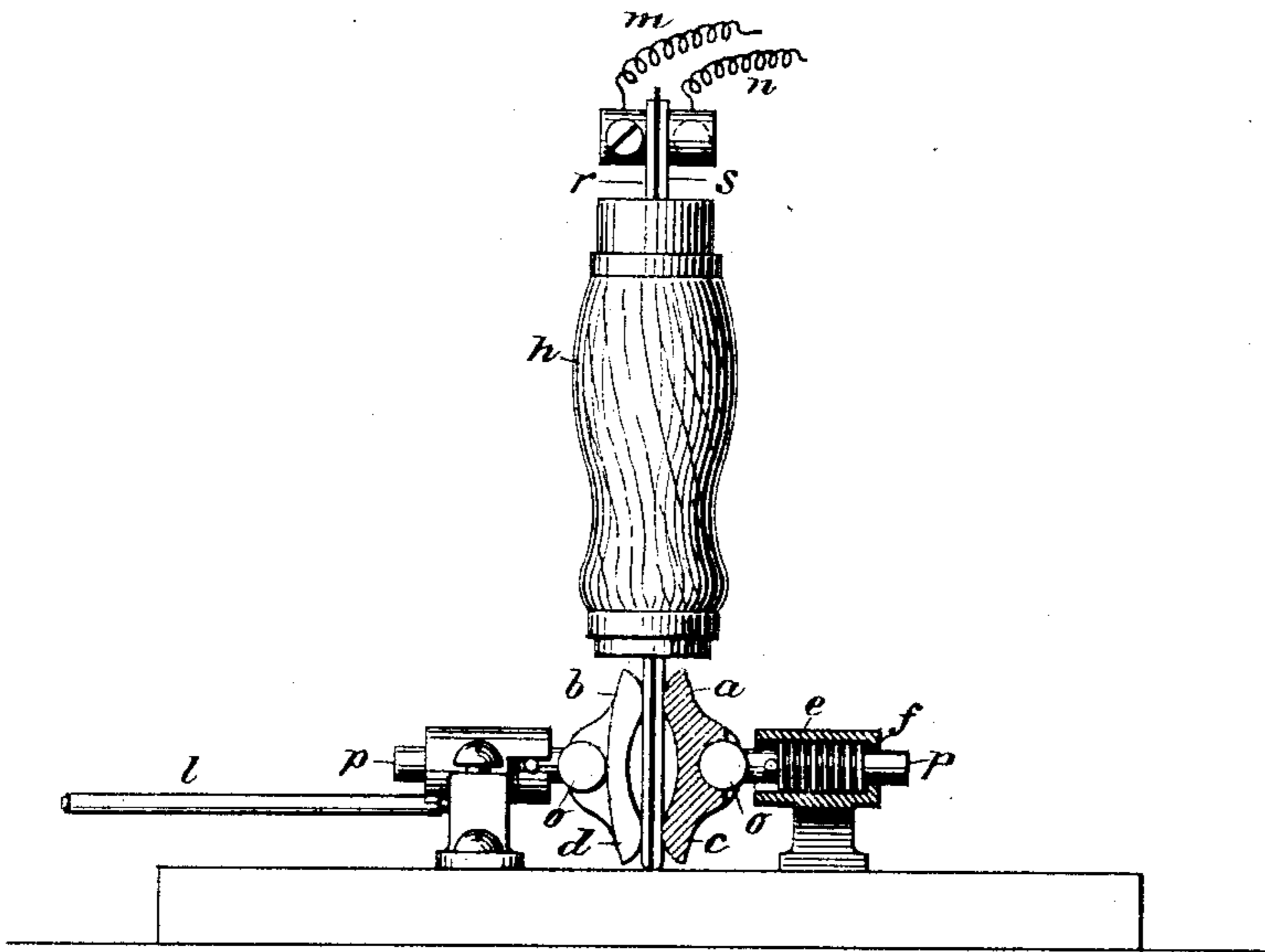


(No Model.)

W. W. GRISCOM.
SWITCH OR CIRCUIT CHANGER.

No. 401,270.

Patented Apr. 9, 1889.



Witnesses.

Geo. W. Dreyer
Carrie C. Ashley

W. W. Griscom Inventor.

By his Attorney J. B. Vauzelle

UNITED STATES PATENT OFFICE.

WILLIAM W. GRISCOM, OF HAVERFORD COLLEGE, PENNSYLVANIA, ASSIGNOR
TO THE ELECTRO DYNAMIC COMPANY OF PHILADELPHIA, OF PENNSYLVANIA.

SWITCH OR CIRCUIT-CHANGER.

SPECIFICATION forming part of Letters Patent No. 401,270, dated April 9, 1889.

Application filed June 30, 1888. Serial No. 278,689. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. GRISCOM, a citizen of the United States, and a resident of Haverford College, in the county of Montgomery and State of Pennsylvania, have invented certain new and useful Improvements in Switches or Circuit-Changers, of which the following is a specification.

My invention is an improvement in switches or circuit-changers.

When a current of electricity is established in a circuit and the circuit is severed or an artificial resistance, as a measuring-instrument—an ammeter, for example—is introduced, a spark is noticeable at the point where the circuit is divided. This sparking differs in degree and in its damaging effects with the strength of current flowing in the circuit. My improved switch avoids this sparking under the described circumstances; and it consists of two pairs of contact-points operating successively. Normally the two pairs of contacts are in parallel circuit. The switch-plug is first introduced between one pair and then between the second pair, so that at no time is the circuit completely severed, and the current is more gradually introduced into the loop or branch circuit containing the resistance.

The accompanying drawing illustrates the form in which my improvement is constructed of pieces of cast-brass held in contact by helical springs.

e is a tube.

p is a rod.

f is a spring acting to press *p p* toward each other.

a c and *b d* are two curved pieces of cast-brass. Each is pivoted at *o* to the rod *p*. Nor-

mally the two extremities *a b* and *c d* are in contact, circuit being through both pairs in parallel. When the strips *r s* are introduced between *a b*, the pieces *a c* and *b d* turn on the bearings *o*. Springs *f* are compressed and the rods *p* recede. Upon a still further advance of *r* and *s* the points *c d* separate and the parts assume the position shown.

What I claim, and desire to secure by Letters Patent, is—

1. In a switch or circuit-changer, two pieces of conducting material respectively pivoted at corresponding points intermediate their terminals or points of contact to reciprocating bearings and normally held in contact at two points, in combination with a plug or wedge consisting of two strips or conductors insulated from each other and adapted to successively separate said two contact-points by a continuous advance movement, substantially as described.

2. The combination, in a switch or circuit-changer, of two pieces of conducting material respectively pivoted at points midway between their extremities to reciprocating bearings and normally held in contact at two points by spring-pressure, with a plug or wedge consisting of two strips or conductors insulated from each other and adapted to successively separate said two contact-points by a continuous advance movement.

Signed at New York, in the county of New York and State of New York, this 28th day of June, A. D. 1888.

W. W. GRISCOM.

Witnesses:

DANIEL E. DELAVAN,
W. B. VANSIZE.