(No Model.)

J. F. BLAKE.

ELECTRICAL CONTACT MECHANISM.

No. 518,481. Patented Apr. 17, 1894.

Fig. 1.

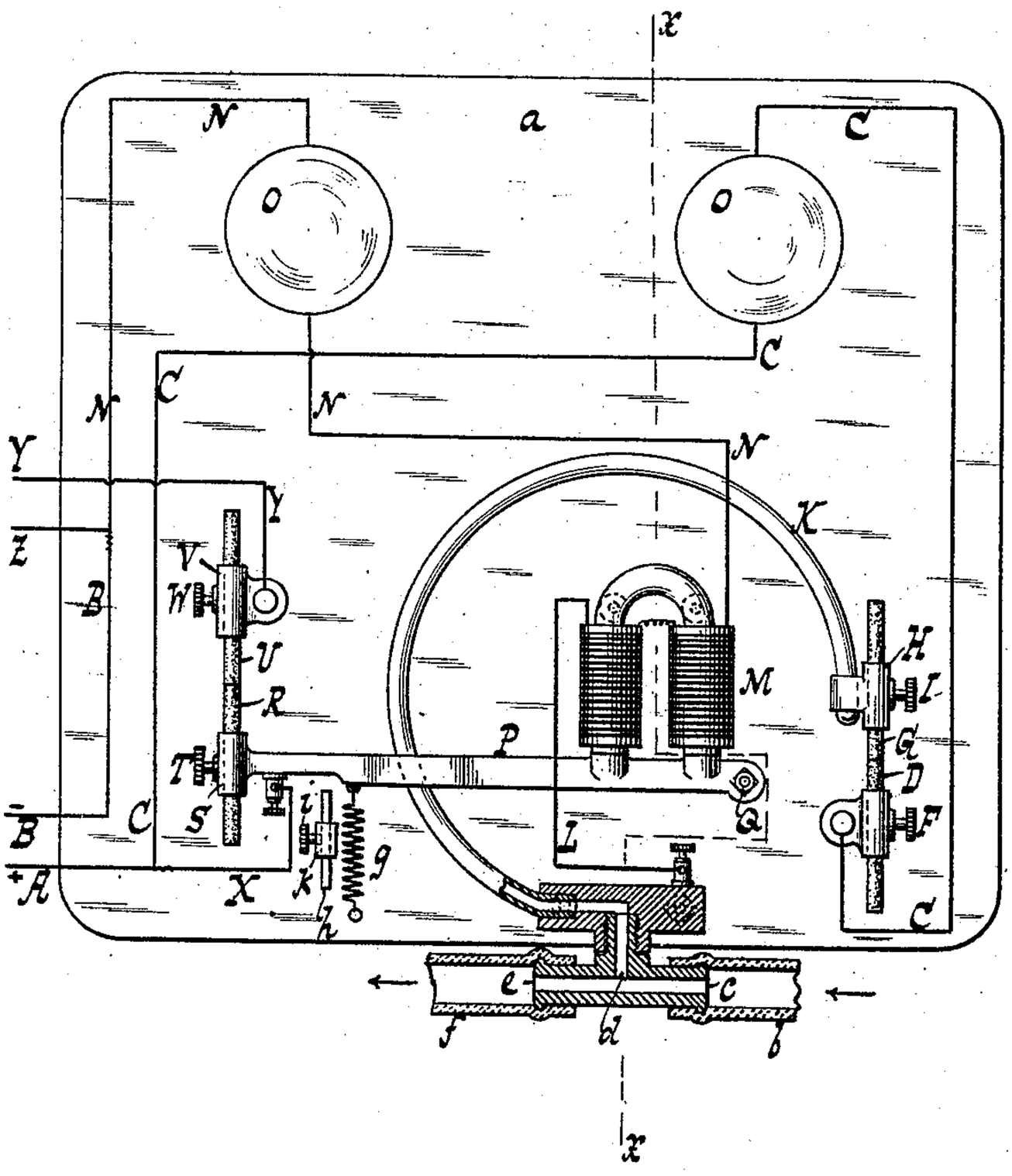
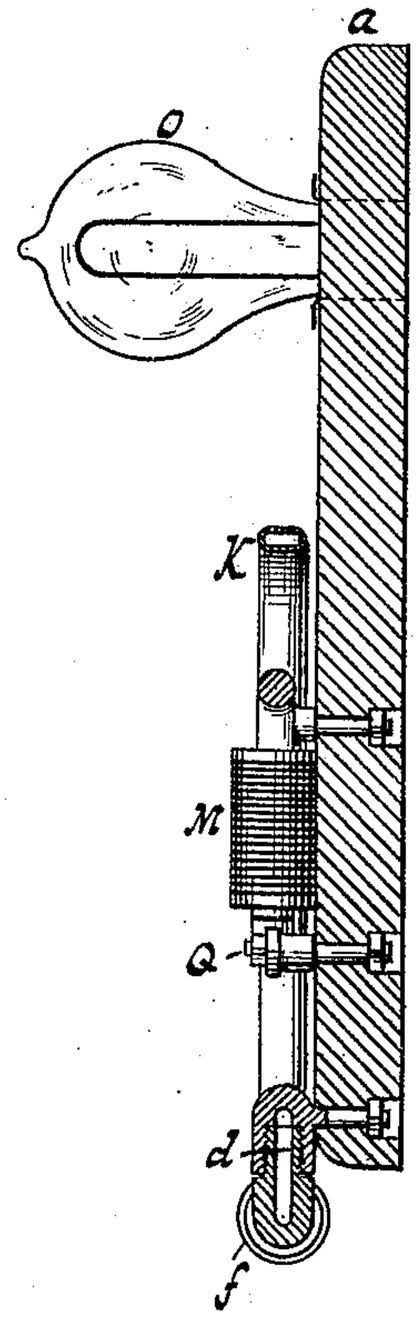


Fig. 2.



WITNESSES:

William Miller

Chas. P. Poensgen.

INVENTOR:

John Feggetter Blake

BY

Hauff & Hauff

ATTORNEYS.

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN FEGGETTER BLAKE, OF NEW HAVEN, CONNECTICUT.

ELECTRICAL CONTACT MECHANISM.

SPECIFICATION forming part of Letters Patent No. 518,481, dated April 17, 1894.

Application filed February 23, 1894. Serial No. 501,266. (No model.)

To all whom it may concern:

Be it known that I, JOHN FEGGETTER BLAKE, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented new and useful Improvements in Electrical Contact Mechanism, of which the following is a specification.

This invention relates to certain improvements in electrical contact mechanism and the invention consists in the novel features of construction set forth in the following specification and claim and illustrated in the annexed drawings, in which—

Figure 1 is a face elevation of the contact mechanism. Fig. 2 is a section along *x x* Fig. 1.

In the drawings the letters A B indicates electrical conductors connecting with the opposite poles of a battery or generator (not shown). From conductor A extends a branch C to a terminal or contact D which can be set or adjusted in holder E by screw F. A terminal or contact G is held in holder H by screw I, said holder H being carried by a flattened elastic tube K bent to circular form, generally known as a Bourdon spring. The tube or spring K connects by conductor L with electro magnet M from which extends a conductor N forming a branch of conductor B. Incandescent lamps O are shown at the branches C N and said lamps form resistance in the branch current C N. The electro magnet M is adapted to actuate an armature or lever P fulcrumed at Q and carrying a contact R in the holder S having set screw T. A contact U is held in holder V by set screw W and from said contact or terminal U extends a conductor Y to any suitable mechanism or electro motor (not shown) such as a pump, the return from the motor being formed by conductor or branch Z connecting with conductor B. The branch X connects armature P or its contact R with conductor A.

The support or base *a* for various parts of the mechanism can be formed of suitable material such as a slab of stone or the like, which being non combustible will serve as a protection against fire. Supposing the pump placed in the circuit Y Z forces or presses air through pipe or hose *b* connecting with the opening or mouth *c* of the T-piece having the three ways or mouths *c d e*, such pressure will pass along pipe or hose *f* to any suitable storage or tank (not shown) and like pressure will be developed in the spring K. When the pressure is sufficient to straighten the spring K to such an extent as to carry contact G out of touch with contact D, the current through conductor C, spring K and conductors L N is broken, and the magnet M is devitalized. The armature P being now released will move away from magnet M so as to carry contact R out of touch with contact U, thus breaking the current through conductors X Y Z and stopping the pump or forcing mechanism. Should the pressure fall below the required intensity in spring K said spring resuming its circular form will restore the contact of terminal G with terminal E, and the magnet M being now vitalized will actuate armature P to restore the contact between terminals R U and start the pump, which latter continues to act until the pressure is again sufficiently intense to break the contact at D G. The spring *g* can be made to move the released armature P away from magnet M and a stop *h* can be made to limit the motion of armature P, said stop *h* being adjustably secured by set screw *i* in holder *k* extending from base *a*.

In my experiments and practice I have used carbon sticks or pencils for the contacts D G R U, and I have found such carbon contacts to be durable and to give satisfactory results. These contacts or circuit closers D G R U being adjustable can be set or adjusted as required, and said contacts can also be readily removed and replaced when found advisable or necessary. Of course the resistance in the branch current C N instead of being formed by lamps O can be formed in any suitable way as by resistance coils.

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

The combination with a base or support, and a pressure-actuated spring mounted thereupon, of a circuit-closer composed of two carbons, one carried by the base or support, and the other carried by one end portion of the

spring, an electro-magnet and resistances in the circuit of the circuit-closer, an armature actuated by the electro-magnet, and a secondary circuit closer composed of two carbons one carried by the base and the other carried by the armature, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN FEGGETTER BLAKE.

Witnesses:

CHARLES F. BOLLMANN,

HARRY M. COOKE.