W. KAISLING.

CLEANING TOOL FOR JACK CONTACTS.

APPLICATION FILED NOV. 8, 1913.

1,151,274. Patented Aug. 24, 1915.

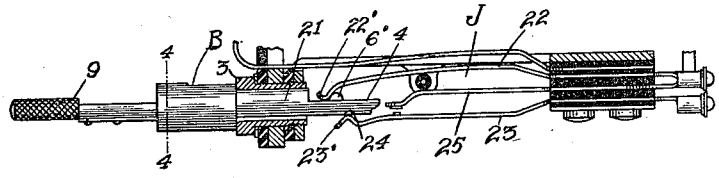


Fig. 1.

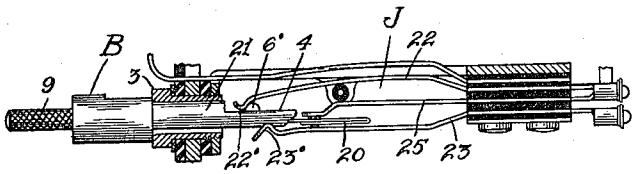


Fig. 2.

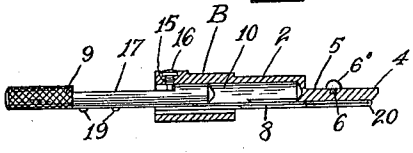


Fig. 3.

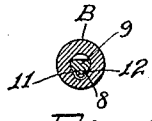


Fig. 4.

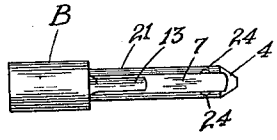


Fig. 5.

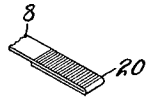


Fig. 7.

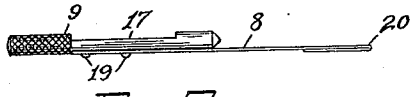


Fig. 6.

Witnesses:
George E. Mueller
Wm Berghahn

Inventor:
William Kaisling
By Curtis B. Camp
Attorney

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM KAISLING, OF CHICAGO, ILLINOIS, ASSIGNOR TO KELLOGG SWITCHBOARD AND SUPPLY COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

CLEANING-TOOL FOR JACK-CONTACTS.

1,151,274. Specification of Letters Patent. Patented Aug. 24, 1915.

Application filed November 8, 1913. Serial No. 799,921.

To all whom it may concern:

Be it known that I, WILLIAM KAISLING, a citizen of the United States of America, residing in Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Cleaning-Tools for Jack-Contacts, of which the following is a specification.

My invention relates to jack spring cleaning devices and has to do more particularly with a cleaning device used for cleaning the contacts of a spring jack without necessarily removing the jack from the switchboard.

Due to atmospheric and other causes spring jack contacts of a switchboard become coated in time, which prevents the contacts making effective contact, causing trouble in the circuits in which they operate. The contacts of a spring jack are inconveniently located and hard to get at to clean while in the switchboard and therefore I provide a cleaning device which may be inserted in the thimble of the jack and having a plunger to be moved in and out between the spring jack contacts to remove the dust and other accumulation from the contacts.

For a more complete understanding of my invention reference may be had to the accompanying drawing in which like reference characters denote like parts and in which—

Figure 1 is a section through a set of spring jack contacts with the cleaning device inserted in the thimble or sleeve of the jack. Fig. 2 is a section of a set of spring jack contacts with the cleaning member in operative position; Fig. 3 is a longitudinal section through the cleaning device; Fig. 4 is a section on the line 4, 4 of Fig. 1; Fig. 5 is a bottom view of the barrel of the cleaning device; Fig. 6 is a view of the plunger and cleaning member; and Fig. 7 is a perspective view of the end of the cleaning member showing one of its roughened cleaning surfaces.

Referring now more in detail to my invention as illustrated, it comprises a barrel B, having a portion 21 of the barrel B of a size to fit the thimble or sleeve 3 of the spring jack J. The nose 4 of the barrel, which is adapted to be forced between the spring contacts of the jack, has a surface 5 to which pin 6 is fastened in any suitable manner, the said pin 6 having a head 6^1 adapted to be engaged by a jack spring according to the construction of the jack in which the device is used. The lower part of nose 4 and portion 21 has a channel 7 cut in it, said channel acting as a guiding means for the cleaning member 8, which is attached to the plunger rod 9, which fits loosely into a hole or bearing 10. The hole 10 has grooves 11 and 12 cut in it extending the length of the hole, which are a continuation of channel 7 and serve as a sliding means for the portion of the cleaning member 8 that passes through the hole 10. The opening 13 in the lower portion of barrel B is a continuation of hole 10. A hole 15 is drilled and tapped to take the screw 16, said screw 16 acting as a stop for the plunger 9 when forced in and out. The plunger 9 has a portion 17 of its surface cut away to provide a stop for coöperating with stop screw 16. The cleaning member 8 is attached to the plunger 9 preferably by rivets 19, the portion 20 thereof being hardened and having its top and bottom surfaces roughened to secure fine file-like surfaces.

To clean the contacts of the spring jack J the barrel B is inserted into the thimble 3, the shoulder of the barrel B limiting the movement of the cleaning device into the thimble 3 of the jack J, the nose 4 of the barrel B thus being forced between the springs 22 and 23. The bent portion 22^1 of the spring 22 therefore passes over the head 6^1 and this acts as a means for securely holding the cleaning device in the thimble of the jack J when the plunger is moved back and forth. Assuming the plunger 9 is out when the device is inserted, the bent portion 23^1 of the spring 23 will rest upon a surface of the portion 20 of the cleaning member 8. As the plunger 9 is moved inwardly the member is moved with it and when the portion 20 passes beyond the notches 24, the bent portion 23^1 drops into the notches 24, these notches being provided so that the end 23^1 cannot rest upon nose 4 and thus be kept away from member 20. Now by a reciprocating movement of the plunger, the cleaning surfaces of the portion 20 are moved back and forth between the contacts of the springs 23 and 25, the fine file-like surfaces passing over the said contacts and cleaning and polishing them.

Although I have illustrated my invention in connection with a particular form of spring jack, it is to be understood that I contemplate constructing it in various ways so as to be used with various combinations of springs and therefore I do not desire to be limited to the exact structure as shown but aim to cover all that which comes within the spirit and scope of the appended claims.

Having described my invention, what I claim as new and desire to secure by United States Letters Patent is:

1. A device of the character described comprising a barrel member, adapted to be inserted into the thimble of the jack, a plunger slidingly supported by said barrel member, and a thin flat member carried by the plunger and having a roughened cleaning surface upon a side face thereof adapted to be reciprocated by movement of the plunger for cleaning laterally faced jack contacts.

2. A device of the character described comprising a barrel member adapted to be inserted into the thimble of the jack, means carried thereby adapted to be engaged by the jack springs for holding the barrel member in the jack, a plunger slidingly supported by said barrel member, and a cleaning member carried by the plunger and adapted to be reciprocated by the movement of the plunger for cleaning the jack contacts.

3. A device of the character described comprising a barrel member, adapted to be inserted into the thimble of the jack, a plunger slidingly supported by said barrel member, guiding and holding means for said barrel member adapted to coöperate with the jack springs, and a cleaning member carried by the plunger and projecting beyond said barrel member, and adapted to be reciprocated between the jack contacts for cleaning them.

4. A device of the character described comprising a barrel member, adapted to be inserted into the thimble of the jack, a plunger member, a cleaning member carried by the plunger and adapted to be reciprocated between the contacts for cleaning them, and means to prevent rotary movement of the plunger relative to the barrel member.

Signed by me at Chicago, county of Cook and State of Illinois, in the presence of two witnesses.

WILLIAM KAISLING.

Witnesses:
GEORGE E. MUELLER,
M. R. ROCHFORD.

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