(No Model.)

C. G. BRADY.

SPRING JACK CLEANER.

No. 509,867. Patented Dec. 5, 1893.

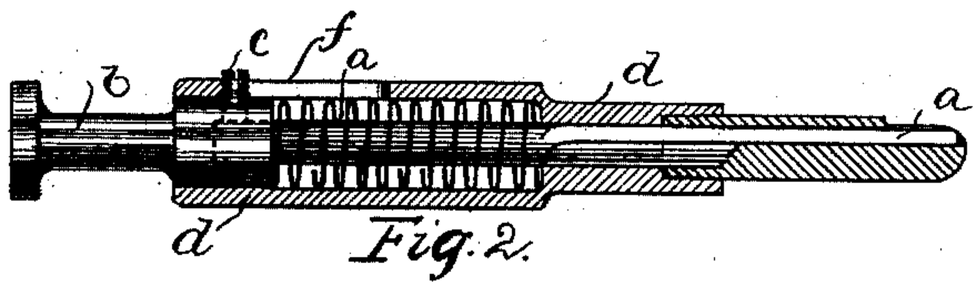

Fig. 2.

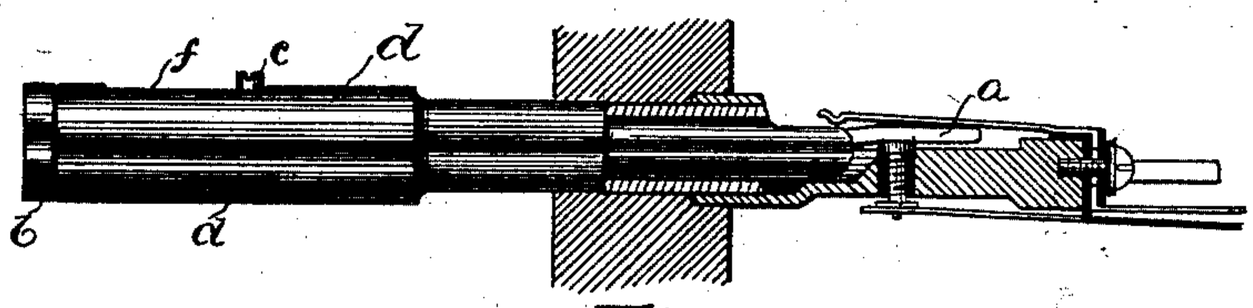

Fig. 1

Witnesses
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CHARLES G. BRADY, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE WESTERN ELECTRIC COMPANY, OF SAME PLACE.

SPRING-JACK CLEANER.

SPECIFICATION forming part of Letters Patent No. 509,867, dated December 5, 1893.

Application filed September 30, 1891. Serial No. 407,237. (No model.)

To all whom it may concern:

Be it known that I, CHARLES G. BRADY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Spring-Jack Cleaners, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to means for cleaning the contact points of spring jacks of telephone switch boards; its object is to provide means for cleaning the said contact points more thoroughly and with less injury to the spring jacks than has hitherto been possible.

My invention consists in a strip of some tough and flexible material as vulcanized fiber or whalebone, which I have discovered removes the incrustations from the contact points without abrading the surfaces of the metal parts, and which accommodates itself to the shape of the line spring so as not to bend or displace it.

Heretofore when the contacts of spring jacks of a switch board have required cleaning it has been common to employ a fine file, which was thrust into the spring jack so as to enter between the contact anvil and the line spring, and the incrusted dust has been thus removed. The disadvantages of this method are, that the line spring and contact anvil are scratched and roughened so as to make still less perfect contact, the contact anvil may be soon filed away so as to make no contact with the line spring, and frequently the line spring is so weakened or bent as to fail to close up the contact anvil.

I preferably employ my invention in combination with a plunger and a sleeve surrounding said plunger of such a size and shape as to be readily introduced into the spring jack and automatically to take the proper position to perform its work efficiently.

My invention is shown in the accompanying drawings, in which—

Figure 1 is an elevation of my improved spring jack cleaner, inserted into a spring jack of ordinary construction. Fig. 2 is a longitudinal section through the center thereof.

Referring to Fig. 2 *a* is a strip of fibrous flexible material secured at one end in the plunger *b* by means of screw *c*. The plunger *b* is adapted to slide freely in a tube *d*, one end of which is of such size as to be readily introduced into the tube or "test ring" of a spring jack. That end of the tube *d* which is adapted for insertion into the spring jack, is flattened for a short distance, for a purpose which will presently be explained. The screw *c* projects a short distance from the plunger *b* and this, projecting portion travels in a longitudinal slot *f* in the tube *d;* the length of said slot determines the travel of the plunger *b*.

In use the smaller portion of the tube *d* is inserted into the spring jack, the flattened portion of the tube being toward the line spring; the line spring rides up on this flattened portion, thereby rotating the tube until the end of the strip *a* is exactly in position to enter between the contact anvil and the line spring; the head of the plunger *b* is then pressed in, and the strip *a* is forced to enter between the contact anvil and the line spring; the pressure of the line spring itself creates sufficient friction between the strip *a* and the contacts to be cleaned.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the strip *a* of tough flexible material, of the plunger *b*, the spring and the incasing tube *d* substantially as described.

2. The combination, with the strip *a* of tough flexible material, of the plunger *b* secured thereto, the incasing tube *d* adapted to be thrust into a spring jack substantially as described.

3. The combination with the strip *a*, of a plunger *b* secured thereto by the projecting pin *c*, incasing tube *d*, adapted to be inserted into a spring jack, the longitudinal slot *f* in

the tube *d* in which the pin *c* travels and by which its range of motion is limited, substantially as described.

4. The combination, with the strip *a*, of tough flexible material, of the plunger *b* secured thereto, the incasing tube *d* adapted to be inserted into a spring jack and furnished at the end of that portion which is adapted for insertion into the jack with a flattened portion, as and for the purposes described.

In witness whereof I hereunto subscribe my name this 17th day of August, A. D. 1891.

CHARLES G. BRADY.

Witnesses:
FRANK R. MCBERTY,
GEORGE L. CRAGG.