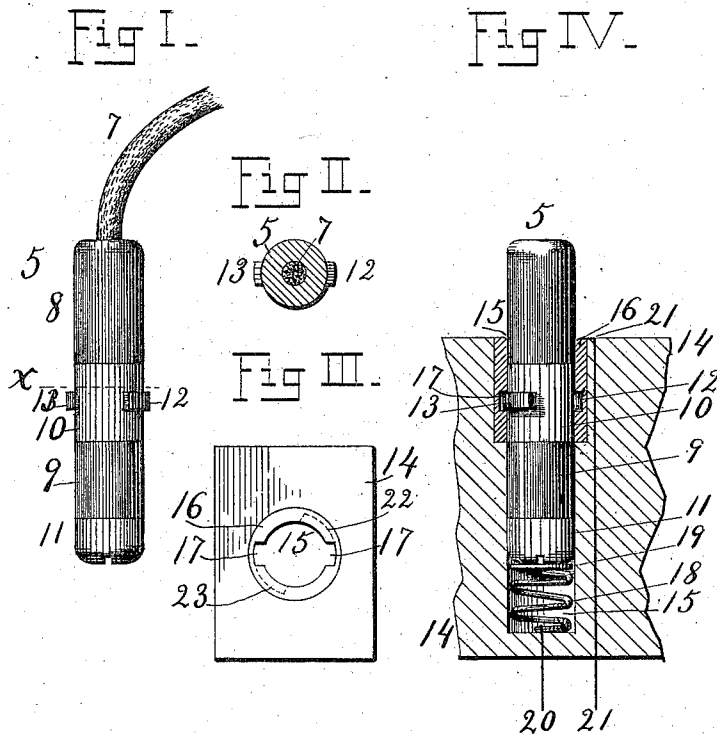


(No Model.)

W. S. PACA.
SPRING JACK.

No. 576,375.

Patented Feb. 2, 1897.



WITNESSES,

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UNITED STATES PATENT OFFICE.

WILLIAM S. PACA, OF BALTIMORE, MARYLAND.

SPRING-JACK.

SPECIFICATION forming part of Letters Patent No. 576,375, dated February 2, 1897.

Application filed September 23, 1896. Serial No. 606,758. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. PACA, a citizen of the United States, residing in the city of Baltimore and State of Maryland, have invented a new and useful Improvement in Spring-Jacks; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure I represents a notch-plug adapted to be used with this spring-jack. Fig. II is a transverse sectional view at the line *x* of Fig. I. Fig. III is a front view of a portion of a switchboard with the socket of one of my spring-jacks, and Fig. IV represents a portion of the switchboard and spring-jack in section with the switch-plug in side elevation.

This invention relates to that class of devices by means of which different lines of telegraphs or telephone-circuits may be temporarily connected, its use being principally confined to central-exchange stations.

The object of this invention is to insure perfect contact and electrical communication between the metallic portions of the switch-plug and the switch-terminals of the spring-jack when the switch is closed and yet permit so loose a fit of the switch-plug into the switch-sockets in the table that the plug may be easily inserted or removed by the operator.

To this end, my invention consists in the construction and combination of parts forming a spring-jack, hereinafter more fully described and claimed.

Referring to the accompanying drawings, 5 represents a switch-plug; 7, the weight-cord therefor; 8 and 9, insulating-sections, and 10 and 11 metallic sections of the plug with which wires concealed within the cord have connection, respectively.

12 and 13 represent lugs projecting from the sides of the metallic portion 10 and integral or having permanent metallic connection therewith.

14 represents a portion of a switchboard, which board usually contains a large number of sockets, one of which is shown at 15 for the insertion of any one of a number of switch-plugs 5. Each socket is provided with a metallic bushing 16, having longitudinal slots 17 at its sides to register with and freely receive the lugs 12 13 when the plug is inserted into the socket. At the inner ends of these slots the passage-ways for the lugs are offset sidewise, forming recesses which extend partly or wholly around within the bushing 16, forming what is termed a "bayonet-joint."

18 represents a metallic spring located in the bottom of the socket 15 and provided with a button or piston 19 of metal to engage the metal end 11 of the plug when the latter enters the socket, and 20 represents a wire which may be one of the members to be connected by switch-plug, while 21 represents a wire which may be another member to be connected therewith, the wire 21 being connected with the bushing 16 as a terminal.

It will be readily seen that if the sections 10 and 11 of the plug be considered as terminals of two wires concealed in the cord 7 and the piston 19 and bushing 16 be considered as terminals of the wires 20 and 21 these terminals might be variously connected up for switching purposes, as, for example, the terminals 10 and 11 might be connected or integral and the wires in the cord 7 be dispensed with, then the switch when closed would connect the wires 20 and 21, while, on the contrary, the wires 20 and 21 might be directly connected when the two wires in cord 7 would, by means of their terminals 10 and 11, be connected by that short circuit when the switch is closed, or the wires 20 and 21 may form an outlying-loop to other subscribers to be connected by the terminals and cord-wires. In service this switch-plug 5 is taken by the operator and inserted in a socket 15, pushing the spring 18 down, as shown in Fig. IV, and then the plug is twisted around, bringing the lugs 12 and 13 into the sidewise offset recesses, as shown by dotted lines 22 and 23, whereby the tendency of the spring to throw the plug out is resisted and contact between the metal lugs 12 13 and the metallic bushing 16 is insured. The spring 18 also insures contact between its piston 19 and the metallic section 11 of the plug. By this means very easy-working switch-plugs are insured perfect metallic contact with other members of the spring-jack, whereby much time and strength of the operator are saved and perfect connections are insured.

Having thus fully described my invention,
what I believe to be new, and desire to secure
by Letters Patent, is the following:

5 The combination in spring-jacks of a switch-
plug having one or more laterally-projecting
lugs connected with line-wires a switchboard
provided with a socket to receive the said
plug freely, the said socket having longitu-
dinal slots with sidewise recesses to receive
10 the said lugs; a longitudinally-acting spring

within the socket, and electric connections
for the socket and spring substantially as de-
scribed.

In testimony whereof I affix my signature
in presence of two witnesses.

WILLIAM S. PACA.

Witnesses:

JOHN Z. MILLER,

LOUISE FRINK.