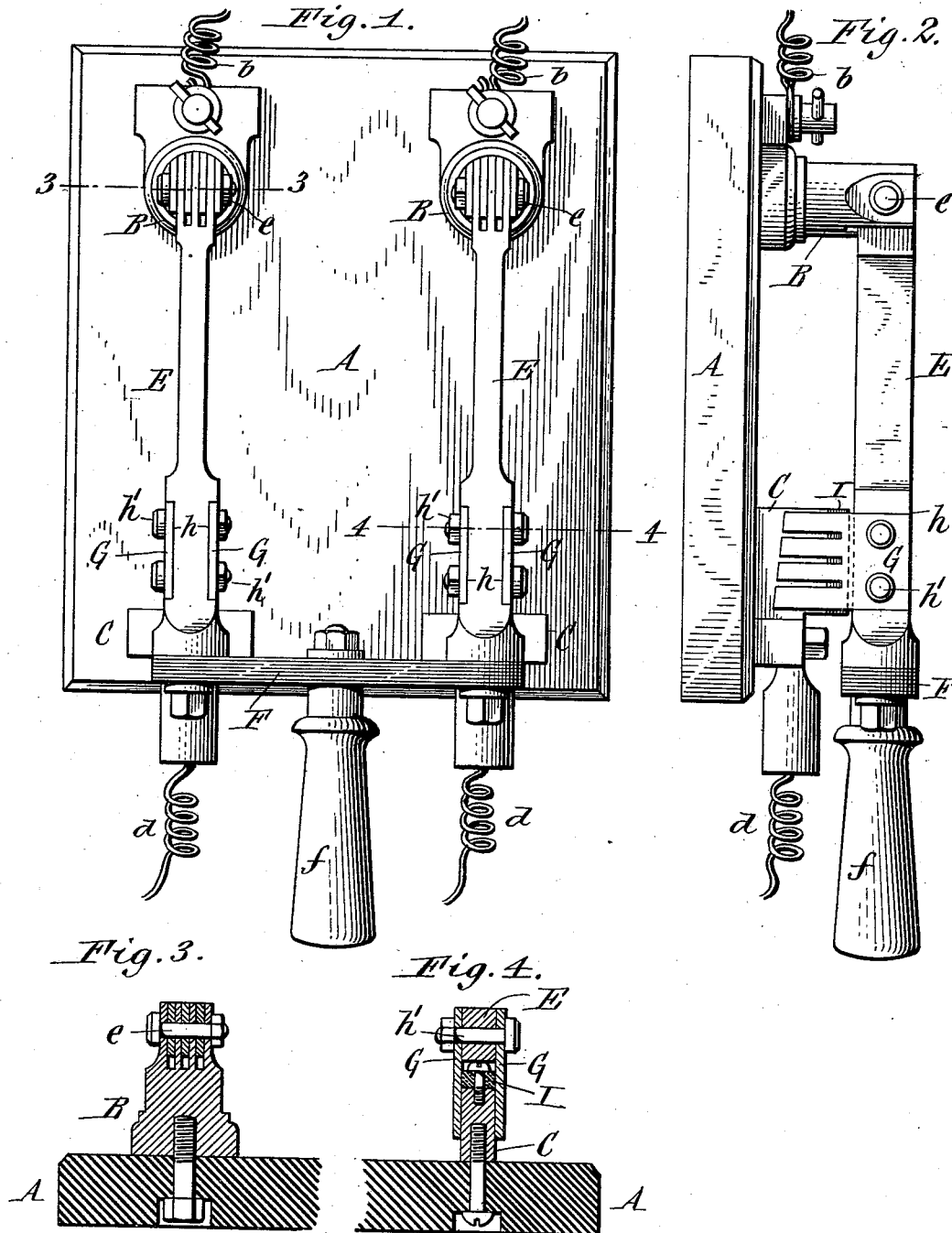


(No Model.)

J. F. KESTER.
ELECTRIC SWITCH.

No. 523,074.

Patented July 17, 1894.



Witnesses:
Theo. L. Popp.
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UNITED STATES PATENT OFFICE.

JESSE F. KESTER, OF BUFFALO, NEW YORK, ASSIGNOR TO THE F. P. LITTLE ELECTRICAL CONSTRUCTION AND SUPPLY COMPANY, OF SAME PLACE.

ELECTRIC SWITCH.

SPECIFICATION forming part of Letters Patent No. 523,074, dated July 17, 1894.

Application filed November 28, 1893. Serial No. 492,203. (No model.)

To all whom it may concern:

Be it known that I, JESSE F. KESTER, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Electric Switches, of which the following is a specification.

This invention relates to that class of switches which are designed for throwing electric apparatus in or out of circuit.

The objects of my invention are to produce a switch of this character in which the terminals are prevented from welding together; to construct the pivot of the switch levers in such a manner that heating of the joint is prevented and to detachably secure the contact plates to the switch lever so that they can be easily renewed when worn or burned out.

In the accompanying drawings:—Figure 1 is a front elevation of my improved switch. Fig. 2 is a side elevation thereof. Figs. 3 and 4 are fragmentary cross sections in lines 3—3 and 4—4, Fig. 1, respectively.

Like letters of reference refer to like parts in the several figures.

A represents the base of slate or other insulating material, and B B the hinge posts secured to the upper portion of the base and connected with the poles of the generator by wires *b b*.

C C represent contact blocks secured to the lower portion of the base and connected with the terminals of the line wires *d d*.

E E represent a pair of switch levers which are pivoted at their upper ends to the hinge posts by transverse pivot bolts or pintles *e e* and connected at their lower ends by an insulating cross bar F of vulcanized fiber or other insulating material. Each hinge post is preferably quadrifurcated and the adjacent end of the switch lever is trifurcated and its jaws are arranged between those of the post, forming a multiple joint or large superficial contact between the lever and post which prevents the current, when passing through the hinge joint, from heating the same. The central portions of the cross bar are provided with a handle *f* for manipulating the switch levers.

G represents contact plates secured to the

lower portion of the switch levers and adapted to bear against the sides of the contact blocks for closing the circuit. A pair of these contact plates are preferably secured to opposite sides of each lever and bear with their free ends against opposite sides of the adjacent contact block. The contact plates are seated in sockets or recesses *h* formed in the sides of the levers and are detachably secured to the levers by transverse bolts *h'*, which construction holds the contact plates in alignment and enables them to be readily removed and replaced by new plates when worn out. The free ends of the contact plates are slitted in the usual manner so as to make them more elastic.

I represents face plates which are secured to the faces of the contact blocks and which prevent the contact plates and blocks from welding together when an arc is formed between them upon opening the switch. These face plates are of the same width as the blocks so that upon opening the switch the contact plates slide from the contact block upon the face plates. These face plates consist preferably of a composition commonly known as "non-sparking metal" which is composed essentially of copper, tin and zinc and has the property of forming a gas when slightly fused, which extinguishes the arc thereby preventing further fusion and welding of the contact plates and blocks. This "non-sparking metal" is also of higher resistance than the contact blocks, which causes the current to be weakened when the contact plates are shifted from the contact blocks to the face plates, thereby further reducing the tendency to fuse and weld. If desired, the face plates may be made of carbon having a higher resistance than the contact blocks. This causes the current to be weakened during the last portion of the opening movement of the switch, the same as in the use of the "non-sparking metal." Welding of the contact blocks with the contact plates is also prevented when carbon face plates are employed, owing to the non-welding properties of carbon.

I claim as my invention—

1. In an electric switch, the combination with the post and the contact block arranged

in the circuit, of a switch lever pivoted at one end to said post and provided at its opposite end with a socket or recess, a contact plate arranged in said socket and adapted to
5 bear against the contact block, and a fastening bolt whereby the contact plate is detachably secured to the switch lever, substantially as set forth.

2. In an electric switch, the combination
10 with the contact block and the switch lever, of a face plate secured to the face of the con-

tact block and consisting of a non-sparking composition, and a contact plate secured to the lever and adapted to pass from the block to the face plate upon opening the switch, 15 substantially as set forth.

Witness my hand this 18th day of November, 1893.

JESSE F. KESTER.

Witnesses:

THEO. L. POPP,
CARL F. GEYER.