

(No Model.)

A. L. JOHNSTON.
AUTOMATIC DISCONNECTOR.

No. 469,253.

Patented Feb. 23, 1892.

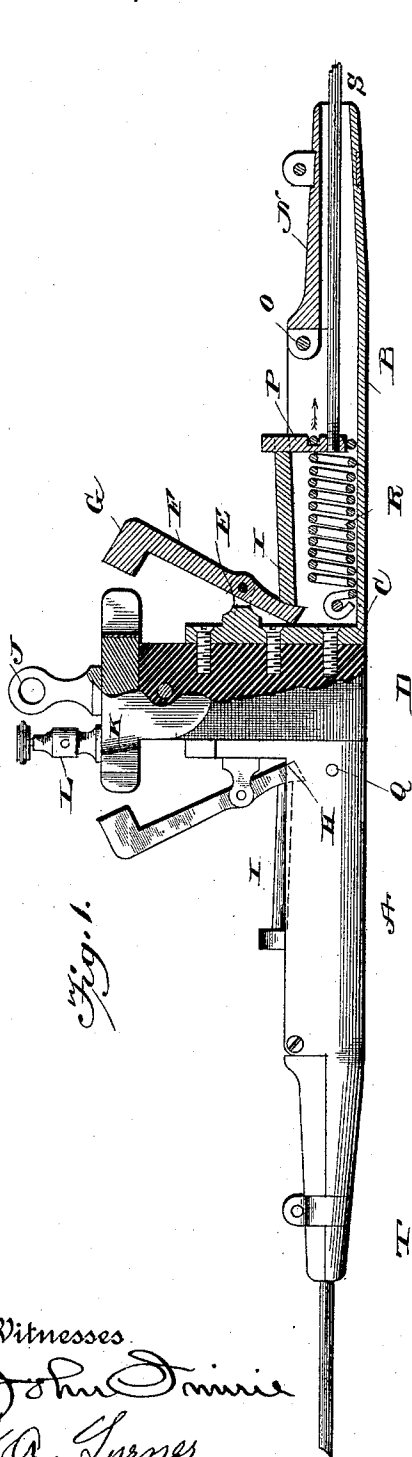


Fig. 2

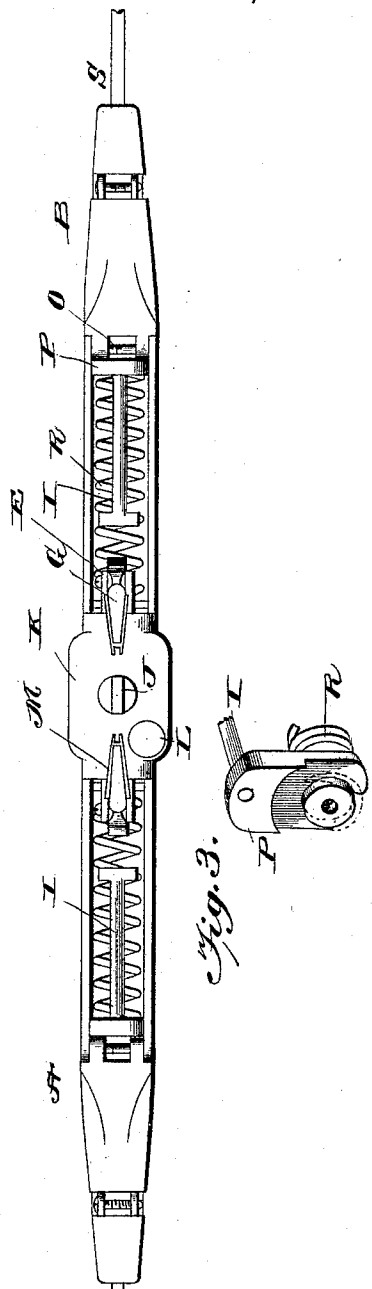
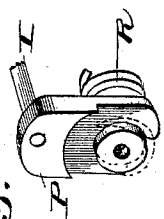


Fig. 3



Witnesses
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UNITED STATES PATENT OFFICE.

ANDREW LANGSTAFF JOHNSTON, OF RICHMOND, VIRGINIA.

AUTOMATIC DISCONNECTOR.

SPECIFICATION forming part of Letters Patent No. 469,253, dated February 23, 1892.

Application filed September 10, 1891. Serial No. 405,282. (No model.)

To all whom it may concern:

Be it known that I, ANDREW LANGSTAFF JOHNSTON, a citizen of the United States, residing in Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Automatic Disconnectors for Overhead Conductors, of which the following is so full, clear, and exact a specification as will enable those skilled in the art to which this invention appertains to make and use the same, reference being had to the accompanying drawings, forming a part hereof.

This invention relates to certain new and useful improvements in disconnectors for electric conductors, and is more especially designed to be used in circuits for electric lighting and for electric railways, and is an improvement on an invention of mine for which application for Letters Patent was filed January 19, 1891.

The object of the invention is (on the breaking of the wire) to automatically cut out the current, so that the wire in its contact with anything or any one will be incapable of injury, but can be immediately seized upon and put out of the way without exposing the person so employed to danger.

In the accompanying drawings, forming a part of this specification, and on which similar letters of reference indicate the same corresponding features, Figure 1 represents a side elevation of my invention with a part of the connector broken away, so as to illustrate the interior mechanism. Fig. 2 is a plan view of the connector when in use, and Fig. 3 is a perspective view of the traveling head P.

The letters A and B indicate two cylindrically-shaped metallic sections similar in shape and bolted at their inner ends C to the post D, which may be formed of any insulating material. These inner ends C are provided with fulcrum-bars E, in the jaws of which are pivotally mounted the switches F, their upper ends terminating in hatchet-shaped heads G and their lower ends H formed so as to be operated by the knock-bars I.

The disconnector in actual practice is suspended by the eye J, formed integral with the cap K, which covers the upper portion of the insulated block D. This cap is made of metal and is provided at any convenient point with

the wire-post L. This cap on either side and just above the sections is provided with V-shaped jaws M, composed of any material which is an especially good conductor of electricity, and into which the lever-heads G are thrown when it is desired to make electrical connection with the line.

The hollow sections B are provided with a hinged portion which can on the removal of the screw O be taken entirely off the section and allow the operator to easily and readily put the line-wire in its proper position in the section and screw it into the metallic traveling head P, into the inner end of which is screwed the knock-bar I. The sections A and B are further provided with a pin Q, to which one end of the spiral spring R is fastened, the other end thereof being secured to the traveling head P.

When the line-wire S is secured into the head P, the hinged section N is closed and held tight by the band T and the traveling head P by the tension of the line-wire is pulled in the direction of the arrow in Fig. 1, and the lever-heads G are then firmly pushed into the jaws M, and the current of electricity entering through the post L proceeds along the base of the cap and the jaws M into the lever, through the fulcrum into the section, and thence down to the line-wire. Should the wire become broken in any way, then the tension of the spring draws the bar I forcibly against the lower end of the lever and throws its head G out of engagement with the jaws M, and the cap K being mounted upon the insulated base D the current is unable to pass down to the line-wire, and said wire as a consequence is dead.

It will be observed with the construction herein shown and described that when the levers are once thrown out of engagement with the jaws on the cap that even should a tension be exerted on the wire, as would be the case when the lineman was repairing the same, the levers would not be thrown back into the position they formerly occupied in the jaws and the current thus re-established; but all repairs, &c., can be made without any danger or inconvenience whatsoever, and when completed and all danger is over the levers are then returned to normal position by the lineman.

Having thus fully described my invention, what I desire to secure by Letters Patent is—

1. In an automatic disconnecter for overhead conductors, the combination, with the
5 body thereof, provided with an insulated cap having jaws, of the switch-bars mounted on the body of the disconnecter, having heads at their upper ends, said heads being adapted to be thrown out of engagement when the wires
10 are slackened.

2. In an automatic disconnecter for overhead conductors, the combination, with the body having an insulated cap with the jaws on either side, of the switch-bars pivotally
15 mounted on the body and provided at their upper ends with hatchet-shaped heads, which are automatically thrown out of engagement when the wires are slackened.

3. In an automatic disconnecter for overhead conductors, the combination, with the
20 body thereof, provided with an insulated cap having jaws, and lever switch-bars mounted upon the body so as to be thrown into engagement with the jaws, of the hollow sections having springs secured thereto at one
25 end, and the line-wires connected to the other ends of the said springs, and knock-bars also connected to the said springs and adapted to be thrown into engagement with the lever-
30 switches when the wires are slackened.

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

ANDREW LANGSTAFF JOHNSTON.

Witnesses:

W. L. BRUEN,

WM. G. OSTENDORF.