

UNITED STATES PATENT OFFICE.

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INSULATOR.

SPECIFICATION forming part of Letters Patent No. 504,059, dated August 29, 1893.

Application filed August 30, 1892. Serial No. 444,587. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. BLACKBURN, a citizen of the United States, residing at Palmyra, in the county of Burlington and State of New Jersey, have invented certain new and useful Improvements in Insulators for Electric Conductors; and I do hereby declare the following to be a sufficiently full, clear, and exact description thereof as to enable others skilled in the art to make and use the said invention.

This invention relates to insulators for electric conductors, and is specially applicable to telephone and telegraph lines although it may be used for electric conducting lines for illuminating and dynamic service, and has for its objects, the more secure holding of the wires, the avoidance of injury to the wire, so that the same wires may be repeatedly re-erected without impairment of strength or conducting capacity, and by substituting the production of the fastening devices by machinery, operated by power with certainty and celerity, for the present modes of making such fastenings, by the manual operation of tying wires at the place of erection, greater certainty of secure and sound fastening is attainable.

The nature of this invention consists in a block of insulating material having a shoulder formed in it upon which the wire rests, in combination with a clamping jaw or bail operated by a lever, having a fulcrum in the insulated block, which lever securely locks the wire, in a depression formed in the shoulder of the insulating block, so as to hold it laterally, and at the same time makes a sufficient flexure of the wire upon the ends of the shoulder, so as to hold it lengthwise without injuriously diminishing the cross section of the wire at the points of flexure.

The construction of the invention is shown in the accompanying drawings, in which—

Figure 1 shows a side elevation. Fig. 2 shows a front elevation; Fig. 3 a vertical section in the plane indicated by the dotted line $x x$ in Fig. 1, and Fig. 4 a vertical section in the plane indicated by the dotted line $y y$ in Fig. 2.

1 represents a block of non-conducting material which may be either of glass, earthen ware, india rubber or wood saturated with

resinous matter. In the block 1 is formed a notch 2; in the back part of the notch 2 is a groove 3 into which the straight part of the jaw 5 fits. In front of and parallel with the groove 3 is a second groove 4 in which the line wire or conductor 6 fits. The sides 7 of the jaw 5 are bent forwardly and upwardly from the straight part of the jaw 5 and thence downwardly in the parts marked 8, and are recurved at the lower ends, so as to form pivots 9, engaging in eyes 10, in the lever bail 11. The lever bail 11 has the upper ends 12 bent inwardly so as to form pivots which enter holes 13 in the block 1 forming fulcrums for the lever bail 11. The proportions and form of the lever bail 11 are such that when depressed the eyes 10 carrying in them the pivot 9 of the jaw 5 are pressed back of the line of greatest depression, and the wires of which the jaw 5 and lever 12 are formed react elastically and hold the lever 12 in close position against the face of the block 1. The form of the groove 3 and the parts 7 of the jaw wire 5 is such, that the line wire 6 is bent downward by the parts 7 of the jaw 5, over the end of the groove 3 and under the part 7, thus preventing any endwise motion of the line wire 6, and the straight part of the jaw 5 prevents the wire 6 from moving backwardly, and is prevented from moving forwardly by the parts 8 of the jaw 5.

The clamping of the line wire 6 is effected by simply placing it in the groove 4 and depressing the lever 11 until the lever loop end of it is in contact with the face of the block 1. The wire 6 can be released by simply raising the lever 11.

A hood 14 as indicated in dotted lines in Figs. 1 and 2 may be formed with block 1 to protect the part of the insulating block 1 contiguous to the wire 6, from water, snow or ice.

The facility of fastening and releasing wires by this device, in situations in which the manipulation with tools often involves risk of falling and personal injury renders this device safely useful and economical as saving time in erecting, and the facilities with which the clamps can be produced by automatic machinery renders them inexpensive in production.

Having described my invention, what I claim is—

1. In an insulator for electric conductors, a bail shaped clamping lever, a block of insulating material having a right lined groove therein adapted to receive a conducting line wire and aperture adapted to receive the pivotal ends of said bail shaped lever, in combination with a single clamp adapted to hook over the conductor on each side of the block and provided with pivotal ends engaged in eyes in said clamping levers, constructed and arranged to operate substantially as shown and described.
2. In an insulator for electric conductors, a

bail shaped clamping lever, a block of insulating material having a right lined groove therein adapted to receive a line conductor, and a second groove parallel thereto adapted to receive a part of a clamping jaw, in combination with a clamping jaw extending across said block in said groove, hooked over the line conductor on each side of said block, and pivotally attached to eyes in said bail shaped lever as described and shown.

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Witnesses:

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