No. 818,186. PATENTED APR. 17, 1906.

H. D. MURDOCK.

INSULATING CLEAT.

APPLICATION FILED JULY 17, 1905.

Fig. 1.

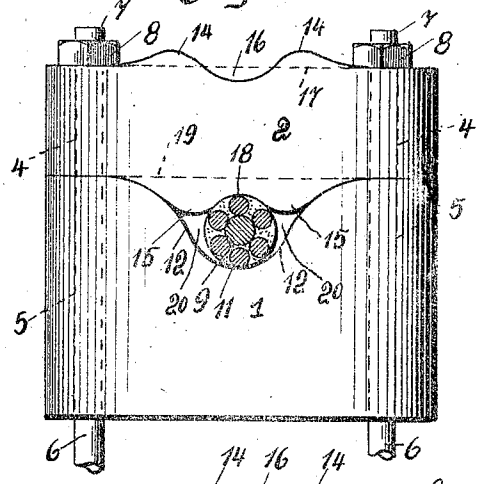
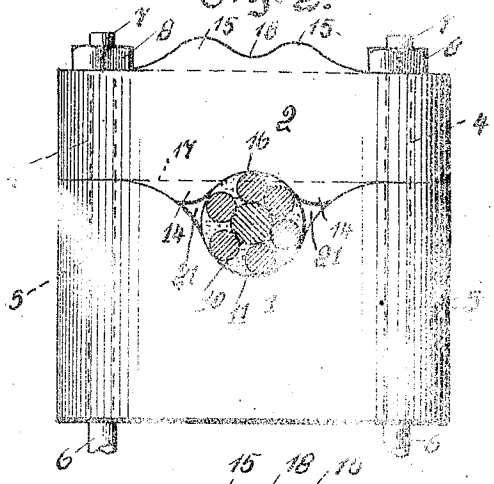


Fig. 2.



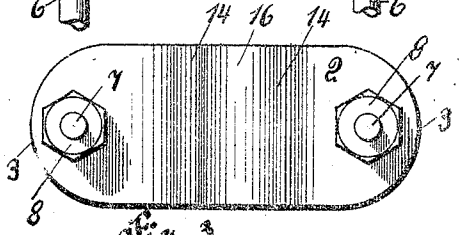


Fig. 3.

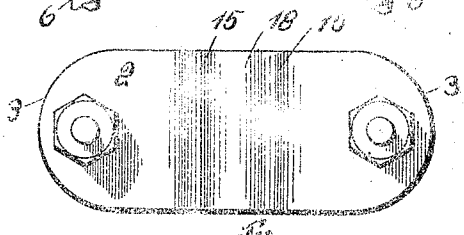


Fig. 4.

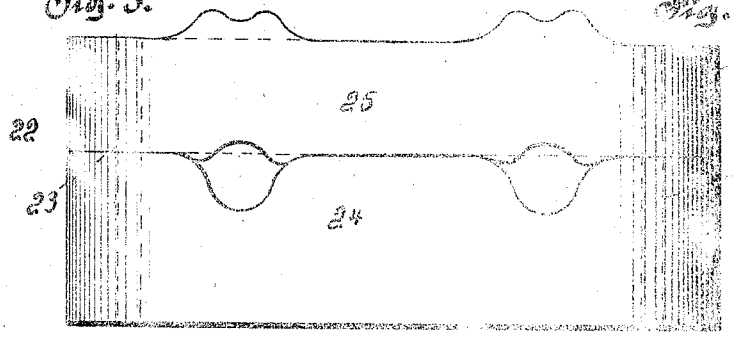


Fig. 5.

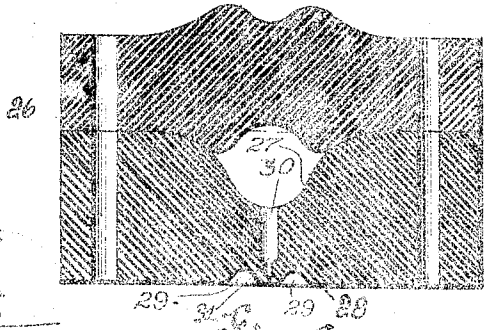


Fig. 6.

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UNITED STATES PATENT OFFICE.

HENRY D. MURDOCK, OF WILKINSBURG, PENNSYLVANIA.

INSULATING-CLEAT.

No. 818,186. Specification of Letters Patent. Patented April 17, 1906.

Application filed July 17, 1905. Serial No. 269,955.

To all whom it may concern:

Be it known that I, HENRY D. MURDOCK, a citizen of the United States of America, residing at Wilkinsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Insulating-Cleats, of which the following is a specification, reference being had therein to the accompanying drawings,

This invention relates to certain new and useful improvements in insulating-blocks; and the invention has for its object to provide a novel form of block in which various sizes of wire or cable can be clamped.

My invention aims to provide a positive and reliable means for effectually retaining a cable or wire in engagement with an insulating-block or piece of material, and in this connection I have devised a novel form of block wherein wires of various diameters can be firmly clamped and retained in position. To this end I have devised a block, a part of which is reversible, whereby either a wire of a smaller diameter can be retained within the insulated block or a wire of a larger diameter. I have also constructed my improved block whereby one or more wires can be fastened therein and I have also devised means for temporarily securing a block to a support or object until the block has been properly positioned.

In insulating-blocks heretofore used, which generally consist of two members clamped together, it has been impossible to mount wires of various diameters within the block without causing the blocks to be separated, this position of the blocks preventing the wire from being firmly clamped and entirely surrounded by the insulating-block. I have provided a block which will clamp wires of various diameters and at the same time insure the wire of being surrounded by the insulating-block.

With the above and other objects in view, which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts to be hereinafter more fully described, illustrated, and claimed.

The essential features of my invention are necessarily susceptible to various structural changes without departing from the scope of the invention; but the preferred embodiments are illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of an insulating-block constructed in accordance with my invention. Fig. 2 is a similar view illustrating the block clamping a wire of a larger diameter than that shown in the block in Fig. 1 of the drawings. Fig. 3 is a plan view of the block illustrated in Fig. 1. Fig. 4 is a plan of the block illustrated in Fig. 2. Fig. 5 is a side elevation of a block constructed to hold one or more wires; and Fig. 6 is a longitudinal sectional view of one of my improved blocks, illustrating a modified form of construction.

Like numerals of reference designate corresponding parts throughout the several views of the drawings.

To put my invention into practice, my improved insulating-block consists of two members 1 and 2, which are preferably made of porcelain or the like insulating material. Each member is substantially oblong in top plan view and is provided with rounded ends 3 3, and in each end of the members 1 and 2 I provide vertically-disposed openings 4 and 5, the openings 4 of the member 2 being adapted to aline with the openings 5 of the member 1 when the member 2 is placed upon the top of the member 1. In these openings conventional forms of bolts 6 6 are placed when it is desired to clamp the insulating-block to a support or object, and the ends 7 7 of the bolts are threaded to receive the nuts 8 8 in order that the member 2 may be clamped firmly upon the member 1.

My invention particularly resides in the openings I [illegible] in the members to receive the wires or cables 9 and 10. Centrally and transversely of the member 1, which serves functionally as a body portion or base for the member 2, I form a groove 11, having slanting sides 12 12. In this groove is adapted to rest the wires or cables to be clamped within the insulating-block. The top and bottom surfaces of the member 2 are provided with protuberances 14 14 and 15 15, the protuberances 14 14 forming a central transversely-disposed groove 16, which lies below the surface 17 of the member 2. Between the protuberances 15 15 is formed a transversely-disposed groove 18, which lies below the surface 19 of the member 2.

In Fig. 1 of the drawings I have illustrated the member 2 as mounted upon the member 1 and the surface 19 of the member 2 coinciding with the top of the member 1. When in this position, the protuberances 15 15 extend downwardly into the grooves 11 of the

member 1, and the groove 18, together with the groove 11, forms curved bearing-surfaces or tapers in which the cable or wire 9 is adapted to rest and be clamped. When the members 1 and 2 are so assembled, it will be observed that they are firmly clamped together.

Reference will now be had to Fig. 2 of the drawings, wherein I have illustrated the member 2 as reversed—that is, the surface 17 of the member coinciding with the top of the member 1. When in this position, the protuberances 14 14 extend partially into the groove 11 of the member 1; but the groove 16, formed between the protuberances, extends above the top of the member 1 or the surface 17 of the member 2, consequently providing an opening within the two members, which will accommodate a wire or cable of a greater diameter than the wire or cable 9.

By the construction of the members 1 and 2 and the feature of reversing the member 2 wires of various diameters can be clamped between the two members of the insulating-block without necessitating the use of a special constructed insulating-block to accommodate a special size of wire.

In Fig. 5 of the drawings I have illustrated a block 22, which is provided with two openings 23 23, these openings being constructed to accommodate wires or cables. The members 24 and 25 of the block 22 are constructed identical with the members 1 and 2, heretofore described, with the exception that the protuberances and grooves are duplicated adjacent each end of the block providing means whereby two wires of various diameters can be clamped within the block. It will of course be understood that a block may be constructed having a plurality of grooves and protuberances to clamp a plurality of wires.

In Fig. 6 of the drawings I have illustrated a block wherein novel means is provided for temporarily holding the block in engagement with an object or support. The block 26, having a groove 27 formed therein similar to the groove 11, heretofore described, has its bottom surface 28 provided with two grooves 29 29, and in the central portion of the block I form a recess 30, which extends downwardly from the bottom of the groove 27 and terminates in a tapering end 31 in close proximity to the grooves 29, the tapering end 31 of the recess 30 lying approximately between grooves 29, whereby when the bottom of the recess is struck with a sharp instrument the material lying between the tapering end 31 of the recess 30 and the grooves 29 29 will be broken away, permitting of a screw or nail being placed in the openings 30 to secure the block 26 to a suitable support or object. It will be observed that when it is not desired to use the opening 30 for securing the block to a support or object that the block is practically as sound and secure as the members 1 of the blocks heretofore described.

By the construction of my improved insulating-blocks considerable time and labor is saved heretofore required in the changing of the insulating-blocks when it was desired to clamp a wire of a greater diameter than could be accommodated in the block, where in connection with my improved blocks it is only necessary that the outer or member 2 of the same be reversed and secured in engagement with the member 1. I do not care to confine myself to the material from which my improved insulating-blocks may be made, as hard rubber, glass, or the like non-conductive material can be readily used.

It is thought from the foregoing that the construction, operation, and advantages of the herein-described insulating-block will be apparent without further description, and various changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit of the invention or sacrificing any of the advantages thereof.

What I claim, and desire to secure by Letters Patent, is—

1. An insulating-block of the character described consisting of two members, one of said members having a groove formed therein, protuberances carried by the upper and lower faces of the other of said members, said member having grooves formed therein between said protuberances, and means to secure said members together, substantially as described.

2. An insulating-block of the character described consisting of two members, one of said members having a groove formed therein, protuberances carried by the other of said members to fit in the groove of the first-mentioned member, said last-named member having a groove formed therein between said protuberances, substantially as described.

3. An insulating-block consisting of two members one of said members having a groove formed therein, protuberances carried by the other of said members and adapted to fit within said groove, substantially as described.

4. An insulating-block comprising two members adapted to match together, and one of which members has a cable-receiving groove in its matching face, the other of said members having two matching faces, and having protuberances on both of its faces to fit in the groove of the first-mentioned member, substantially as described.

5. An insulating-block comprising two members, one of which is provided centrally of its matching face with a transverse groove, the other of said members having two matching faces to match with the first-mentioned member, and having a transverse groove in each matching face, and having protuber-

ances on each matching face at the sides of the grooves.

6. In an insulating-block, a reversible member, having both of its faces adapted to match with another member, and having a centrally-arranged transverse groove in each of its faces, the said grooves being of different depths, protuberances on both of said faces at the outer sides of the grooves, in combination with a second member having a groove in its matching faces to receive said protuberances.

7. An insulating-block comprising two members adapted to match together, one of which has a transversely-extending groove on its matching face, and the other of which is adapted to have either of its faces match with the first-mentioned member, and is provided with a groove and a protuberance on each face, the grooves on one face being of a depth less than the grooves on the other face, and the protuberances adapted to engage in the transversely-extending groove in the first-mentioned member, substantially as described.

8. An insulating-block comprising a member adapted to receive a cable, and having a weakened portion adapted to be broken away to form an opening therethrough.

9. In an insulating-block, two members adapted to be matched together, and each provided with a cable-receiving groove, one of said members constructed with a weakened portion adapted to be broken away to form an opening therethrough, as and for the purpose described.

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

HENRY D. MURDOCK.

Witnesses:

E. E. POTTER,

C. KLOSTERMANN.