No. 648,710. Patented May 1, 1900.

G. C. QUELCH.

FUSE BLOCK.

(Application filed Oct. 10, 1899.)

(No Model.)

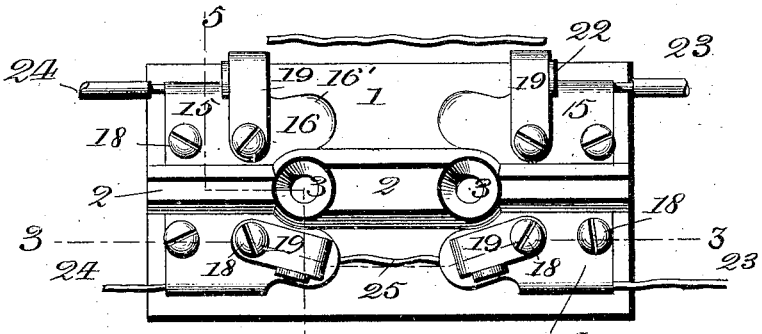

Fig. 1.

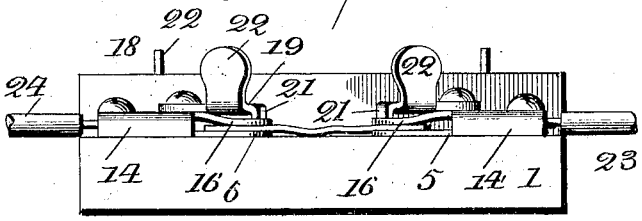

Fig. 2.

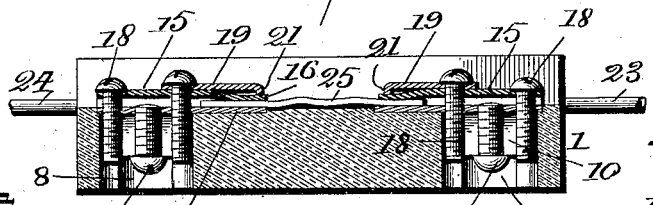

Fig. 6.

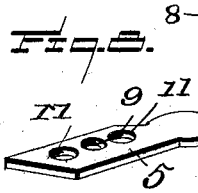

Fig. 8.

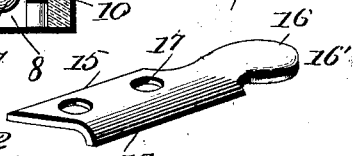

Fig. 3.

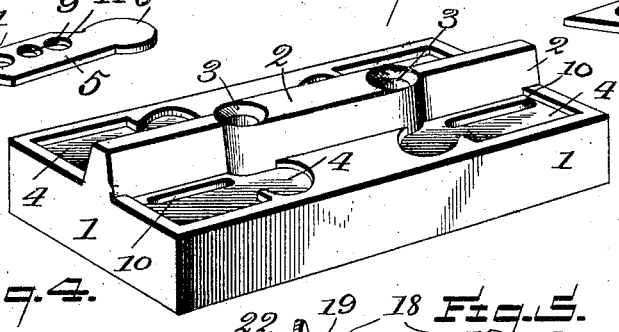

Fig. 4.

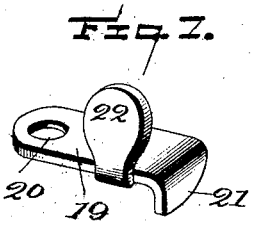

Fig. 7.

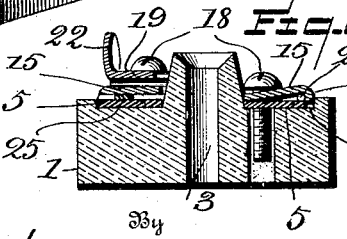

Fig. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE C. QUELCH, OF VINTONDALE, PENNSYLVANIA.

FUSE-BLOCK.

SPECIFICATION forming part of Letters Patent No. 648,710, dated May 1, 1900.

Application filed October 19, 1899. Serial No. 733,176. (No model.)

To all whom it may concern:

Be it known that I, GEORGE C. QUELCH, a citizen of the United States of America, residing at Vintondale, in the county of Cambria and State of Pennsylvania, have invented certain new and useful Improvements in Fuse-Blocks, 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 fuse-blocks, and has for its primary object to construct a fuse-block in which the disks ordinarily employed in connection with fuse-wires for securing the same in position may be dispensed with and the fuse-wires secured in position by the aid of a clamping-plate engaging directly upon the same.

The invention further aims to construct a fuse-block in which the fuse-wires may be more easily and quickly secured than is possible where it is necessary to employ a screw-driver or other tool for fastening the fuse-wires by the aid of a screw or other fastening device.

A further object of the invention is to construct a fuse-block possessing the above advantages and having means for separating the two fuse-wires in order that when the line is short-circuited and the fuse-wires burned out the spark from one wire will be prevented from reaching the other wire and the short circuit thus continued to the dynamo.

Briefly described, the invention consists of a base or bed block of suitable insulated material, which is adapted to be secured to the wall, ceiling, or other point either by screws or in any desired manner. This block has embedded therein the contact-plates, which are held in position by a screw inserted through the base of the block. These plates are provided with screw-threaded apertures to receive fastening-screws by means of which a clamping-plate is secured on top of each of the embedded plates. This clamping-plate is provided with a depressible or spring-lip portion which is adapted to be depressed toward the embedded plate, so as to clamp the fuse-wire between the said two plates by means of a cam-plate pivotally mounted on one of the screws which fasten the clamping-plate in its position upon the embedded plate. The main wires and the local, house, or lamp wires are held securely between the embedded plates and the clamping-plates, the latter being forced into firm engagement therewith by the fastening-screws. These elements, which enter into the construction of my invention, together with such other novel features of construction as may be contained therein, will be hereinafter more particularly described and then specifically pointed out in the claims, and in describing the invention in detail reference will be had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference will be employed to designate similar parts throughout the several views thereof, in which—

Figure 1 is a top plan view of my improved fuse-block, showing the main and local wires broken away, with one fuse-wire held in position and the other fuse-wire removed, the cam-plates being open to permit such removal. Fig. 2 is a side view. Fig. 3 is a longitudinal sectional view on the line 3 3 of Fig. 1. Fig. 4 is a perspective view of the insulated block with all plates removed. Fig. 5 is a cross-sectional view taken on the line 5 5 of Fig. 1. Fig. 6 is a perspective view of one of the clamping-plates. Fig. 7 is a similar view of one of the cam-plates. Fig. 8 is a like view of one of the embedded plates.

To put my invention into practice, I provide a base or bed block 1, composed of porcelain or other suitable insulated material, which may be of any desired shape or outline, though in the accompanying drawings for illustration I have shown the same in the shape of a substantially-rectangular block and provided centrally of its outer face with a ridge 2, extending horizontally with the block for its entire length. This ridge 2 is provided with as many apertures 3 as may be desired for the reception of screws for fastening the block in position, the apertures being preferably countersunk at the top of the ridge to allow of the head of the fastening-screws being upon a plane with or below the top face of said ridge. This block 1 is provided on its outer face adjacent to the ridge 2 with recesses 4 4 4 4, having the same conformation of outline as

the contact-plates 5, which they are adapted to receive. These plates are formed with the receiving-lips 6 and are held in position in the recesses by means of a screw 7 inserted through the opening 8 in the block 1 and engaging in the screw-threaded aperture 9 in the plates 5. For convenience sake I preferably form this opening 8 larger in dimensions in the base of the block than at the top or outer face of the block, and the same terminates on the upper face of the block in an oblong slot 10 to receive the ends of the screws which hold the clamping-plates and the cam-plates in position. As these screws pass for a slight distance into the insulated block it would be necessary to have the apertures to receive the same in true registry with the screw-threaded apertures 11 in the plate 5; but by terminating the recess 8 in the oblong slot this fineness or exactness requiring skill to construct the block is obviated.

The recesses 4 are of slightly-greater width than the body portion of the plates 5, so that when these plates are in position a channel 12 will be provided between the outer edge of the plates and the outer wall of the recess, which channel is adapted to receive the downwardly-extending flange 14, formed integral with the clamping-plates 15. These clamping-plates are each formed with a depressible or spring lip 16 and with openings 17, the latter being adapted to register with the screw-threaded openings 11 in the embedded plates 5 when the clamping-plates are in position and are held by the fastening-screws 18. One of these fastening-screws 18 is adapted to have mounted thereon between its head and the clamping-plate 15 the securing device, which I herein term a "cam-plate," and consisting of the body portion 19, having the aperture 20 near its one end to receive the fastening-screw and having its other end turned downwardly with the one edge curved to form the cam 21, adapted to engage with the beveled part 16′ of the depressible or spring lip 16 and force the latter downwardly toward the lip 6 into engagement with the fuse-wire. This cam-plate is operated by means of an upwardly-extending lug 22 or thumb-piece, which may be formed integral therewith or secured thereto, as desired.

In Figs. 1, 2, and 3 of the drawings I have shown the main or dynamo wires and the local lamp or house wires connected to the fuse-block, the main wires 23 and the lamp-wires 24 being held between the clamping-plates 15 and the embedded plates 5. The formation of these plates 15 with the flange 14 and the provision for this flange in the channel 12 allows of the plate 15 being forced into engagement with the embedded plates along their straight edge and the clamping of the wires near the flange, as shown in Fig. 5 of the drawings, securely holding these wires in position. The fuse-wires 25 are shown in Fig. 1, one in position and on the other side removed, the cam-plates being swung outwardly, so as to permit such removal of the fuse-wire.

It is thought from the foregoing description that the operation of the fuse-block will be readily apparent, as it will be observed that when the cam-plates are moved outwardly to the position shown in Fig. 1 of the drawings the fuse-wire may be placed between or removed from between the lip 16 of the clamping-plates 15 and the lip 6 of the embedded plates 5, and when the cam-plates are moved inwardly to engage the lips 16 these lips are compressed toward the lips 6 and hold the fuse-wire in its position. In case of short-circuiting the ridge 2 will prevent the spark from the one fuse-wire from reaching and establishing circuit with the spark of the other fuse-wire, which would destroy the effectiveness and usefulness of the fuse-block.

While the construction as herein shown and described appears to embody the preferable form of my invention, yet I do not wish to unduly limit myself to the construction herein shown, as it will be observed that various changes may be made in the details of construction without departing from the general spirit of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a fuse-block, the combination with the base-block composed of insulating material provided with a longitudinally-extending ridge on its one face, of the contact-blocks embedded in said base-block, clamping-plates mounted on said contact-plates, and cam-plates pivotally mounted on said clamping-plates for depressing a portion of said clamping-plates and holding the fuse-wire between the said depressed portion and the contact-plates, substantially as described.

2. In a fuse-block, the combination with the base-block of insulating material, and the contact-plates embedded therein, of the clamping-plates mounted on said embedded contact-plates and each provided with a spring-lip, and the cam-plates mounted on said clamping-plates and adapted to compress the lip portions thereof into engagement with the fuse-wire, substantially as described.

3. In a fuse-block, the combination, with the base-block composed of insulating material, of the contact-plates embedded therein, clamping-plates mounted on said contact-plates, and cam-plates pivotally mounted on said clamping-plates for depressing a portion of said clamping-plates and holding the fuse-wire between the said depressed portion and the contact-plates, substantially as described.

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

GEORGE C. QUELCH.

Witnesses:
GEORGE BLUVELT,
WILLIAM A. QUELCH.