No. 629,663. Patented July 25, 1899.

H. P. DAVIS.

FUSE BLOCK FOR ELECTRIC CIRCUITS.

(Application filed Mar. 23, 1899.)

(No Model.)

Fig. 1.

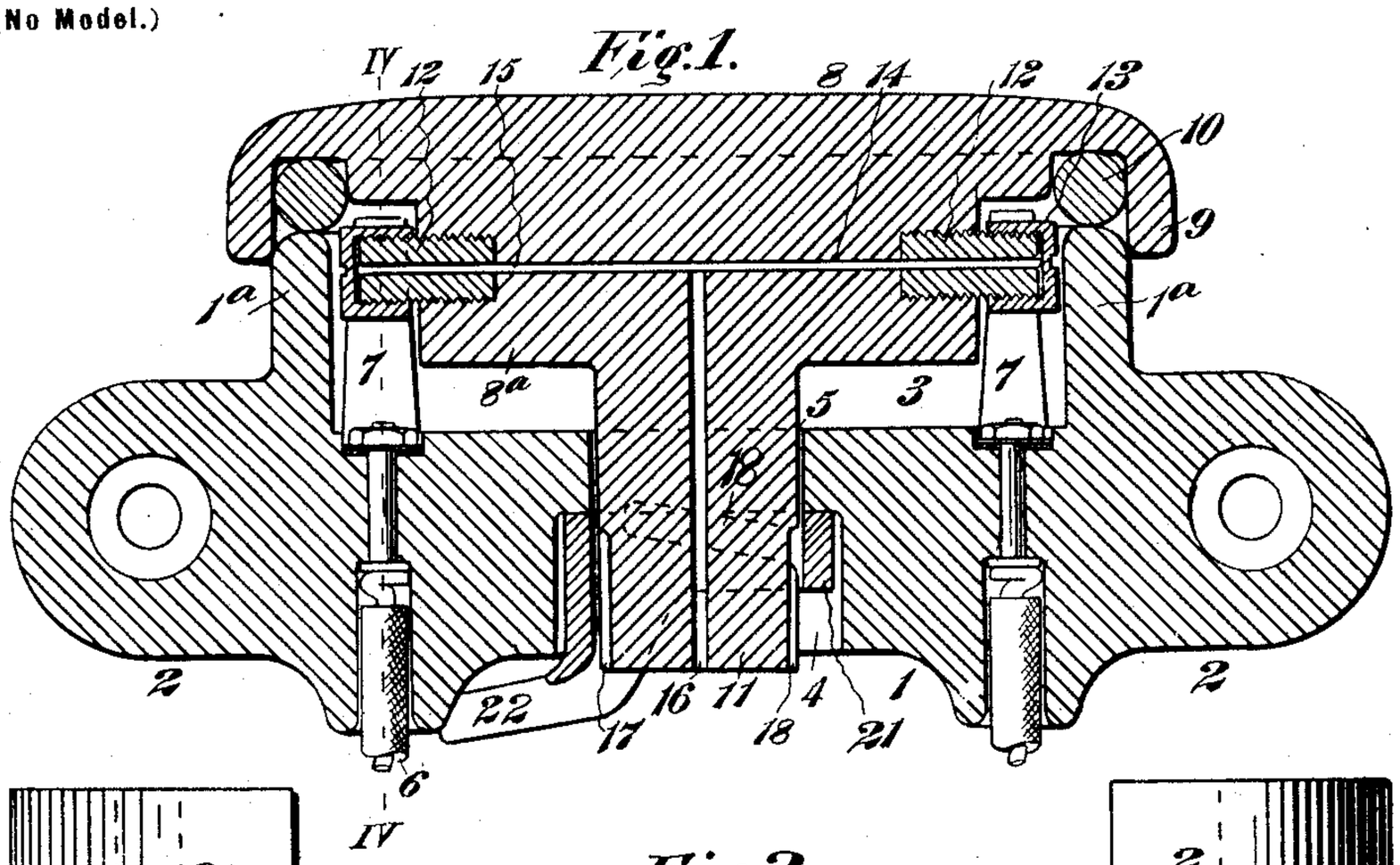


Fig. 2.

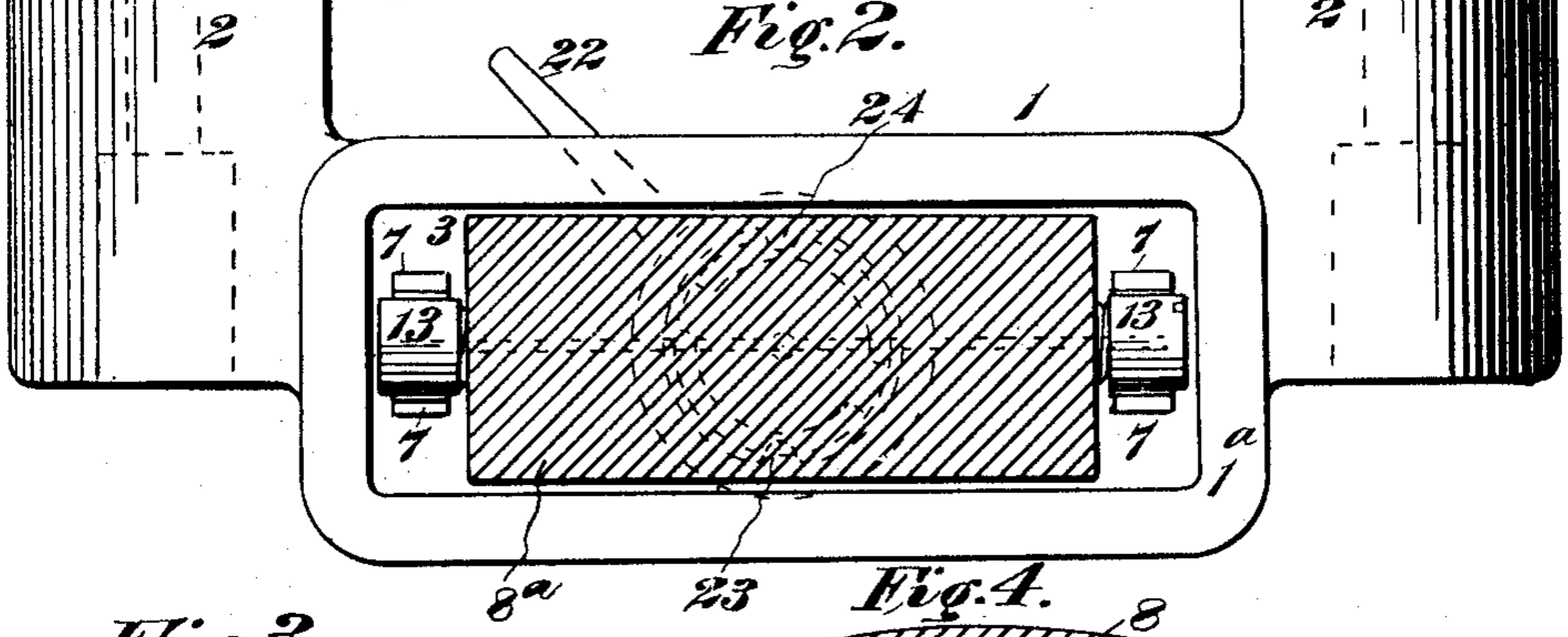


Fig. 3.

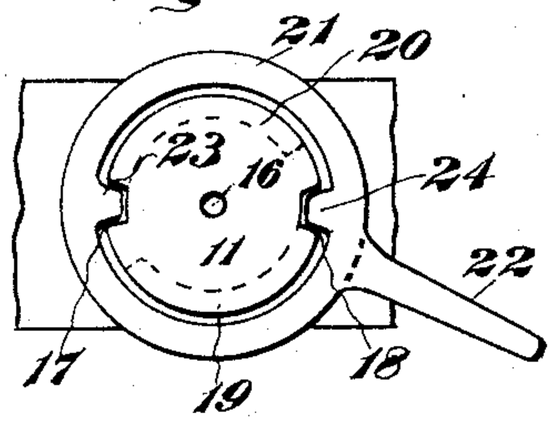
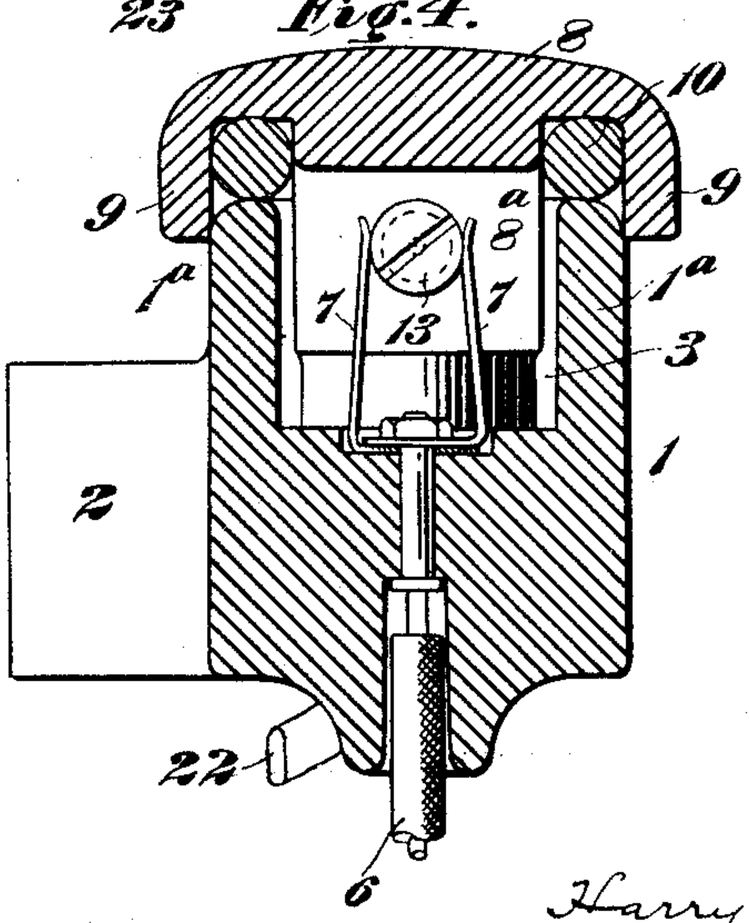


Fig. 4.



WITNESSES:

Ethan D. Dodds

H. C. Tenney

INVENTOR

Harry P. Davis

BY

Wesley G. Carr

ATTORNEY.

UNITED STATES PATENT OFFICE.

HARRY P. DAVIS, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO THE WESTINGHOUSE ELECTRIC AND MANUFACTURING COMPANY, OF PENNSYLVANIA.

FUSE-BLOCK FOR ELECTRIC CIRCUITS.

SPECIFICATION forming part of Letters Patent No. 629,663, dated July 25, 1899.

Application filed March 23, 1899. Serial No. 710,214. (No model.)

To all whom it may concern:

Be it known that I, HARRY P. DAVIS, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Fuse-Blocks for Electric Circuits, (Case No. 809,) of which the following is a specification.

My invention relates to fuse supporting and inclosing devices, generally known in the art as "fuse-blocks;" and it has for its object to provide a device of this character which is simple and inexpensive in construction and effective in operation and which permits of the ready insertion of a fuse and the assembling and separation of the parts with a minimum expenditure of time and labor and a maximum degree of safety.

In the accompanying drawings, Figure 1 is a longitudinal sectional view of a fuse-block constructed in accordance with my invention; and Fig. 2 is a plan view of the fuse-block, the fuse-carrying part being, however, shown in section. Fig. 3 is a detail view of the locking devices; and Fig. 4 is a transverse section on line IV IV of Fig. 1, looking from left to right.

The details of construction illustrated in the drawings will now be described.

The base or body portion 1 of the fuse-block is made of porcelain or other suitable non-conducting and non-combustible material and is provided at its ends with perforated lugs or ears 2 for the purpose of fastening the same to a support. (Not shown.) One side of the base or body portion is recessed or hollowed out to form a chamber 3. The opposite side is also provided with a recess 4, which is connected with the chamber 3 by an opening 5. The electric conductors 6, which lead to the circuit-conductors in connection with which the fuse-block is used, are secured at opposite ends of the chamber 3 to spring terminal plates or fingers 7, which project some distance into the chamber 3. The cover portion 8 of the fuse-block is also constructed of porcelain or other suitable non-conducting material and is provided with a flange or apron 9, which extends entirely around its edge and is of such width and peripheral length as to surround and shut down over the wall 1^a, which surrounds the chamber 3, thus serving to protect the terminals from rain and snow or other materials which may fall upon the top of the fuse-block. A gasket 10, of soft rubber or other similar material, is located in a groove just inside the apron 9, so as to engage with the upper edge of the wall 1^a when the cover is in its normal position, and thus prevent the entrance of any moisture into the chamber 3. The inner portion 8^a of the cover projects downward into the chamber 3 and is provided midway of its ends with a cylindrical projection 11, which extends through the opening 5 and recesses 4 when the parts of the block are assembled in operative position, as clearly shown in Fig. 1. Metal terminal pieces 12 are set into the ends of the portion 8^a, and these pieces are screw-threaded, so that cap-pieces 13, having corresponding internal screw-threads, may be screwed thereon in such position as to engage the spring terminal plates 7 and make good contact therewith when the cover is in its normal position. A longitudinal passage 14 is provided through the terminal pieces 12 and the intervening portion of the piece 8^a for the reception of a fuse-wire 15. The cylindrical portion 11 is also provided with a longitudinal passage 16, which leads from the passage 14 to the atmosphere and serves as a vent or blow-out opening for the fumes resulting from the melting or blowing of the fuse.

In order to clamp the cover 8 to the base 1, I provide the portion 11 with two diametrically opposite longitudinal grooves 17 and 18 and with diagonal grooves 19 and 20, which extend at an angle to the diameter through nearly a semicircumference, the diagonal groove 19 communicating at one end with the lower end of the groove 18 and the diagonal groove 20 communicating at one end with the lower end of the groove 17. A clamping-nut 21 is provided with a handle 22 and with two opposite lugs 23 and 24 in position to engage, respectively, with the grooves 17 and 18. When the locking-nut is placed upon the part 11 and pressed inward until the lug 24 reaches

the end of the groove 19 and the lug 23 the end of groove 20 and then the nut is given a partial turn by means of the handle 22, the cover will be drawn toward the base and clamped firmly thereto, as will be readily understood. When it is desired to replace the blown fuse, the nut may be readily turned until the lugs 23 and 24 register with the corresponding longitudinal grooves, when it may be removed and the cover lifted from the base. The terminal screw-caps 13 may then be removed and the ends of the blown fuse taken out. New fuse-wire being then inserted its projecting ends will be bent over against the ends of the pieces 12 and the caps again screwed on, thus clamping the ends of the fuse closely between the parts 12 and 13, thereby making a good electrical connection between them and the fuse, and as the caps closely fit the spring-plates 7 when the cover is in operative position the circuit connections are as good as could be desired.

I claim as my invention—

1. A fuse-block for electric circuits comprising two separable parts one of which is provided with circuit-terminals and an opening and the other of which is provided with a fuse and fuse-terminals and a projection having a blow-out passage and fitting in and extending through said opening, in combination with a clamping device adapted to engage both parts of the block and draw them together.

2. In a fuse-block for electric circuits, a base portion provided with circuit-terminals and an intermediate opening, in combination with a fuse-holding cover provided with terminals and having a portion provided with a blow-out passage and projecting through said opening when in operative position, and a device for engaging said base and said cover and clamping them rigidly together.

3. In a fuse-block for electric circuits, a base provided with spring-terminals and an opening, in combination with a cover provided with a fuse and fuse-terminals and having a portion which projects through the opening in the base when in operative position, a gasket between said base and said cover, and a device for clamping the cover to the base.

4. In a fuse-block for electric circuits, a base provided with spring-terminals and having an opening, in combination with a fuse-holding cover provided with removable terminals and having a blow-out chimney projecting through the opening in the base and provided with inclined grooves, and a device provided with projections which coöperate with the chimney-grooves to clamp the cover rigidly to the base.

5. In a fuse-block for electric circuits, a base provided with spring-terminals and having an opening, in combination with a fuse-holding cover provided with removable terminals and having a lateral projection provided with a blow-out passage, a gasket between the base and the cover, and a device for clamping the cover to the base.

In testimony whereof I have hereunto subscribed my name this 20th day of March, 1899.

HARRY P. DAVIS.

Witnesses:
WESLEY G. CARR,
H. C. TENER.