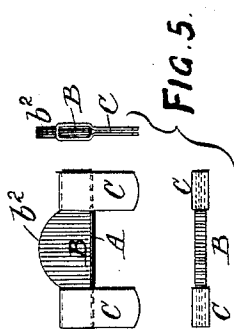
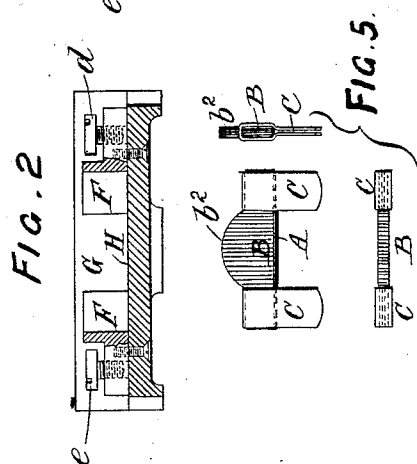
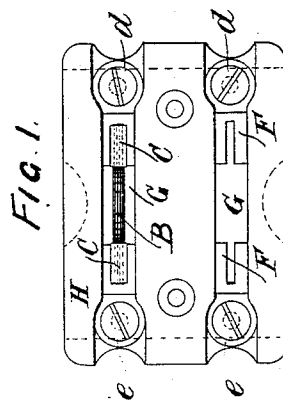
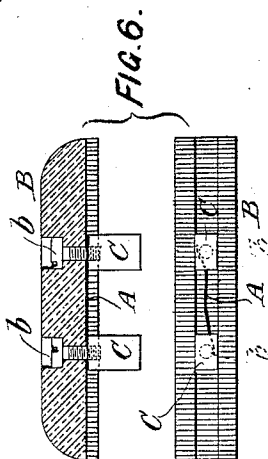
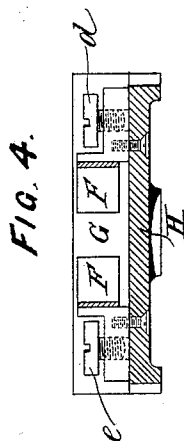
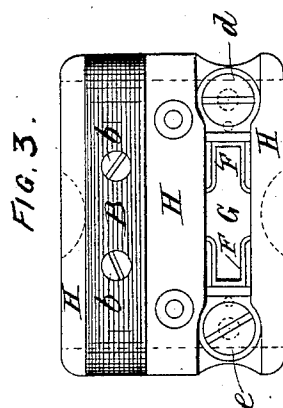
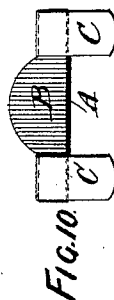
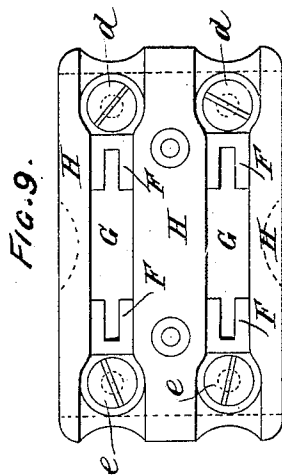
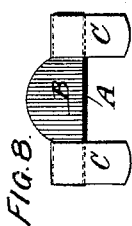
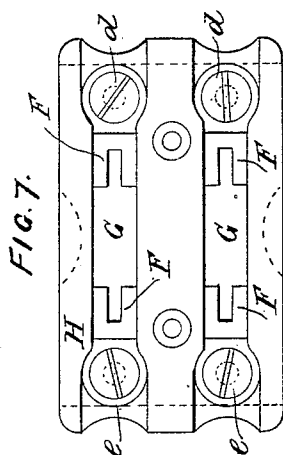


(No Model.)

J. G. S. CUNNINGTON.
FUSE AND FUSE BLOCK.

No. 433,770.

Patented Aug. 5, 1890.



Witnesses
John Revell
George Baumann.

Inventor
Joseph G. S. Cunningham
By his Attorneys
Howell and Howell

UNITED STATES PATENT OFFICE.

JOSEPH G. S. CUNNINGTON, OF COVENT GARDEN, COUNTY OF MIDDLESEX,
ENGLAND.

FUSE AND FUSE-BLOCK.

SPECIFICATION forming part of Letters Patent No. 433,770, dated August 5, 1890.

Application filed March 21, 1890. Serial No. 344,765. (No model.) Patented in England April 12, 1888, No. 5,452.

To all whom it may concern:

Be it known that I, JOSEPH GRACE SMITH CUNNINGTON, electrical engineer, a subject of the Queen of Great Britain and Ireland, and residing at 31 King Street, Covent Garden, in the county of Middlesex, England, have invented a certain Improved Fusible Device for Protecting Electric Circuits, (for which I have obtained a patent in Great Britain, No. 5,452, dated April 12, 1888,) of which the following is a specification.

The object of my invention is to provide a fusible device which is very efficient, and is readily put in place and removed by unskilled persons, and by which the use of such a device unfitted for the particular circuit with which it is to be used and which it is to protect is prevented.

I will explain, with reference to the accompanying drawings, what I consider the best means of carrying my invention into effect, premising that I do not limit myself to the precise details which I shall describe.

Figure 1 is a plan, and Fig. 2 a vertical section, of a device constructed according to my invention. Figs. 3 and 4 are corresponding views of a similar device for a larger current. Fig. 5 is a side view and plan of the plug shown in Figs. 1 and 2 for carrying the fusible conductor, and Fig. 6 is a longitudinal section and plan of under side of the modification in the form of plug which is shown in Figs. 3 and 4.

In Figs. 2 and 4 the plugs carrying the fusible pieces are removed, and in Figs. 1 and 3 one of the said plugs is shown in place and the other removed.

The plug is constituted by a fusible conductor A, Figs. 5 and 6, mounted on a carrier B, of insulating material, and the said fusible conductor is in electric contact with contact-pieces C C, which are fixed to the said carrier B, and are preferably made of copper, presenting a considerable surface. The fusible conductor A may be fixed in the carrier by being soldered to the contact-pieces C or by being otherwise made to have good contact with the said contact-pieces. For example, as shown in Fig. 6, the conductor may be pinched in between the contact-pieces C and carrier B by the screws *b b*. The two portions of the

circuit to be joined by the device are connected by binding-screws *d e* or otherwise with contact-pieces F F, held in a slot G in a suitable mounting H, so that the said contact-pieces F F, which are sockets with the walls forming the contact-faces, bear on the aforesaid contact-pieces C C on the carrier B, and so that the plug can be readily slid or put into place and readily removed to complete or interrupt the circuit. The carrier B may be provided with a projecting portion *b*², Fig. 5, or with some suitable equivalent therefor, to be grasped by the person using the device. The contacts F F in the mounting and the slot G, in which they are situated, correspond in size only with the contact-pieces C and carrier B, having a fusible conductor fitted for the particular circuit, so that only a fusible conductor fitted for the circuit can be used, my principal object being to prevent a fusible device of a large size being used when a small one should be used.

The contact-pieces C C may be made springy, as shown in Fig. 5, so that when inserted between the arms of the contact-pieces F F they will spring outward and make an effective contact therewith, or instead of making the pieces C C springy the contacts F F may have springy arms, as shown in Figs. 3 and 4, and the pieces C C wedge between the said arms.

It will be seen by referring to the drawings that the carrier B and contact-pieces C, with the fusible conductor A, (shown in Figs. 3 and 6,) is not suited for use with the device shown in Figs. 1 and 2, and vice versa.

The invention is not limited to making the plugs and carriers of varying widths, as the same object may be otherwise obtained, for example, by making them of varying lengths, as shown in Figs. 7 to 10, so that a plug carrying a fusible conductor not suited to the circuit does not bridge across or make contact with the contact-pieces of the carrier or cannot be inserted therein.

Fig. 7 shows a plan of the mounting or holder, and Fig. 8 an elevation of the plug carrying a fusible conductor suited to one circuit, and Figs. 9 and 10 are similar views of the mounting or holder and plug for another circuit. It will be seen that the lengths of plugs and the distance between the contact-

pieces of the carrier are such that the plugs carrying the fusible conductors suited to a large current cannot be placed in carriers fitted to a circuit for a small current, and this will generally be sufficient, although it will be readily understood that the plugs and holders or mountings may be so proportioned that not even a fusible conductor suited for a small current can be placed in a circuit which requires a fusible conductor for a larger current.

The devices may be used singly or in any desired combinations of two or more, a combination of two being illustrated by the drawings.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

Fusible devices for protecting electric cir-

cuits and comprising plugs provided each with two contacts and a connecting fusible conductor, the connected contacts in the plugs for different current-circuits being of different thicknesses or different distances apart, in combination with mountings having corresponding sockets whose walls form contacts, similarly of different widths or different distances apart, all substantially as and for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

J. G. S. CUNNINGTON.

Witnesses:

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