April 16, 1968 E. H. PATER ET AL 3,378,665

FUSE HOLDERS

Filed Jan. 9, 1967 2 Sheets-Sheet 1

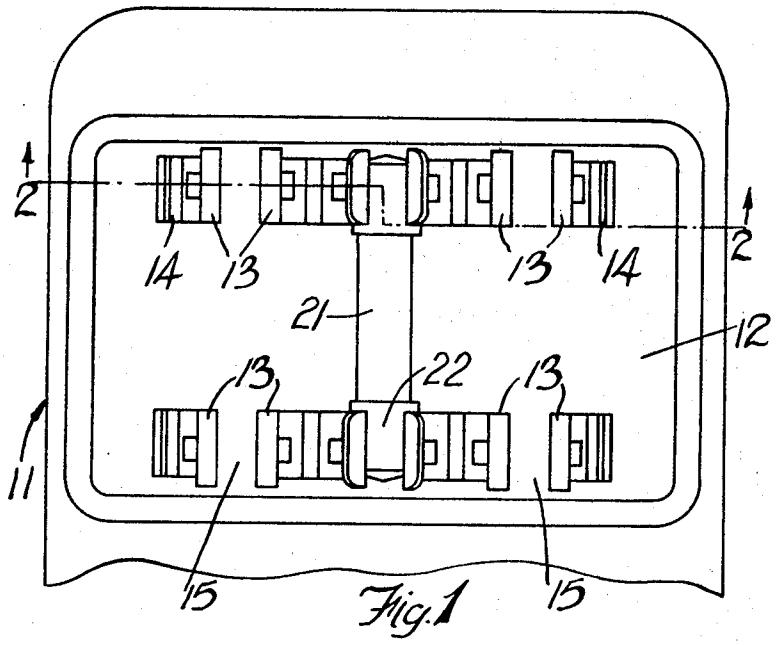


Fig. 1

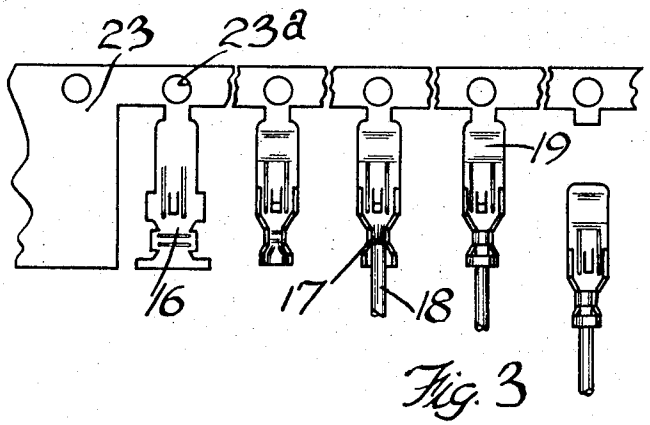
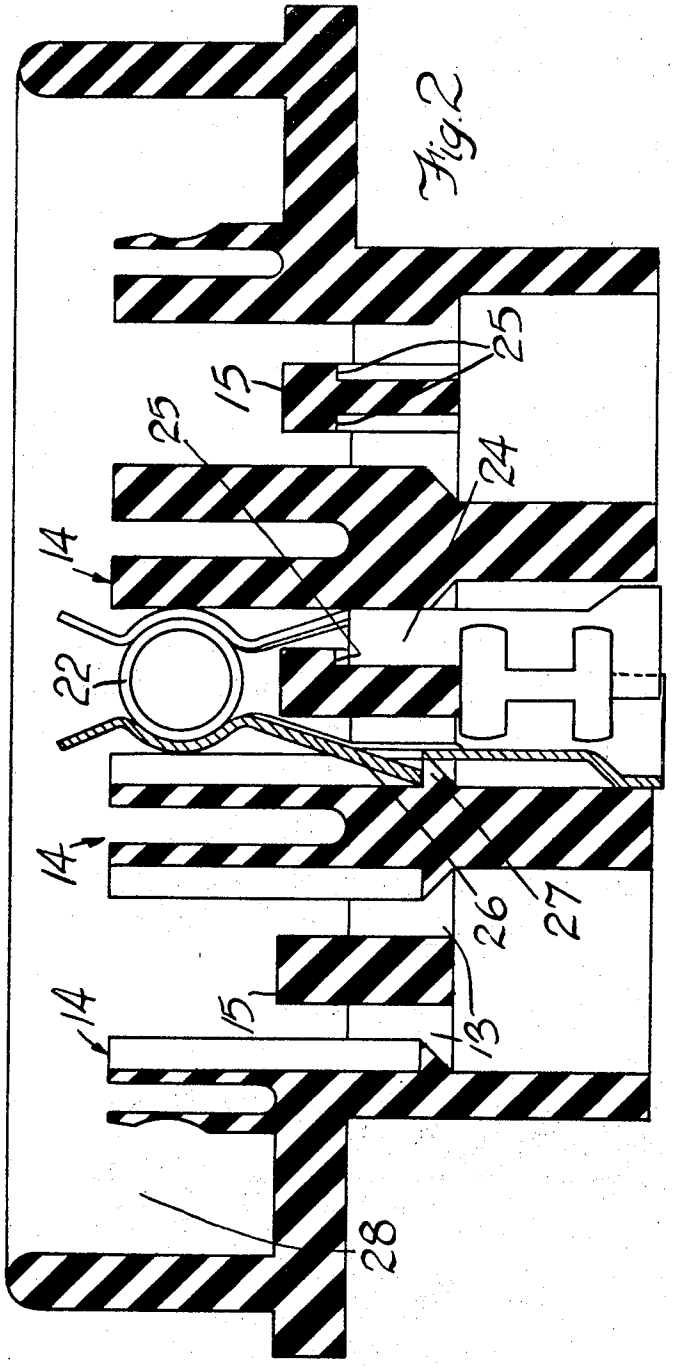


Fig. 3

April 16, 1968 E. H. PATER ET AL 3,378,665

FUSE HOLDERS

Filed Jan. 9, 1967 2 Sheets-Sheet 2



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3,378,665

FUSE HOLDERS

Edward Henry Pater, Smethwick, and Benjamin William Matthews, Birmingham, England, assignors to Joseph Lucas (Industries) Limited, Birmingham, England, a British company

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1 Claim. (Cl. 200—166)

ABSTRACT OF THE DISCLOSURE

A fuse holder of the kind including a pair of spaced clips for gripping the ends of a cartridge fuse, the two arms of each clip being in contact with resilient walls on a body supporting the clip. The walls flex to permit the insertion of the fuse, and such an arrangement removes the necessity of the two arms constituting a clip being interconnected, so that each clip can be made from two identical separate connectors.

This invention relates to holders for cartridge fuses, or electrical components of similar shape, of the kind comprising a body, and a pair of clips supported by the body respectively and each having a pair of arms adapted to grip the ends of a fuse.

According to the invention, in a holder of the kind specified the arms are in contact with resilient walls forming part of the body, said walls flexing to permit insertion of the fuse.

In many known constructions, the fuse is held in position by the resilience of the arms alone, and so it is necessary for the arms to be interconnected. For the purpose, each pair of arms usually form integral parts of a clip. According to the present invention, the arms are restricted in outward movement by the resilient walls, and so it is possible to use a clip consisting of two identical separate connectors with which the respective arms are integral. It is then possible to form a large number of identical connectors on a continuous strip of conductive material, and then to secure leads to the connectors before inserting the connectors into the body. Such a method of manufacture is not possible in constructions wherein each pair of arms is integral with a clip.

The invention in another aspect resides in a method of manufacturing a fuse holder.

Although the invention is particularly useful where each clip is formed from two connectors, it can advantageously, be employed with clips having the arms integral therewith.

One example of the invention is illustrated in the accompanying drawings wherein FIGURE 1 is a plan view of a holder for use with cartridge fuses, some of the fuses and their respective connectors being omitted for clarity. FIGURE 2 is a sectional view on the line 2—2 in FIGURE 1 and FIGURE 3 is a diagrammatic representation, illustrating the formation of the connectors shown in FIGURES 1 and 2.

Referring first to FIGURES 1 and 2, there is provided a moulded housing **11** which is designed to support connectors for engaging and making electrical connection to three fuses. The moulding **11** includes a base **12** having extending therethrough two parallel rows of slots **13**, the slots in the two rows being aligned with each other. The slots **13** in each row are split up into pairs by resilient lugs **14** which extend at right angles to the base **12**, the individual slots in each pair of slots being separated by walls **15**. The lugs **14** and the walls **15** extend from both sides of the base **11**, the parts of the lugs **14** which extend upwardly from the base **12** being bifurcated to form a pair of resilient walls.

There is further provided a plurality of conductive connectors **16** each of which includes a portion **17** with which is engaged a lead **18**, and a part circular arm **19** which in use engages the end cap of a cartridge fuse. Referring to FIGURE 3 the connectors **16** are formed from a conductive strip **23**, which is first punched to define index holes **23***a*, the strip is then passed through a machine which shapes a plurality of connectors on the strip, electrically and physically connects a lead **18** with the end **17** of each connector by crimping the end **17** around the lead, and finally severs each connector complete with its lead from the remainder of the strip **23**.

In order to engage a connector **16** with the housing **11**, the arm **19** o fthe connector is inserted into a slot **13** and the connector is urged upwardly through the slot **13** until a pair of tags **24** integral with the connector **16** engage a downwardly presented abutment **25** on the wall **15** adjacent the slot **13** to prevent further movement of the connector upwardly. Each connector **16** is also formed with integral outwardly extending resilient tongue **26** which during insertion of the connector **16** into the housing **11** is flexed inwardly by engagement with the lug **14**. When the tags **24** of the connector engage the abutments **25** the tongue **26** flexes outwardly to engage an upwardly directed shoulder **27** integral with the lug **14**. Thus the tongue **26** and shoulder **27** prevent inadvertent withdrawal of the connector **16** from the housing **11**. The connectors are arranged so that the connectors occupying a pair of slots **13** are in face to face relationship defining a conductive clip with which an end cap **22** of a cartridge fuse **21** can be engaged. The lugs **14** are so shaped that the arm **19** of each connector **16** contacts the adjacent resilient wall defined by the bifurcated lug **14**, this resilient wall being flexed during engagement of a fuse with the connectors **16**.

The outermost lugs **14** are so shaped that they define with the wall of the housing **11** clips **28** for retaining a pair of spare fuses.

Having thus described our invention what we claim as new and desire to secure by Letters Patent is:

1. A holder for cartridge fuses and electrical components of similar shape, comprising in combination, a body, a first pair of parallel resilient walls defined by said body, a second pair of parallel resilient walls defined by said body and axially spaced from said first pair of resilient walls by a distance substantially equal to the length of the component to be supported, a first pair of identical, separate, conductive arms supported by said body between said first pair of resilient walls respectively, and adapted to grip one end of the component, and a second pair of identical, separate, conductive arms supported by said body between said second pair of resilient walls respectively and adapted to grip the other end of said component, said first pair of arms engaging the first pair of walls respectively and said second pair of arms engaging the second pair of walls respectively and the resilience of said walls serving to urge the arms towards one another when the component is engaged therebetween so that under the influence of said resilient walls, said arms grip the component.

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ROBERT K. SCHAEFER, *Primary Examiner.*
H. O. JONES, *Assistant Examiner.*