

A. E. PARTINGTON.
 MULTIPLE FUSIBLE CUT-OUT FOR ELECTRICAL CIRCUITS.
 APPLICATION FILED MAY 6, 1910.

975,569.

Patented Nov. 15, 1910.

4 SHEETS—SHEET 1.

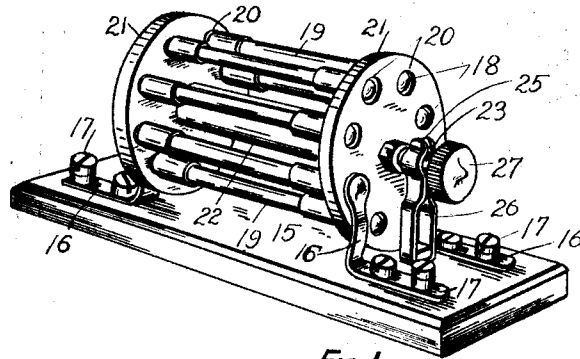


Fig. 1.

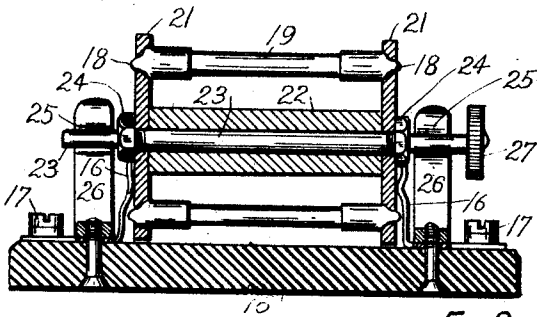


Fig. 2.

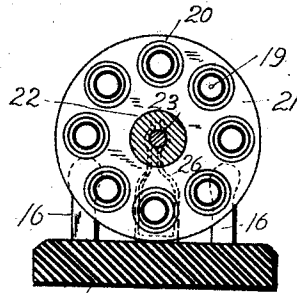


Fig. 3.

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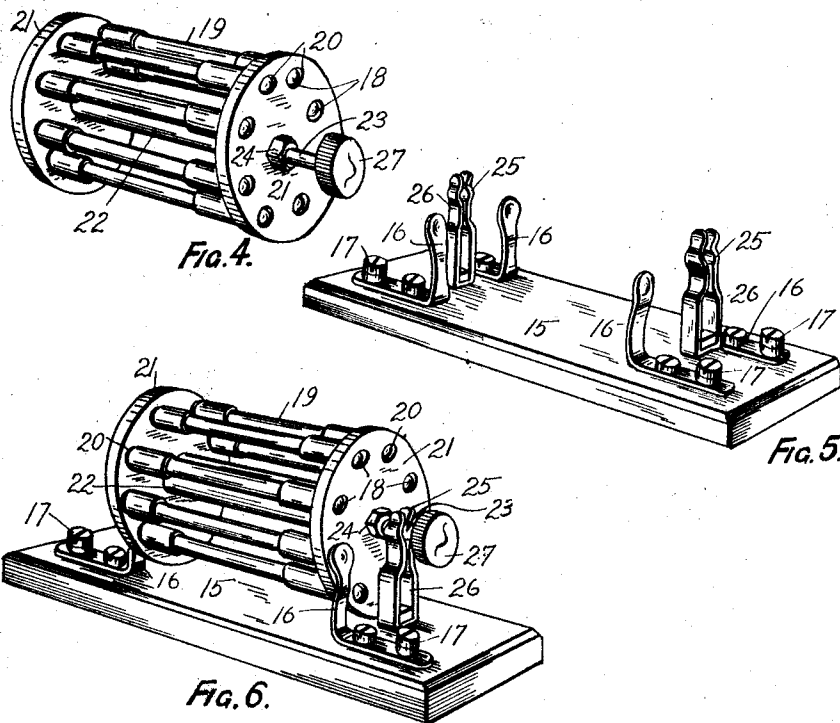
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4 SHEETS—SHEET 2.



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4 SHEETS—SHEET 3.

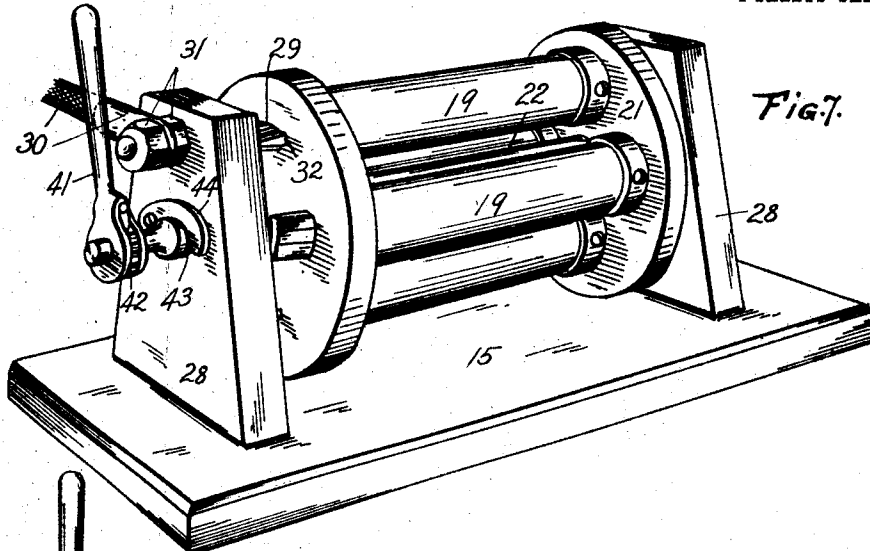


Fig. 7.

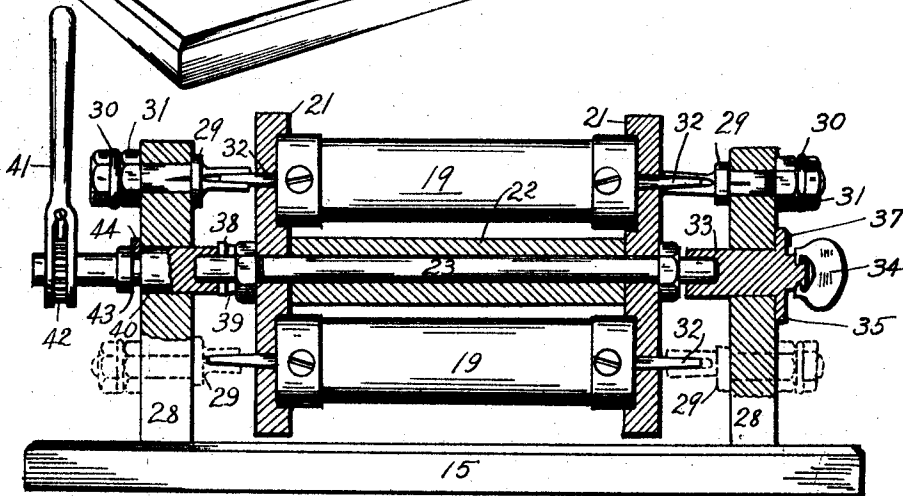


Fig. 8.

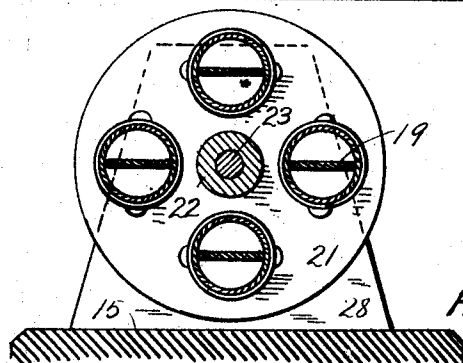


Fig. 9.

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4 SHEETS—SHEET 4.

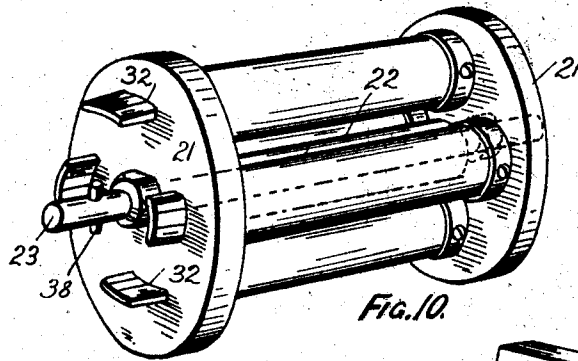


Fig. 10.

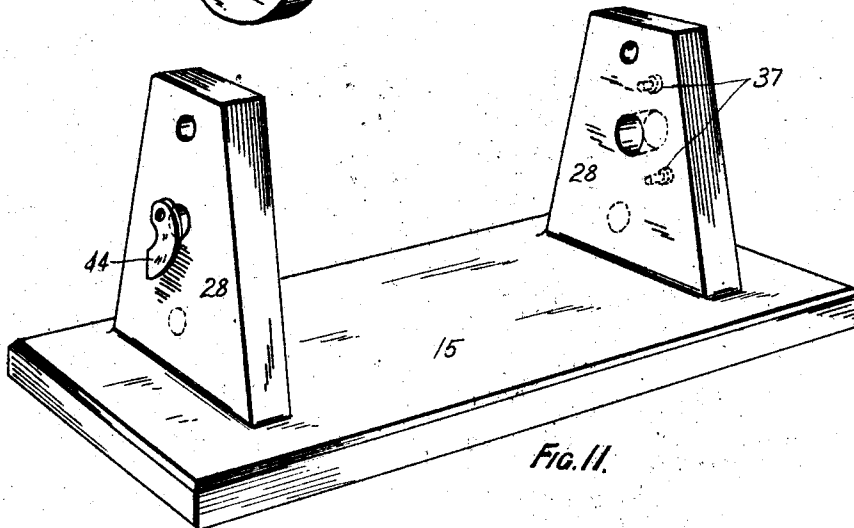


Fig. 11.

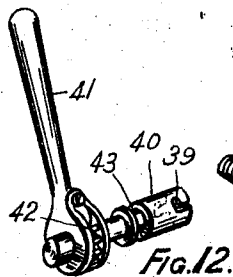


Fig. 12.

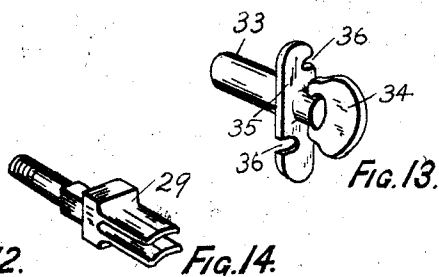


Fig. 13.

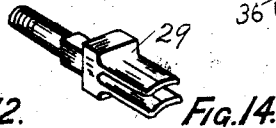


Fig. 14.

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UNITED STATES PATENT OFFICE.

ALBERT EDWARD PARTINGTON, OF SYDNEY, NEW SOUTH WALES, AUSTRALIA.

MULTIPLE FUSIBLE CUT-OUT FOR ELECTRICAL CIRCUITS.

975,569.

Specification of Letters Patent.

Patented Nov. 15, 1910.

Application filed May 6, 1910. Serial No. 559,679.

To all whom it may concern:

Be it known that I, ALBERT EDWARD PARTINGTON, a British subject, residing at 389 Riley street, Sydney, in the State of New South Wales, Commonwealth of Australia, have invented a new and useful Multiple Fusible Cut-Out for Electrical Circuits, of which the following is a specification.

To the average consumer of electric current who is unacquainted with electrical fittings and appliances the burning out of a safety fuse or cut out in the circuit and consequent cutting off of the current occasions considerable delay and inconvenience by reason of the necessity for obtaining skilled assistance to renew the fuse.

Now the object of this invention is to provide a device containing a plurality of fuses, which can be operated in a simple manner so that a burned out fuse can be withdrawn and a complete fuse expeditiously inserted into the circuit.

This improved multiple fusible cut out for electrical circuits comprises essentially a reel or barrel of non-conducting material consisting of a pair of parallel disks which are centrally and removably secured thereto by a through bolt acting as a spindle that is rotatably and removably mounted in a frame constructed preferably of non-conducting material. Secured to and bridging between the inner faces of said disks and equi-distant from one another and parallel to the spindle are provided a series of cylindrical fuses of the inclosed type the metallic contact ends of which protrude through orifices in the said disks so that one or more of the fuses may make contact with the spring contacts of a circuit affixed to the base plate, and on the partial rotation of the said barrel a burned out fuse or fuses will be withdrawn from said spring contacts and replaced by a complete fuse or fuses. The spindle of the barrel is manually operated.

Referring to the accompanying drawings illustrating this invention carried out practically, Figure 1 is a perspective view of a double pole multiple fuse constructed for use in a low tension circuit, Fig. 2 being a central longitudinal section and Fig. 3 a central cross section thereof, Fig. 4 is a perspective view of the barrel, Fig. 5 a similar view of base plate with its attachments while Fig. 6 is a perspective view of single pole multiple fuse for low tension circuit.

Fig. 7 is a perspective view of this improved device for the purpose set forth designed for high tension circuits and wherein fuses of large ampere capacity are employed, Fig. 8 a side elevation partly in section and Fig. 9 a central cross section. Figs. 10 and 11 are perspective views respectively of fuse barrel and barrel frame, and Fig. 12 a similar view of the hand ratchet lever and bearing, Fig. 13 a view of a locking bearing and Fig. 14 a bifurcated spring contact.

Referring particularly to Figs. 1 to 6 inclusive, mounted on the base plate 15 of non-conducting material are the L shaped spring contacts 16 having binding screws 17 of an electric circuit. These spring contacts 16 make connection with the tapered ends 18 of inclosed fuses 19 which take in and protrude through apertures 20 in the disks 21 said fuses bridging between said disks 21 that are movably affixed to the barrel tube 22 by a through bolt 23 and nuts 24. The disks 21 and barrel tube 22 being constructed of non-conducting material. This through bolt 23 acts as a spindle and has bearing in the jaws 25 of spring bearings 26 affixed to the base plate 15 and on one end of said spindle is a milled head 27.

In operation assuming a fuse in the circuit to be burned out the barrel 22 is partly rotated by means of the milled head 27 so that such fuse is withdrawn from contact with the spring contacts 26 and replaced by a succeeding fuse on the barrel. To re-charge the barrel the said barrel is lifted out of the bearings 25 and one or both of the nuts 24 on the spindle 23 being slackened back so as to allow the burned out fuse or fuses to be withdrawn and when recharged by a fresh supply of fuses the nuts 24 are tightened up again and the barrel replaced into its bearings.

Referring particularly to Figs. 7 to 14 inclusive in which parts similar to those illustrated in preceding figures bear similar reference numerals, to the base plate 15 are affixed a pair of A shaped brackets 28 having on the inner face spring split concaved contacts 29 to the shanks of which are secured the circuit wires 30 by nuts 31. Into the said contacts 29 take the split metal projections 32 of the inclosed fuses 19. The fuses 19 are affixed similarly to the barrel as described in Figs. 1 to 6 but the spindle 23 has one end taking in bearing 33 removably affixed to the A shaped bracket 28. This bearing 33 has a

thumb piece 34 and a catch or stop piece 35 having slots 36 in which take the screw stop pins 37 secured to the brackets 28 and which prevent lateral movement. The other end of said spindle 23 has a through pin 38 for the bayonet joint 39 of an extension spindle 40 bearing in the bracket 28 and provided with a ratchet lever 41 engaging with a tooth pinion 42 fastened on said spindle 40. This spindle 40 has an annular groove 43 in which takes a cam catch 44 fulcrumed on the bracket 28 for the purpose of preventing lateral movement of said spindle 40. The spring contacts 29 on brackets 28 and shown in dotted lines Fig. 8 indicate the position for double pole fuse.

In operation to remove the fuse barrel the fuse contacts 32 must be free of the spring contacts 29 the cam catch 44 is then released from the groove 43 and the spindle 40 is unlocked and withdrawn from engagement with the barrel spindle 23. The bearing 33 is then removed likewise by the thumb piece 34 thus enabling the barrel to be removed and recharged in a similar manner to that described with reference to Figs. 1 to 6.

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

1. In a multiple fusible cut-out for electrical circuits, a revoluble barrel of non-conducting material consisting of two apertured end disks spaced by a barrel tube and separably held in their assembled condition by removable fastening means, fuses removably supported by the apertured end disks with

their metallic ends protruding beyond the barrel ends, contacts engaging the metallic fuse ends, and means removably and revolubly supporting the barrel.

2. In a multiple fusible cut-out for electrical circuits, a revoluble barrel of non-conducting material consisting of two apertured end disks spaced by a barrel tube and held in their assembled condition by removable fastening means, fuses removably supported by the apertured end disks with their metallic end disks spaced by a barrel tube and held in

tacts engaging the metallic fuse ends, and means supporting the barrel consisting of a base, and bearings secured thereto in which are mounted the spindles of the barrel.

3. In a multiple fusible cut-out for electrical circuits, a revoluble barrel of non-conducting material, a plurality of fuses removably contained therein and having metallic contacts protruding beyond the barrel ends, supporting means removably holding the barrel, spring contacts held by the supporting means engaging the metallic contacts of the fuses, and means for rotating the barrel consisting of an extension spindle for one of the barrel spindles, a pinion therefor, and a ratchet lever engaging the pinion.

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

ALBERT EDWARD PARTINGTON.

Witnesses:

T. C. ALLEN,
WALTER SIGMONT.