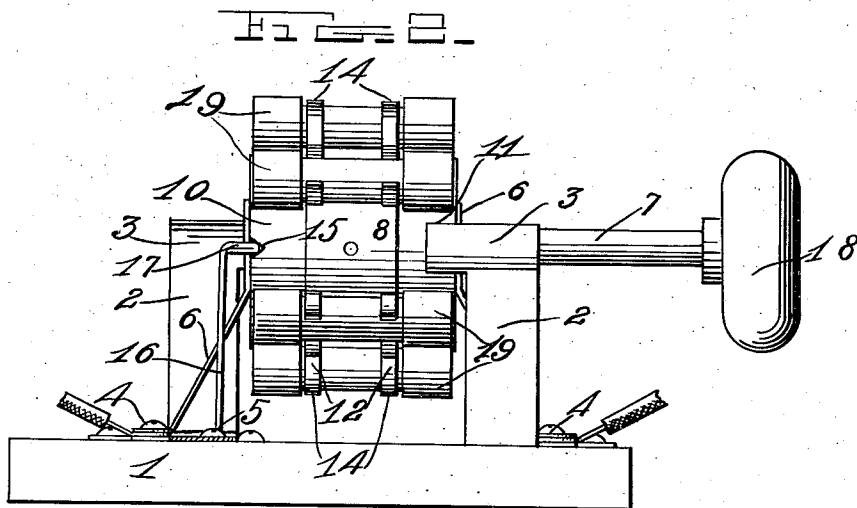
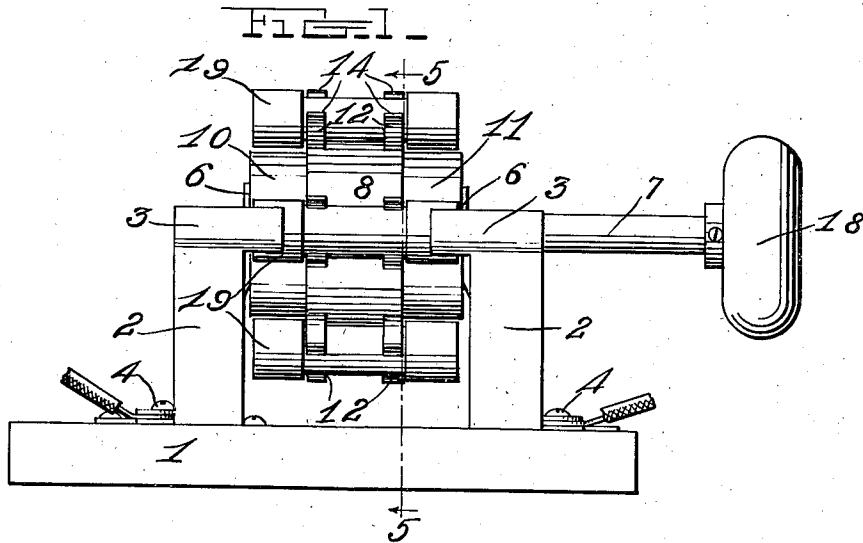


P. E. WESTERDAHL.
 COMBINED MULTIPLE FUSE BLOCK AND SWITCH.
 APPLICATION FILED DEC. 1, 1910.

994,623.

Patented June 6, 1911.

2 SHEETS-SHEET 1.



Witnesses
 J. R. Pierce.
 O. B. Hopkins

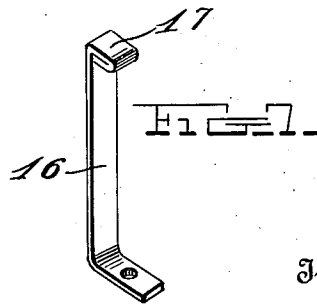
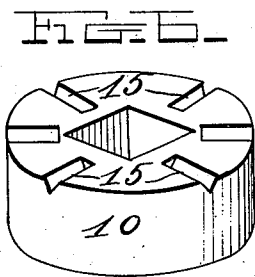
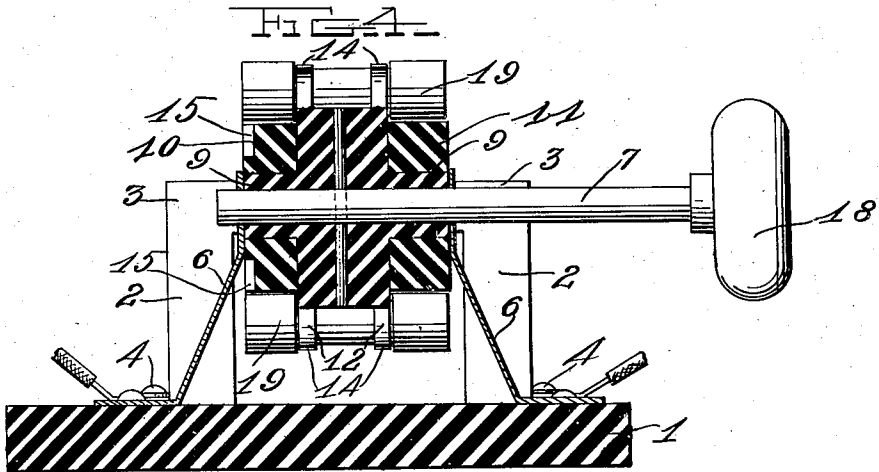
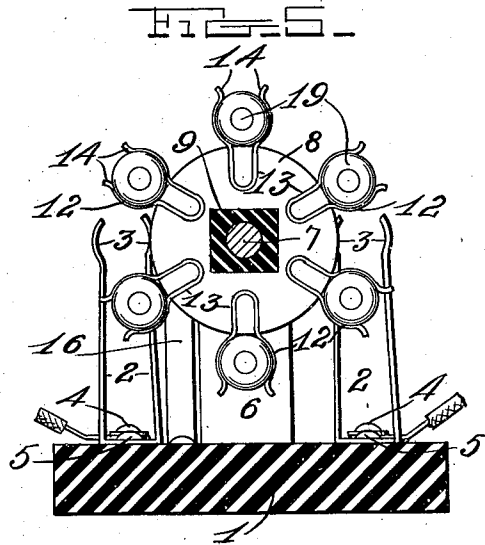
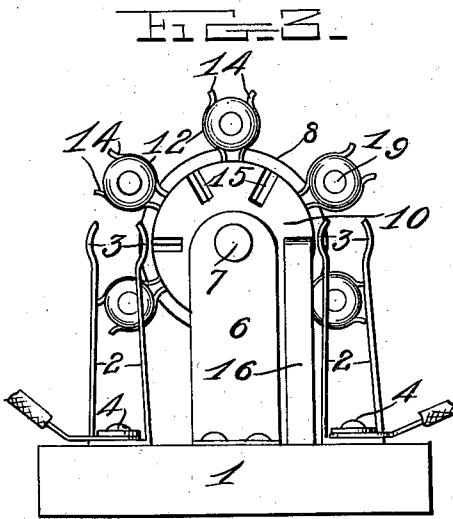
Inventor
 P. E. Westerdahl.
 by *A. B. Wilson & Co.*
 Attorneys

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2 SHEETS—SHEET 2.



Witnesses
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J. R. Perkins

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UNITED STATES PATENT OFFICE.

PER ENOCK WESTERDAHL, OF SEATTLE, WASHINGTON.

COMBINED MULTIPLE FUSE-BLOCK AND SWITCH.

994,623.

Specification of Letters Patent.

Patented June 6, 1911.

Application filed December 1, 1910. Serial No. 595,090.

To all whom it may concern:

Be it known that I, PER ENOCK WESTERDAHL, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Combined Multiple Fuse-Blocks and Switches; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in a combined rotary multiple fuse box and switch.

One object of the invention is to provide a combined fuse block and switch of this character having an improved construction and arrangement of fuse supporting mechanism by means of which the fuses are firmly held in position and may be successively brought into engagement with spring contact terminals, thus providing for the quick and easy renewing of the fuses when any of the same have burned out.

Another object is to provide means for holding the fuses against casual engagement with the contact terminals when the switch is open.

A further object is to provide a combined switch and fuse block of this character which will be simple, strong and durable in construction, efficient and reliable in operation and well adapted to the purpose for which it is designed.

With the foregoing and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings: Figure 1 is a side view of my improved fuse block and switch showing the same in closed position; Fig. 2 is a side view with the parts broken away showing the switch in open position; Fig. 3 is an end view thereof; Fig. 4 is a central longitudinal sectional view; Fig. 5 is a vertical cross sectional view on the line 5-5 of Fig. 1; Fig. 6 is a detail perspective view of the locking washer for holding the switch in an open position; and, Fig. 7 is a similar view of the spring locking pawl for holding the switch in open position.

Referring more particularly to the draw-

ings, 1 denotes the base or supporting plate of the switch, said plate being formed of porcelain, slate or any other non-conducting material. Secured to the plate 1 are pairs of spring contact terminals 2 which are in the form of spring metal plates or strips bent upon themselves into substantially U-shape or form and having their upper ends extended inwardly and bent or curved outwardly to form concaved contact heads 3 which are adapted to be engaged by the ends of the fuses as will be hereinafter more fully described. The contact terminals 2 are provided at their looped outer ends with terminal or binding screws 4 with which are connected the terminals of the conducting wires for the circuits. In the looped lower ends of the contact terminals are also arranged fastening screws or bolts 5 which are inserted through the base 1 and securely hold the spring contact terminals in position.

On the base 1 between the pairs of contact terminals 2 are secured upwardly projecting bearing standards 6 in the upper ends of which is revolubly mounted the supporting and operating shaft 7 of the switch. Fixedly mounted on the shaft 7 between the upper ends of the standards 6 is a fuse supporting block 8 which may be of any suitable shape but is preferably cylindrical. On the opposite ends of the block are formed squared extensions 9 with which are engaged washers 10 and 11. The block 8 and washers 11 are formed of any suitable insulating or non-conducting material.

In the opposite ends of the block 8 are secured pairs of spring fuse holding clips 12, said clips being at equal intervals around the block and having their outer ends projecting radially therefrom as shown. The clips 12 are preferably formed from a single strip of spring metal bent midway between its ends to form a loop shaped block engaging shank 13 and outwardly curved fuse engaging fingers the terminals or outer ends of which are bent outwardly at a slight angle, as shown at 14, to facilitate the engagement of the fuses with the fingers. The loop shaped shanks of the clips are forced or driven edgewise into the ends of the block as shown in Fig. 5 of the drawings thereby securely holding the clips in position.

In the outer end of the washer 10 are formed a series of radially disposed locking notches 15 one of which is arranged opposite the center of each of the spaces between the

clips holding the fuse blocks. Secured to the base 1 adjacent the notched end of the washer 10 is an upwardly projecting spring locking pawl 16 the upper end of which is bent inwardly to form a tooth 17 which is adapted to spring into engagement with the notches 15 in the washer 10 as the latter and the block 8 are turned to bring the fuses into and out of engagement with the contact terminals 2. By arranging the notches in the washer opposite or in line with the center of the spaces between the clips holding the fuses the blocks will be locked by the pawl 16 when turned to a position in which the fuses are disengaged from the terminals, said blocks being thus held against turning and the fuses from being casually engaged with the terminals thus holding the switch in open position.

One end of the shaft 7 is extended a suitable distance and has arranged thereon any suitable form of switch operating knob or handle 18. The fuses 9 may be of any suitable construction and adapted to be supported by the clips and to be engaged with the spring contact terminals as hereinbefore described.

From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention as defined in the appended claims.

Having thus described my invention, what I claim is:

1. In a combined switch and fuse block of the character described, a base, contact terminals arranged on said base, a revolubly mounted fuse supporting block, means on said block to hold a series of fuses whereby the latter are successively brought into and out of engagement with said contact terminals and the switch thus opened and closed and, means to lock said switch in open position thereby holding the fuses from being casually engaged with the terminals.

2. In a combined switch and fuse block of the character described, a base, pairs of spring contact terminals secured to said base, a revolubly mounted supporting shaft, a fuse supporting block secured to said shaft, fuse holding clips secured to said block whereby the fuses carried by said clips are

adapted to be successively brought into and out of engagement with said spring contact terminals and the switch thus opened and closed, and a spring locking pawl adapted to lock said block against movement when turned to a position wherein the fuses are out of engagement with the terminals thereby preventing the casual contact or engagement of the fuses with the terminals.

3. In a combined fuse block and switch, a base plate, pairs of spring contact terminals arranged on said base plate, supporting standards secured to said plate between said terminals, a shaft revolubly mounted in said standards, a fuse block fixedly mounted on said shaft, a series of fuse holding clips arranged on said block and adapted to detachably secure a series of fuses thereto, washers arranged on the opposite ends of said block, one of said washers having formed therein an annular series of locking notches, one of which is arranged opposite the center of the space between said fuse holding clips, and a spring pawl secured to the base and adapted to be engaged with said locking notches whereby the switch is locked in an open position and the fuse held against casual engagement with said contact terminals.

4. In a combined fuse block and switch, a base plate, pairs of spring contact terminals secured to said base, a revolubly mounted fuse block arranged between said terminals, fuse holding clips arranged on said block, said clips comprising strips of spring metal bent upon themselves to form loop shaped attaching shanks adapted to be driven into the opposite ends of the block and outwardly projecting curved fuse holding fingers, washers secured to the opposite ends of said block, one of said washers having formed in its outer end an annular series of locking notches, one of which is arranged opposite the center of each of the spaces between the fuse holding clips on the block, and a spring pawl secured to the base plate and having on its upper end a tooth adapted to engage the notches in said washer and to thereby lock said block against turning when the switch is open and the fuse against casual engagement with said contact terminals.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

P. ENOCK WESTERDAHL.

Witnesses:

F. W. PARRISH,
H. C. PARRISH.