

O. H. BLOOMQUIST.  
 COMBINATION ELECTRIC SWITCH.  
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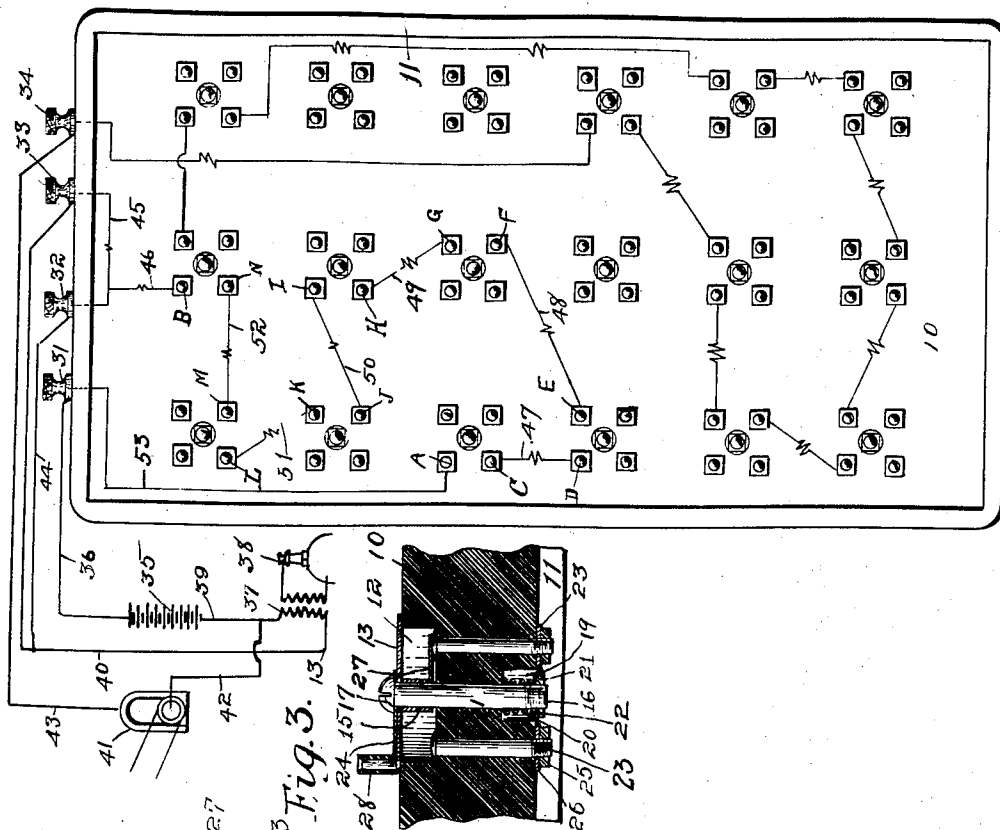


Fig. 2.

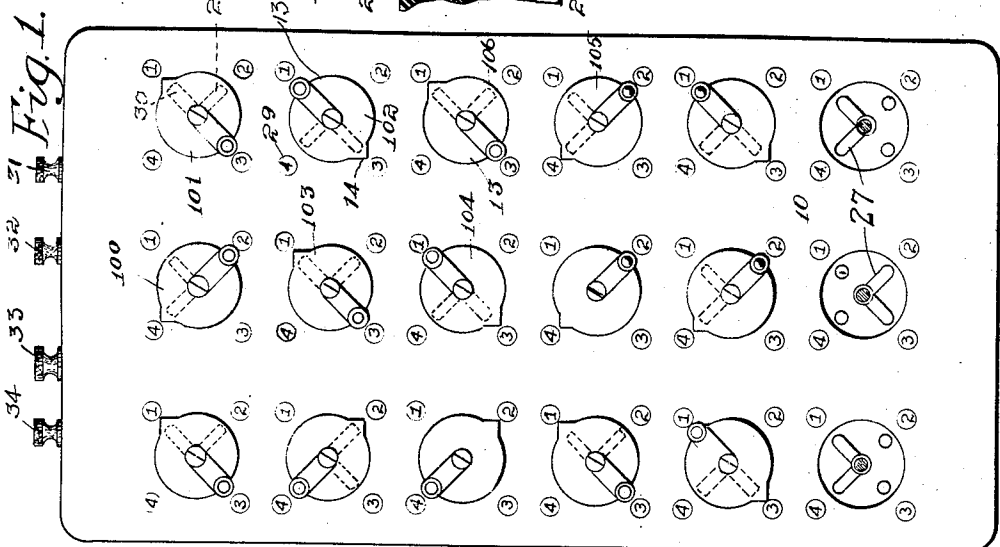


Fig. 1.

Witnesses  
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# UNITED STATES PATENT OFFICE.

OSCAR HILMER BLOOMQUIST, OF CROOKS, IOWA.

COMBINATION ELECTRIC SWITCH.

1,200,074.

Specification of Letters Patent.

Patented Oct. 3, 1916.

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To all whom it may concern:

Be it known that I, OSCAR H. BLOOMQUIST, a citizen of the United States, residing at Crooks, in the county of Webster and State of Iowa, have invented a certain new and useful Combination Electric Switch, of which the following is a specification.

The object of my invention is to provide a combination electric switch of simple, durable and inexpensive construction.

More particularly, it is my object to provide an electric switch board having a plurality of switch devices mounted thereon capable of being connected in different series or pluralities of series and provided with indicating characters arranged adjacent to the switches so that the switches in any series must be turned to a particular indicating character in order to complete a circuit, thereby enabling the operator to complete the circuit by a secret combination, which combination is capable of a large number of variations.

Still a further object is to provide such a combination electric switch in which by the arrangement of the series above referred to, different circuits from the same source of electrical energy may be created at different times, or at the same time through different series of switches.

My invention consists in certain details, in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claim, and illustrated in the accompanying drawings, in which:

Figure 1 shows a top or plan view of the combination electric switch embodying my invention. Fig. 2 shows an inverted plan view of the same, and Fig. 3 shows a vertical, sectional view through a portion of the switch board and one of the switch mechanisms.

In the accompanying drawings, I have used the reference numeral 10 to indicate generally the support which forms the body or base of my improved switch board. The support 10 is preferably made of suitable insulating material and is preferably provided on its lower surface with an annular circumferential flange 11 so constructed and arranged that if the board is laid down upon a flat surface it will rest upon said flange and the main portion of the under

surface of the said support 10 will not rest upon said flat surface.

Mounted in the support 10 is a plurality of switches which are constructed as follows: In the upper surface of the board or support 10 is a plurality of holes or recesses 12 which are preferably cylindrical in form. Resting on the upper surface of the support 10 above each of the holes 12 is a disk 13 having at one point of its circumference an indicating pointer 14. The disk 13 is provided on its under surface with a downwardly extending cylinder 15, clearly shown in Fig. 3. The board or support 10 is provided with a hole extending through it from the middle of each opening or hole 12. Extending through the last described hole and through the hole 12 and through the cylinder 15 is a bolt 16 having on its upper end the screw head 17 and being screw threaded at 18 at its lower end.

In the lower surface of the body 10 is an enlarged opening 19 in communication with each of the openings through the body 10. Mounted on the bolt 16, within the opening 19, is a coil spring 20. On the lower end of the bolt 16 is a nut 21, and between the nut 21 and the spring 20 is a washer 22. The spring 20, the washer 22 and the nut 21 serve to hold the bolt 16 in position for holding the disk 13 firmly against the body 10. Extending from the bottom of each hole 12 through the body 10 is a plurality of conductor posts 23 preferably provided with enlarged heads 24 at their upper ends and screw threaded at their lower ends and provided at their lower ends with nuts 25 and washers 26. The lower ends of the bolts 23 form binding posts. Formed on the cylinder 15 is a laterally extending arm 27 designed to engage one of the bolts or posts 23. Mounted on the disk 13 is a handle 28, whereby the disk may be rotated. By moving the handle 28 around the bolt 16 as a pivot, the arm 27 may be brought into contact with any of the bolts 23. Adjacent to each of the disks 13, I preferably provide indicating characters 29 on the face of the board or support 10 so located and arranged as to correspond with the location of the various bolts 23 at each switch.

In Fig. 1, there are provided four indicating characters for each switch. When the pointer 14 is adjacent to one of the indicating characters the arm 27 is so located that it then engages a certain one of the bolts 23.

This may be the one practically beneath the indicating numeral or not. Formed on the cylinder 15 is a laterally extending arm 30, indicated by the dotted lines in Fig. 1 and so arranged with relation to the arm 27 that when the arm 27 engages one of the bolts 23 the arm 30 engages the head of another of said bolts. It will readily be seen that the bolts 23 may be arranged in any convenient number at common distances from each other and that the arms 27 and 30 may be arranged at various angles with relation to each other to correspond with the position of the bolts 23. Mounted on the board 10, as shown in the drawings, are four binding posts 31, 32, 33 and 34. As will be seen from the description heretofore given and following, the number of said binding posts may be increased as desired.

I have used the reference character 35 to indicate a suitable source of electrical energy. A current conducting wire 36 connects the member 35 with the binding post 31. The binding post 31 is also connected with one of the binding posts on a bolt 23 as, for instance, at A. Suitably located are coils 37 and a spark plug 38. A current conducting wire 39 connects the member 35 with the coil 37 and said coil is also connected by a current conducting wire 40 with the binding post 33. Suitably located is a magneto 41 which is connected by a wire 42 with the wire 39 and by a wire 43 with the binding post 34. The wire 44 connects the wire 40 and the binding post 33. The binding posts 32 and 33 are connected by wires 45 and 46 with one of the binding posts B of a bolt 23. It will be understood that the bolts 23 may be electrically connected in any way desired and that the circuit through said bolts may be varied to make a large variety of secret combinations. For illustration, the switches heretofore described are connected as follows for completing a circuit from the member 35: A wire 47 connects one of the bolts 23, indicated in Fig. 2 by the reference character C of the switch to which the binding post A belongs, with the post or bolt D. The bolt or post E is connected by the wire 48 with the post or bolt F. The post G is connected by the wire 49 with the post H and the post I is connected by the wire 50 with the post J. The post K is connected by the wire 51 with the post L and the post M is connected by the wire 52 with the post N of the switch to which the post B belongs. It will therefore be seen that by turning the switches, indicated in Fig. 1 by the reference characters 100, 101, 102, 103, 104, 105 and 106 to proper position for connecting the posts N and B with each other, M and L with each other, J and K with each other, H and I with each

other, F and G with each other, D and E with each other and C and A with each other, a circuit will be completed through the member 35, the wire 36, the post 31, the wire 53, the switch 106, the wire 47, the switch 105, the wire 48, the switch 104, the wire 49, the switch 103, the wire 50, the switch 102, the wire 51, the switch 101, the wire 52, the switch 100, the wire 46, the wire 45, the post 33, the wire 40, the ignition system members 37 and the wire 39. In the same way, as shown by the diagram, a circuit may be created by the wiring shown in Fig. 2 through a different series of switches and wires and through the magneto 41. As shown, each of the circuits uses the switch 100 but the handle 28 must be turned to different positions for completing the different circuits, both of the circuits, including the ignition coil 37.

It will readily be seen that any number of combinations may be worked out and a circuit can be created for operating lights or for other purposes if desired. The system is shown simply for the purpose of illustration.

It will readily be seen that one who did not know where the switches should be turned could not, without great difficulty, work out the combination necessary to establish the proper circuits.

It will be understood that a large number of changes may be made in the details of the construction of my improved combination switch without departing from the essential features thereof, and it is my intent to cover by this application any such changes which may be included within the scope of the following claim:

I claim as my invention:

A secret combination switch, comprising a base, provided with a large recess on one side and a smaller recess on the opposite side, the smaller recess being opposite the large one, said base having an opening connecting said recesses, a shaft in said opening, a disk on said shaft to cover said large recess, said disk being provided with a sleeve rotatably mounted on said shaft, the inner end of said sleeve being provided with radially extending arms, a plurality of terminal contacts arranged around said shaft in the bottom of said large recess designed to be engaged by said arms, a handle for said disk, and yielding means in said smaller recess for holding said arms against said contact.

Des Moines, Iowa, January 2, 1914.

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Witnesses:

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