

July 24, 1928.

1,678,508

G. W. HART

ELECTRIC SWITCH

Filed Jan. 10, 1923

Fig. 1.

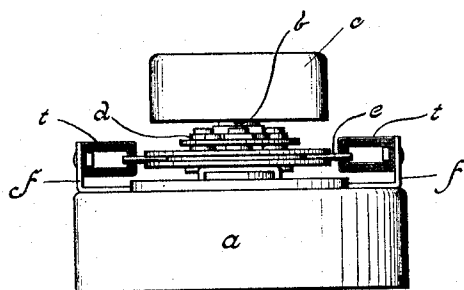


Fig. 2.

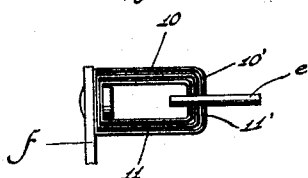
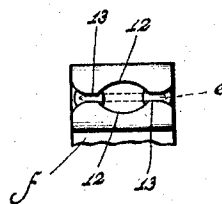


Fig. 3.



Inventor

Gerald W. Hart

By *W. H. Lindsey*

His Attorney

UNITED STATES PATENT OFFICE.

GERALD W. HART, OF WEST HARTFORD, CONNECTICUT, ASSIGNOR TO THE HART MANUFACTURING COMPANY, OF HARTFORD, CONNECTICUT, A CORPORATION OF NEW JERSEY.

ELECTRIC SWITCH.

Application filed January 10, 1923. Serial No. 611,789.

My invention relates to electric switches of the type having a switch blade adapted to be snapped into and out of engagement with terminals or contacts positioned on a suitable base. The aim of the present invention is to provide a switch of this sort with terminals of such construction and arrangement that the opposed arms of each terminal will accommodate themselves to the switch blade as it is snapped therebetween and will resiliently engage the interposed switch blade at a multiplicity of points, thus insuring good electrical contact between the parts under all conditions so that the switch will more effectively carry a relatively large amount of current with little or no heating effect.

In the accompanying drawing, wherein I have shown, for illustrative purposes, one embodiment which the present invention may take,

Fig. 1 is a side elevational view of a switch, with the cover removed, equipped with terminals constructed in accordance with the present invention;

Fig. 2 is an enlarged view in side elevation of one of the terminals in engagement with the switch blade; and

Fig. 3 is an end view of one of the terminals, the switch blade being shown in cross section by dotted lines.

In this drawing, I have shown, for purposes of exemplification only, my improved contacts or terminals applied to a switch of a well-known type, it having a base *a* of insulating material, a spindle *b* journaled thereon, a handle *c* for turning the spindle, and devices *d* of any desired or improved construction for throwing, when the spindle is rotated, the switch member or blade *e* with a sharp snap action into and out of engagement with the terminals.

In accordance with the present invention, each of the terminals, designated generally by the letter *t*, comprises a pair of contact arms, each formed of a plurality of superimposed, slightly spaced apart spring strips, the ends of the strips of each arm being bent over to bring the free edges thereof into the same general plane. In the drawing, I have designated the strips or fingers of one arm

by the numeral 10 and those of the other arm by the numeral 11. The turned over ends of the strips 10 are designated by the numeral 10', and those of the strips 11 by the numeral 11'. In the present instance, each terminal is formed of a plurality of generally U-shaped members nested or positioned one within the other and secured together at their closed ends in any suitable manner to a bracket *f* carried by the base *a*. It will be seen that the strips or fingers of each arm of the terminal are slightly spaced apart so that these strips are free to flex in all directions, thus permitting them to individually accommodate themselves to the switch blade and thereby insuring good electrical contact between the terminals and switch blade at a multiplicity of points, which means that a relatively large current may pass without unduly heating the parts of the switch. It will be understood, of course, that the free ends of the arms are spaced apart a distance slightly less than the thickness of the switch blade so that all of the strips of the terminal will engage this blade with the desired degree of pressure.

By preference, the edges of the turned down ends of the fingers or strips are interrupted, in the present illustrative disclosure each being cut away or recessed as at 12 intermediate its side edges so that each strip has a multiplicity of contact edges or points 13 which will simultaneously engage the switch blade.

It is, of course, obvious that my invention is susceptible of various modifications and changes which are within the spirit of the invention without departing from the scope of the following claims, it being understood that the present disclosure of my invention is by way of illustration only and it is not to be taken as restrictive of my conception.

I claim as my invention:—

1. A terminal for electric switches comprising a pair of contact arms adapted to receive and grasp between them a switch blade, each arm comprising a plurality of superimposed, slightly spaced apart spring strips, the free ends of the strips of the two arms being bent towards each other to engage the interposed switch blade, and the

edges of said bent over ends being interrupted so that each strip has a plurality of contact points adapted to engage said switch blade.

- 5 2. In an electric switch, the combination with a switch blade, of a terminal comprising a plurality of U-shaped spring members nested one within the other and secured together at their closed ends, the respective

arms of said members being spaced apart 10 whereby they may independently flex and having their free ends bent over at right angles to the body portions of the arms to engage and grasp said blade, the edges of said turned over ends extending generally 15 in a direction in which said blade is moved into and out of engagement with said edges.

GERALD W. HART.