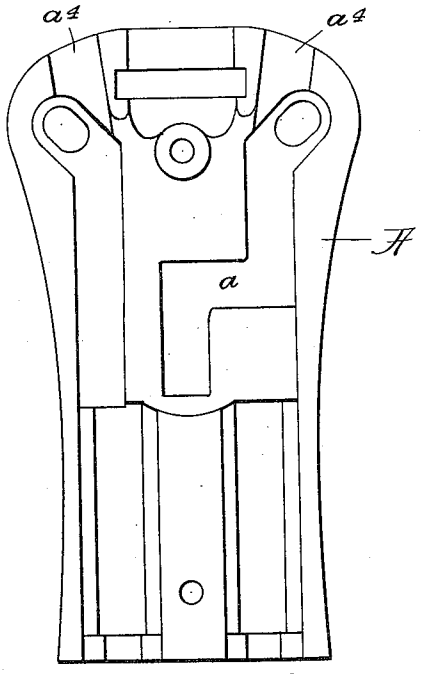
Dec. 11, 1928. 1,694,400

E. SJOLIN

SOCKET AND SWITCH PLUG

Filed Jan. 11, 1922 2 Sheets-Sheet 1

Fig. 1.



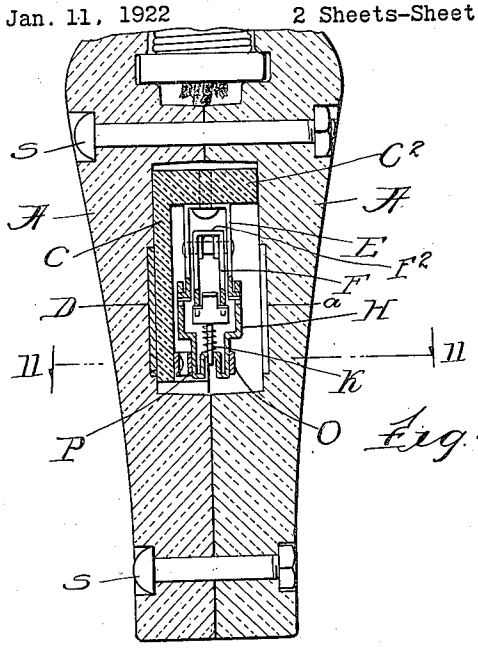


Fig. 4.

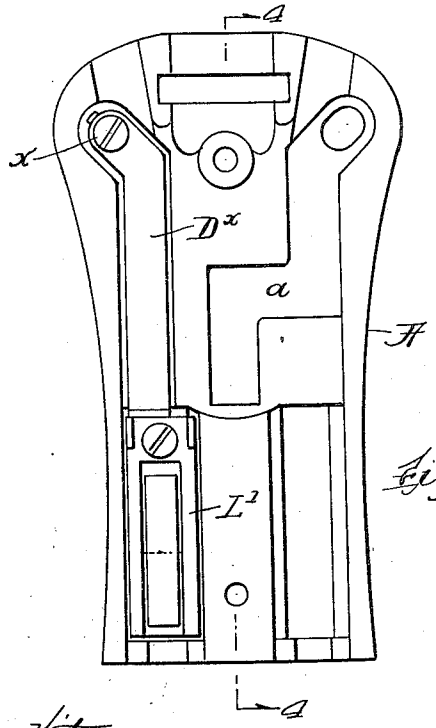


Fig. 2.

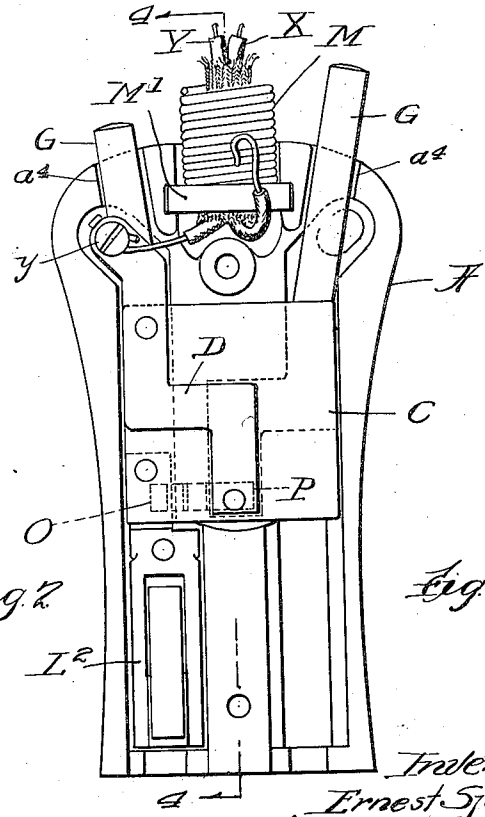


Fig. 3.

Witness:

Inventor:
Ernest Sjolin,
by Burton & Burton
his Attys.

Dec. 11, 1928. 1,694,400

E. SJOLIN

SOCKET AND SWITCH PLUG

Filed Jan. 11, 1922 2 Sheets-Sheet 2

Fig. 5.

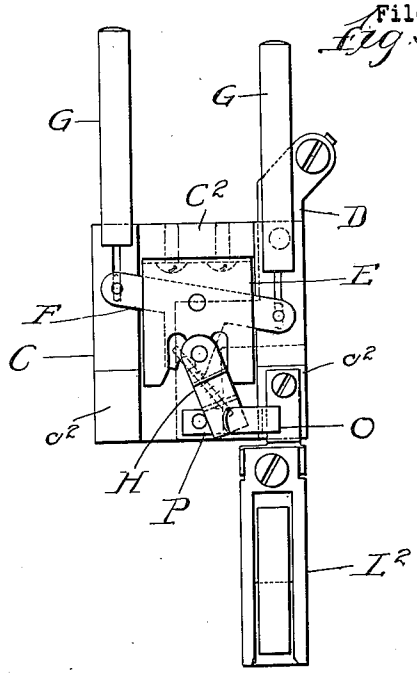


Fig. 6.

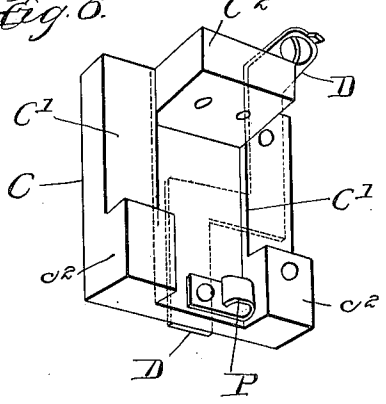


Fig. 7.

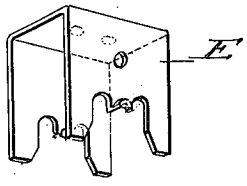


Fig. 12.

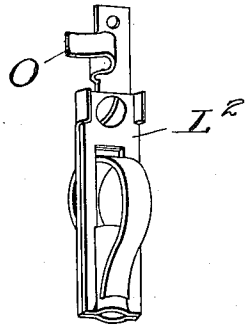
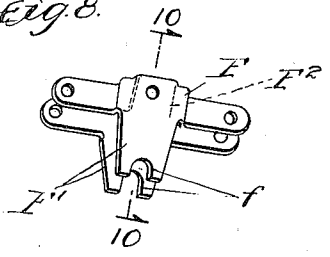


Fig. 8.



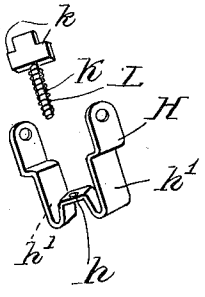
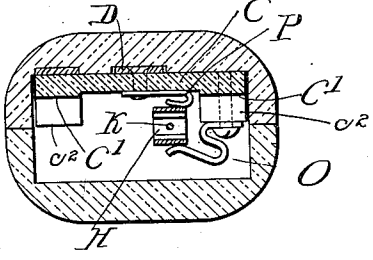


Fig. 9.

Fig. 11.



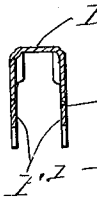


Fig. 10

Witness:

Inventor:
Ernest Sjolin,
by Burton & Burton
his Attys.

Patented Dec. 11, 1928. 1,694,400

UNITED STATES PATENT OFFICE.

ERNEST SJÖLIN, OF CHICAGO, ILLINOIS, ASSIGNOR TO CHICAGO FLEXIBLE SHAFT COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

SOCKET AND SWITCH PLUG.

Application filed January 11, 1922. Serial No. 528,393.

The purpose of this invention is to provide an improved construction of connection plug and switch for electric irons more compact and convenient as to manipulation of the switch, and less expensive to manufacture than like devices now in use.

It consists in the elements of structure shown and described as indicated in the claims.

In the drawings:—

Figure 1 is an interior face view of either of the two identically formed members which constitutes the casing or body of the device.

Figures 2 and 3 are similar views of the case members having positioned in them respectively different parts constituting the circuit and switch, for which seats are provided in both of said casing members so that they may be used without discrimination for initially seating said parts respectively.

Figure 4 is a section at the line, 4—4, on Figures 1 and 2 through the completely assembled device.

Figure 5 is a broad-side elevation of the snap switch device with its parts assembled on an insulating mount, and with one of the sockets secured to the same mount ready for mounting as assembled in the casing.

Figure 6 is a corresponding elevation of the other contact member and the other socket attached thereto ready for lodging in the casing.

Figure 7 is a perspective view of the snap-switch insulating mount.

Figure 8 is a perspective view of a folded metal hanger which constitutes one of two co-operating members of the snap switch device.

Figure 9 is a perspective view of the other co-operating member of said device.

Figure 10 is a section at the line, 10—10, on Figure 8.

Figure 11 is a section at the line, 11—11, on Figure 4.

Figure 12 is a perspective view of one of the identically-formed sockets.

One feature of the construction shown in the drawings consists in the identical form of the case members, A, A, which are molded of insulating material such as "bakelite", their identity of form adapting them to be made in the same mold or by the same pair of dies, with material saving in cost as compared with an otherwise equivalent structure not designed in detail so as to permit these two case members having identical form. This identity of form is made possible by the designing of a special form of insulating mount, C, for the snap switch parts, and which carries also one of the sockets and one of the contact pieces, and by connecting the other socket directly to the other contact member, so that the casing members do not require to be shaped interiorly for seating or mounting the snap switch parts, but only for seating the insulating mounting block and accommodating in the cavity the unitary structure consisting of said mounting block and parts mounted thereon and the other contact piece. To this end the snap switch mounting block, C, made of insulating material, as bakelite, is, in general, a rectangular block, as seen in rear side elevation, having along opposite vertical edges on the front face projecting ribs, C^1, C^1, each terminating at the lower end in a projecting boss, c^2, and having at the upper end a forwardly projecting overhanging lug or flange, C^2, which in width occupies the entire interval between the two lateral ribs, C^1, C^1. The rear side of the mount is flat as stated, and there is secured upon it a conducting bar, D, double-right-angular in form,—that is, having a middle part extending transversely and having at opposite ends of said middle part portions extending at right angles thereto respectively upward and downward therefrom. This conducting bar is mounted on the back side of the mounting block, C, with its downwardly-extending end at the middle of the width of said block, and thereby at the middle of the width of the casing when the parts are assembled, and its upwardly extending end positioned along one side of the mount. The identically formed casing members, A, A, have each a shallow recess, a, adapted to accommodate the conducting bar, D, so that in assembling it is a matter of indifference to which casing member the mounting block, C, is applied with its

flat side against the inner wall of said casing member, since the other casing member, whichever it be, has necessary recesses to accommodate the parts mounted upon and projecting from the forward side of said mounting block. E is a sheet metal bearing member for the snap switch device. It is a strip of metal folded in U-shape and secured by two screws taking through the neck of the U into the under side of the projecting lug, C^2, so that the two arms of the U depend from said lug. F is a T-shaped yoke member comprising two parallel wings, F^1, F^1, each T-shaped and joined by a neck, F^2 at the middle of the length of the cross bar of the T. This member is pivoted at the middle of the length of the T cross bar to the bearing member, E, for rocking between the two wings or limbs of said bearing member between which said T-shaped yoke depends, and the opposite ends of the cross bar of the T are pivotally connected respectively to the plunger pins, G, G. H is a co-operating member of the snap switch device, being a yoke pivoted by its ends at *e*, *e*, on the part, E, which carries the first mentioned yoke member, F. K is a spring-stressed thrust pin having its stem guided in an aperture, *h*, in the neck of the yoke member, H, and having near its opposite end shoulders, *k*, *k*, which lodge pivotally in notches, *f*, *f*, in the ends of the two stem members of the T-shaped yoke member, F, the stressing spring, L, is coiled about the pin, K, reacting between the shoulder of the pin and the neck of the yoke, H. The yoke, H, constitutes one member of a switch of the general character of a knife switch, that is, adapted to be wedged as a knife blade between the two electrodes for closing the circuit. These two electrodes, O and P, are both mounted upon the insulating block, C, the electrode, O, being a terminal lug on the socket, L^2, which is secured to the mounting block, C, as seen in Figure 5, and the electrode, P, being secured directly to the mounting block, C, as seen in Figure 6. The yoke, H, in the operation of the snap switch swings between and out from between these two electrodes which contact respectively the outer surfaces of the two side bars of the yoke, H, at the part, h^1, see Figure 9.

In assembling this device the cable comprising the two in-leading wires, X and Y, is passed through a bushing and guarding sleeve, M, which comprises the usual coiled wire sheath and terminates in a flange, M^1, and the two wires are secured respectively by binding screws, *x* and *y*, the one to the conducting bar, D, mounted as stated on the back side block, C, and the other to the conducting bar, D^x, which carries the socket, L^1. The two case members are then applied one onto the block, C,—that is, so as to seat the block, C, therein, and the other onto the conducting bar, D^x, so as to seat it therein, and the two casing members then being brought together inner face to inner face, each of the conducting bars finds its proper seat in the recess provided in the opposite casing member, and the casing members are secured together by screws, S, S, at apertures provided for that purpose toward the opposite ends of the casing.

When assembled as described, it will be understood that the plungers, G, G, find their seats at a^4, a^4, in the half-cylindrical recesses provided in the two casing members respectively, which register to constitute complete cylindrical guide-ways for the plungers.

I claim:—

1. A socket and switch plug comprising two identically-formed casing members adapted to be clamped together with corresponding recessed faces opposed for enclosing a cavity consisting of the aggregate of the recesses, whereby corresponding recesses in the two members are reciprocally positioned with respect to the longitudinal axis of the casing, said recesses comprising recessed seats for two socket members, said seats extending to and opening at one end of the casing, recessed seats for two circuit-connecting bars attached to the sockets respectively, a recess for a snap-switch-mounting block, and two guide recesses for snap switch push pins extending to and opening at the opposite end of the casing; the several recessed seats being adapted to operatively position the parts respectively to be seated therein, whereby attachment of said parts to the casing is avoided.

2. In the construction defined in claim 1 the snap switch device having its pivots extending transversely of the parting plane of the casing members and the push pin actuated member being positioned substantially in said plane, whereby the push pins may extend out of the casing in said plane, and each obtain equal seating in the two casing members.

3. A socket and switch plug comprising in combination with a casing composed of two identically formed members, an insulating mounting block fixed in the casing; a socket carried on the mounting block having a contact for the switch; a two-stemmed T-lever fulcrumed on the block, having step bearings at the end of its stem members, a yoke fulcrumed on the block below the fulcrum of the T-lever, a pivot member having a stem guided in the yoke cross bar, and a spring reacting between said cross bar, and the pivot member to stress the latter against the step bearings on the stem.

4. A socket and switch plug comprising a casing composed of two duplicate casing members each recessed to form similar cavities therebetween, a pair of sockets intermediate said members engageable from the lower end of the casing, switch mechanism disposed in one of said cavities having a lead

wire terminal thereon and a conductor extending therefrom connecting to one of said socket members, a second lead wire terminal on the end of a conductor connecting at its other end to said second socket member, and push pins for actuating said switch, extending upwardly through the upper end of said casing in the medial longitudinal plane thereof.

In testimony whereof, I have hereunto set my hand at Chicago, Illinois, this 20 day of December, 1921.

ERNEST SJOLIN.