June 1, 1926. 1,586,713

E. SJOLIN

ATTACHMENT PLUG FOR ELECTRIC IRONS

Filed July 30, 1921

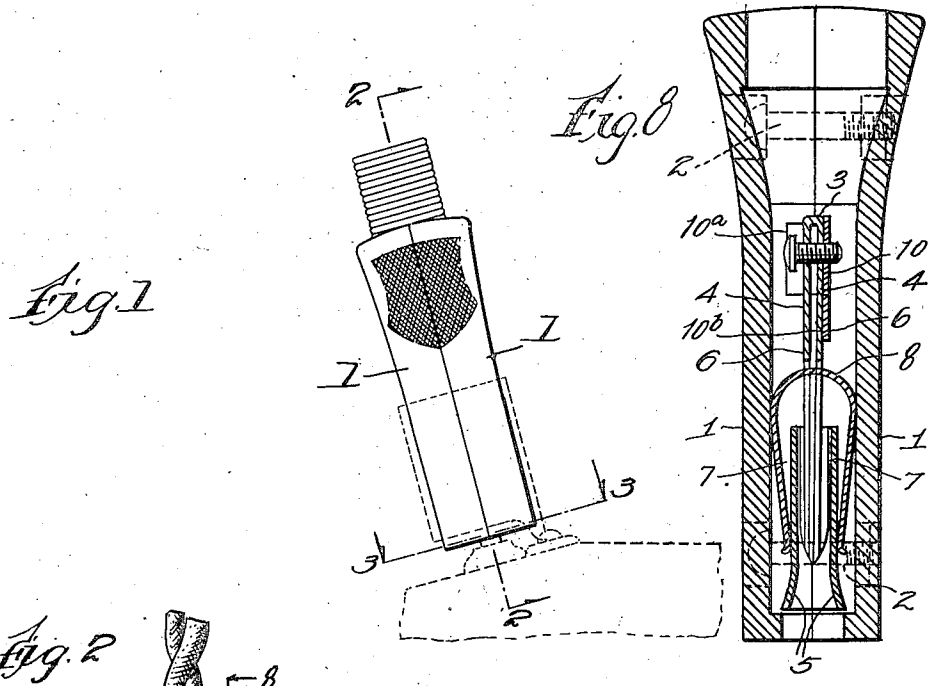


Fig. 1

Fig. 8

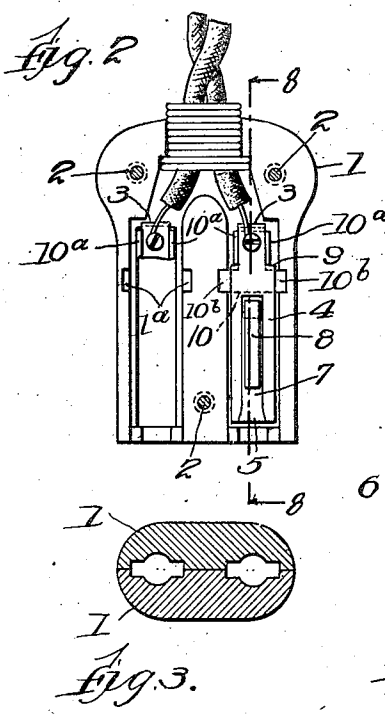


Fig. 2

Fig. 3

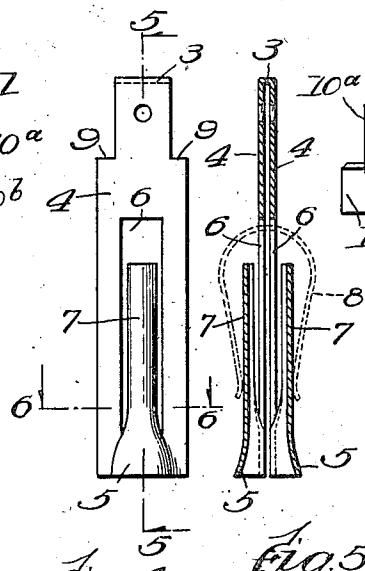


Fig. 4

Fig. 5

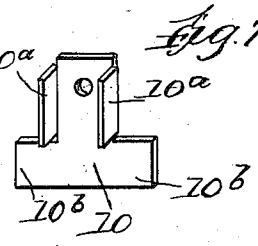


Fig. 7

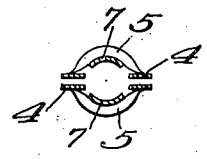


Fig. 6

Inventor;
Ernest Sjolin,
By Burton & Burton
his Atty's.

Witness;

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UNITED STATES PATENT OFFICE.

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

ATTACHMENT PLUG FOR ELECTRIC IRONS.

Application filed July 30, 1921. Serial No. 488,515.

The purpose of this invention is to provide an attachment plug for electric irons adapted more perfectly than devices of this class at present in use, to accommodate itself to variation in diameter of the electrodes or contact studs of the iron. It consists in the elements and features of construction shown and described, as indicated in the claims.

In the drawings:—

Figure 1 is a side elevation of an attachment plug embodying this invention, the same being shown in position on the iron of which the adjacent parts are shown in dotted line.

Figure 2 is a section at the line, 2—2, on Figure 1.

Figure 3 is a section at the line, 3—3, on Figure 1.

Figure 4 is a side elevation of the socket member.

Figure 5 is a section at the line, 5—5, on Figure 4.

Figure 6 is a section at the line, 6—6, on Figure 4.

Figure 7 is a perspective view of the clip employed for securing the socket member in the body.

Figure 8 is a section at the line, 8—8, on Figure 2.

In the drawings the body member of the attachment plug is shown consisting of two similar parts, 1, 1, which are clamped together by screws, 2, for embracing between them a socket member. This socket member is an integral element comprising the two stud sockets. It is stamped and folded from a metal sheet. The two sockets are identical in form and the remainder of the description can be directed to one socket. The metal sheet is folded at 3, forming two fork arms, 4, 4, extending in general parallel to each other, and at the ends remote from the fold, shaped as seen at 5 to form on each arm half of a flaring entrance for the electrode stud of the iron. At a distance back from the end of the arm greater than the assumed length of the electrode stud, each arm is apertured as seen at 6. From the lower end of this aperture to the point at which the flaring taper of the mouth of the socket begins, there is struck out from each wing, a tongue, 7, severed from the lateral portions of the arm from the aperture, 6, nearly to the end of the arm rendering said lateral portions spring arms carrying the tongue by integrality therewith at the lower end beyond the severance, each tongue being concave inwardly so that the two tongues face each other to form a split socket for the electrode stud. It will be understood that the two-wing member described has a certain amount of elasticity,—that is, the wings may be sprung apart with a tendency to react toward each other, moving in such reaction somewhat as if pivoted together at the fold or bend at the upper end, and also so that the two tongues, 7, if spread apart by the insertion of a large stud between them, tend to spread at their upper ends moving in such direction as if pivoted to the wings at the point of junction of the tongues therewith at their lower ends. This tendency of the wing bodily to move toward and away from each other as if pivoted at their upper ends, and of the tongues to move similarly as if pivoted at their lower ends, tends to cause the two tongues to accommodate themselves to studs of somewhat different diameters by substantially bodily movement toward and from each other so as to maintain contact with the studs throughout the full length of the tongues, and not at the upper end of the stud only, as would be the tendency if the accommodation to a large diameter of the stud were dependent upon the spreading of the arms divergently from their fold, nor at the lower end only as would be the tendency if the accommodation to a small diameter were dependent upon the convergence of the tongues upwardly from their lower ends subject to spreading for larger stud. The U-spring of flat sheet metal inserted through the aperture, 6, in the arm, having its ends bearing against the tongues, 7, near their lower end or junction with the arms respectively, serves to apply the yielding pressure for forcing the arms and tongues together, and to give an adequate pressure without reliance entirely upon the stiffness of the arms, which if that stiffness were relied upon alone for the purpose would require the wing member to be made of heavier stock than desirable, or have it especially formed for stiffness which would defeat the simplicity of the design.

For positioning the two-winged socket member in the body there is provided a sheet metal clip or holder, 10, folded to form two

parallel lugs, 10^a, projecting at the same side for embracing between them the upper end of the socket member which is cut away at opposite sides adjacent the bend or fold to form shoulders, 9, 9, above which the lugs, 10^a, are stopped; and said clip has left standing in the plane of the blank from which it is made projecting oppositely in that plane, lugs, 10^b, 10^b, which engage recesses, 1^a, in the faces of the mated members of the body, for holding the clips and thereby the socket members securely in the body.

For causing the pressure of the loop spring member, 8, upon the two socket members to be adequate for gripping the contact pin or tongue which is to be inserted between them, this spring member is normally dimensioned as to the spread of the bow relatively to the facing cavities in the two casing members between which it is grasped, so that when these members are clamped together, the spring is compressed at the bow, as may be understood upon comparison of the dimensions of the bow and cavities respectively in Figure 8.

I claim:—

1. A spring socket device for the purpose indicated, comprising two facing half-socket members, each consisting integrally of a cylindrical segment flanked by two flat spring arms, which are both in the same plane, the segment being severed from the arms longitudinally from a point at a relatively short distance from the open end of the socket, and the flat arms being rigidly united at a point beyond the opposite end of the socket, whereby the resiliency of the flat arms for a length substantially that of the socket is obtained independently of any resiliency of the segments which form the socket proper.

2. The construction as defined in claim 1, foregoing, having the apertures formed by striking out the half socket members from between the two flat spring arms of the respective members and being coincidentally extended beyond the struck-out free ends of the socket members, in combination with a loop spring extending through the coinciding apertures and having its ends bearing inwardly on the socket members respectively, for yieldingly resisting their spreading.

3. The construction as defined in claim 1, foregoing, having the apertures formed by striking out the half-socket members from between the two flat spring arms of the respective members coincidentally extended beyond the struck-out free ends of the socket members, in combination with a loop spring extended through the coinciding apertures and having its ends bearing inwardly on the socket members respectively for yeildingly resisting their spreading, and a body enclosing the socket device comprising two mated members having their facing surfaces recessed for accommodating the socket device, the loop spring being dimentioned as to the spread of its limbs relatively to said recesses so that the spring is compressed between said two body members when they are secured together for holding the socket devices.

In testimony whereof, I have hereunto set my hand at Chicago, Illinois, this 26th day of July, 1921.

ERNEST SJOLIN.