

No. 717,246.

Patented Dec. 30, 1902.

W. B. MURPHY.
SOCKET MEMBER.

(Application filed Sept. 2, 1902.)

(No Model.)

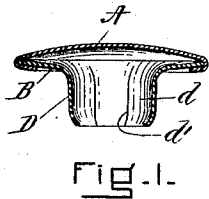


Fig. 1.

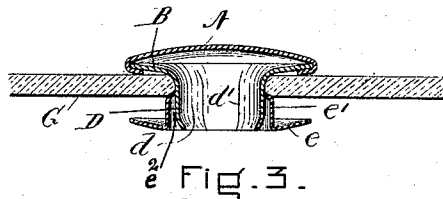


Fig. 3.

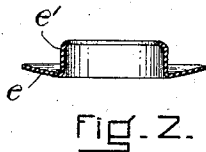


Fig. 2.

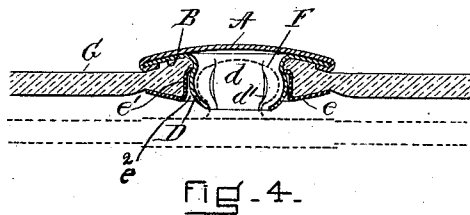


Fig. 4.

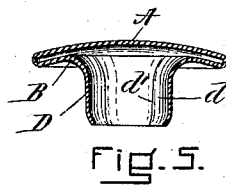


Fig. 5.

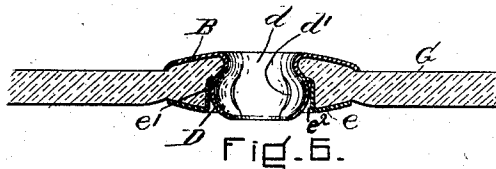


Fig. 6.

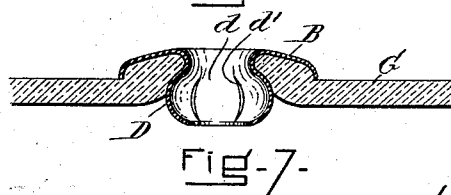


Fig. 7.

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UNITED STATES PATENT OFFICE.

WILLIAM B. MURPHY, OF NEW YORK, N. Y., ASSIGNOR TO UNITED STATES FASTENER COMPANY, OF PORTLAND, MAINE, AND BOSTON, MASSACHUSETTS, A CORPORATION OF MAINE.

SOCKET MEMBER.

SPECIFICATION forming part of Letters Patent No. 717,246, dated December 30, 1902.

Application filed September 2, 1902. Serial No. 121,914. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. MURPHY, of New York, in the county and State of New York, have invented a new and useful Improvement in Socket Members, of which the following is a specification.

My invention relates to that class of socket members which are especially designed for use with a solid or unyielding ball member, and for that purpose it is provided with a yielding "mouth" or "socket-entrance," so-called, although it may be used with a resilient ball member, if thought best.

It consists of a socket member provided with spring-sections arranged in the socket-piece to form a tubular portion and which in the setting of the socket-piece in the material to form the socket member are bulged outwardly intermediate of the ends of the tubular portion to assist in holding the socket member in the material, thus also engaging the ball-chamber, the size of the entrance to which is predetermined in the construction of the socket-piece, being substantially the size of the outer end of the said tubular section. With the socket member so set is preferably used a recessed washer, which by reason of its shape is enabled to reach through or partly through the opening in the material in which the socket is set without interfering with the yielding of the spring-sections, the inner edge of the hole in the washer engaging the socket-piece at or near its neck at the base of the spring-sections and the flange of the washer cooperating with a suitable flange or opposing surface of the socket-piece to clamp the material and hold the socket-piece in place.

My invention will be understood by reference to the drawings, in which three forms of my invention are shown.

Figure 1 is a section of a socket-piece embodying my invention. Fig. 2 is a recessed washer. Fig. 3 shows the members assembled prior to setting. Fig. 4 shows the socket member set and engaging the ball member. Fig. 5 is a modification of my socket-piece. Fig. 6 is another modification, the modified uncapped socket-piece in this view being set to form a socket member; and Fig. 7 shows

the socket-piece set as a socket member without a washer.

In Figs. 1, 3, and 4 the socket-piece is made in two parts. A is a cap, the peripheral edge of which is turned over about the flange B of the other part, which flange is integral with the tubular portion D. This tubular portion is comprised mainly of the spring-section d , formed by slits d' in the turned portion extending from the outer edge of the tubular portion to or toward the base thereof. The mouth of the tubular portion is formed in the making of the socket-piece and is substantially maintained during the setting of the socket-piece.

E is a washer which comprises a flange e and an upwardly-projecting section e' , which provides a recess e^2 for the purpose below described. The opening in this section e' is somewhat smaller than at the flanged end and is preferably slightly turned inward, as shown, and forms a tube of sufficient diameter to slide over the tubular portion of the socket-piece when the parts are assembled prior to being set.

In Fig. 4 the members are shown set. In the setting of the socket-piece and washer pressure is applied to the cap A of the socket-piece and the extremity of the tubular section D of the socket-piece, whereby the two are brought together, the mouth of the tubular portion D retaining its predetermined shape and the spring-sections d being bowed outwardly, as shown in Fig. 4, so as not only to engage with the washer, but also to leave ample room to contain the ball F. The socket-piece and the washer are held together in this case by the bulging or enlargement of the spring-section within the recess e^2 in the washer, and the material G is clamped within the flange of the washer and the flange of the socket-piece.

The form of socket-piece shown in Fig. 5 is identical to that shown in Fig. 1; but in this case the cap portion A and the flange B are integral.

In Fig. 6 the socket-piece is shown without any cap portion A, the flange portion B being preferably slightly enlarged and forming a flange of sufficient size to answer all pur-

poses of a flange and the absence of the cap A exposing the opening which extends through the tubular portion D of the socket-piece.

It will be noted that in the socket member 5 the bulging outwardly of the tubular portion D of the socket-piece in the act of setting forms a neck where the tubular portion D joins the flange B, a portion of which neck coöperates with the end of the portion *e'* of 10 the washer in the setting of the device. While I prefer that the slits *d'* shall extend to the junction of the flange B and tubular portion D of the socket-piece even farther when the flange portion and cap are made in 15 one piece, as in Fig. 5, this is not necessary to the operation of the device when set, so long as they extend sufficiently far toward the base of the tubular portion to enable the spring-sections to be bulged outwardly, as 20 described, and at the same time to have yield enough to form an efficient ball-holding structure.

With some sorts of material the washer may be omitted, as shown in Fig. 7, the engagement of the spring-sections in setting 25 being sufficient to hold the unset member in place.

In the present state of the art relating to the working of brass it is unnecessary to give 30 any specific directions as to the shape of the blank from which my socket-piece may be made. It will be noted in this connection that, in fact, the tubular portion of the socket-piece shown in Figs. 1 and 3 may be drawn 35 like an eyelet and that as shown in Fig. 5 the one-piece socket-piece may be drawn from a piece of brass approximately cruciform or star-shaped.

What I claim as my invention is—

40 1. A socket-piece having a flange portion and spring-sections, said spring-sections forming a slitted tubular structure projecting from said flange, the extremities of the said spring-sections forming a preformed socket-entrance

and the intermediate portions thereof forming a ball-receiving chamber and being adapted to be bulged in the act of setting to assist in holding the socket-piece to the material, said flange being at one end of the spring-sections and said preformed socket-entrance 50 at the other end thereof.

2. A socket member comprising a flange portion, a neck, spring-sections and a washer, said spring-sections being bulged outwardly and approaching at their extremities to form 55 a spring-mouth, said flange being located at the opposite end of said socket member from said mouth and said washer being located about said neck, held in place by said spring-sections and adapted to clamp the material 60 against said flange portion.

3. A socket member comprising a flange portion, a neck, spring-sections and a recessed washer having a hole, the free extremities of said spring-sections approaching to form a 65 spring-mouth and the intermediate portions of said spring-sections being bulged and lying within the recess in the washer, the hole in said washer being sufficient to allow it to encircle said neck and the recess in said 70 washer being sufficient to allow said washer to clamp the material against said flange portion without substantial interference with the action of said spring-sections.

4. A socket member comprising a flange 75 portion, a neck and spring-sections, said spring-sections being bulged outwardly and approaching at their extremities to form a spring-mouth and clamping the material against said flange portion, said flange portion being at one end of said spring-sections and said spring-mouth being at the other end 80 thereof.

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Witnesses:

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