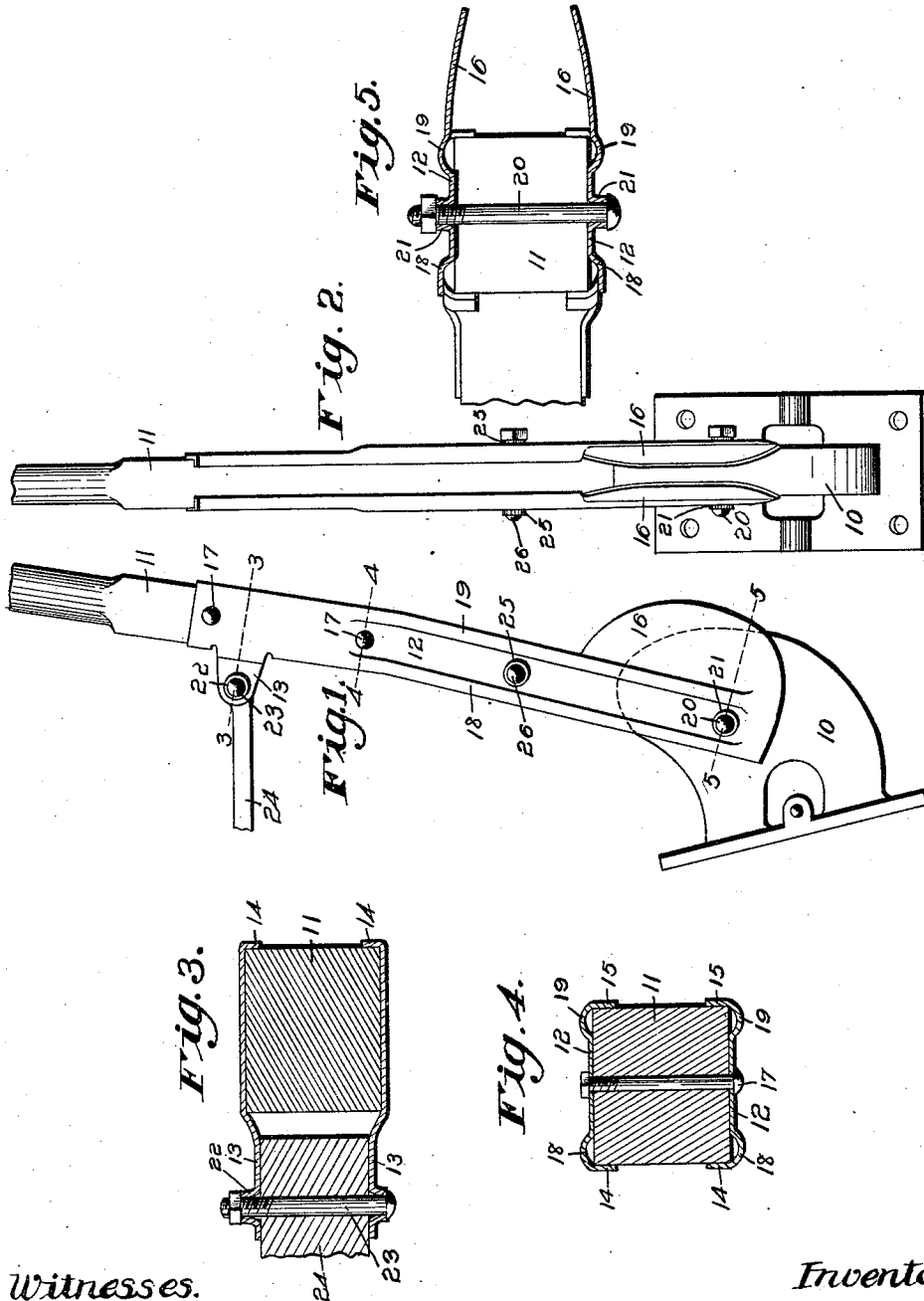


E. L. WATROUS.
SHEET METAL LEVER SOCKET.
APPLICATION FILED MAR. 8, 1909.

1,046,241.

Patented Dec. 3, 1912.



Witnesses.
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UNITED STATES PATENT OFFICE.

EDWARD L. WATROUS, OF DES MOINES, IOWA, ASSIGNOR TO DAVID B. GANN, OF CHICAGO, ILLINOIS.

SHEET-METAL LEVER-SOCKET.

1,046,241.

Specification of Letters Patent.

Patented Dec. 3, 1912.

Application filed March 8, 1909. Serial No. 482,142.

To all whom it may concern:

Be it known that I, EDWARD L. WATROUS, a citizen of the United States, residing at Des Moines, in the county of Polk and State of Iowa, have invented a certain new and useful Sheet-Metal Lever-Socket, of which the following is a specification.

The object of my invention is to provide a socket for wooden levers, that may be formed complete of two pieces of sheet metal so shaped and arranged that they may be produced by dies and formers without hand work to thereby produce a lever socket of simple, durable, and inexpensive construction and of light weight.

My invention consists 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 claims, and illustrated in the accompanying drawings, in which—

Figure 1 shows a side elevation of a lever socket embodying my invention connected to a fulcrum piece. Fig. 2 shows an edge view of same. Fig. 3 shows a sectional view on the line 3—3 of Fig. 1. Fig. 4 shows a sectional view on the line 4—4 of Fig. 1, and Fig. 5 shows a sectional view on the line 5—5 of Fig. 1.

Referring to the accompanying drawings, I have used the reference numeral 10 to indicate a fulcrum piece to which the lever socket is to be pivoted and 11 indicates a wooden handle having an angular lower portion and a rounded upper portion to be grasped by an operator.

The socket is formed complete of two mating pieces of sheet metal. Each piece comprises a body portion 12 having, near its upper end, a laterally projected integral lug 13 extended toward the side which is herein referred to as the front side for convenience in description. The front margin of the body portion 12 is provided with an inwardly extended flange 14, as clearly shown in Fig. 4, and which extends from the upper end of the body portion downwardly to a point spaced apart from the lower end, as shown in Fig. 2. This flange 14 is designed to engage the front face of the handle 11. On the rear edge of the body portion 12 is a similar inwardly projecting flange 15 extended from the top of the body portion to a point spaced apart from the bottom, and

at the rear lower portion of the body 12 is a curved rearward extension 16 which projects in the rear of the body portion a distance corresponding to substantially the width of the body portion 12. The two body portions thus formed are placed on opposite sides of the wooden handle and the handle extends downwardly between them and the point adjacent to the upper ends of the extensions 16, as shown in Fig. 2. The handle is secured in position between the body portions and the body portions are held together by means of suitable rivets or bolts 17 passed through said body portions and the handle. The lower ends of the body portions are placed on opposite sides of the fulcrum piece 10 and the rear extensions 16 perform the double function of strengthening and reinforcing the socket at the lower end and also of overlapping and protecting the fulcrum piece to thereby prevent articles from entering between the socket and the fulcrum piece when the socket is moved to its forward limit.

Each of the body portions 12 is provided with a curved strengthening and reinforcing rib 18 adjacent to its forward corner and a similar rib 19 adjacent to its rear corner. These ribs, as clearly shown in Fig. 4, curve outwardly away from the handle and then inwardly to form the flanges 14 and 15. By this means, I avoid the making of a square corner at the point where the body portion 12 and the said flanges unite, and at the same time, I obtain the advantage of the strengthening and reinforcing features of said ribs. In this connection it is to be understood that the material of which these sockets are formed is comparatively heavy and that there is considerable difficulty in forming square corners on sheet metal of this thickness, hence the advantage of having the curved ribs 18 and 19 arranged adjacent to the flanges 14 and 15. These ribs 18 and 19 extend downwardly to points below the pivotal point of the socket, and, therefore, the extensions 16 at the lower ends of the body portions are so arranged that they do not interfere with the reinforcing rib 19, but co-act with it in strengthening and reinforcing the body portion at the points where they are applied.

The fulcrum point of the socket is arranged near the lower end thereof between the ribs 18 and 19 and the said socket is

pivoted to a bolt 20 passed through the fulcrum piece 10. In order to strengthen and reinforce the socket at the point where the bolt passes through it, I provide in each body portion 12, an outwardly extended sleeve 21 surrounding the bolt opening. This sleeve is formed integral with the body portion, and hence, when the bolt 20 is passed through said sleeves, there will be a long wearing surface between the sleeve and the bolt at each end of the bolt, and, obviously, the amount of wear that takes place between a sleeve of this kind and the bolt will be much less than would be the case if the bolt were passed through a round opening punched through the body portion. Hence, by means of this construction, a device is provided that is extremely durable. In each of the lugs 13, I also provide an outwardly extended sleeve 22 designed to receive a bolt 23 for pivotally connecting the socket with a rod 24. At a point spaced apart from the lower end of the socket, I also form two similar sleeves 25 through which a bolt 26 is passed for the purpose of connecting another lever or rod with the socket. The sleeves 25 are formed in the same manner as the sleeves 21 before described.

30 In practice, it is obvious that the entire socket may be formed complete of two pieces of sheet metal, which may be produced by means of dies and formers of ordinary construction and without the use of hand work.

35 Furthermore, the socket thus formed may be connected to a wooden handle quickly and easily by means of rivets and it may also be connected to a fulcrum piece and to other rods or levers to be operated by the socket.

40 The construction of the socket is such that it will have a maximum of strength by the use of a minimum amount of metal, and, furthermore, at the points at which wear takes place, the socket is provided with

sleeves which form long bearings and which prevent excessive wear.

I claim as my invention.

1. A socket for levers, formed of two pieces of sheet metal, each comprising a body portion having a laterally extended lug near its upper end, said lug having an integral sleeve to receive a bolt, the edges of each socket member being formed with rounded longitudinal ribs provided with inwardly projecting flanges terminating above the lower end of the socket, and the lower ends of the socket members being provided with lateral extensions having integral outwardly extending sleeves to provide an extended bearing for a fulcrum bolt.

2. A sheet metal socket for levers, formed of two pieces of sheet metal, each comprising a body portion having a laterally extended lug near its upper end, said lug being formed with an integral sleeve to receive a bolt, both edges being also provided with rounded ribs extended longitudinally, said ribs being provided with flanges at their outer edges to extend inwardly, said flanges being terminated at a point spaced apart from the lower end of the socket, and said lower end being provided with a curved lateral extension for the purposes stated, the lower end of each socket member being also provided with an integral outwardly extended sleeve to receive a bolt to serve as a fulcrum, and both of said sides being also provided above the fulcrum point with an outwardly extended sleeve to receive a bolt, arranged and combined substantially in the manner set forth and for the purposes stated.

Des Moines, Iowa, Mar. 6, 1909.

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Witnesses:

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