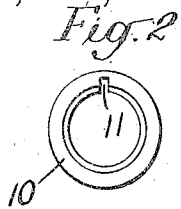
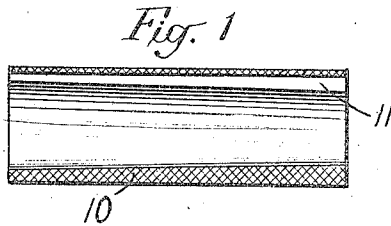
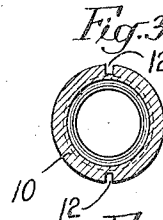
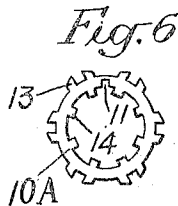
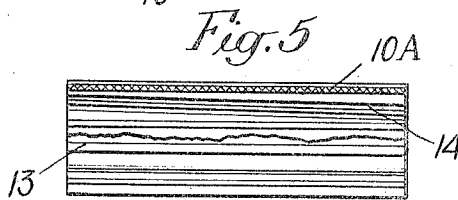
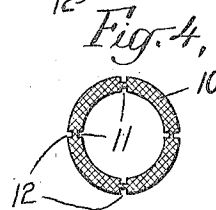
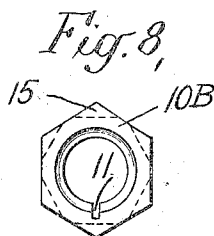
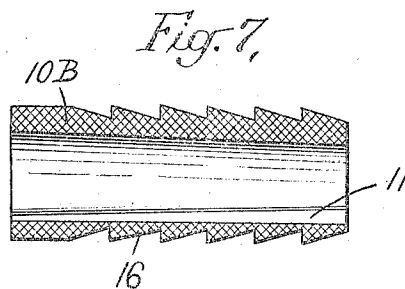
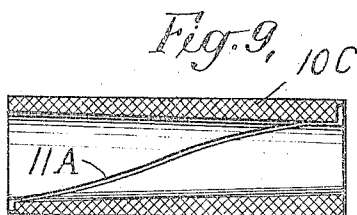
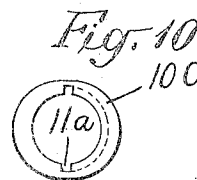
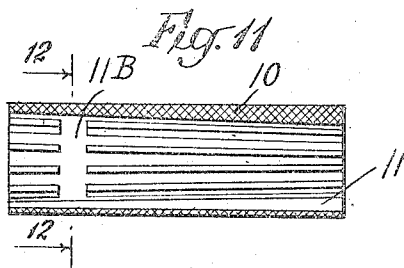
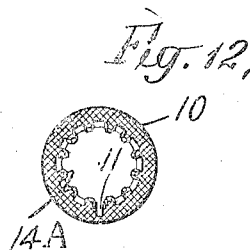
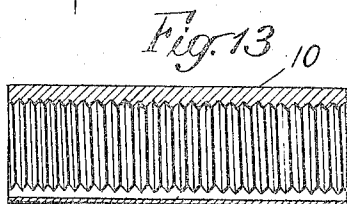
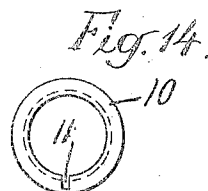


J. KENNEDY.
WALL SOCKET.
APPLICATION FILED JUNE 19, 1914.

1,182,015.

Patented May 9, 1916.



WITNESSES
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ATTORNEY

UNITED STATES PATENT OFFICE.

JOSEPH KENNEDY, OF NEW YORK, N. Y., ASSIGNOR TO THE CLEMENTS COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

WALL-SOCKET.

1,182,015.

Specification of Letters Patent.

Patented May 9, 1916.

Application filed June 19, 1914. Serial No. 846,091.

To all whom it may concern:

Be it known that I, JOSEPH KENNEDY, a citizen of the United States of America, and a resident of New York, county of New York, and State of New York, have invented certain new and useful Improvements in Wall-Sockets, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to wall sockets or plugs such as are inserted in walls, floors or other structures of material which will not readily receive and hold the threads of a bolt, for the purpose of forming anchorage members for bolts and the like, and its object is to provide a simple device which will be securely held in a hole in such material. More especially its object is to provide a structure of such construction that it is weakened in certain parts so that it will split along a substantially longitudinal line or lines when a bolt or the like is driven into it.

Structures embodying this invention were disclosed in a copending application for patent, Serial No. 784,672, filed by me August 14, 1913, and this application is a continuation in part of said pending application and which I have assigned to The Clements Company, a corporation of the State of New York.

Referring to the drawings: Figure 1 is a longitudinal sectional elevation of a structure embodying my invention, and Fig. 2 is an end view thereof. Fig. 3 is a transverse section of a similar device with two grooves therein through its outer surface instead of the single groove through the inner surface of the wall socket shown in Figs. 1 and 2. Fig. 4 is a similar section of a wall socket of slightly modified construction. In Figs. 5 and 6 I have shown in longitudinal elevation partly in section and in end view respectively, a wall socket or plug with projecting ribs on both its interior and its exterior and which is also constructed in accordance with the present invention. Another style of wall plug which also embodies this invention is illustrated in longitudinal section and end view in Figs. 7 and 8 respectively. Fig. 9 is a longitudinal sectional elevation and Fig. 10 an end view of another modification of structure in which

this invention is present. Fig. 11 is a longitudinal sectional elevation of a still further modification of construction, and Fig. 12 is a transverse section of the same device taken on the line 12—12 of Fig. 11. A longitudinal wall plug embodying this invention and having a tapered threaded interior is illustrated in longitudinal sectional elevation and in end view in Figs. 13 and 14 respectively.

Like characters of reference designate corresponding parts in all the figures.

In all of the figures the wall socket or plug comprises a one-piece hollow shell which is usually constructed of metal. In Figs. 1, 2 and 3 the outer surface of this shell is cylindrical and it is provided with a smooth tapered bore. In this particular structure the shell is made of some soft material such as lead so that when a threaded bolt or the like is screwed into it, such bolt will cut its own threads in the bore. In this shell is either a groove 11 cut longitudinally through a part or the whole of its length in the surface of its bore, or a similar groove 12 cut in its outer surface. It is immaterial whether there are one or more of these grooves, as their object is to so weaken the structure that when a bolt is forced into the bore the shell will split apart along one line, or will split apart into two or more sections, thereby permitting a relatively free expansion of the shell. It is also advantageous especially if the material of which the shell is made is stronger, to place these grooves 11 and 12 opposite and in alinement with each other as shown in Fig. 4.

In the structure shown in Figs. 5 and 6, the shell 10^a is cylindrical but has projecting from its outer surface a plurality of longitudinally disposed ribs 13, and from its inner surface similarly disposed ribs 14. Lines drawn through the ends of the ribs 13 as they would appear in a transverse section would form a hexagon. Such external ribs are provided to prevent turning of the wall plug while a bolt is being forced into it and to obtain a gripping hold upon the surface of the hole into which such a plug is driven. The internal ribs facilitate the self-thread cutting of the bolt as it is inserted and are tapered to give the desired expansive effect of the bolt to the shell. In

this particular structure a single groove 11 is formed in the inner surface of the shell 10^A between two of the internal ribs 14.

In some cases wall plugs may be made in the form illustrated in Figs. 7 and 8, in which the shell is designated by 10^B. This shell has a tapered bore in which is a groove 11. In this case the external shape of the shell is polygonal as shown at 15, but the apexes of the polygon are tapered at intervals as at 16 in a common direction to form serrations which materially aid in holding the device within the hole into which it is driven.

The exterior of the shells may be in a surface the cross-section of which is a curve of non-uniform diameter. Such a shell is shown at 10^C, Figs. 9 and 10, and its cross-section may be in the form of an ellipse or an oval. It is obvious that such a form resists the tendency which it has to rotate in the hole in which it is inserted, during the insertion of a bolt. In this case the slot 11^A is cut helically. These helical grooves allow the shell to part at the point offering the least resistance and results in a balance of gripping effect along the full length of the wall of the hole. They also allow the expansion of the shell at different parts of its length, to take place in different angular directions, thereby giving a maximum holding effect.

In the specific form illustrated in Figs. 11 and 12, there are interrupted longitudinal ribs 14^A projecting from the surface of a tapered bore. The slot 11 is cut in the inner surface of the shell and extends between the interrupted ribs or lugs 14^A which do not extend through the whole length of the shell. The threads of a bolt readily cut themselves into such internal lugs if the shell is made of lead or the like.

The shell shown in Figs. 13 and 14 is provided with a tapered threaded bore, a construction which may be used with soft metal but which is particularly desirable when a harder metal such as cast iron is used.

I have illustrated several modifications of structure to show that this invention is applicable to many forms of wall sockets and is capable of wide variations, and I intend only such limitations as appear in the appended claims.

What I claim is:

1. A wall socket comprising a one piece hollow shell having a groove therein adapted to weaken said shell along a longitudinal line.

2. A wall socket comprising a circumferentially continuous one piece hollow shell having a groove therein extending through

the greater part of the wall of said shell adapted to weaken the shell along a longitudinal line.

3. A wall socket comprising a circumferentially continuous one piece hollow shell of soft metal having therein a plurality of longitudinal grooves extending through the greater portion of the wall of said shell.

4. A wall socket comprising a one piece hollow shell having a frangible annularly continuous portion and having therein a substantially longitudinal groove adapted to weaken the shell.

5. A wall socket comprising a one piece hollow shell of soft metal, the inner surface of said shell being adapted to receive the threads of a bolt, said shell being provided with a groove so placed as to make the shell longitudinally frangible.

6. A wall socket comprising a one piece shell of soft metal having a longitudinally tapered bore adapted to receive the threads of a bolt, said shell being provided with a groove so placed as to make the shell longitudinally frangible.

7. A wall socket comprising an integral hollow shell adapted to receive a bolt, constructed with means for weakening said shell longitudinally for a portion of its length, and integral means within said shell for receiving the threads of a bolt, said means being arranged to cause the insertion of a bolt to split said shell at said weakened portion.

8. A wall socket comprising an integral shell of soft metal having a longitudinally tapered bore adapted to receive the threads of a bolt, and constructed with integral means for causing the insertion of a bolt to split said shell longitudinally.

9. A wall socket comprising a hollow one-piece shell having a helical line of weakness therein.

10. A wall socket comprising a hollow one-piece shell having a helical groove therein adapted to weaken said shell along the line of said groove.

11. A wall socket comprising an integral shell having a longitudinally tapered bore adapted to receive the threads of a bolt and provided with a helical groove for causing the insertion of a bolt to split the shell along the line of said groove.

In witness whereof, I have hereunto set my hand in the presence of two subscribing witnesses, this 15th day of June, 1914.

JOSEPH KENNEDY.

Witnesses:

I. B. MOORE,
I. M. MULCAH.