H. ROSENBERG.

EXPANSION BOLT ANCHOR.

APPLICATION FILED MAR. 3, 1913.

1,066,227.

Patented July 1, 1913.

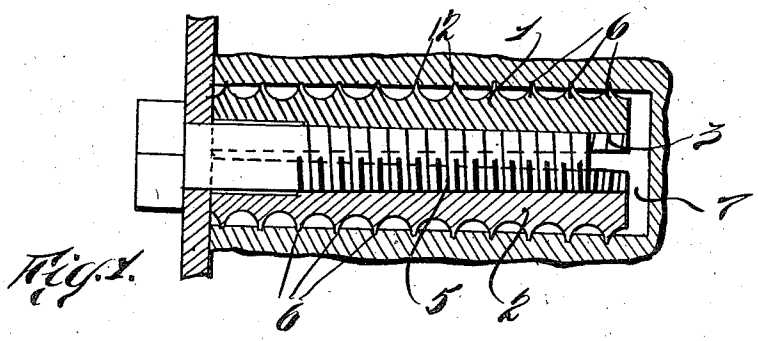


Fig. 1.

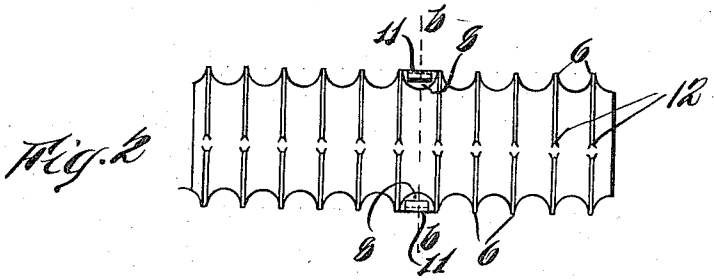


Fig. 2.

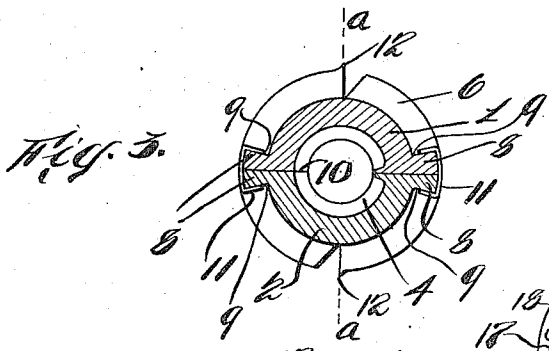


Fig. 3.

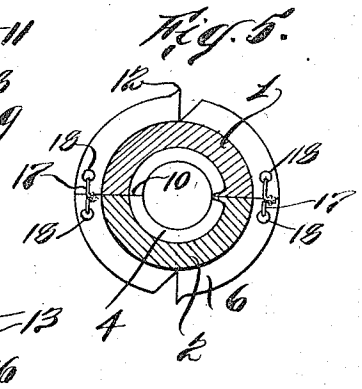


Fig. 5.

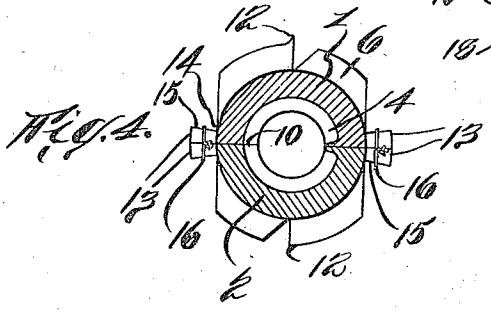


Fig. 4.

Witnesses
C. A. Jarvis
Ruth Meyers.

Inventor
Heyman Rosenberg.
by Maurice Wesch
attorney.

UNITED STATES PATENT OFFICE.

HEYMAN ROSENBERG, OF NEW YORK, N. Y.

EXPANSION-BOLT ANCHOR.

1,066,227. Specification of Letters Patent. Patented July 1, 1913.

Application filed March 3, 1913. Serial No. 751,844.

To all whom it may concern:

Be it known that I, HEYMAN ROSENBERG, a citizen of the United States of America, residing at New York city, borough of the Bronx, county and State of New York, have invented certain new and useful Improvements in Expansion-Bolt Anchors, of which the following is a full, clear, and exact description.

This invention relates to an improvement in expansible anchor-bolts, the object being to provide such an article which will firmly grip the wall in which an opening has been made.

My improved anchor-bolt will be used for the purposes for which anchor-bolts are commonly employed.

I will now proceed to describe my invention in detail and will point out the novel features of improvement which will be also set forth in the claims, reference being had to the accompanying drawing, forming part hereof, wherein:—

Figure 1 is a sectional view of a portion of a wall and my improved anchor-bolt, the section of the shell being taken on a line *a—a* in Fig. 3; Fig. 2 is an enlarged plan view of the shell assembled and before said shell has been expanded; Fig. 3 is an enlarged cross-sectional view of the shell, the section being taken on a line *b—b* in Fig. 2; and Figs. 4 and 5 are cross-sectional views of modified forms of engaging means for the shell-sections.

As herein illustrated, my improved anchor-bolt consists of a plurality of shell-sections (in this instance two) 1 and 2 the said shell-sections being provided with a tapering bore 3 having a thread 4 which is engaged by a lag-screw 5. The shell-sections 1 and 2 are provided with annular ribs 6 which will aline when the said sections are assembled. To retain the sections together both before use and before being expanded, after they have been inserted in a suitable opening, or hole, 7, I provide each section with projections or lugs 8, each having an angularly disposed surface 9; that is to say, angularly disposed relative to the meeting surface 10 of the sections and over the meeting lugs a clip or the like 11 is placed by any suitable means. The clip 11 consists of any suitable thin metal which can be forced over the lugs and which will break or yield when the sections are subjected to the strain imposed to expand them, the strain being exerted by screwing the lag-screw 5 inwardly.

It frequently happens that the shell of an expansion-bolt will rotate before it has been expanded sufficiently to cause the teeth or projections thereon to contact with the wall. To prevent the rotation of the shell, I provide each rib 6 with a projection 12, which is slightly higher than the rib. When the shell-sections are expanded by the inwardly moving lag-screw 5, the clips 11 will yield or break and the projections 12 will contact with the wall and will therefore prevent the rotation of the shell while the lag-screw is being rotated to cause the ribs 6 to come in contact with the wall, and thereby hold the shell within the opening. In practice the projections 12 will extend but very slightly above the surface of the annular ribs 6, in order that the ribs 6 will not be prevented from coming in contact with the wall. As the lugs 8 will be in alinement when the shell members are placed together, the clips 11 can be readily put on. As can be seen in Fig. 1, the axis of the bore of the complete shell is coincident with the axis of the said shell. It will also be seen that the lugs 8 are located about midway of the length of the shell and are positioned between two of the annular ribs 6, but they may be otherwise located along the shell edges. The clips 11 merely retain the shell-members together while being handled and before being placed in an opening adapted to receive the same. The clips 11 not only keep the shell members from separating, but they also keep the said members in longitudinal alinement. It will of course, be obvious that I may provide a plurality of the lugs 8 and binding clips 11, along the meeting edges of the shell-sections.

In Fig. 4 the engaging lugs 13 are provided by casting a recess 14 in some of the ribs 6, preferably in two of the center ribs, one of the walls of the recess, such as 15, being tapered. The lugs 13 in this instance are engaged by a twisted wire band 16.

In Fig. 5 the shell-sections are held together by wire links 17 which pass through openings 18 in one of the ribs 6.

In the foregoing specification and claims, the term clip is intended to cover any element which is carried by the engaging means to hold the shell-members together.

It will be noted from an inspection of Figs. 3, 4 and 5 that the projections 12 of the shell members are reversely directed.

Having now described my invention, what I claim and desire to secure by Letters Patent is:

1. An expansion-bolt comprising an expansible shell having a tapering threaded bore, a lag-screw to enter said bore, projecting lugs carried by said shell, and clips carried by said lugs.

2. An expansion bolt-anchor comprising a plurality of shell-sections, projecting lugs carried by said sections adapted to aline one with the other, and clips engaging the lugs of contiguous sections.

3. An expansion bolt shell comprising a plurality of sections, annular ribs carried by said sections, a projecting lug carried by each shell-section and located adjacent the meeting edges thereof, said lugs being disposed between two of said annular ribs and clips engaging said lugs, said shell being provided with a threaded bore.

4. An expansion bolt shell comprising a plurality of sections, annular ribs carried by said sections, a projecting lug carried by each shell-section and located adjacent the meeting edges thereof, said lugs being disposed between two of said annular ribs, the surface of said lugs, opposite to the meeting edges thereof, being angularly disposed relative to said meeting edges, and clips engaging said lugs adapted to hold the shell members together, said shell being provided with a threaded bore.

5. An expansion-bolt anchor, comprising an expansible shell, clips connecting the expansible members of said shell, and means on each member of the shell to engage the clips.

6. An expansion-bolt anchor, comprising an expansible shell, clips having angularly disposed inwardly directed ends for detachably connecting the expansible members of said shell, and angularly disposed lugs on each shell member engaging the said clips.

7. An expansion-bolt anchor, comprising an expansible shell, provided with exterior annular ribs, some of said ribs being recessed, one of the walls of said recess being angularly disposed, and a clip engaging the angular walls of said recess.

8. An expansion-bolt anchor comprising an expansible shell, means for detachably connecting the members of the shell together, and reversely directed projections carried by the members of said shell.

Signed at New York city, N. Y. this 28th day of February, 1913.

HEYMAN ROSENBERG.

Witnesses:

EDWARD A. JARVIS,

RUTH MEYERS.