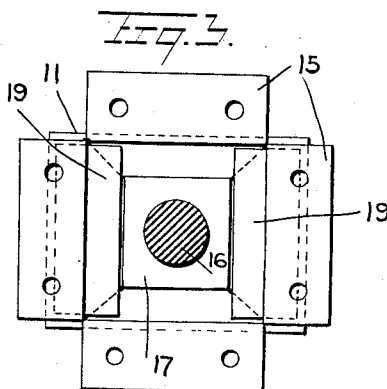
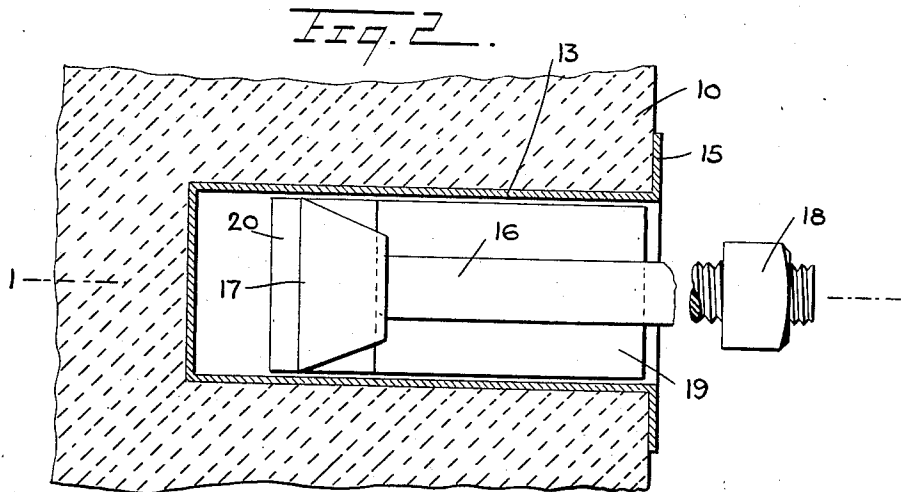
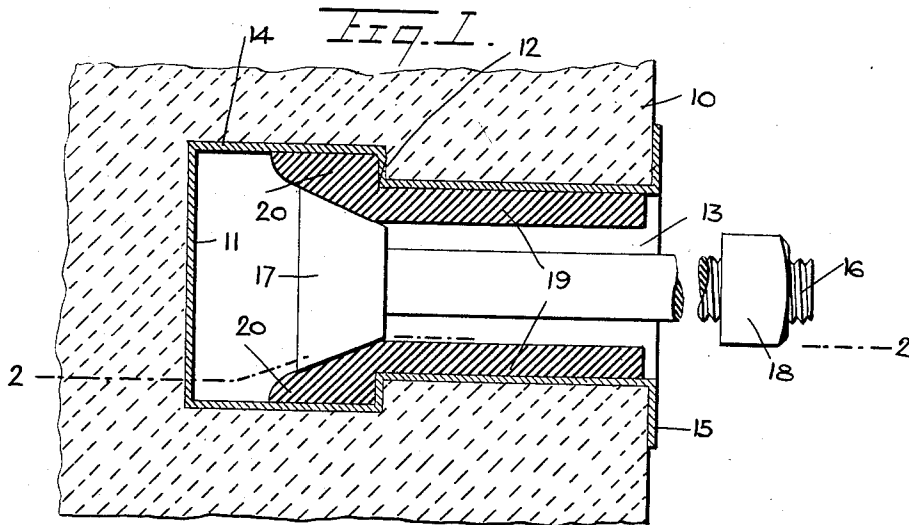


C. BUTLER.
DETACHABLE ANCHOR BOLT.
APPLICATION FILED JULY 10, 1912.

1,062,534.

Patented May 20, 1913.



WITNESSES

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COOLEY BUTLER, OF NEW YORK, N. Y.

DETACHABLE ANCHOR-BOLT.

1,062,534.

Specification of Letters Patent.

Patented May 20, 1913.

Application filed July 10, 1912. Serial No. 708,568.

To all whom it may concern:

Be it known that I, COOLEY BUTLER, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Detachable Anchor-Bolt, of which the following is a full, clear, and exact description.

This invention relates to fastening devices adapted essentially for concrete building constructions.

Among the objects of the invention is to devise an anchoring means of the character indicated which will be more reliable in use by reason of its positive connection with the concrete construction than devices heretofore proposed for this purpose.

A further object is to provide for the ready removal of an anchor bolt after it has become damaged or broken and for the easy renewal of the same without the use of special tools or special operations upon the wall itself.

A still further object attained by this invention is to provide for the use of different sizes or lengths of bolts in connection with a standard sized socket formed in the wall.

The foregoing and other objects of the invention will hereinafter be more fully described and claimed and illustrated in the drawings accompanying this specification in which like characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a horizontal sectional view of a fragment of a wall showing a preferred embodiment of the invention, taken on the line 1—1 of Fig. 2, the bolt being in plan; Fig. 2 is a vertical section of the same on the line 2—2 of Fig. 1; Fig. 3 is a front elevation of the device, the bolt being in section.

The numeral 10 is intended to represent a fragment of a concrete wall or other construction of a similar nature, and I wish it to be understood that I do not wish to be limited to any particular construction, it being understood that the term "concrete" as herein used may be broad enough to cover any construction or means to which my device may be connected or with which it may be used.

While the concrete wall is under construction and the material thereof is in a soft plastic state, I secure in place a comparatively light sheet metal structure 11 which

will be herein referred to as a socket piece. The socket piece is so formed as to provide a pair of lateral vertically extended shoulders 12 which determine the place of connection between the neck portion 13 and the enlarged cavity portion 14 of the socket piece. Said two portions of the socket piece are substantially straight and rectangular in form. At the outer end there are formed a series of angularly disposed flanges 15 which embrace the wall surrounding the socket piece. The primary object of the socket piece is to form a cavity within the concrete construction during the formation of the said construction, said cavity being deep enough so that the main strain upon the anchoring means will be borne by the concrete wall rather than by the socket piece itself. The socket piece, however, will be of sufficiently substantial character as to prevent abrasion or other deleterious action upon the concrete due to the removable parts of the anchor which cooperate with the inner walls of the socket piece.

The fastening device may be of any suitable nature or form, but as indicated in the drawings it consists preferably of a bolt 16 having a head 17 which is square as viewed in elevation but which head is tapered or pyramidal in the direction of the bolt. The bolt may be of any suitable size or length and is intended to be provided at its outer end with any suitable means such as a nut 18 for securing any building construction or element to the wall 10.

In the assembling of this device after the wall 10 has been built with the socket piece 11 in place, the bolt head 17 is slipped into the cavity formed in the inner end of the socket piece, the head passing for this purpose through the neck 13. A pair of keys 19 having tapered heads 20 are introduced into the socket piece on opposite sides of the bolt. The bolt head 17 is intended to be slipped far enough back against or toward the rear wall of the socket piece to admit said keys, the heads of which are adapted to engage squarely upon the shoulders 12 aforesaid, and when the bolt is drawn outward the head of the bolt engaging with the tapered heads 20 will secure the keys snugly in place against the lateral walls of the socket piece, whereby the bolt will be held in the socket piece and wall in positive position and substantially centered as indicated in Fig. 3.

The bolt will then be in position to have attached thereto any desired building element as before set forth.

If the bolt should become damaged as by erosion or breakage, it may easily be withdrawn from the socket piece by moving it back toward the rear wall of the socket piece so as to permit easy removal of the keys. A new bolt may then be installed as in the first instance.

The several parts of the device may be made of any suitable materials and the relative sizes and proportions thereof may be varied to considerable extent without departing from the spirit of the invention as set forth in the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In combination, a rigid socket piece, adapted to be secured in a wall, and having a plurality of shoulders, a bolt having its head projected into the rear part of said

socket piece, and a plurality of keys between the bolt and the walls of the socket piece, said keys having heads adapted to interlock with said shoulders and to be engaged by the bolt head, substantially as set forth.

2. The combination of a socket piece made of rigid material and having a pair of oppositely disposed square shoulders, a bolt having a tapered head introduced into said socket piece beyond the said shoulders, and a pair of keys introduced between said bolt and the opposite walls of the socket piece, said keys having tapered heads for engagement with the tapered head of the bolt and adapted to interlock with the aforesaid square shoulders, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

COOLEY BUTLER.

Witnesses:

J. H. MCGINN,

H. SCHROEDER.