

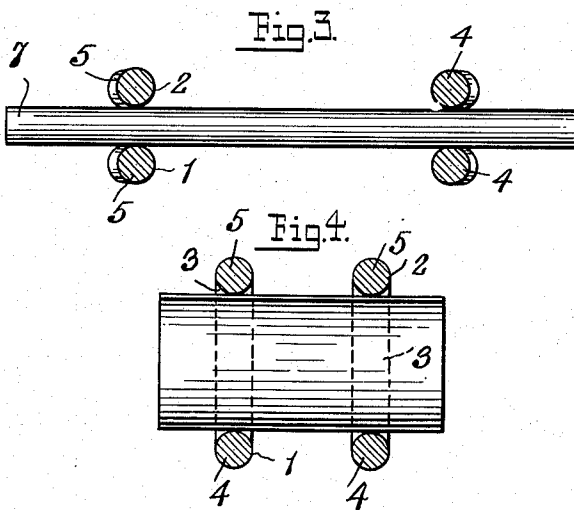
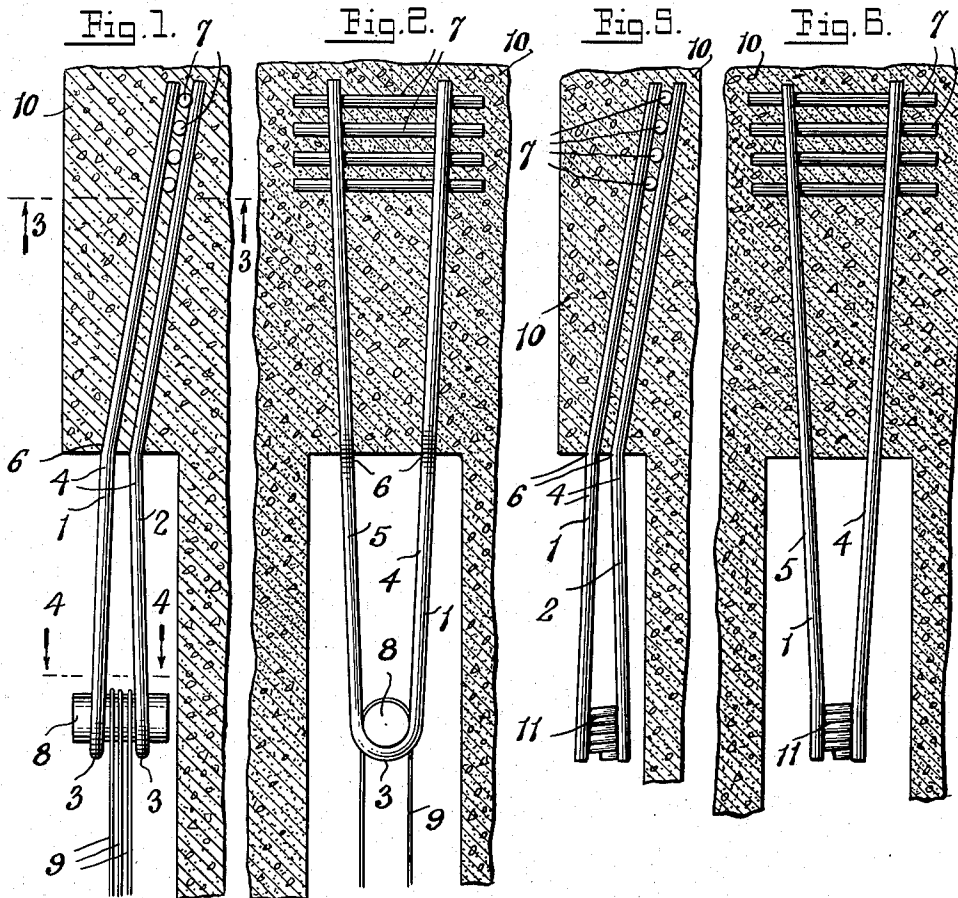
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CONCRETE REINFORCEMENT ANCHORAGE

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CONCRETE REINFORCEMENT ANCHORAGE

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2 Claims. (Cl. 72-105)

1

2

This invention relates to anchorages for concrete structures, and particularly to those which can be employed for the maintenance of stressing wires or other stressing elements in a concrete mass. An object of the invention is to provide a simplified concrete anchorage which can be readily and economically made of metallic rod; which will be very firmly anchored in the concrete structure and which can easily maintain the stressing elements connected to it under the required stress at all times.

More particularly, the invention contemplates in one embodiment, the provision of a substantially U-shaped anchorage composed of a plurality of similarly-bent rods, each of U-shaped formation, the rods being held in slightly spaced relation by means of spaced cross pieces welded between them adjacent to one end thereof, the U-shaped elements providing a seat or cradle for receiving a rod section around which the stressing wires may be extended. Another embodiment of the invention contemplates the provision of the U-shaped members with spiral coils as a substitute for the loop portion at one end thereof, whereby the stressing elements can be in the form of, or include threaded rods threadably received in said spiral coils in a manner to be described.

These and other objects are attained by the invention, a more particular description of which will hereinafter appear and be set forth in the claims appended hereto.

In the accompanying drawing, wherein an illustrative embodiment of the invention is disclosed, Fig. 1 is a side elevation of one embodiment of the concrete anchorage showing the same partly embedded in a concrete mass; Fig. 2 is a front elevation of the same; Fig. 3 is an enlarged sectional view taken on the line 3-3 of Fig. 1, looking in the direction of the arrows; Fig. 4 is a sectional view taken on the line 4-4 of Fig. 1, looking in the direction of the arrows; Fig. 5 is a side elevation of another embodiment of the invention, showing the anchorage partly embedded in a concrete mass, and Fig. 6 is a front elevation of the same.

Referring to the embodiment shown in Figs. 1 to 4 inclusive of the drawing, the improved anchorage includes a pair of similar, substantially U-shaped rod members 1 and 2. Said members 1 and 2 are alike in shape, and each thus includes a loop portion 3 from which the divergent legs 4 and 5 extend. Each of the legs 4 and 5 is slightly bent as indicated at 6 so that the end portions of the legs, or those parts

located remotely from the loop 3 and beyond the bend 6 extend slightly angularly, as clearly seen in Fig. 1.

Located between these portions of the legs 5 and 6 of each of the U-shaped members 1 and 2 is a plurality of spaced cross rods 7 which are welded in place between the end portions of the legs. These spaced cross rods 7 act to hold the two U-shaped members in their spaced relation and stiffen and lend rigidity and strength to the leg portions thereof, and particularly near the ends whereat the cross rods 7 are located.

In the loops 3 of the U-shaped members is located a rod 8 which may be welded therein and serves as a bridging member between the two loops 3. In placing the anchorage in place, it is cast in the concrete structure 10 with the angularly extending and more widely-spaced end portions of the legs 4 and 5, and the cross rods 7 therebetween, surrounded by the concrete mass, as clearly seen in Figs. 1 and 2. The loop portions of the anchorage project from the concrete, so that stressing wires 9 may be placed around the rod 8 and tensioned as required. This projecting end portion of the anchorage, including the loops 3, the rod 8 and the stressing wires 9 can be later enclosed in concrete, thus sealing the stress therein.

The structure of the anchorage is such that the divergent angularly-bent legs of the U-shaped members; their spaced-apart relation and the location of the spaced cross bars between the legs all resist displacement from the concrete mass and the anchorage will be thus well capable of withstanding the stress imposed upon it when employed in the manner described.

In the embodiment of the invention disclosed in Figs. 5 and 6, the construction of the rod members 1 and 2 is similar to that described with respect to Figs. 1 to 4 except that loops 3 are not used and spiral coils or helices 11 are welded between the ends of the members 1 and 2 where the loops 3 were located in the first-described embodiment. In this embodiment of the invention, the stressing elements may be rods having threaded portions for threadable engagement with the coils 11, or these coils may be utilized for engagement with threaded elements which may, in turn, receive stressing wires or other stressing elements. With this construction, the coil-carrying ends of the anchorage may be located either inside or outside of the concrete mass as described with respect to the embodiment of the invention shown in Figs. 1 to 4 inclusive and previously herein described.

3

Having described several embodiments of the invention, it is obvious that the same is not to be restricted thereto but is broad enough to cover all structures coming within the scope of the annexed claims.

What we claim is:

1. A concrete anchorage, comprising a pair of substantially U-shaped rod members formed at one end with a loop and having legs extending divergently therefrom, a plurality of spaced transverse cross rods located between and secured to the legs of the two U-shaped members adjacent to the ends of the legs thereof and holding the two U-shaped member spaced apart for a distance equal to the diameter of the cross rods, said cross rods being disposed substantially parallel to one another and spaced apart for distances at least equal to their diameters, the cross rods being welded to opposite sides of the legs of the U-shaped members to thereby hold the legs of said members in their spaced relation and to stiffen the leg portions of the U-shaped rod members adjacent to the end portions of the legs of the same, the ends of the cross rods projecting laterally beyond the legs of the U-shaped members, the legs of one of the U-shaped members being disposed in parallelism to the legs of the other U-shaped member for at least one-half of the length of said legs, the loop portions of the U-shaped members being spaced apart for a distance greater than the diameter of the cross rods, and an anchorage secured in the loops, said anchorage comprising a section of rod having its longitudinal axis extending transversely to the cross rods.

2. A concrete anchorage, comprising a pair of substantially U-shaped rod members each having a pair of legs extending divergently from one end,

4

a plurality of spaced transverse cross rods located between and secured to the legs of the two U-shaped members adjacent to one end of the legs thereof and holding the two U-shaped members spaced apart for a distance equal to the diameter of each of the cross rods, said cross rods being disposed substantially parallel to one another and spaced apart for distances at least equal to their diameters, the cross rods being welded to the opposite sides of the legs of the U-shaped members to thereby hold the legs of said members in their spaced relation and to stiffen the legs adjacent to the end portions of the legs, the ends of the cross rods projecting laterally beyond the legs of the U-shaped members, the legs of one of the U-shaped members being disposed in parallelism to the legs of the other member for at least one-half of the length of said legs, and an anchorage secured between the ends of the legs remote from the cross rods, said anchorage having its longitudinal axis extending transversely to the cross rods.

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