UNITED STATES PATENT OFFICE.

CLAUSE A. P. TURNER, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR TO C. A. P. TURNER COMPANY, OF MINNEAPOLIS, MINNESOTA.

COLUMN REINFORCEMENT AND METHOD OF MAKING THE SAME.


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To all whom it may concern:

Be it known that I, CLAUDE A. P. TURNER, of Minneapolis, in the county of Hennepin, and in the State of Minnesota, have invented a certain new and useful Improvement in Column Reinforcements and Methods of Making the Same, and do hereby declare that the following is a full, clear, and exact description thereof.

The object of my invention is to provide a construction of reinforcement for columns, and the like of concrete, which will be economical to make, light in weight to save freight, and capable of being collapsed or folded down for shipment, to save room and to avoid damage in shipment.

In the accompanying drawings—Figure 1 is a side elevation of a section of column reinforcement embodying my invention; Fig. 2 is an end view thereof; Figs. 3 and 4 are detail enlarged views in side elevation of a portion of one of the spacing bars; and Fig. 5 is a horizontal section on the line 5—5 of Fig. 3.

My invention relates more particularly to the type of column reinforcement in which heavy wire is wound into a spiral, or helical form, and the coils thereof are spaced or held separated suitable distances apart by parallel bars that engage the coils at the desired spaces apart. Such a helical form of reinforcement 10 is shown in the drawings, and the coils thereof are engaged and held spaced apart by several, preferably, two light bars 11, the coils being caught by offset curved fingers or hooks 12 integral with the bar, which are formed therefrom by shearing, and offsetting the bar at the desired points, the sheaf being of such shape that the offset is produced before the complete severance at one end to form the hook, is effected. This procedure in the formation of the hooks saves the offsetting as a separate operation. The bars 11 are light, and preferably they are of angle iron. When the pitch of the coil is slight so that adjacent coils are closed together, the engaging tongues or hooks are situated in a staggered, or alternating arrangement as shown in Fig. 3.

It will be noted that the fingers, or hooks by reason of their form, or configuration provide a hinge-form connection with the coils of the helix that enables the collapsing and opening out of the structure. This form or configuration of the hooks is that of a reversed curve, that is to say from the point of connection of the hook with the bar, from which it is formed, it curves upward and outward and then around the adjacent coil of the helical reinforcement, which being round in cross section where the hook curves around it provides a snug, or close engagement with the hook that makes a real pivotal connection between the helix and the bar that maintains the proper spacing between the helix coils.

I use but two spacing bars 11 and place them at diametrically opposite points, for thus the coil can be flattened or collapsed, as there can be a turning movement of the individual turns relative to the bars, due to the pivotal connection afforded by the tongues or hooks, and thus the bulk of the reinforcement can be reduced, for, and danger of damage in shipment diminshed, yet, it can easily be restored to its circular or cylindrical form.

Having thus described my invention what I claim is:

A reinforcement for concrete columns, comprising a spiral forming a plurality of spaced circular encircling members round in cross section and spacing bars having integral clips struck out wholly from within the strip body and attached thereto at one extremity and overlying portions of said encircling members and bent thereover in a reverse curve and confining the same against the side of the bars, a pivotal connection being thereby formed between the encircling members and the bars, said bars being two in number and situated diametrically opposite each other.

In testimony that I claim the foregoing I have hereunto set my hand.

CLAUSE A. P. TURNER.

Witnesses:

CHAS. J. WILLIAMSON,
A. T. HAYES.