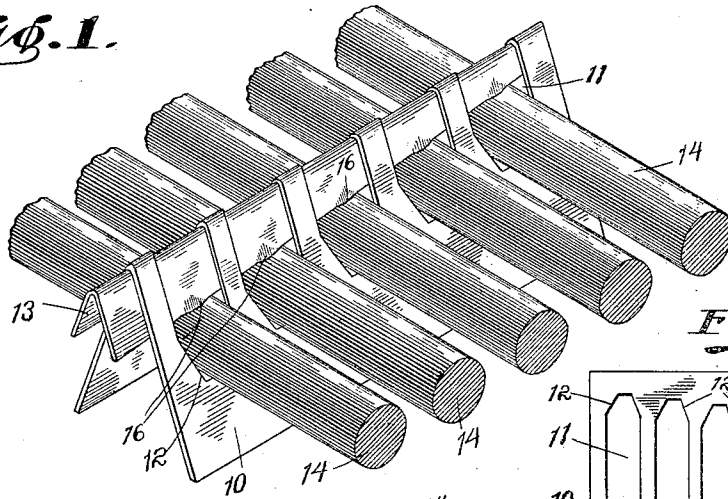


D. B. LUTEN.  
CLAMP FOR CONCRETE REINFORCING MEMBERS.  
APPLICATION FILED JUNE 7, 1907.

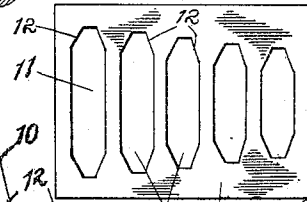
1,060,919.

Patented May 6, 1913.

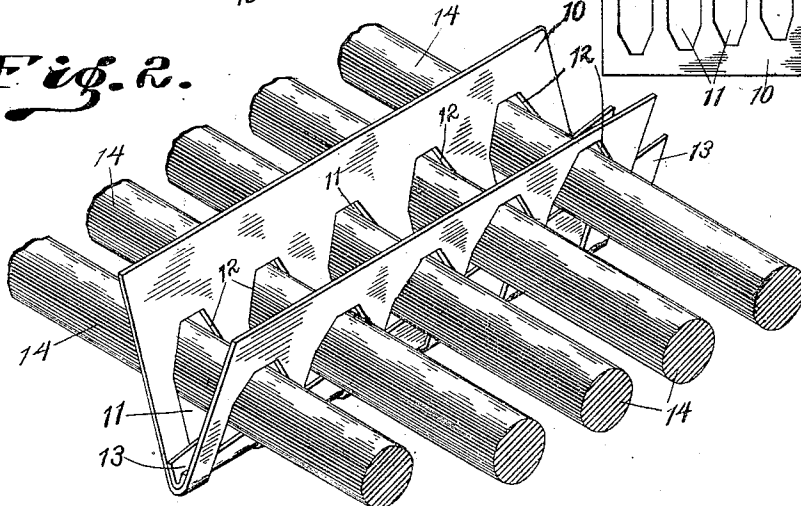
*Fig. 1.*



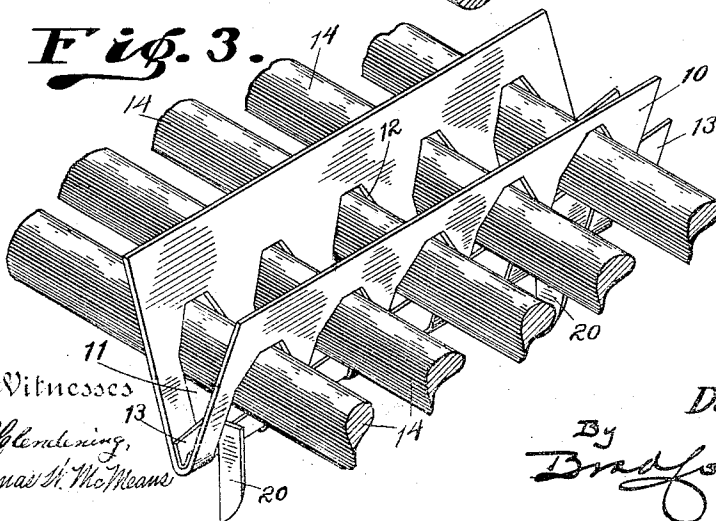
*Fig. 4.*



*Fig. 2.*



*Fig. 3.*



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# UNITED STATES PATENT OFFICE.

DANIEL B. LUTEN, OF INDIANAPOLIS, INDIANA.

CLAMP FOR CONCRETE-REINFORCING MEMBERS.

1,060,919.

Specification of Letters Patent.

Patented May 6, 1913.

Application filed June 7, 1907. Serial No. 377,692.

*To all whom it may concern:*

Be it known that I, DANIEL B. LUTEN, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Clamps for Concrete-Reinforcing Members, of which the following is a specification.

In the erection of reinforced concrete structures it is desirable that the reinforcing members be held in desired relation to each other during the embedment thereof in the concrete, and it is especially desirable that groups of reinforcing members be arranged together into reinforcing units which may be properly proportioned by skilled labor and transported as units to the point of use where they may be placed and embedded by less skilled labor.

The object of my present invention is to provide a simple, cheap, yet efficient, clamping member by means of which a plurality of reinforcing members may be properly spaced and securely connected into a group or unit, as many of said clamps being used in a unit as may be necessary, the construction being such that there will be no difficulty in properly compacting the concrete around the same.

The accompanying drawings illustrate my invention.

Figure 1 is a perspective view of my improved clamp, with a plurality of rods properly spaced and connected thereby; Fig. 2 is a similar view showing the under side; Fig. 3 a view similar to Fig. 1 showing a slightly modified form, and Fig. 4 a plan of the main sheet of the clamp preliminary to folding.

In the drawings, 10 indicates a sheet or plate of metal of desired thickness, having formed therethrough a series of parallel slots 11 tapered at their opposite ends, as at 12, and the slots gradually increasing in length, the arrangement being such that, when the plate is doubled upon itself, along a medial line, into a V, the crotch of the V will lie at angle to the plane of the ends of the slots. To cooperate with the main member of the clamp I provide a wedge 13 which may be conveniently formed from a tapered strip or plate folded upon a medial line into a V adapted to fit the V of the main plate.

In use, the reinforcing bars 14 are placed in the several slots 11 and the wedge 13

driven between said bars and the crotch of the main plate 10. As the wedge 13 is driven to position, its edges will be spread, as at 16, thus preventing accidental removal of the wedge after it has once been placed.

In placing the clamps on the reinforcing rods it is preferable that they be placed as shown in Fig. 1, with the mouth of the V uppermost, so that there will be no difficulty in having the concrete fill the V and properly embed the reinforcing bars.

In order to support the clamp, as well as the reinforcing bars, upon and above the centering, I find it convenient to provide the fingers 20 (as shown in Fig. 3) which are stamped up from the sheet and turned at an angle to the main body thereof so as to project below the crotch of the main plate. Where this is done, the ends of the fingers 20 may be sharpened and driven into the centering so they will project from the completed and hardened concrete, thus forming a member by means of which metal lath, etc. may be readily held in position.

I claim as my invention:

1. A clamping holder to space and retain reinforcing bars, comprising a sheet having a plurality of substantially parallel perforations of varying length transverse to the sheet and arranged throughout the length of the sheet and longitudinally folded upon a line transverse to the perforations, and a retaining member of varying width adapted to be projected across the perforations in the plate at the line of fold.

2. A clamp comprising a member having a plurality of integral separated fingers of gradually increasing length, with means at their ends for engaging a retaining member of gradually increasing width adapted to be projected transversely across the fingers and cooperate therewith.

3. A clamp comprising a sheet having a series of medial substantially parallel perforations therethrough of increasing length, said plate being folded upon a medial line of the lengths of the perforations, and a cooperating retaining wedge adapted to be projected across the fingers in the crotch of the plate.

4. A clamp comprising a sheet having a series of medial substantially parallel perforations therethrough of increasing length, said plate being folded upon a medial line of the lengths of the perforations, and a cooperating sheet-metal wedge doubled upon

a medial line to substantially conform to the crotch of the main plate, substantially as and for the purpose set forth.

5 5. A clamp for holding a plurality of members together, comprising a longitudinally grooved plate with receiving openings of varying depths transverse to the groove, and a cooperating wedge receivable in the  
10 the transverse openings.

6. A reinforcement for concrete comprising a plurality of members arranged so that one, arranged transversely, contacts with the others arranged longitudinally, and a  
15 folded holding member provided at the fold with a plurality of notches of varying

depths, said longitudinal members being located in said notches and the transverse member in the fold and the combined thickness of the several longitudinal members 20 with the transverse member varying to correspond with the varying depth of notches of the holding member.

In witness whereof, I have hereunto set my hand and seal at Indianapolis, Indiana, 25 this third day of June, A. D. one thousand nine hundred and seven.

DANIEL B. LUTEN. [L. S.]

Witnesses:

ARTHUR M. HOOD,  
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."