W. SHARP.

METAL REINFORCEMENT FOR BRICKWORK, CONCRETE, AND THE LIKE.

APPLICATION FILED MAY 4, 1914.

1,304,815.

Patented May 27, 1919.

Fig-1.

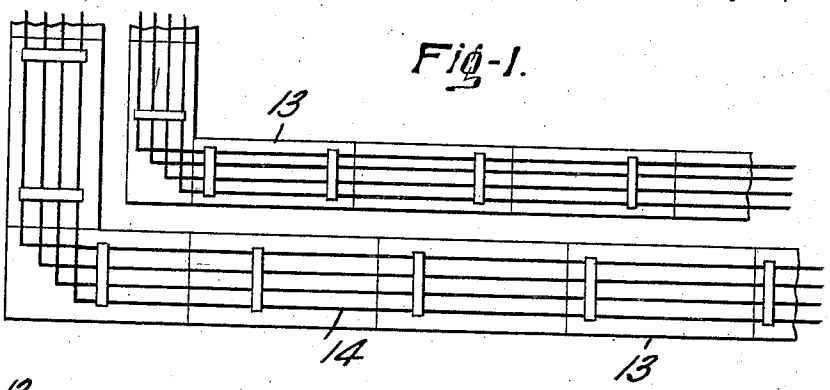


Fig-2.

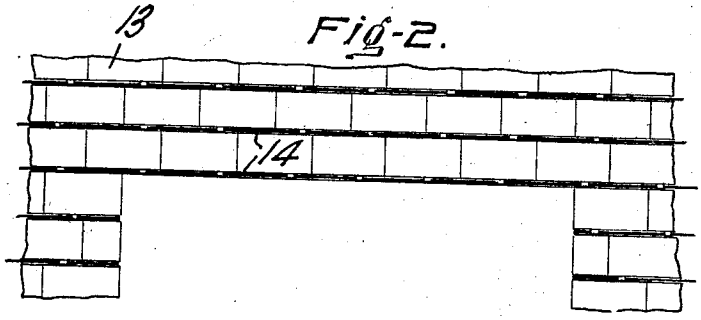


Fig-3.

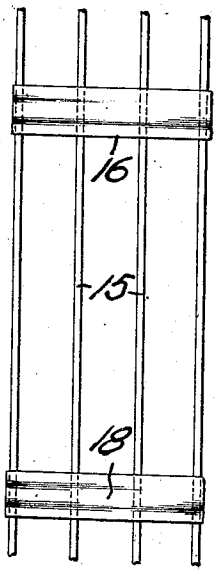


Fig-6.

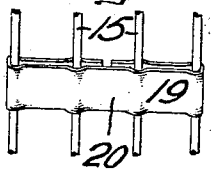


Fig-4.

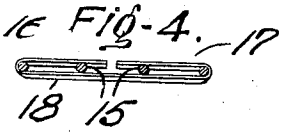


Fig-5.

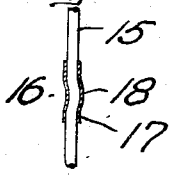
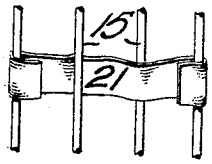


Fig-7.



Witnesses.

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UNITED STATES PATENT OFFICE.

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METAL REINFORCEMENT FOR BRICKWORK, CONCRETE, AND THE LIKE.

1,304,815. Specification of Letters Patent. Patented May 27, 1919.

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To all whom it may concern:

Be it known that I, WYLIE SHARP, a citizen of the Dominion of Canada, and resident of the city of Montreal, in the Province of Quebec and Dominion of Canada, have invented certain new and useful Improvements in Metal Reinforcements for Brickwork, Concrete, and the like, of which the following is a full, clear, and exact description.

This invention relates to improvements in reinforcing means for walls and the like built up of separate blocks such as brick, stone, tiles or the like.

The object of the invention is to provide a cheap and efficient reinforcing means which may be applied with the mortar as the wall is built.

The device consists essentially of a plurality of parallel wires designed to be arranged lengthwise of the wall, and provided at intervals with cross ties, which hold the wires in parallel relation.

In the drawings which illustrate the invention:—

Figure 1 is a plan view of a hollow wall showing the application of the reinforcing means to both the inner and outer portions thereof.

Fig. 2 is a side elevation of a wall showing the application of the reinforcing means to support the blocks over a window or door opening or the like.

Fig. 3 is a fragmentary plan view of the preferred form of reinforcement.

Fig. 4 is a cross sectional view.

Fig. 5 is a cross sectional view of the binder.

Figs. 6 and 7, are perspective views of alternative forms of binder.

Referring more particularly to the drawings, 13 designates a wall built up of bricks or stone or cement blocks or tiles. The reinforcement 14 forming the subject matter of this invention is designed to be laid between the courses of blocks in the mortar as frequently as may be necessary or desired, as clearly shown in Figs. 1 and 2. Corners may conveniently be turned by folding the reinforcement on itself, as clearly shown in Fig. 1. This reinforcement used throughout a wall will add greatly to the strength and stiffness thereof, and hold the same against bulging or sagging, and more particularly against cracking. The greatest advantages of the reinforcement are that brick walls may be reduced in thickness without loss of strength and that window and door openings will not need to be arched, or provided with separate one piece lintels and sills, as is the case when no reinforcement is used. Furthermore, a wall reinforced according to the present invention will not require continuous foundation.

The reinforcement consists preferably of a plurality of parallel wires 15 held in such relation by cross ties 16 of corrugated sheet metal. These ties may be variously formed, and may be bent over at the ends, as shown at 17, to secure same to the wires. In this form, it may be desirable to alternate the cross ties on opposite sides of the wires at intervals. When corrugated sheet metal is used, it is preferred to have only a single slight corrugation, as shown clearly at 18, Fig. 5. The strip 16 is bent around the wires in flat condition, and then corrugated so that the wires are bent to conform to the corrugations, as shown at 15ª, Fig. 5. This serves the double purpose of holding the strips against movement and stiffening the same so that the ends will remain flat.

In Fig. 6, a slight modification is shown in which the cross tie 19 may be made of flat or corrugated sheet, and the ends turned over the outside wires and formed of sufficient length to substantially meet, whereby all the longitudinal wires 15 will be supported at both sides. This cross tie may also be pressed tightly down between the wires, as shown at 20, so that the wires will be held a uniform distance apart.

In Fig. 7, a cross tie 21 of sheet metal is shown woven through the longitudinal wires, the weaving being preferably alternated in the usual manner, so that the wires are supported alternately below and above. The form of Figs. 6 and 7 will include the features of Fig. 5.

Numerous other modifications may be made in the method of connecting and holding the longitudinal wires, those shown being only a few forms which suggest themselves as the most simple and inexpensive, but it is obvious that such modifications will fall within the scope of this invention, as clearly as do the alternative forms illustrated.

Having thus described my invention, what I claim is:—

1. A reinforcing one piece clip rounded

over upon itself at each end having corrugations thereon extending longitudinally thereof.

2. Reinforcing comprising a plurality of longitudinal members and a plurality of transverse one piece holding members bent upon themselves at the ends and embracing the outer longitudinal members, said transverse members being corrugated longitudinally of themselves.

3. A device according to the preceding claim in which the longitudinal members are provided with corrugations, meshing with the corrugations of the transverse member.

In witness whereof, I have hereunto set my hand in the presence of two witnesses.

WYLIE SHARP.

Witnesses:
S. R. W. ALLEN,
G. M. MORELAND.

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