

No. 733,187.

PATENTED JULY 7, 1903.

H. E. GRANT.
METALLIC BOND FOR BRICKWORK.
APPLICATION FILED DEC. 10, 1902.

NO MODEL.

Fig. 3.

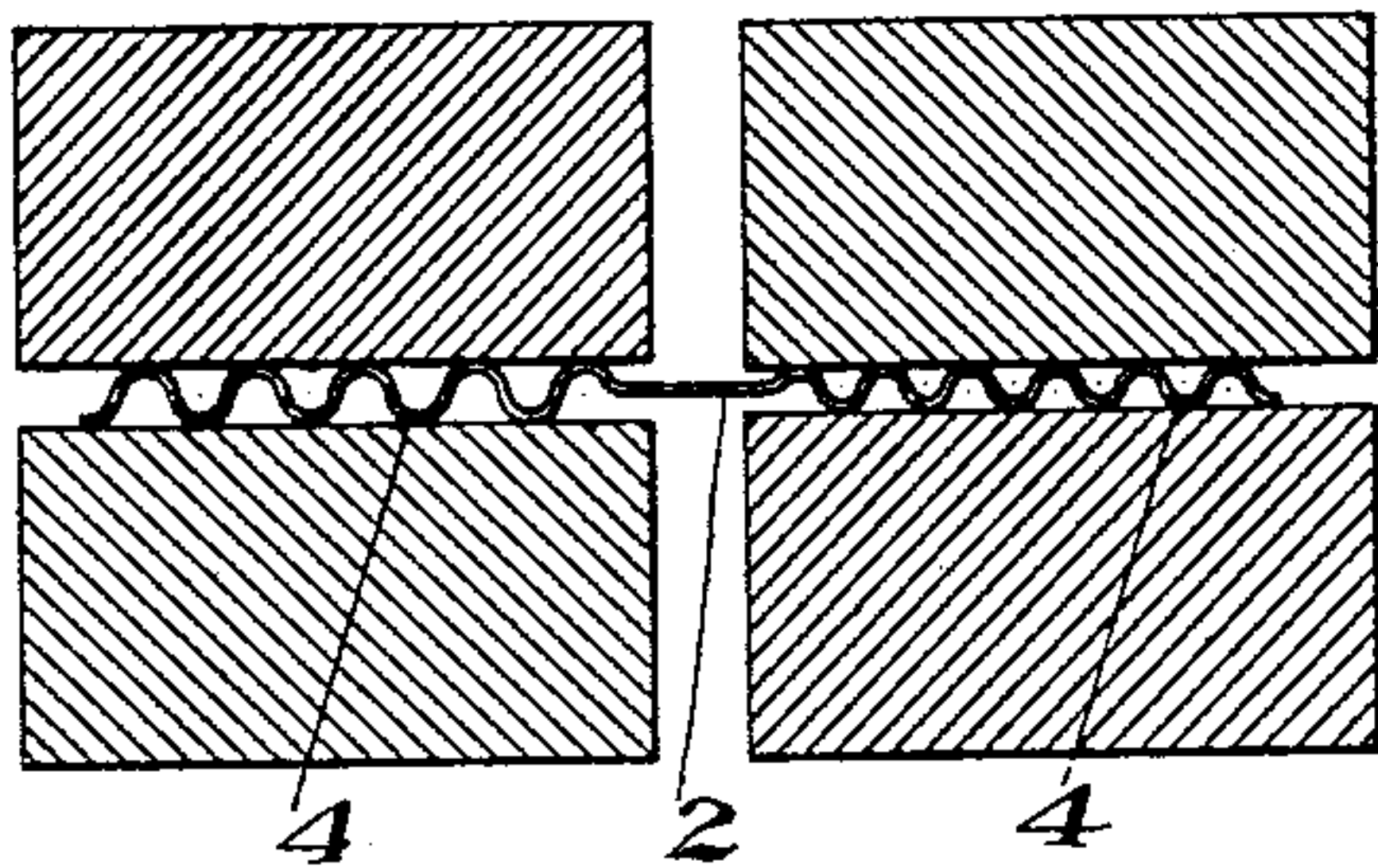


Fig. 1.

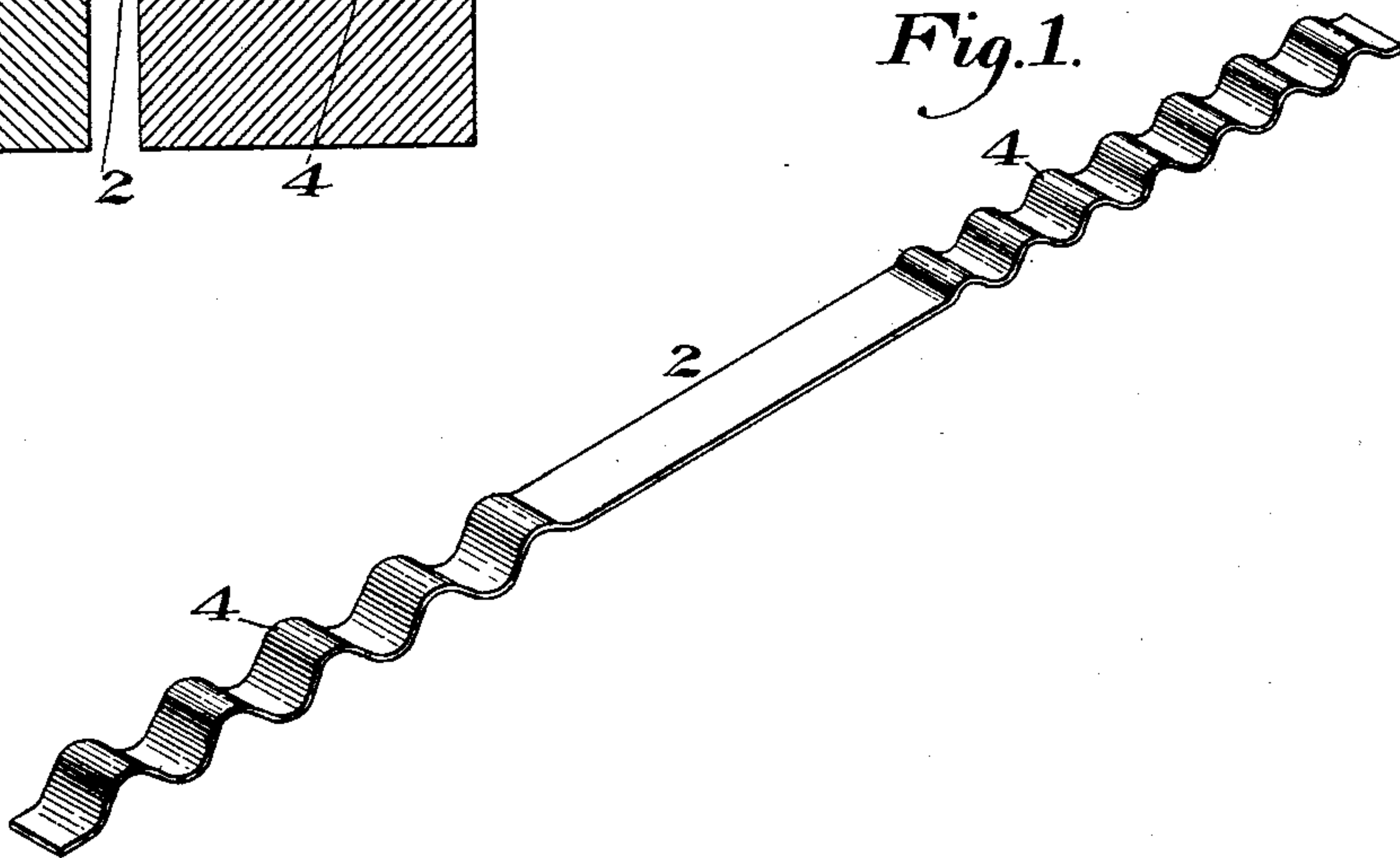


Fig. 2.

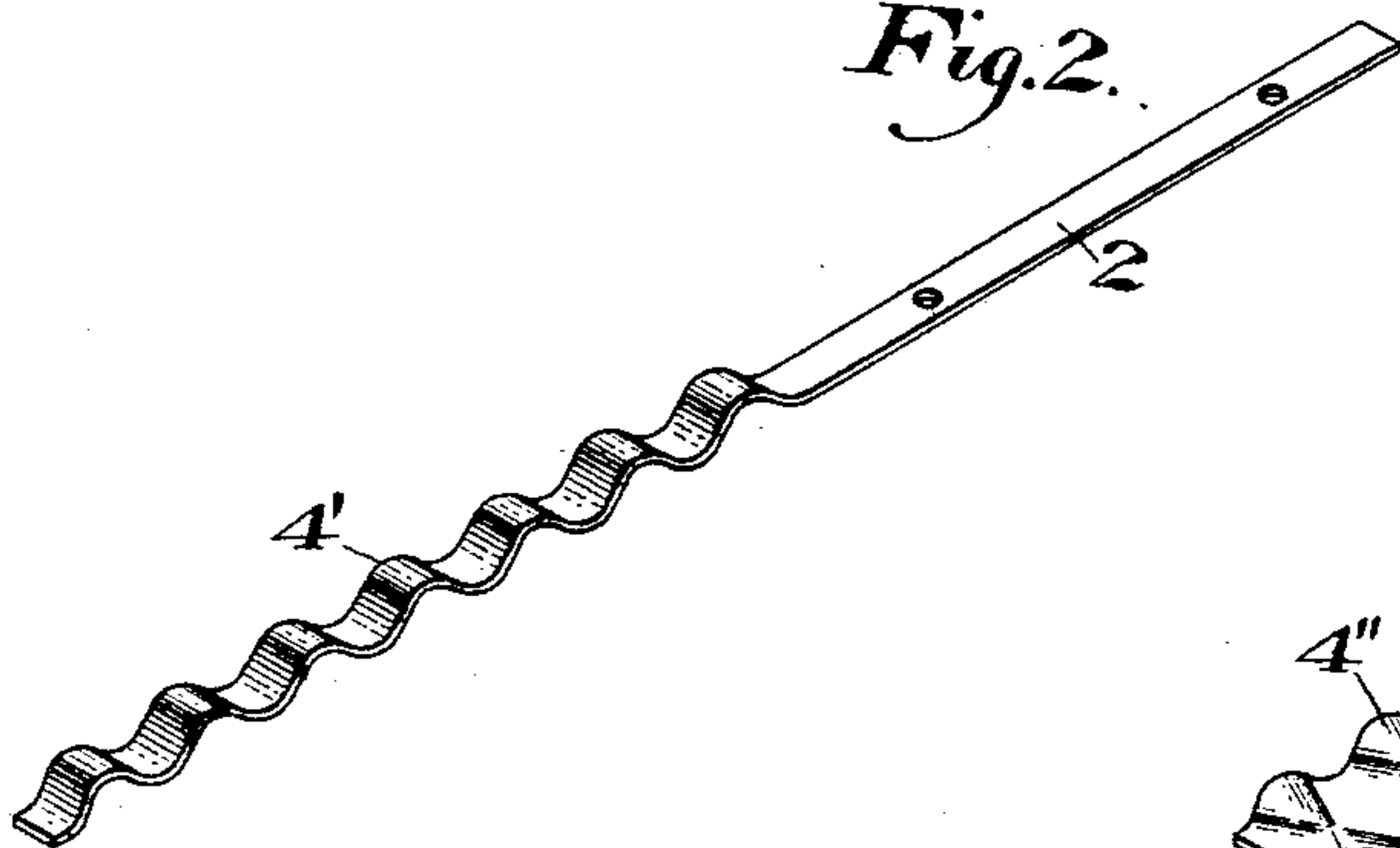


Fig. 5.

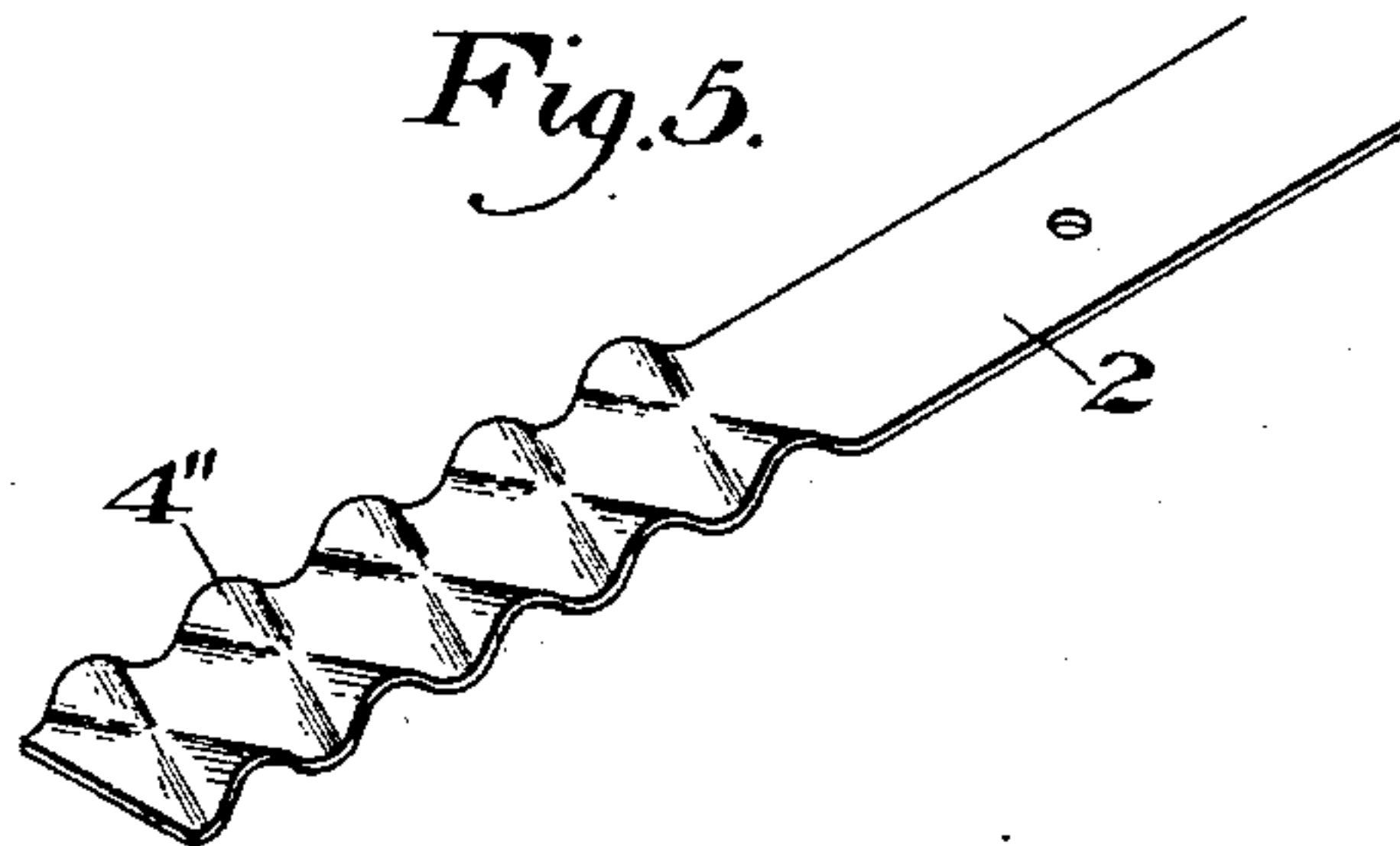
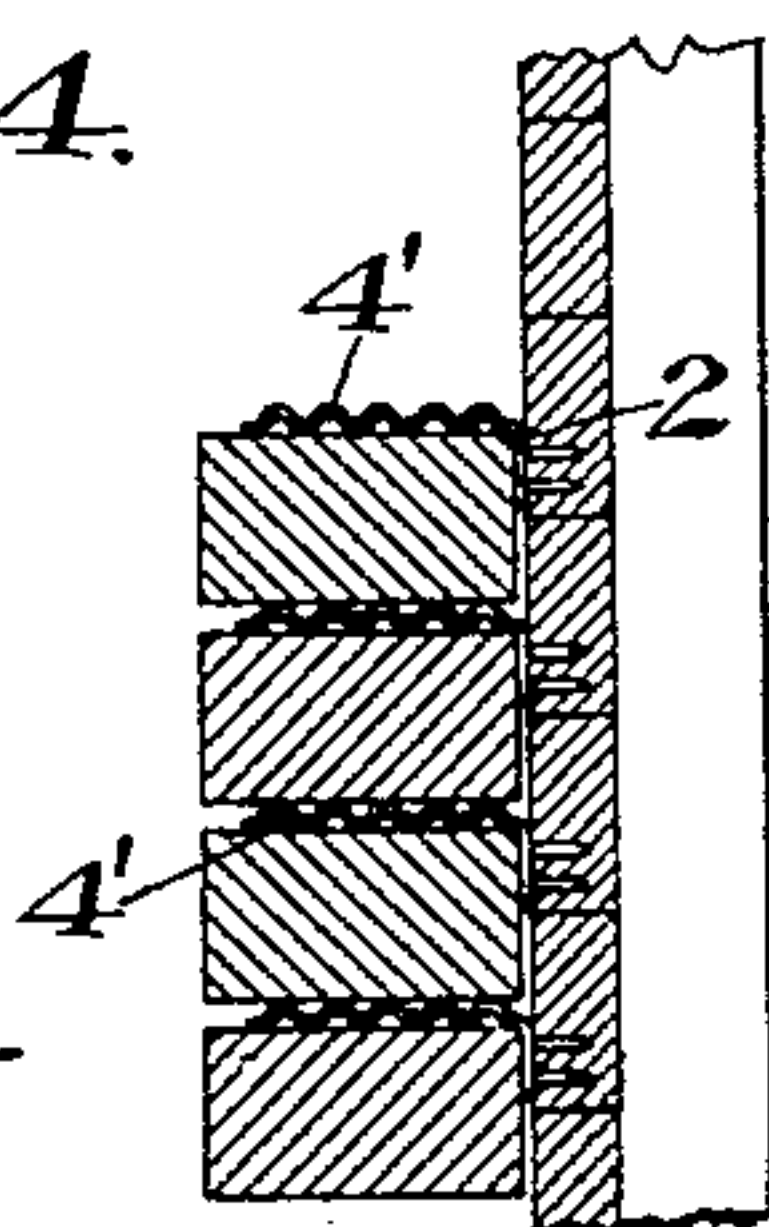


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

HORACE E. GRANT, OF PITTSBURG, PENNSYLVANIA.

METALLIC BOND FOR BRICKWORK.

SPECIFICATION forming part of Letters Patent No. 733,187, dated July 7, 1903.

Application filed December 10, 1902. Serial No. 134,629. (No model.)

To all whom it may concern:

Be it known that I, HORACE E. GRANT, of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Metallic Bond for Brickwork, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view showing one form of my improved wall-tie. Fig. 2 is a similar view showing a modified form used for brick veneering. Figs. 3 and 4 are broken vertical sections of brick walls, showing the ties of Figs. 1 and 2 in position; and Fig. 5 is a perspective view showing another form of crimps or corrugations.

My invention relates to the class of metallic bonds used for tying together the bricks of different courses or for tying brick veneering to wood sheathing, and it is designed to provide a cheap and simple form of such bond which can be made in large quantities without the use of skilled labor and can be cut from a sheet or strip and formed into shape at the same time.

To that end it consists in a bond formed of a flat metal strip with an end portion having vertically-extending crimps or corrugations bent in opposite directions.

It also consists in a bond having an intermediate substantially plain or flat portion and end portions having vertical crimps or corrugations, and, further, in the said combination wherein the crimps at one end are at a greater height than those at the other end.

It further consists in the construction and arrangement of the parts, as hereinafter more fully described, and set forth in the claims.

In the drawings, referring to the form of Figs. 1 and 3, I show a bond having an intermediate portion 2, which is substantially flat, and end portions 4 4, which are provided with reversely-bent vertically-extending crimps or corrugations arranged to fill the joints between the bricks of the two courses in the wall and become embedded in the mortar. In Fig. 3 I have shown the bond as used in a double wall having a face-brick course, and for such locations I make the crimps at one end of greater height than those at the other end of the bond, as also shown in Fig. 1.

This is of importance in cases where the joints of one course are thicker than those of the other course, as where face brick are used with a rear course of common brick, since ordinary wall-ties will not fill the joints of the rear course in such cases. In the ordinary two-course wall the crimps may of course be made the same height at both ends of the bond, the tie being otherwise the same as shown in Fig. 1.

In Figs. 2 and 4 I show another form of my bond, which is especially adapted for use in "veneered" buildings, in which a single course of bricks is used to cover the sheathing. For this location I use a bond with crimps 4, similar to those of Fig. 1; but one end portion of the tie is cut away and holes are punched in the flat portion, as shown in Fig. 2. In using this form the flat portion is nailed to the sheathing, as shown in Fig. 4, and the brick is then laid in place, the body of the bond is bent down over the top of the brick, and the mortar being applied another bond is nailed above and the next brick is laid and pressed down upon the bond.

In Fig. 5 I show another form, wherein the crimps or corrugations 4" do not extend entirely across the tie, but simply extend from each edge inwardly any desired distance. These may be either oppositely arranged, as shown, or in alternate form on the opposite sides.

In making these bonds I preferably cut them from a large sheet having a width equal to the length of one bond, or a multiple of such length, and use with the cutting-die crimping-dies which form the corrugations at the same stroke with the cutting operation. A bond is thus given with cut edges on both sides and with the vertical crimps or corrugations. When the bonds are in place, the crimped portions are embedded in the mortar, while the intermediate part, on which strain may be brought by sagging of one course, cannot elongate to any substantial extent, and hence holds the courses firmly in place.

The device may be easily made in large quantities at small expense by cutting and shaping from a sheet, as above described.

Many variations may be made in the shape, size, and length of the tie without departing from my invention.

I claim—

1. A metallic bond consisting of a flat metal strip having an end portion provided with curved crimps or corrugations bent in opposite directions and extending inwardly from its edges; substantially as described.
2. A metallic bond consisting of a flat metal strip having at both ends portions provided with curved crimps or corrugations bent in opposite directions and extending inwardly from its edges; substantially as described.
3. A metallic bond having at both ends transverse projections, the projections at one

end being of greater height than those of the other end; substantially as described.

4. A metallic bond having corrugated portions at both ends extending transversely of the plane of the tie, the crimps at one end being higher than those at the other; substantially as described.

In testimony whereof I have hereunto set my hand.

HORACE E. GRANT.

Witnesses:

L. M. REDMAN,
H. M. CORWIN.