

H. H. LAMPERT.  
WALL TIE.  
APPLICATION FILED JAN. 23, 1920.

1,366,470.

Patented Jan. 25, 1921.

Fig. 1.

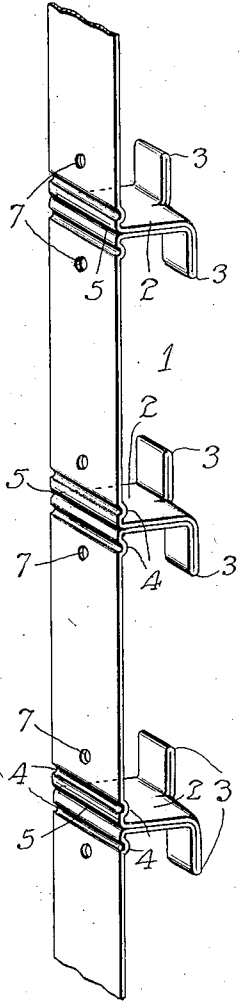


Fig. 2.

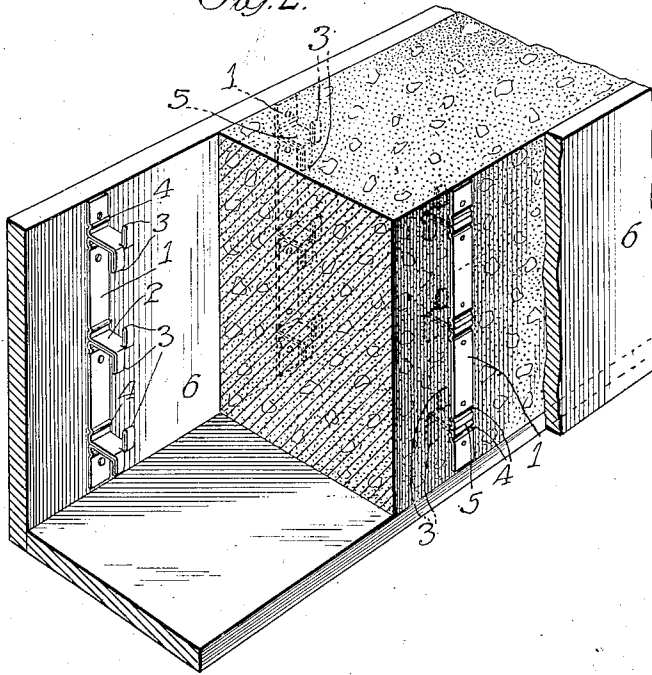


Fig. 3.

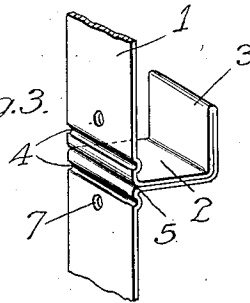
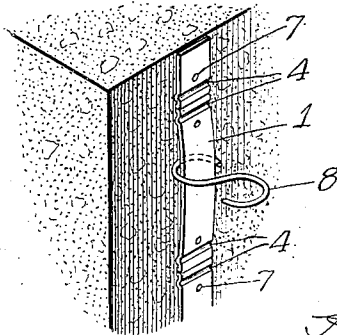


Fig. 4.



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# UNITED STATES PATENT OFFICE.

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## WALL-TIE.

1,366,470.

Specification of Letters Patent.

Patented Jan. 25, 1921.

Application filed January 23, 1920. Serial No. 353,413.

*To all whom it may concern:*

Be it known that I, HENRY H. LAMPERT, a citizen of the United States of America, and a resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Wall-Ties, of which the following is a specification.

The main objects of this invention are to provide an improved device, designated as a wall tie, for use in concrete or other building constructions in such a manner that various elements or devices intended to form a part of the completed structure, may be secured to a wall, ceiling, or other part of the structure; to provide a strip of metal having an improved arrangement of anchor parts thereon which are adapted to be embedded into the wall so as to locate the strip on the face thereof; to provide an improved formation of means in said strip which enable a practical elongation of the portions between two anchor parts in order to permit said portion to be bowed outwardly away from the face of the wall; to provide an improved wall tie which is particularly suited for bonding brick or stone veneer to concrete; and to provide a wall tie of this kind which is simple and inexpensive to manufacture by reason of the small amount of material and workmanship required to form the same.

An illustrative embodiment of this invention is shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a section of a wall tie constructed in accordance with this invention.

Fig. 2 is a perspective view of a section of a concrete mold showing the manner in which the tie members are applied to the form and their ultimate arrangement in the concrete.

Fig. 3 is a perspective view of a modified form of the wall tie.

Fig. 4 is an enlarged fragmentary perspective view of a portion of concrete and a section of a wall tie constructed in accordance with this invention, showing attached to the latter a bonding member by which some element or device entering into the building construction may be attached to such wall or the like.

In the specific embodiment herein shown, the strip 1 is of wrought metal and is doubled upon itself at intervals so as to form transversely disposed anchor parts 2 the

ends of which are bent over so as to provide wings 3 extending in the same general direction as the strip 1.

In the preferred embodiment, the anchor parts 2 are slit inwardly from the ends thereof whereby said ends may be bent over to form the wings 3 extending in opposite directions.

Corrugations 4 are formed in the strip 1 crosswise thereof between adjacent anchor parts 2 so that after the tie member has been embedded in a wall, the portions between adjacent anchor parts 2 may be practically elongated when said portions are bowed outwardly away from the face of the wall, as will more fully hereinafter appear. These corrugations are preferably located adjacent to the bends 5 which occur in doubling the strip upon itself to form the anchor parts 2.

This improved wall tie is formed by first running the strip 1 through a suitable machine or pair of dies, cutting longitudinally disposed slits therein at predetermined intervals along its length, after which the strip is run through another set of dies or another machine so that the strip is doubled upon itself at the points where said slits are formed in such a way that the slits extend inwardly from the ends of the double-over portions so that said ends may be then bent over to form the oppositely disposed wings 3 extending in the same general direction as the strip 1. The corrugations 4 may be formed either at the time the slits are cut or at the time the strip is doubled upon itself as may be found most expedient.

The tie member is particularly designed for use in connection with concrete building constructions. However, it is also suitable for use with other forms of building involving the use of plastic material in which the anchor parts 2 may be embedded so as to leave the strip exposed along the face of the wall. The most general use to which this wall tie is put is that of bonding brick or stone veneer to concrete.

The device is used by securing the face thereof against the sides 6 of the mold by driving nails or other suitable fastening means through apertures 7 formed in the strip. One of the tie members is shown in place in Fig. 2. After the concrete has been poured into a mold in which several of the wall ties have been suitably arranged, the anchor parts 2 and wings 3 become em-

bedded in the concrete with the face of the strip substantially flush with the face of the concrete.

After the mold sections have been removed, the ends of the fastening means by which the tie member was secured to the mold, may be clipped off in any suitable manner. By the use of a suitable tool driven in between the strip 1 and the concrete, portions of the strip between adjacent anchor parts 2 may be bowed out away from the face of the concrete so as to allow a bonding member or other device to be inserted around the strip. When this strain is put upon the portions of the strip, the corrugations 4 have a tendency to flatten out so that there is a practical elongation of the section of the strip 1 between the anchor parts 2. In Fig. 4, an S-shaped member 8 is shown secured in place in the aforesaid manner. If such a bonding member is used for bonding brick veneer to the face of the concrete, these bonding elements 8 are arranged so as to be placed in the mortar between the bricks.

If the wall tie is used for other purposes than bonding brick veneer, the form and manner of attachment of the elements to the strips may be varied in any way that may be found most desirable.

As will be obvious, other modifications than those herein shown may be made, and those which are herein shown may be further modified or altered, or have details thereof omitted without departing from the spirit of this invention as defined by the following claims.

I claim:

1. A wall tie of the class described, comprising a strip of metal doubled upon itself at intervals along its length so as to provide transversely disposed anchor parts, said anchor parts of equal width with said strip having the ends thereof bent over to form wings extending in the same general direction as the strip and being adapted to be embedded in a wall or the like so as to locate said strip on the face thereof.

2. A wall tie of the class described, comprising a strip of metal doubled upon itself at intervals along its length so as to provide transversely disposed anchor parts, each of said anchor parts having a slit extending inwardly from the end thereof and having the end bent over to form oppo-

sitely disposed wings extending in the same general direction as said strip, said anchor parts being adapted to be embedded in a wall or the like so as to locate said strip on the face thereof.

3. A wall tie of the class described, comprising a strip of metal, transversely disposed anchor parts formed on said strip, and corrugations formed in said strip crosswise thereof between said anchor parts, said anchor parts being adapted to be embedded in a wall or the like so as to locate said strip on the face thereof, said corrugations being adapted to permit a practical elongation of the portions of the strip between the embedded anchor parts so that such portions may be bowed outwardly from the face of the wall.

4. A wall tie of the class described, comprising a strip of metal doubled upon itself at intervals along its length so as to provide transversely disposed anchor parts, and corrugations formed in said strip crosswise thereof adjacent to the bend in said strip made in the formation of said anchor parts, said anchor parts being adapted to be embedded in a wall or the like so as to locate said strip on the face thereof, said corrugations being adapted to permit a practical elongation of portions of the strip between the anchor parts so that such portions may be bowed outwardly from the face of the wall.

5. A wall tie of the class described, comprising a strip of metal doubled upon itself at intervals along its length so as to provide transversely disposed anchor parts, each of said anchor parts having a slit extending inwardly from the end thereof and having the end bent over to form oppositely disposed wings extending in the same general direction as said strip, and corrugations formed in said strip crosswise thereof adjacent to said anchor parts, said anchor parts being adapted to be embedded in a wall or the like so as to locate said strip on the face thereof, said corrugations being adapted to permit a practical elongation of the portions of the strip between the embedded anchor parts so that such portions may be bowed outwardly from the face of the wall.

Signed at Chicago this 21 day of Jan., 1920.

HENRY H. LAMPERT,