Sept. 14, 1943. P. MENTESANA ET AL 2,329,550

WALL FORM TIE

Filed April 23, 1942

Fig. 1.

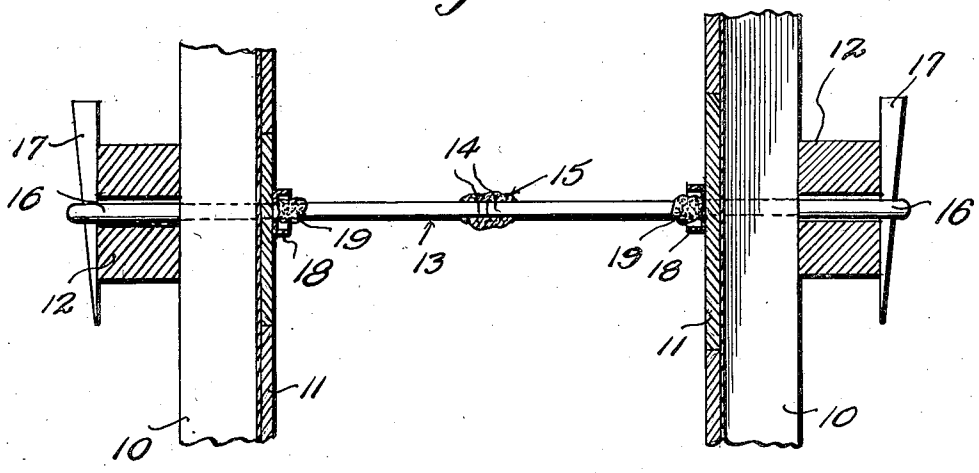


Fig. 2.

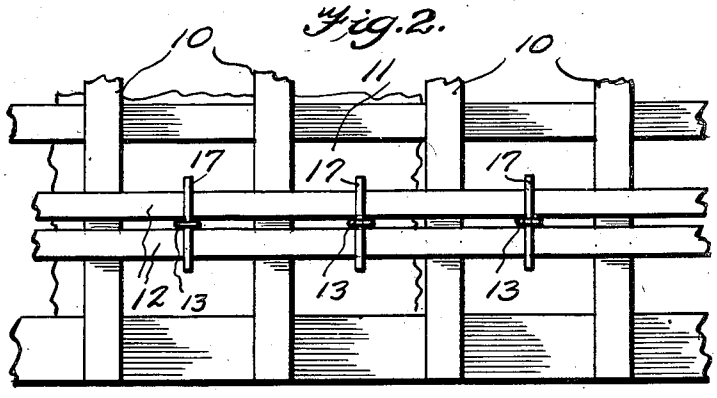


Fig. 5.

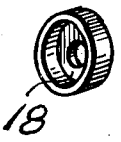


Fig. 3.

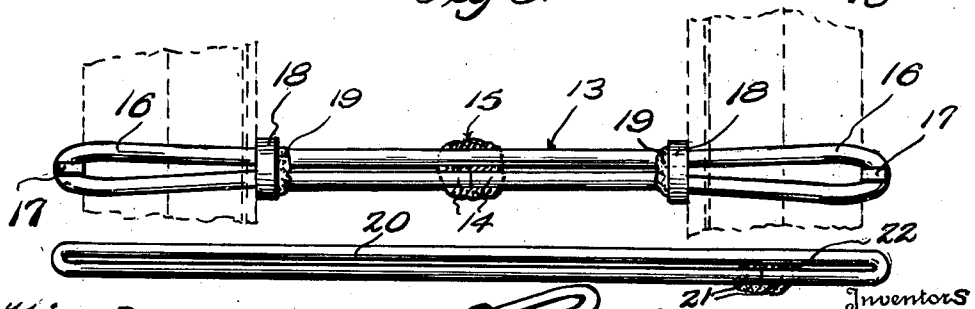


Fig. 6.

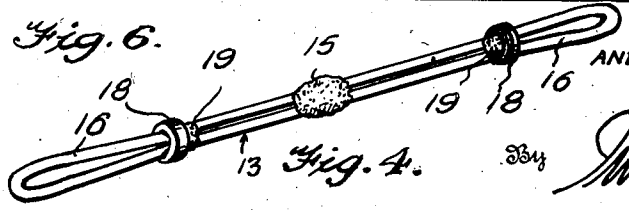


Fig. 4.

Inventors
PHILIP MENTESANA
AND ANTHONY GIORDANO

By Irving R. McCathran

Attorney

Patented Sept. 14, 1943 2,329,550

UNITED STATES PATENT OFFICE

2,329,550

WALL FORM TIE

Philip Mentesana and Anthony Giordano,
Brooklyn, N. Y.

Application April 23, 1942, Serial No. 440,244

1 Claim. (Cl. 25—131)

This invention relates to a wall tie for use in securing forms in assembled relation, when casting concrete structures and the like.

One important object of the present invention is the production of a simple and efficient wall tie which is made of a single length of suitable gauge metal rod which is bent back upon itself to provide an elongated narrow loop, the ends of the rod being welded together.

A further object of the present invention is the production of a simple and efficient wall tie comprising an elongated narrow loop, the ends of which receive tightening wedges which cooperate with spacing washers for firmly holding the spaced walls of a form in definite spaced and braced relation.

Other objects and advantages of the present invention will appear throughout the following specification and claim.

In the drawing:

Figure 1 is a side elevational view of the wall tie in position for holding the walls of a form in spaced relation, certain parts of the form being shown in section;

Figure 2 is a front elevational view of a portion of a form, showing several wall ties in position;

Figure 3 is a top plan view of one of the wall ties; the central welded joint being shown in section;

Figure 4 is a perspective view of the wall tie;

Figure 5 is a perspective view of one of the spacing washers of the wall tie;

Figure 6 is a plan view of a modified type of tie which is used for fastening columns, girders, beams, piers, etc.

By referring to the drawing, it will be seen that 10 designates the vertical studs of the form against the inner faces which abut the sheeting 11 of any suitable type known to the trade. Spaced walers 12 extend longitudinally of the wall, as shown, and at suitable intervals throughout the heighth of a wall or form.

The improved wall tie 13 may be used in any desired number to properly brace the form and this wall tie is preferably formed from a circular rod or length of material, both ends of which are bent back upon itself to provide an elongated narrow loop at each end thereof, and a pair of intermediate parallel strands. The ends of the length of material are brought together to constitute abutting ends or terminals 14 which are welded, as at 15, to provide a welded joint preferably at the center of the tie 13. The metal used in making or forming this welded joint extends around the abutting ends of one of the strands and the parallel strands of the tie intermediate the ends of the tie, as shown in detail in Figure 3, to brace the tie at its center.

The tie 13 is extended transversely of the form and the eye-portions 16 at the respective ends of the tie extend between and beyond the spaced walers 12, as shown in Figure 1. Vertically extending wedges 17 are inserted through the eye-portions or loops 16 and engage the outer faces of the walers 12 for tightening the tie 13 upon the form. Cupped washers 18 are carried by the tie 13 at properly spaced intervals, as shown in Figures 1, 3 and 4, and these washers 18 abut against the inner faces of the sheeting 11, as shown in Figure 1. The cupped side of the washer 18 in each instance preferably faces away from the sheeting 11, to present the flat face of the washer against the sheeting. A welded spot 19 is formed upon the tie 13 adjacent each washer 18 to provide an abutment for the washer 18, within the cupped side of the washer in a manner whereby the welded spot or joint 19 will be shielded by the cupped washer 18. It should be noted that the metal used in making or forming the welded spot or joint 19 also extends around the parallel strands of the tie to bind the strands together at the point of contact with the washer 18. This construction greatly reinforces and strengthens the tie intermediate the eye-portions requiring only a minimum amount of material.

It should be understood that by driving the wedges 17 downwardly through the eye-portions 16 and against the members 12, the tie 13 will be tightened upon the form, and the washers 18 will be tightened against the sheeting 11. In this way, the inner and outer portions of the form will be efficiently braced and properly held in selected spaced relation, as shown in Figure 1.

In Figure 6, there is shown a modified form of the invention in the nature of a tie which may be used for fastening columns, guiders, beams, peers, etc. In this structure the washers 18 are eliminated and the tie comprises a single-length rod 20 preferably circular in cross section bent back upon itself to provide an elongated narrow loop having its abutting terminals 21 secured by a welded joint 22.

From the foregoing description, it will be noted that a simple and economical wall tie has been produced which may be quickly and efficiently secured to a wall form for bracing

the form and also for holding the sections of the form in proper spaced relation.

It should be understood that certain detail changes in construction may be employed without departing from the spirit of the invention, so long as such changes fall within the scope of the appended claim.

Having described the invention, what is claimed as new is:

A wall tie of the class described comprising a length of material looped upon itself to provide a wedge-receiving loop at each end thereof and having a plurality of parallel strands intermediate the wedge-receiving loops, one of the strands having adjacent terminals, metal forming a welded joint rigidly connecting one of the terminals of the strands together and the metal used in forming the welded joint also passing around and rigidly connecting the parallel strands together intermediate the ends of the tie, spaced cupped washers surrounding the parallel strands adjacent the wedge-receiving loops, the cupped side of the cupped washers facing away from the wedge-receiving loops, and metal forming a welded joint surrounding the strands adjacent each washer and fitting within the cupped side of each cupped washer for rigidly holding the washer in place and for rigidly holding the strands together adjacent the cupped sides of said washers thereby reinforcing and strengthening the tie intermediate the wedge-receiving loops thereof, the washers constituting shields for the welded joint adjacent the washers.

PHILIP MENTESANA.
ANTHONY GIORDANO