July 25, 1933. T. C. SCHENK 1,919,751

WEDGE FOR FORM TIES

Original Filed May 1, 1931

Fig. 1.

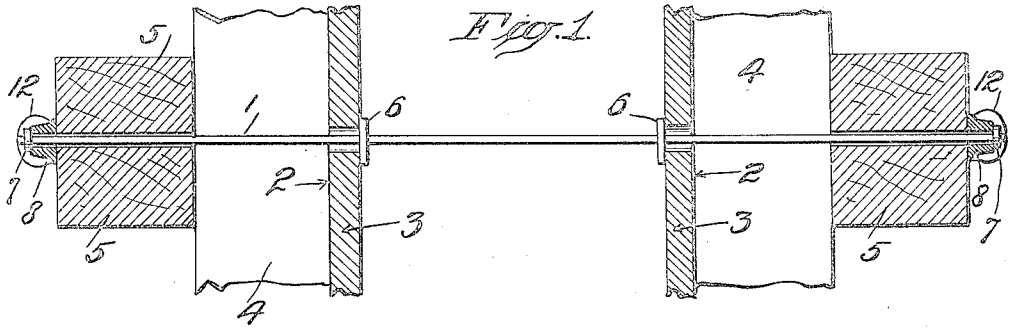


Fig. 2.

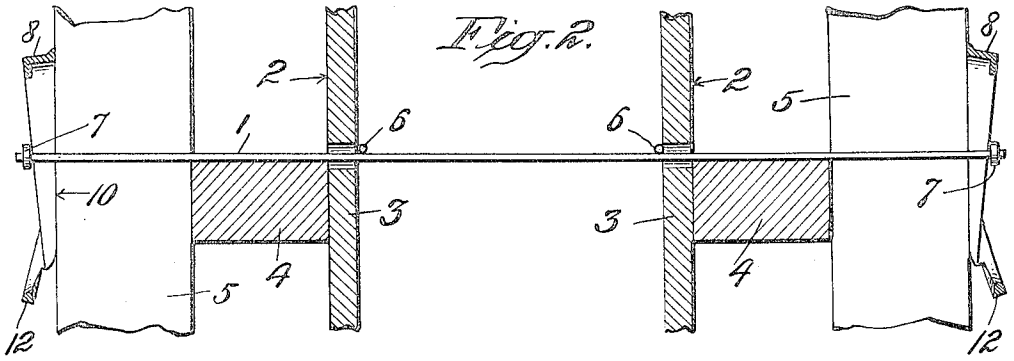


Fig. 3.

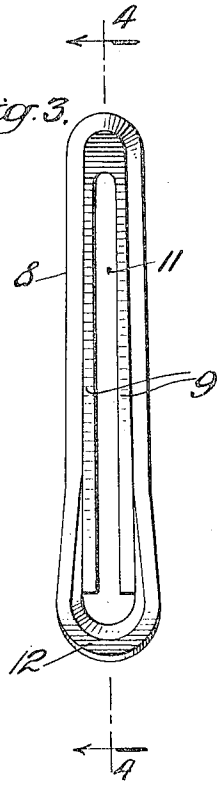
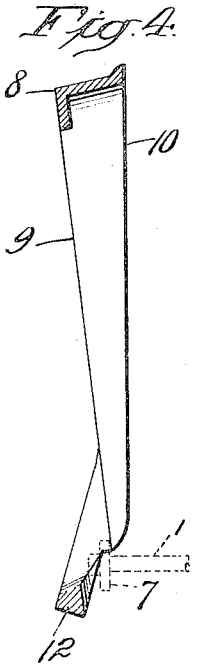


Fig. 4.



INVENTOR
JAMES C. SCHENK
BY
O. Allen Edwards
ATTORNEY

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UNITED STATES PATENT OFFICE

TAMIS C. SCHENK, OF BROOKLYN, NEW YORK, ASSIGNOR TO RICHMOND SCREW ANCHOR CO., INC., A CORPORATION OF NEW YORK

WEDGE FOR FORM TIES

Original application filed May 1, 1931, Serial No. 534,153, now Patent No. 1,857,610, dated May 10, 1932. Divided and this application filed April 9, 1932. Serial No. 605,321.

This application is a division of my earlier application for Form ties, filed May 1st, 1931, and bearing Serial No. 534,153 patented May 10, 1932, Number 1,857.610.

The object of my invention is to provide a holding wedge for a simple form tie which will be cheap to construct, easy to manipulate, and satisfactory in service, and which may be broken off well in the concrete after use, so as to leave no exposed metal, after the pointing of the wall. These and other objects are accomplished by my invention, some embodiments of which are hereinafter more particularly set forth.

For a more detailed description of my invention, reference is to be had to the accompanying drawing, forming a part hereof, in which

Figure 1 is a sectional view showing one embodiment of my invention;

Figure 2 is a similar view taken at right angles to Figure 1;

Figures 3 and 4 show a fastening wedge, Figure 4 being a sectional view taken on the line 4—4 of Figure 3.

Throughout the various views of the drawing, similar reference characters designate similar parts.

My improved form tie 1 may be used with any suitable form 2, which may consist of longitudinal boards 3 re-inforced by horizontal beams 4 and vertical beams 5, all of which are used in the conventional manner.

This tie 1 has cross bars 6 welded to the same in such a manner as to make the metal somewhat brittle where the weld occurs, so that when the bar is bent, it will fracture at this point. As long as it is straight and in tension, this brittleness is not important as it does not impair its tensile strength. At each end, the tie is provided with an enlarged head or washer 7, which is secured in place by swaging or in other suitable manner. The parts are drawn together by means of wedges 8 at each end. These wedges are carefully designed so as to be bottom heavy and not top heavy. Each wedge is composed of a casting or forging with parallel surfaces 9 adapted to engage the parts 7 with increasing thickness from the inner surfaces 10 as the top is approached, the top position being that which the wedge assumes when in use. A longitudinal slot 11 extends nearly the length of the wedge and at the bottom there is an elevated loop 12 which is so arranged and disposed that it carries more weight than the top and will clear the part 7 of a form tie when inserted as indicated in Figure 4. This part 12 is in the form of a loop as indicated, and when the wedge is put in place and moved down so that the tie extends through the slot 11 at a point above the center of gravity of the wedge, gravity will maintain the tie in a vertical position with the loop 12 down. This is most important because during the pouring and other operations incidental to the use of the forms there is some vibration and if this wedge were top heavy instead of bottom heavy, it would have a tendency to loosen, reverse, and drop. This is impossible with the structure made as above described.

The use of this modification will be readily understood. Assuming that the forms are assembled and against the bar 6, the wedges are inserted as indicated in Figure 4, and driven down or allowed to slide down to their proper position, where they will automatically lock and remain firm until the forms are taken down, and the forms are taken down by striking upwardly the loops 12 of the wedges 8 and then removing the wedges and taking down the forms, and this will leave the ends of the ties 1 projecting. As soon as the concrete is sufficiently hard, these ties may be readily broken by bending close to the bars 6, because of the effect of the welding which makes the bars brittle at these points and the ends may be thrown away and the surface finished so as to completely conceal the metal.

While I have shown and described some embodiments of my invention, it is obvious that it is not restricted thereto, but that it is broad enough to cover all structures that come within the scope of the annexed claims.

Having thus described my invention, what I claim is:

1. A bottom-heavy wedge for form ties

having spaced walls defining a slot between them, said walls having outer parallel surfaces which diverge from the inner surfaces of said walls to the top of the wedge, a loop at the bottom of the walls connecting said walls and enlarging the lower end of the slot so that the enlarged end of a form tie may be passed through the loop and the weight of said loop will tend to hold the wedge in a vertically disposed position.

2. A bottom heavy wedge for form ties having spaced parallel walls defining a slot between them, said walls having outer parallel surfaces diverging from the inner surfaces of said walls to the top of the wedge, a loop at the bottom of the walls connecting said walls and enlarging the lower end of the slot so that the end of a form tie may be passed through the loop and the weight of the loop will tend to hold the wedge in a vertically disposed position, the loop extending out diagonally from the walls of the wedge.

TAMIS C. SCHENK.