Jan. 16, 1968 B. B. HUSS, JR 3,363,373

FORM TIE

Filed Oct. 19, 1965

Fig. 1

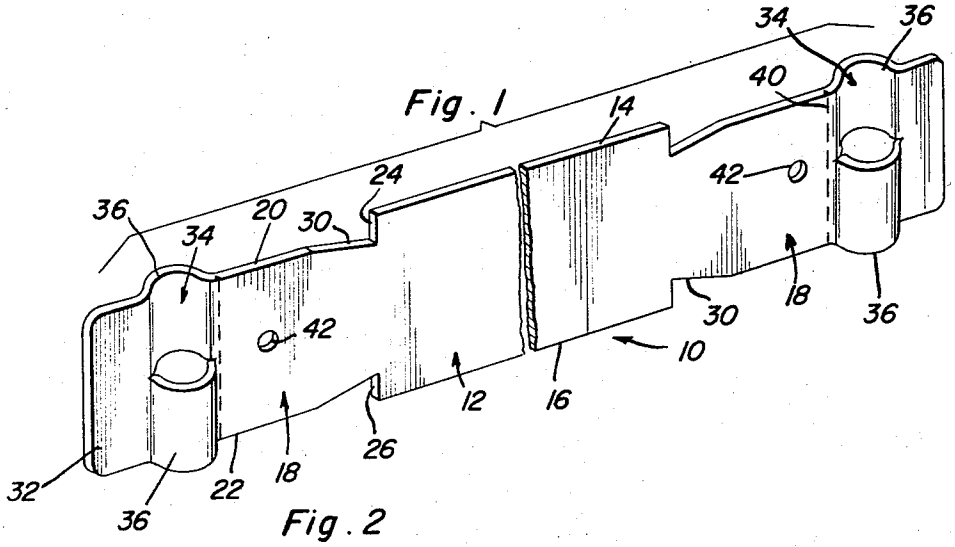



Fig. 2

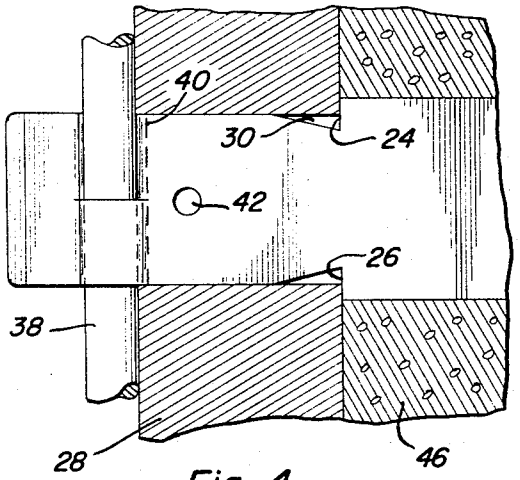



Fig. 3

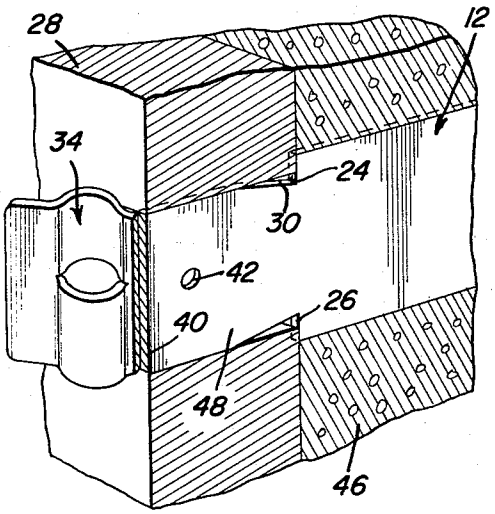
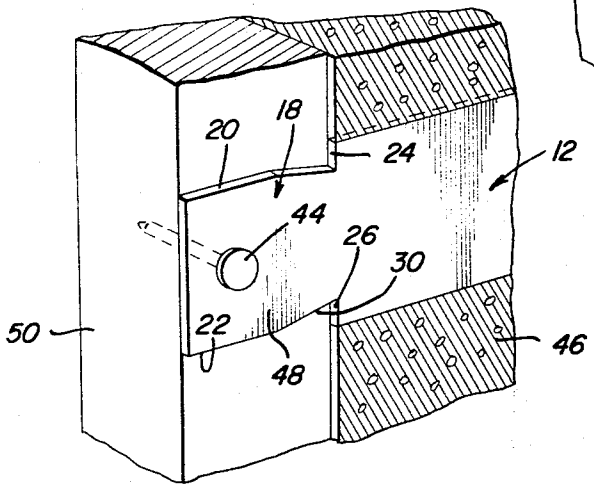



Fig. 4




Bernard B. Huss, Jr.

INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson

Attorneys

United States Patent Office 3,363,373
Patented Jan. 16, 1968



3,363,373

# FORM TIE

Bernard B. Huss, Jr., 24 Tierrecita Vallejo, Minot, N. Dak. 58701

Filed Oct. 19, 1965, Ser. No. 497,749
4 Claims. (Cl. 52—98)

## ABSTRACT OF THE DISCLOSURE

A form tie which incorporates form board positioning means in conjunction with specifically defined opposite end portions which provide, subsequent to the removal of the form boards and readily severable end pieces, lug-like projections adapted for utilization in mounting furring strips.

The instant invention generally relates to form ties, and is more particularly concerned with a form tie which, through its structural uniqueness, provides an anchoring means for furring strips subsequent to the removal of the form boards.

It is a primary object of the invention to provide a form tie which, subsequent to its use in the manner of a conventional tie in spacing and stabilizing spaced parallel form boards, also functions in the manner of an embedded anchor for furring strips or the like used in the construction of wall finishing materials, shelving, etc.

Further, it is a significant object of the instant invention to provide a form tie which is basically simple in construction and capable of economical manufacture.

In achieving the above objects, it is contemplated that the form tie of the instant invention comprise an elongated flat relatively rigid plate having a central elongated rectangular portion and two reduced end portions, each end portion defining upper and lower abutting shoulders against which the corresponding form board is positioned. Spaced outwardly from the corresponding pair of shoulders defined by each end portion, and adjacent the outer end of the end portion are a pair of oppositely directed bowed portions which define a passage for a bracing rod, spike or the like which in turn acts so as to clamp the corresponding form board against the adjoining pair of shoulders generally in the manner of a conventional form tie arrangement. Just inward of the vertical rod passage in each reduced end portion is a vertical line of weakness which, upon a lateral bending of the outer end of the corresponding end portion, will permit a relatively simple severing of this outer end so as to leave, after a removal of the corresponding form board, an outwardly extending lug-like projection. The portion forming the lug-like projection is in turn provided with a nail-receiving aperture therethrough whereby, upon a removal of the outer portion at the line of weakness, a suitable furring strip or the like can be positioned against the side of the projecting lug, or a vertical series of such lugs, and securely fastened thereto by the driving of a suitable driven fastener through the lug aperture and into the furring strip, thereby fixedly anchoring the furring strip in a relatively simple manner.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a perspective view of a form tie incorporating the features of the instant invention;

FIGURE 2 is an enlarged partial cross-sectional view illustrating the use of the form tie as a means for stabilizing form boards;

FIGURE 3 is a perspective section illustrating the manner in which the outer ends of the form ties are to be removed so as to leave furring strip anchoring lugs; and

FIGURE 4 is a perspective section illustrating the manner in which a furring strip is to be mounted on the projecting lugs.



Referring now more specifically to the drawings, reference numeral **10** is used to generally designate the form tie comprising the instant invention. This form tie consists basically of an elongated flat relatively rigid plate having an elongated rectangular central portion **12** including parallel upper and lower edges **14** and **16**. In addition to the central portion, the form tie **10** includes a pair of relatively shorter rectangular end portions **18** having generally parallel upper and lower edges **20** and **22** offset inwardly from the corresponding upper and lower edges **14** and **16** of the central section **12** so as to define upper and lower abutment shoulders **24** and **26** against which the form board or boards **28** are to engage in a manner which will be readily appreciated from FIGURES 2 and 3. In addition, it will be noted that the inner ends of the upper and lower edges **20** and **22** are notched or relieved as at **30** so as to provide an enlarged space immediately adjacent the shoulders **24** and **26**, thereby facilitating both the proper seating of the form boards **28** and avoiding any tendency for the form boards **28** to jam when being mounted or removed.

In order to complete the mounting of the form boards **28**, each of the form tie end portions **18** includes, adjacent the outer end **32** thereof, a vertical rod passage **34** defined by oppositely directed vertically aligned arcuate deformations or bowed portions **36** which receive a vertical rod or pin **38** subsequent to the mounting of the form board **28** and engageable against the outer face thereof so as to clamp and stabilize the form board **28** against the corresponding pair of shoulders **24** and **26** somewhat in the manner of a conventional wall tie arrangement.

Just inward of either one or both of the vertical passages **34** associated with the form tie **10** is a vertically directed line of weakness **40** which may be formed in any suitable manner such as through the use of grooves, perforations or the like. This line of weakness **40** is to of course not so change the tensile strength of the tie **10** so as to affect its usefulness as a conventional form tie. On the contrary, the line of weakness **40** should be such so as to require a lateral folding or bending of the outer end of the corresponding end portion **18**, as illustrated in FIGURE 3, so as to effect the breaking of the tie along the line **40**.

Located at a point between the vertically aligned shoulders **24** and **26** and the vertical line of weakness **40** is an aperture or nail hole **42**, this hole **42** being normally positioned closer to the line of weakness **40** so as to facilitate the driving of a nail, screw or the like **44** therethrough in a manner which shall be described subsequently.

After the poured wall **46** has set-up sufficiently so as to enable a removal of the form boards **28**, the outer ends of the end portions **18** are broken off along the lines of weakness **40** as illustrated in FIGURE 3, and the form boards **28** removed, thereby leaving, in each instance, a lug-like projection **48** extending from the poured wall. This lug-like projection **48**, referring now to FIGURE 4, is specifically provided so as to act as an embedded anchor for a furring strip or the like **50** positioned thereagainst and subsequently fastened thereto by a suitable driven fastener **44**, thereby providing for an extremely rigid and highly simplified manner of mounting and anchoring furring strips to poured concrete walls. It will of course be appreciated that the form ties **10** are to be vertically aligned in a manner which will enable the use of a plurality of such ties in the anchoring of a single

furring strip. Further, while the ties have generally been referred to as vertically oriented, it should of course be appreciated that a horizontal orientation of such ties can also be obviously effected within the scope of the instant invention. In addition, should the lug-like portions **48** of any of the ties **10** not be needed or necessary, it will be appreciated that the entire end portion **18** can be readily snapped from the embedded main body portion **12** along a line defined by the corresponding upper and lower shoulders **24** and **26** in light of the reduced cross-sectional area at this point resulting both from the shorter end portions **18** and the notches **30**.

From the foregoing, it should be appreciated that a highly novel form tie has been defined, this tie being specifically constructed so as to both function in the manner of a conventional tie in locating and stabilizing opposed form boards during the pouring of a concrete structure and, through the severing of a predetermined portion thereof, function in the manner of an embedded anchor for subsequently mounted furring strips or the like.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desirable to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

**1.** A form tie and furring strip anchor comprising an elongated flat rigid vertically oriented plate having parallel upper and lower edges, form board abutment means at longitudinally spaced points on said member defining a central portion of a length equal to the depth of the pour, and opposed end portions, at least one end portion including upper and lower edges respectively stepped downward and upward along the full length thereof from



corresponding upper and lower edges on the central portion so as to define the corresponding abutment means, said one end portion including form board clamp means cooperatively operable with the corresponding abutment means in outwardly spaced relation thereto for retaining a form board therebetween, a line of weakness transversely across said one end portion between the upper and lower edges thereof immediately inward of the clamp means thereon and in outwardly spaced relation to the corresponding abutment means for enabling a severing of the corresponding clamp means from said one end portion to form a strip mounting projection defined by the unsevered section between the abutment means and the line of weakness, and a fastener receiving aperture defined through said one end portion between the abutment means and the line of weakness for the reception therethrough of a furring strip retaining fastener.

**2.** The construction of claim **1** wherein the upper and lower edges of said one end portion are respectively offset downward and upward adjacent the abutment means so as to define recessed portions to facilitate a flush accommodation of the form board against the abutment means.

**3.** The construction of claim **2** wherein said clamp means cooperating with said abutment means comprises a transverse rod passage formed in said end portion between the upper and lower edges thereof by oppositely bowed vertically aligned sections of the end portion.

**4.** The construction of claim **3** wherein the second end portion of said plate constitutes a duplicate of said one end portion.

**References Cited**

UNITED STATES PATENTS

| | | | |
|---|---|---|---|
| 1,833,998 | 12/1931 | Kinninger | 52—99 |
| 1,850,462 | 3/1932 | Kinninger | 52—98 |

BOBBY R. GAY, *Primary Examiner.*

A. CALVERT, *Assistant Examiner.*