This invention relates to the art of masonry and concrete construction and more particularly to a novel tie for use in conjunction with forms for poured concrete structures.

The primary object of the present invention resides in the provision of a concrete form tie provided with novel means for breaking off the ends of the tie so as to facilitate rapid release of the forms.

The invention features the use of novel fittings of cylindrical shape which are arranged on a tie for facilitating rotation of the ends thereof so as to enable the tie to be more easily twisted and broken, thereby permitting the release of forms and the elimination of the projecting ends of the ties.

Another object of the present invention resides in the provision of a concrete form tie that employs a novel arrangement of a tool to be inserted in the end of the tie for twisting the end of the tie, which means may also serve to aid in holding a form in position.

Another feature of the invention resides in the provision of novel fittings which may be used and re-used in conjunction with wall ties in an convenient manner.

Still further objects and features of the present invention reside in the provision of a concrete form tie that is simple in construction, efficient in use, capable of being manufactured from readily available materials, and which is inexpensive to manufacture, thereby permitting wide use and distribution.

These, together with the various ancillary objects and features which will become apparent as the following description proceeds are attained by this concrete form tie, preferred embodiments being shown in the accompanying drawing by way of example only wherein:

Fig. 1 is a perspective view of a concrete form tie constructed in accordance with the concepts of the present invention with the ties thereof being broken away;

Fig. 2 is a longitudinal sectional view of the concrete form tie comprising the present invention but showing two types of fittings which may be used in conjunction with the present invention;

Fig. 3 is a vertical sectional view taken along the transverse plane of line 3–3 in Fig. 1, illustrating particularly the construction of one of the fittings;

Fig. 4 is an elevational detail view illustrating the manner in which one of the fittings is positioned on the tie;

Fig. 5 is a transverse vertical sectional view as taken along the plane of line 5–5 in Fig. 2.

With continuing reference to the accompanying drawing wherein like reference numerals designate similar parts throughout the various views, reference numeral 10 generally designates the concrete form tie comprising the present invention which is constructed on an elongated strap 12 of metal of suitable length to extend the distances between opposed forms and to extend a little bit thereafter.

The bar 12 is provided with pairs of slots 14 and 16 therein, each of which pair of slots substantially reducing the effective cross sectional area of the bar 12 at the slots.
substantially flat rectangular cross section, said bar having spaced pairs of opposed slots therein spaced from the ends of said bar substantially reducing the cross sectional dimension of said bar at said slots, and fittings secured on said bar outwardly of said slots and forming cylindrical bearings for facilitating twisting of the ends of said bar to break said bar at said slots, each of said fittings being formed of a cylinder of a smooth, slightly compressible synthetic plastic material, said cylinder having a notch of wedge shape formed therein, said cylinder receiving said bar in said notch and clampingly engaged said bar.

2. A concrete tie rod comprising an elongated bar of substantially flat rectangular cross section, said bar having spaced pairs of opposed slots therein spaced from the ends of said bar substantially reducing the cross sectional dimension of said bar at said slots, and fittings secured on said bar outwardly of said slots and forming cylindrical bearings for facilitating twisting of the ends of said bar to break said bar at said slots, said bar having spaced slits therein adjacent the respective ends of said bar, said bar having ears integrally deformed at said slits from said bar for receiving a tool to apply leverage on the ends of said bar, each of said fittings being constructed of an exceedingly smooth, slightly compressible synthetic plastic material, each of said fittings being formed of a cylinder having a notch of wedge shape therein each of said cylinders receiving said bar in said notch and clampingly engaging said bar.

References Cited in the file of this patent

UNITED STATES PATENTS

2,074,394 Hoffner May 23, 1937
2,218,099 Schenck Oct. 15, 1940
2,570,174 Kinninger Feb. 27, 1952
2,412,307 Tatsch Dec. 10, 1946
2,501,412 Schaefer Mar. 21, 1950
2,613,424 Kenney Oct. 14, 1952
2,728,127 Armstrong Dec. 27, 1955
2,838,822 Kenney et al. June 17, 1958