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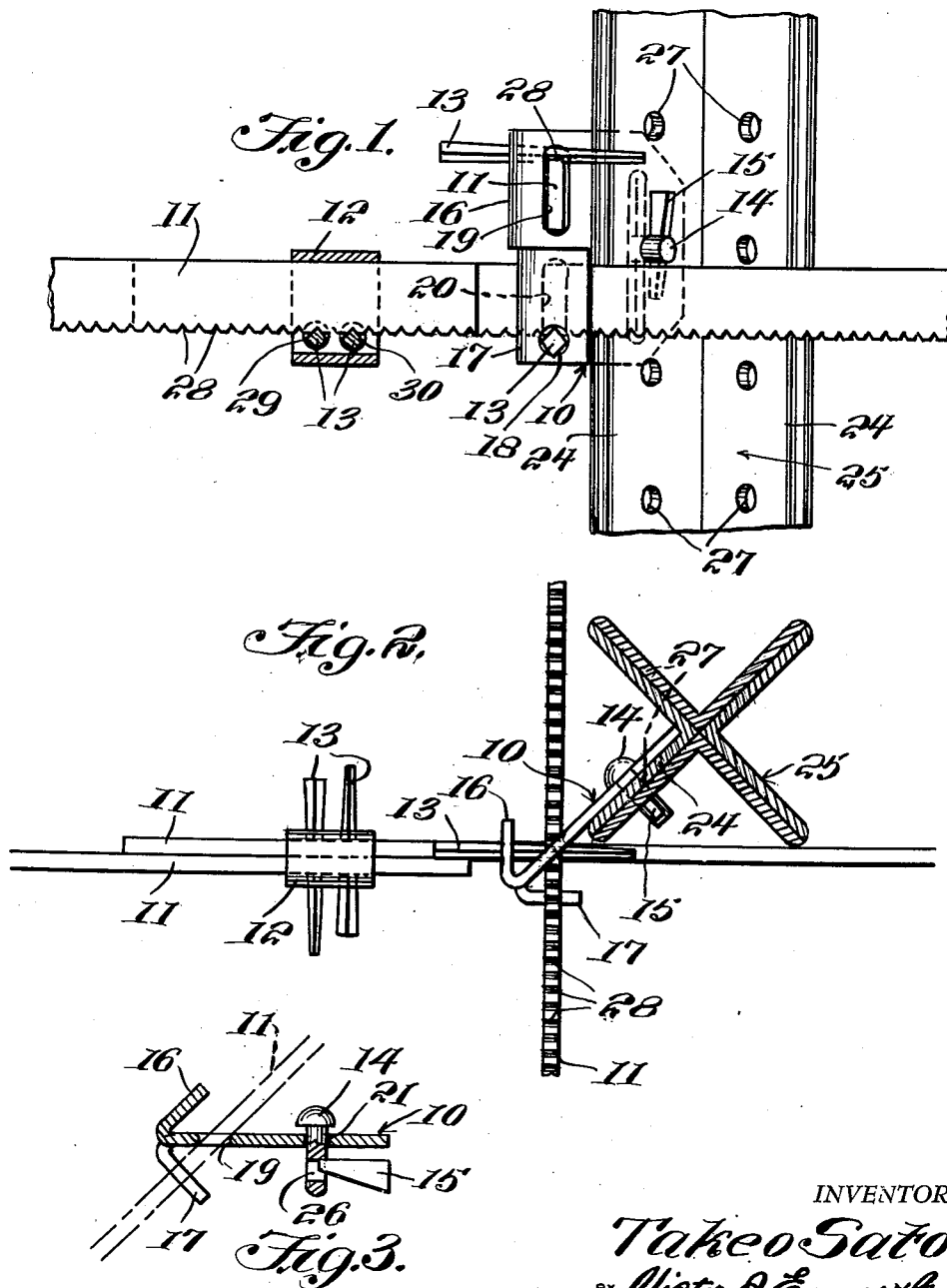
T. SATO

2,580,960

ANGLE POST TIE BAR

Filed Aug. 10, 1948

2 SHEETS—SHEET 1



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2 SHEETS—SHEET 2

Fig. 4.

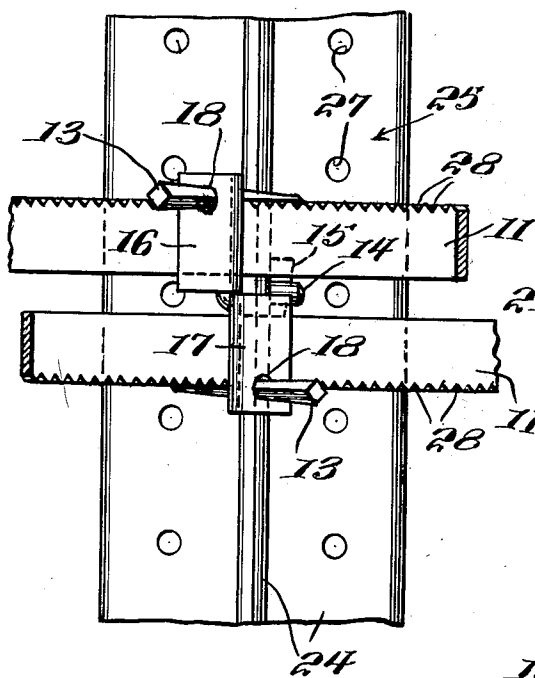


Fig. 5.

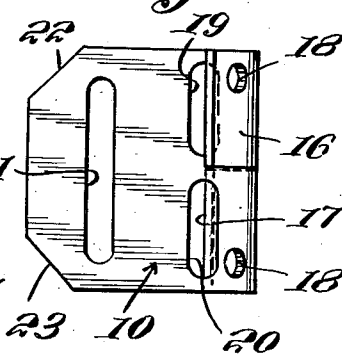


Fig. 7.

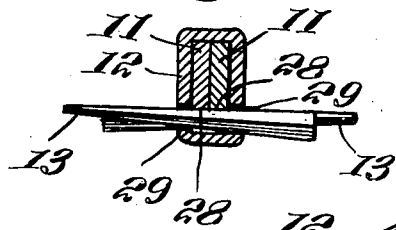


Fig. 6.

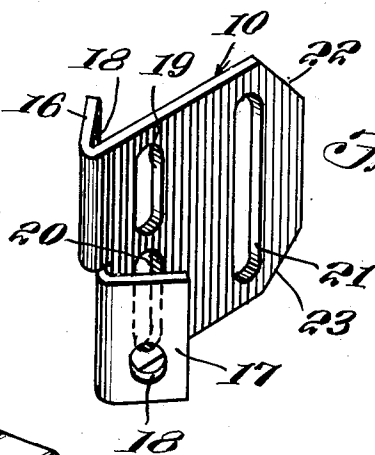
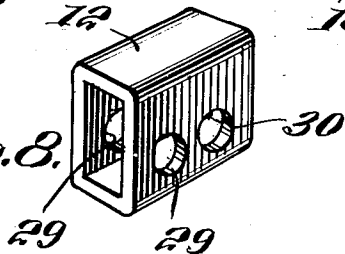


Fig. 8.



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UNITED STATES PATENT OFFICE

2,580,960

ANGLE POST TIE BAR

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Application August 10, 1948, Serial No. 43,523

1 Claim. (Cl. 189—31.5)

1 This invention relates to tie bars for supporting shoring posts of the type formed with angles, and in particular to a two-way clip for attaching the tie bars to the legs of angles, and means for locking and splicing the tie bars.

The purpose of this invention is to facilitate attaching tie bars to shoring posts where the posts are of angular formation and consequently do not have flat sides to which the ties may be nailed or bolted.

Shoring posts are usually formed of square wood beams and braces or tie bars may readily be nailed or bolted thereto, and when structural shapes are used they are provided with flat sides to which braces may be attached, but when the posts are formed with angles with the legs extending outwardly it is difficult to attach the bracing members thereto. With this thought in mind this invention contemplates a special clip adapted to be secured to an angularly positioned leg of an angle with flanges extending in opposite directions therefrom wherein the flanges are positioned so that they will be perpendicular to tie bars extending at right angles to the post. The invention also includes means for adjusting the length of the tie bars and means for locking the tie bars in the holding clips.

The object of this invention is, therefore, to provide connecting devices for facilitating connecting tie bars to adjustable angle shoring posts wherein the tie bars are connected to outstanding legs of the angles.

Another object of the invention is to provide devices for connecting tie bars to angle posts that are adapted to be used on posts of different types and sizes.

A further object of the invention is to provide tie bars for angle posts that are adjustable in length and provided with connectors and locking devices which are of a simple and economical construction.

With these and other objects and advantages in view the invention embodies toothed bars slidably held in a collar, clips with angularly positioned flanges for holding the ends of the bars, and studs with slots therein and provided with tapered keys for locking the parts in assembled relation.

Other features and advantages of the invention will appear from the following description taken in connection with the drawings, wherein:

Figure 1 is an elevational view showing the upper part of a post with tie bars secured thereto and with a collar on the tie bars shown in section.

2 Figure 2 is a sectional plan through the post showing the tie bars attached thereto.

Fig. 3 is a sectional plan through the clip for holding the tie bars to the post, taken through the plate or clip, and with the post and other parts omitted.

Figure 4 is an elevational view looking toward the corner of the post shown in Figures 1 and 2 with parts broken away.

Figure 5 is a detail showing a side elevation of the tie bar holding clip.

Figure 6 is a perspective view of the clip.

Figure 7 is a cross section through the tie bar adjusting and splicing collar.

Figure 8 is a perspective view of the adjusting and splicing collar.

Referring now to the drawings wherein like reference characters denote corresponding parts the shoring angle post tie bars and the locking and splicing means therefor includes a clip or plate 10, bars 11, a collar 12, tapered pins 13, and studs 14 with tapered keys 15.

The clips 10 are formed as illustrated in Figures 5 and 6 with one end divided forming oppositely positioned flanges 16 and 17. The flanges are provided with openings 18 for the pins 13, and slots 19 and 20 are provided through the intermediate part of the clip through which the tie bars as indicated by the dotted lines 11 in Figure 3 pass. The inner ends of the clips are provided with elongated slots 21 and the inner corners 22 and 23 are beveled as shown.

The clips 10 are positioned against the surfaces of outstanding legs 24 of angles 25 as shown in Figures 1 and 2 and are secured in place by studs 14 which have slots 26 therethrough in which the keys 15 are positioned. The studs pass through the slots 21 in the clips and bolt holes 27 in the angles.

One of the edges of the tie bars 11 is provided with teeth 28 and with a bar positioned through the slot 20 one of the pins 13 is driven into the opening 18, as illustrated in Figures 1 and 4, and the tie bar will be locked in the clip. The position of the tie bar passing through the upper opening 19 is reversed so that the teeth are on the upper edge and the opening 18 in the corresponding flange 16 is located in the upper part of the flange. The openings for the tapered pins may be located in the upper or lower parts of the flanges as may be desired.

The splicing collar 12 is rectangular-shaped in cross section, being shaped to receive two of the tie bars 11, and one side of the collar is provided with openings 29 and 30 which pass through both of the walls thereof, and tapered pins 13 are posi-

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tioned in these openings to lock the tie bars therein. The pins may be placed through opposite sides of the collar so that one binds against the other, as shown in Figure 7 to prevent the pins working loose.

With the parts arranged in this manner the clips 10 are secured to the angle posts by the studs 14 and keys 15, and the tie bars are secured in the clips by the tapered pins 13, and when it is desired to splice the bars or adjust the length thereof two bars are placed through a collar 12 and locked therein by the pins 13. To remove the tie bars it is only necessary to tap the small ends of the pins and keys.

It will be understood that modifications may be made in the design and arrangement of the parts without departing from the spirit of the invention.

What is claimed is:

In a connector for shoring, the combination which comprises angle posts having outwardly extended legs with rows of spaced openings therein, a plate positioned against the side surface of an outwardly extended leg of the posts, said plate having a vertically disposed elongated opening in the inner end registering with one of said spaced openings, means positioned in the registering opening securing said plate to said

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leg, and said plate having diagonally disposed flanges on the outer ends with the flanges divided midway of the width of the plate and with one of said flanges diagonally positioned in relation to the plate and extended inwardly from the outer end thereof on one side of the plate and other of said flanges extended diagonally inwardly on the opposite side of the plate, said flanges having pin receiving openings therethrough, and said plate having elongated openings therethrough and bars disposed in said openings, said elongated openings and said pin receiving openings in the flanges having pins disposed therein locking said bars in the elongated openings.

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