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D. VOCISANO

CLAMP FOR CONCRETE FORMS

Filed March 26, 1927

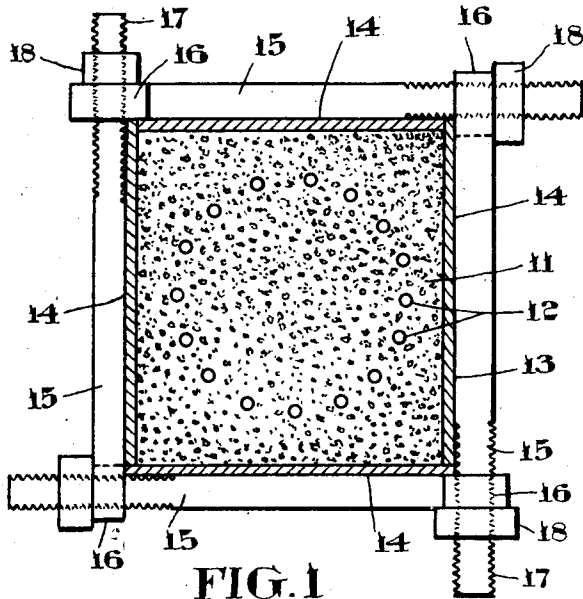


FIG. 1

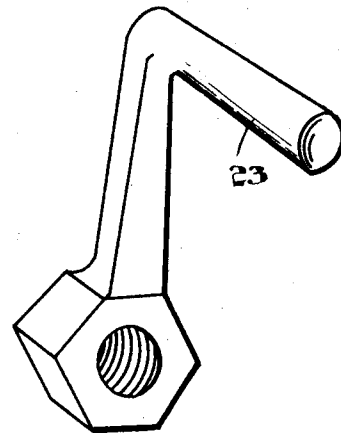


FIG. 6

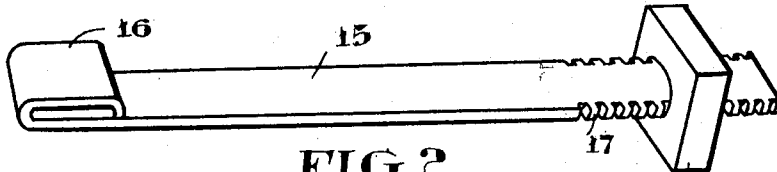


FIG. 2

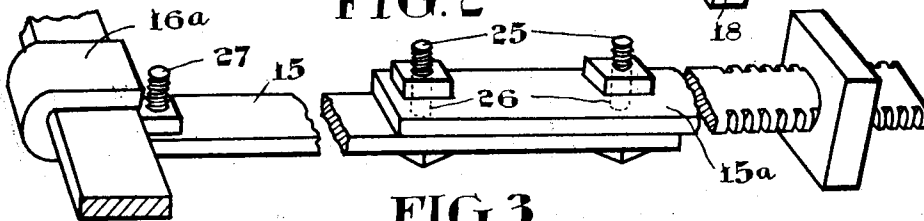


FIG. 3



FIG. 4

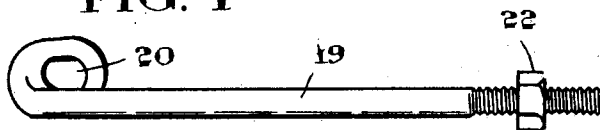


FIG. 5

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CLAMP FOR CONCRETE FORMS.

Application filed March 26, 1927, Serial No. 178,693, and in Canada October 15, 1926.

This invention relates to new and useful improvements in clamping devices for concrete moulds or columns, and the object of the invention is to provide a simple and efficient clamp for holding the sides or parts of the form of mould in place during the pouring of the concrete and also during the setting of same.

Another object is to provide clamping means which will be quickly and easily applied to the forms.

A further object is to provide a clamp for concrete moulds which will be easily adjusted to suit the size of form in use.

A still further object is to provide concrete form clamping means, which will allow an even pressure to be exerted on all sides of the mould.

A still further object is to provide an adjustable clamp which will be economically manufactured and which when dismantled will be easily and conveniently packed in comparatively very little space.

In my invention I provide a sectional clamp, each section being formed from a single bar hooked or looped at one end and threaded at the other end. In assembling the clamp a plurality of such bars are used, each being attached to two adjacent bars in such a manner that they may be easily and conveniently adjusted to suit the type of size of form in use, and also to exert an even pressure on all sides of the mould.

In the drawings which illustrate various forms of my invention;

Figure 1 is a plan view of a rectangular column mould with one type of my improved clamp fitted thereon.

Figure 2 is a perspective view of one of the bars used in the construction of the clamp shown in Figure 1.

Figure 3 is a perspective view of one modification which may be made to the end of the bar shown in Figure 2.

Figure 4 is a side elevation of a modified type of bar which may be used for clamping purposes.

Figure 5 is a perspective view of a modification which may be made to the one end of the bar shown in Figure 4.

Figure 6 is a perspective view of one type of nut which may be used on all types of clamps built according to my invention.

Referring more particularly to the draw-

ings, 11 designates a rectangular concrete column which has been reinforced by means of the bars 12. In making such columns, forms 13 are formed, said forms comprising four side members 14 nailed or otherwise secured together, and surrounding the reinforcing bars 12. To prevent bursting of the mould during the pouring or setting of the concrete, clamps are provided, said clamps being positioned outside of the mould and in such a manner that all parts of the mould are securely held together, as shown in Figure 1. A plurality of such clamps are used on each column and these clamps are spaced apart so that fine adjustments may be made to suit any conditions which may arise during the course of building such columns. In Figure 2 I have shown my preferred type of bar which is used in the type of clamp shown in Figure 1. This clamp consists of four flat bars 15, each constructed in accordance with Figure 2, that is each bar is bent at one end in the form of a loop 16 and threaded at the other end 17 to receive a nut 18. In fitting the bars together to form the clamp the threaded end of one bar is pushed through the looped end of another bar and the nuts 18 are screwed on to the threaded end to hold them in place. In the drawings I have shown the device as applied to the construction of a square column, but it will be readily seen that by adjusting the position of the nut, the clamps may be used for holding rectangular forms of oblong shape in place. In the type of bar shown in Figure 3, the end 16^a is bent in the form of a hook so that the bars may be assembled without the necessity of removing the nut during the operation of assembling the clamp. The types of bars shown in Figure 2 and Figure 3 may be used for forms of large dimensions, as the depth of the bar is placed at right angles to the longitudinal axis of the column.

In Figures 4 and 5, round bars 19 are used, the latter showing a looped or closed end 20, and the former a hooked end 21, while the remaining ends of both bars are threaded to receive a nut 22. This type of bar may be used for making clamps for holding comparatively smaller column moulds than that shown in Figure 1. The manner of assembling the round type of clamp is similar to that disclosed in the matter referring to the

assembling of the clamp shown in Figure 1. The nuts may be provided with an integral handle 23, as shown in Figure 6, so that no spanners are required during the assembling of the various members of the clamp.

For use in moulding very large columns, it may be desirable to use an extension of the standard sizes of clamping members. In Figure 3 I have shown an extension bar 15^a, secured to the bar 15 by means of bolts 25 passing through the holes 26. A bolt 27 may also be inserted adjacent the hooked end 16^a of the bar to hold the complementary clamping bar in position.

In use it will be readily seen that the clamp may be adjusted so that the pressure exerted thereby is evenly distributed over the entire surface of the mould and very fine adjustments may be made to overcome any change which may have taken place in

the mould during the pouring or partial setting of the column under construction.

The device is very simple in construction and can be economically manufactured, and provides a useful and durable clamp which may be easily packed in the minimum amount of space for transportation.

Having thus described my invention, what I claim is:—

A clamp for concrete molds comprising a plurality of bars of rectangular cross section, each bar consisting of two sections detachably secured together, one section of each bar being bent at its free end to receive and engage with the bar adjacent thereto and the other section of each bar being notched to provide an interrupted thread.

In witness whereof, I have hereunto set my hand.

DOMENICO VOCISANO.