Oct. 18, 1927. 1,645,609

C. J. E. MAXWELL

CLAMPING DEVICE FOR MOLDS

Filed April 22, 1927 2 Sheets-Sheet 1

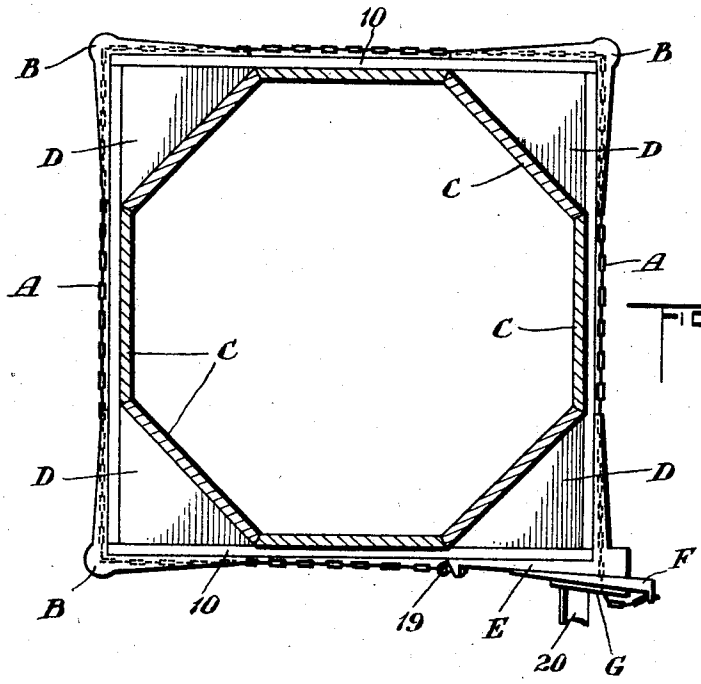


FIG. 2.

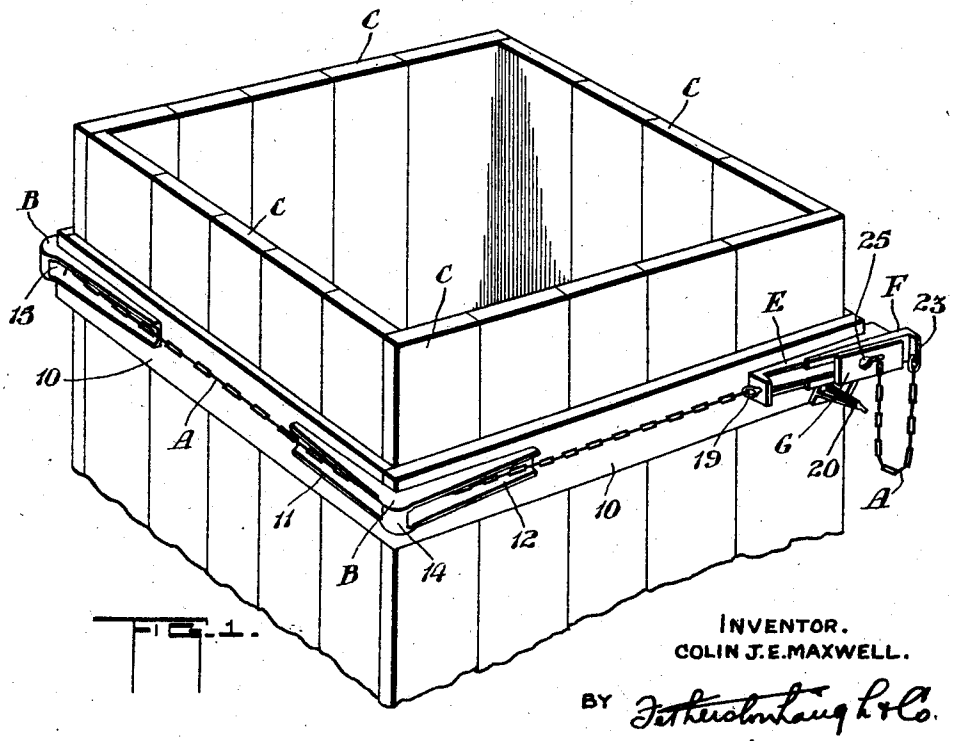


FIG. 1.

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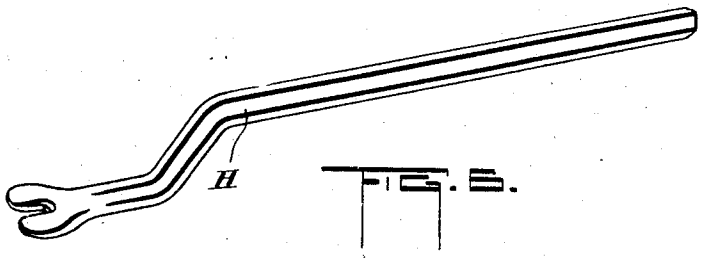


FIG. 6.

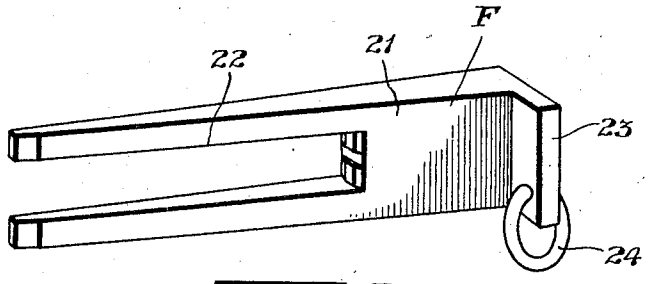


FIG. 5.

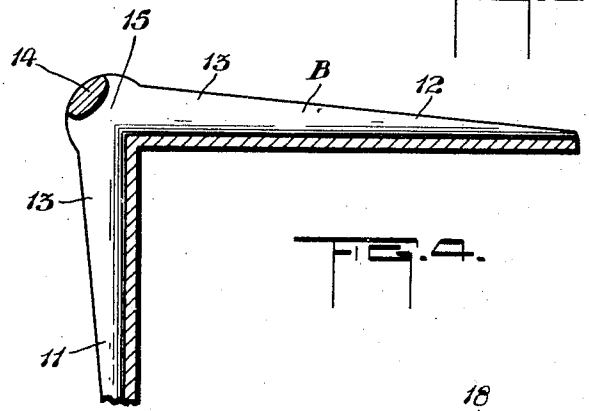


FIG. 4.

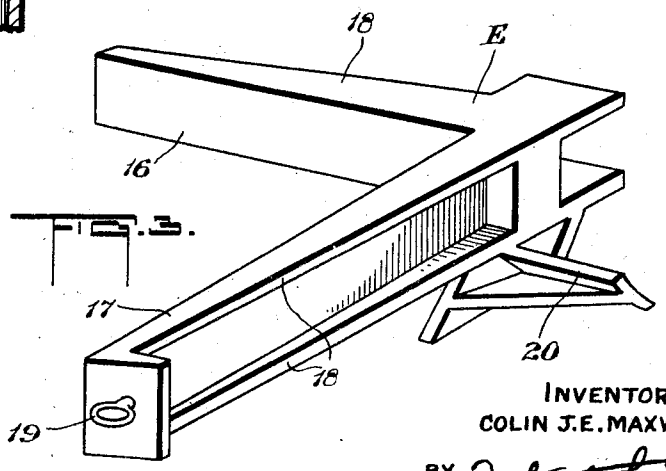


FIG. 3.

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UNITED STATES PATENT OFFICE.

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CLAMPING DEVICE FOR MOLDS.

Application filed April 22, 1927. Serial No. 185,893.

This invention relates to improvements in clamping devices for molds such as are used for holding together molds which are used for forming columns or beams of concrete, although it is capable of adaptation and use for other analogous purposes. It is of particular use in tightening and clamping a flexible tightening member extending about the mold holding members.

The objects of the invention are generally to improve and simplify the construction of the device to enable it better to perform the functions required of it, at the same time increasing its strength and ease of operation. It consists essentially of the improved construction hereinafter described in detail in the accompanying specifications and drawings.

In the drawings:

Figure 1 is a perspective view showing an embodiment of the invention applied to the tightening of a flexible member about rectangular mold members.

Figure 2 is a sectional plan showing the device applied to an octagonal mold member.

Figure 3 is a perspective detail of an anchor member.

Figure 4 is a sectional detail through one of the corner members.

Figure 5 is a perspective view of the tightening wedge.

Figure 6 is a perspective view of a tightening bar adapted for use in connection with the device as hereinafter explained.

In the drawings like characters of reference indicate corresponding parts in all of the figures.

Referring to the drawings, A indicates a flexible tightening member such as a chain, which is designed to extend around or through corner members B placed about the corner of adjacent mold members C. In Figure 1 these mold members are designed to mold a column which is rectangular in cross section, whereas in Figure 2 the column is rectangular in cross section. In the latter case auxiliary or filling blocks D may be provided which will enable the corner blocks to be fitted into position in the same way as shown in Figure 1, the corners being formed in this case by the auxiliary blocks D.

In each instance, between the corner blocks and the mold members bars or strips 10 of wood or the like may be inserted. The general arrangement of the corner blocks with the flexible tightening member as shown does not form part of the present invention, which is directed more particularly to the anchor member and the locking or tightening means therefor hereinafter described.

Each of the corner members B, of which three are shown in the drawing, is of the construction shown in detail in Figure 4 of the drawing, comprising arms 11 and 12 having their inner faces extending at right angles to each other and having ribs 13 on their outer faces, the ribs on opposite sides being connected by a cross bar 14, between which and the outside corner of the meeting bars 11 and 12 an eye 15 is formed, through which the flexible member A is passed.

The fourth corner member is of special construction and constitutes an anchor member E of the form shown in detail in Figure 3. It is provided with arms 16 and 17 whose inner faces extend at right angles to each other and whose outer faces are formed at the edges with outwardly extending ribs 18. The member 18 has an eyelet or eye 19 attached thereto or formed integral therewith. Also, a fulcrum member 20 is provided adjacent to the corner for a purpose hereinafter described.

Cooperating with the anchor member E is a wedge member F of the form shown in Figure 5. It is provided with a firm portion 21 having a central slot 22 through which the chain may be inserted and an outwardly extending lug 23 having a ring or eye 24 attached thereto and which forms a connection between the lug and the end of the flexible member A.

G indicates a locking plate formed with a central key-hole slot 25 through which the flexible member A extends.

In using the device the corner blocks B and the anchor block E are located at the corners of the mold to be held together as shown in Figures 1 and 2. The flexible member A is drawn about the corner members and tightened conveniently by means of a bar H, of the type shown in Figure 6, the bar being placed against the fulcrum member 20 during the tightening operation. When the chain A has been tightened to the desired extent the locking member G is engaged with a link of the chain, the key-hole slot being of a size to permit the entire chain to pass through the circular portion

while individual links will be locked in the narrow portion. The wedge F is then inserted between member G and anchor block E, the bar H is removed and a blow is struck with a hammer or any convenient device on the wedge member F which places a substantial strain on the chain, thereby holding all the parts together.

It will be observed that the device is composed of very few parts, and each part is a unit in itself. The device may be tightened with the use of a single bar operating on the fulcrum which is integral with the anchor member E. All of the parts are held together by the chain or flexible member. The outer corners of the member B are rounded in order to avoid accidental dislodgment of the same.

Great strength is the result of the simplicity described in the preceding paragraph; as will be noted in the design of the corner pieces and of the tightening and holding devices, which are in the very simplest forms. While the flexible tightening unit passing through all the corner blocks except the main corner block to which latter it is attached at one end, is shown in the drawings as a chain, obviously a rope or a piece of cable or other like flexible member, or either with a short section of chain attached to the loose end for fastening, or short rigid cross pieces at the loose end of the rope or cable for fastening, may serve the same purpose.

As many changes could be made in the above construction and many apparently widely different embodiments of my invention, within the scope of the claims, constructed without departing from the spirit or scope thereof, it is intended that all matter contained in the accompanying specification and drawings shall be interpreted as illustrative and not in a limiting sense.

What I claim as my invention is:

1. In a device of the character described, an anchor member having arms adapted to extend along adjacent sides of a mold, a flexible tightening member connected to the anchor member, a locking member adapted to engage with the flexible member and a wedge member adapted to be inserted between the locking member and the anchor member.

2. The device as claimed in claim 1 in which the locking member is in the form of a plate having a key-hole slot therein.

3. The device as claimed in claim 1 in which the wedge member is attached to the flexible member.

4. The device as claimed in claim 1 in which the wedge member is formed with a central slot through which the flexible member extends.

5. The device as claimed in claim 1 in which the anchor member has a fulcrum formed thereon.

6. A device of the character described comprising in combination a flexible tightening member, an anchor member connected at one end to the same having arms adapted to extend about the corner of a mold, a plurality of corner members connected to the flexible member, a locking member having a locking slot through which the flexible member extends, and a tightening wedge adapted to extend between the anchor member and the locking member.

7. The device as claimed in claim 6 in which the wedge member is attached to the flexible member.

8. The device as claimed in claim 6 in which the anchor member has a fulcrum formed thereon.

In witness whereof I have hereunto set my hand.

COLIN JOHN EDWARD MAXWELL.