L. LAMPERT.

COLUMN CLAMP.

APPLICATION FILED MAY 23, 1921.

1,433,830.

Patented Oct. 31, 1922.

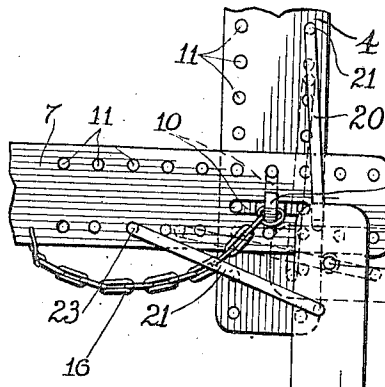


Fig. 2.

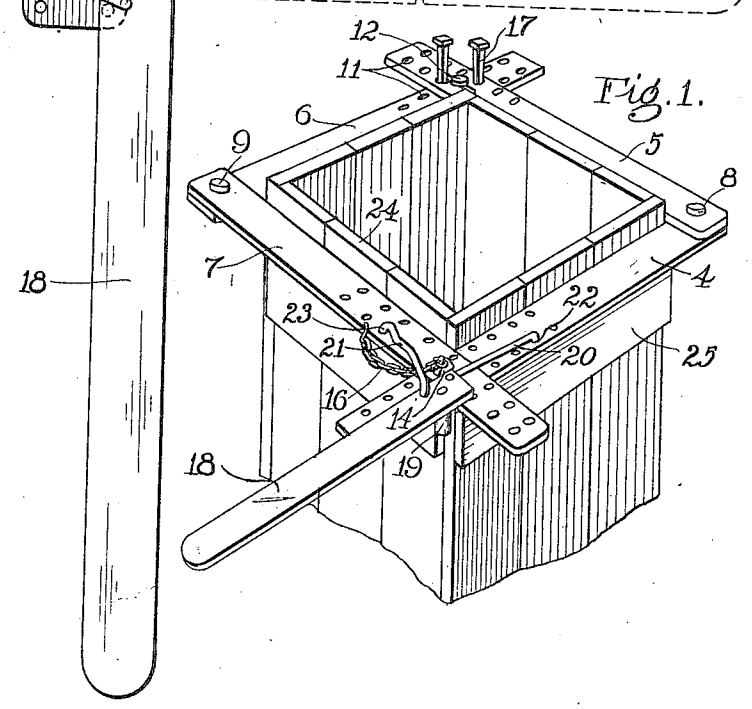


Fig. 1.

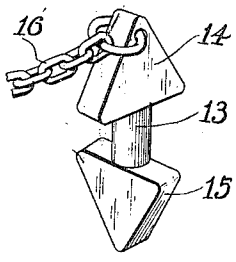


Fig. 3.

Witnesses

Arthur C. Wright

Inventor

Lydia Lampert,

By Lamm & Lamm

Attorneys

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UNITED STATES PATENT OFFICE.

LYDIA LAMPERT, OF CHICAGO, ILLINOIS.

COLUMN CLAMP.

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To all whom it may concern:

Be it known that I, LYDIA LAMPERT, a citizen of the United States of America, and a resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Column Clamps, of which the following is a specification.

The main objects of this invention are to provide an improved column clamp and tightening tool therefor; to provide an improved construction and arrangement of the arms or bars which constitute the clamp so as to dispense altogether with the use of corner brackets; to provide a tool which is adapted to draw up both of the intersecting arms simultaneously; and to provide a clamp and tool which is simple and inexpensive in construction and simple and easy to operate.

An illustrative embodiment of this invention is shown in the accompanying drawings, in which—

Fig. 1 is a perspective view of a section of a column mold having a clamp and tool embodying this invention arranged thereon.

Fig. 2 is an enlarged plan of a pair of intersecting arm ends showing the tightening tool as arranged thereon for drawing up the arms.

Fig. 3 is a perspective view of the removable pivot pin which connects the ends of two of the intersecting arms together.

In the specific embodiment of this invention as shown in the accompanying drawings, the clamp comprises four arms 4, 5, 6 and 7, the arms 4 and 5 being connected together by a pivot pin 8 to constitute one pair of arms, and the arms 6 and 7 being connected together by a pivot pin 9 to constitute a second pair of arms. One end of each of the arms is provided with a longitudinally disposed slot 10 and two rows of apertures 11, the rows being disposed along the edges of the arms on opposite sides of the slots 10. The slotted and apertured ends of the arms 5 and 6 are permanently connected together by a pin 12 extending through the intersecting slots 10 and having a head on each end whereby the pin is permanently secured in place. This pin provides for a pivot which is relatively shiftable longitudinally of both of the arms simultaneously. The slotted and apertured ends of the arms 4 and 7 are adapted to be arranged in intersecting overlapping relation and secured together by a pivot pin 13 which is provided with narrow right-angularly disposed heads 14 and 15 which enable the pin to be inserted through the slots 10 of the two arms by springing the arm ends apart slightly and inserting the head 15 through the slot in one arm and then turning the pin and inserting it through the slot in the other arm.

In order to prevent the pivot pin 13 from becoming lost or misplaced it is connected to one of the arms of the clamp by means of a chain 16.

The slotted and apertured ends of the arms are secured together in fixed relation by the use of pins or wedges 17 extending through registering apertures 11 in the respective arm ends.

The tightening tool comprises a bar 18 having a pin 19 secured in one end thereof so as to fit within the crotch formed by the overlapping intersecting ends of the arms 4 and 7 whereby said bar is fulcrumed on said clamp. Links 20 and 21 are pivoted on the end of the bar 18 adjacent to the pin 19 but eccentrically thereof, the outer ends of said links being provided with transversely disposed shoulders 22 and 23 which are adapted to engage apertures 11. The swinging of the bar 18 on its fulcrum causes the links 21 to simultaneously draw the bars 4 and 7 toward each other until apertures 11 are brought into registration to permit the insertion of pins 17.

The operation of the device is substantially as follows: The clamp is placed around the mold 24 usually so as to rest upon the cleats 25. The ends of the arms 4 and 7 are temporarily secured together by the pivot pin 13. The ends of the arms 5 and 6 are then adjusted to approximately the proper position and the pins 17 inserted in registering apertures. The tightening tool 18 is then placed in position with the bar disposed substantially along the arm 4. The shoulders 22 and 23 are inserted in suitable apertures 11 in the arms 4 and 7. The bar 18 is then swung toward the position shown in dotted outline in Fig. 2. This causes the arms 4 and 7 to be drawn toward each other until the proper apertures 11 come into registration so as to insert pins 17 for securing said arms in fixed relation.

Although but one specific embodiment of this invention has been herein shown and described, it will be understood that numerous details of the construction shown may be

altered or omitted without departing from the spirit of this invention as defined by the following claims.

I claim:

1. A clamp, comprising two pairs of arms arranged to embrace a rectangular mold, the arms of each pair being pivotally connected together at their ends, permanently arranged means pivotally securing one arm of each pair together at their respective ends in such a way that said means is shiftable longitudinally of both arms simultaneously, means other than said pivot means adapted to secure said latter-mentioned arm ends in fixed relation, the other arms of each pair being adapted to be arranged in intersecting overlapping relation, and removable means adapted to positively secure said overlapping arm ends in fixed relation.

2. A clamp, comprising two pairs of arms arranged to embrace a rectangular mold, the arms of each pair being pivotally connected together at their ends, the other ends of the arms of each pair being provided with longitudinally disposed slots and a series of apertures, a pivot pin permanently arranged in the slots of the overlapping ends of one arm of each pair so as to shiftably connect said arms together, the other arm of each pair being adapted to be arranged in intersecting overlapping relation, a removable pin adapted to be inserted in the slots in said other overlapping arm ends for holding the same together, and means other than said pins coacting with the registering apertures in said arm ends for positively securing said pairs of arms in fixed relation.

3. A clamp, comprising a plurality of arms pivotally connected together at the ends so as to embrace a rectangular mold, and having the two end arms adapted to be arranged in intersecting overlapping relation, a removable shiftable member for connecting said overlapping arm ends together, a tightening tool comprising a bar, means for fulcruming said bar on said arms, and a pair of links pivoted to said bar eccentrically of said fulcrum and adapted to have the outer ends thereof engage said respective arms whereby when said bar is shifted on said fulcrum said links will simultaneously draw said bars into position to permit them to be secured in fixed relation.

4. A clamp, comprising a plurality of arms pivotally connected together at the ends so as to embrace a rectangular mold, and having the two end arms adapted to be arranged in intersecting overlapping relation, a removable shiftable member for connecting said overlapping arm ends together, a tightening tool comprising a bar, a pin on said bar adapted to be seated in the crotch formed by the intersecting overlapping arm ends so as to provide a fulcrum, and a pair of links pivoted to said bar eccentrically of said fulcrum and adapted to have the outer ends thereof engage said respective arms whereby when said bar is shifted on said fulcrum said links will simultaneously draw said bars into position to permit them to be secured in fixed relation.

5. A clamp for use in embracing a rectangular mold and comprising a pair of intersecting overlapping arms, said arms having a series of apertures arranged lengthwise thereof whereby apertures at the intersection of said arms are adapted to register to permit the insertion of pins for securing said arms in fixed relation, a tightening tool comprising a bar, a pin on said bar adapted to be seated in the crotch of said intersecting arms and thereby form a fulcrum for said bar, and a pair of links pivoted to said bar eccentrically of said fulcrum and adapted to have the outer ends thereof engage said respective arms whereby when said bar is shifted on said fulcrum said links will simultaneously draw said bars into position to permit them to be secured in fixed relation.

Signed at Chicago this 20th day of May, 1921.

LYDIA LAMPERT.