No. 880,201. PATENTED FEB. 25, 1908.

C. DIETRICHS.

APPARATUS FOR MOLDING CONCRETE AND THE LIKE.

APPLICATION FILED NOV. 27, 1907.

Fig. 1

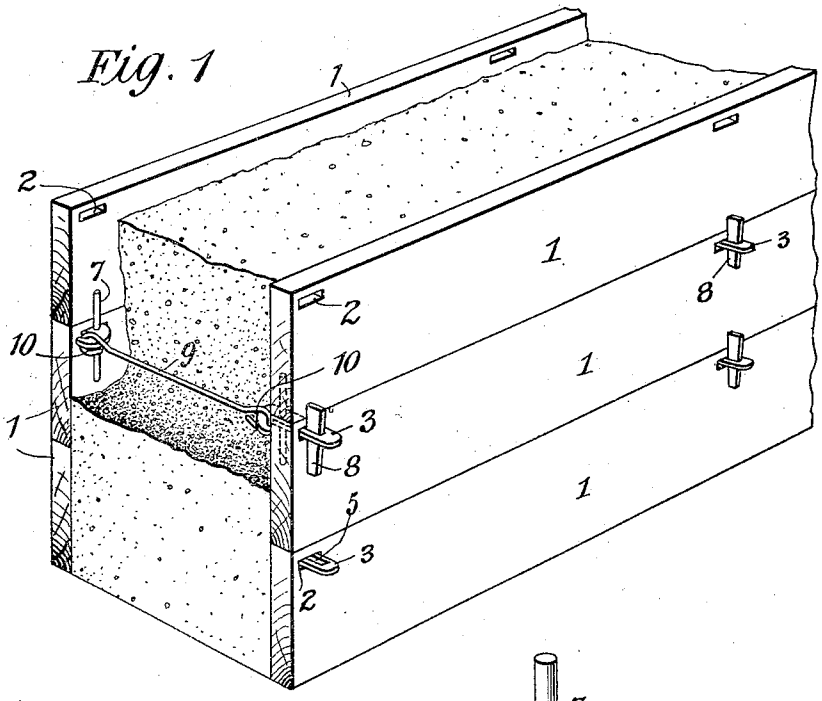


Fig. 2

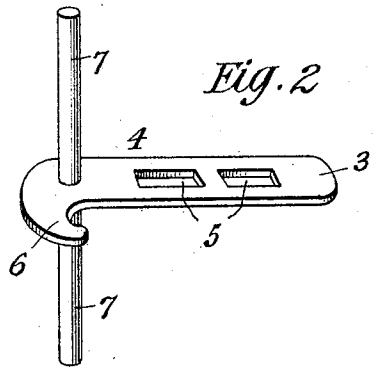
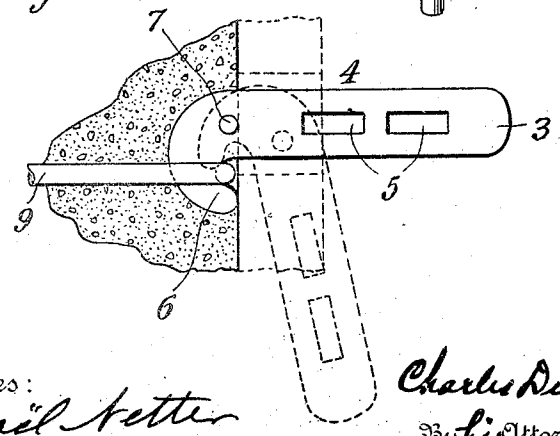


Fig. 3



Witnesses:
Raphael Netter
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Charles Dietrichs Inventor
By his Attorney Baxter Morton

UNITED STATES PATENT OFFICE.

CHARLES DIETRICHS, OF LITTLE FERRY, NEW JERSEY.

APPARATUS FOR MOLDING CONCRETE AND THE LIKE.

No. 880,201. Specification of Letters Patent. Patented Feb. 25, 1908.

Application filed November 27, 1907. Serial No. 404,065.

To all whom it may concern:

Be it known that I, CHARLES DIETRICHS, a citizen of the United States, residing in Little Ferry, county of Bergen, and State of New Jersey, have invented a new and useful Apparatus for Molding Concrete and the Like, of which the following is a specification.

This invention relates to an apparatus for molding concrete and the like, and it has for its object the provision of simple, cheap and effective means for securing in position the boards or plank commonly used to form the side members of molds for concrete walls.

The invention also contemplates the provision of securing device of such character that the side members may be quickly secured in position or released when it is desired to remove them, but also such construction that the mold members will be held securely at a proper alinement and at a fixed distance apart.

In the accompanying drawing I have illustrated the preferred form of the invention in connection with the side members of a mold for a concrete wall, corresponding parts being designated by similar characters of reference in the several views.

In the drawings Figure 1 is a perspective view of a section of wall, of portions of the side members of the mold, and of the securing device in use. Fig. 2 is a perspective view of one of the main clamp members alone. Fig. 3 is a diagram showing how the main clamp member is released from the stay rod after the setting of the concrete without injuring the surface of the concrete.

As usual in the construction of walls of concrete, the molds have the sides built up of longitudinally arranged boards or planks 1. These planks are preferably slotted adjacent to their upper or lower edges, as shown at 2. The slots or kerfs 2 are large enough to permit the passage of the shanks 3 of main clamp members 4 and extend longitudinally of the boards or plank, as shown in Fig. 1. Each main clamp member 4 comprises the shank 3, preferably slotted with a plurality of slots 5, a hook portion 6 and a pin 7 which extends through the shank in a plane perpendicular thereto near its junction with the hook portion of the clamp. The pin 7 should be heavy enough to withstand considerable strain and may be from 2 to 4 inches in length. The hook portion and shank portion of each of the main clamp members lie in the same plane and, when the securing device is in use, the free end of the hook of each of the main clamp members lies substantially in contact with the inner face of the adjacent board or plank 1.

Coöperating with the main clamp member of the securing device is a wedge 8 of suitable size to be passed through one of the slots 5 in the shank of the main clamp member and adapted to coöperate with the pin 7 in gripping the board or plank in which the main clamp member is set together with the immediately adjacent board or plank. Each pair of securing devices coöperate with a stay rod 9 provided at its ends with eyes 10 or analogous device with which the hook portion of the clamp members are adapted to engage.

When the securing devices are in use, the boards or planks forming the bottom tier of the mold are set in position, the slots or kerfs 2 being arranged opposite each other. The shanks of the main clamp members are then thrust through the kerfs or slots and the stay rods 9 secured in position between the mold members by bringing the hook portions of the main clamp members in engagement with the eyes or analogous device at the ends of the stay rod. After the hooks have been brought into engagement with the eyes of the stay rod, the wedges 8 are forced home through the proper slots in the shanks of the main clamp members, thus forcing the main clamp members into the position shown in Fig. 1 and clamping the mold members between the pins 7 and the wedges 8. When the main clamp members are brought into this position, the stay rods are securely held by the hooks, and the eyes of the stay rods are preferably completely filled by the hooks, thus insuring uniform spacing of the mold members throughout. Several tiers of mold members should be secured in position before introduction of concrete into the mold, the exact number of tiers being determined by circumstances. After a sufficient number of tiers to receive the desired amount of concrete or analogous material have been secured in position the concrete is deposited in the mold in the usual manner, and tamped down. After the concrete has been allowed to set, the mold members may be released by simply withdrawing the wedges 8 from the slots 5 in the shanks of the main clamp members. The mold members can then be drawn away from the wall, leaving the main clamp members in engagement with the eyes at the

ends of the stay rods. The main clamp members are then removed by swinging them to the position indicated in dotted lines in Fig. 3, by which movement the hooks are disengaged from the eyes of the stay rods. The removal of each clamp member from engagement with the eye of the stay rods leaves in the surface of the concrete only a small opening which may be easily filled by the application of a small quantity of moist sand and cement mixed in proper proportions to match the mixture forming the surface of the wall. At the same time all marks on the face of the wall left by the pins 7 may be obliterated together with the beads or ridges formed along the edges of the mold members.

From the foregoing description and the accompanying drawings it will be noted that the securing devices forming the present invention are of exceedingly simple construction, requiring only one set of dies to form the main clamp members; that they comprise only a very small number of parts; and that their use does not require skilled labor. Moreover, they are cheap, durable and easy to handle. As they are not permanently attached to the mold members, they are not liable to be injured and do not interfere with the handling of the mold members like ordinary plank.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In apparatus for molding concrete, a device for securing mold members comprising a main clamp member for a shank adapted to extend through the side of a mold and provided with a pin extending prependicularly through the shank and adapted to engage the inner face of the mold, said mold member being also provided with a hook portion for engagement with the extremity of a stay rod and having its shank adapted to receive a wedging member, and a wedging member adapted to coöperate with the main clamp member in clamping the mold members.

2. A securing device for the members of concrete molds comprising a main clamp member and a wedging member coöperating therewith, said main clamp member being provided at one extremity with means for engaging a stay rod and having a pin mounted perpendicularly therein and adjacent to the means for engaging the stay rod, the shank of said main clamping member being adapted to extend through the side of the mold and adapted to receive the wedging member which coöperates with the main clamping member in clamping the mold members.

In testimony whereof, I have signed my name in the presence of two witnesses.

CHARLES DIETRICHS.

Witnesses:
OTTO MUNK,
BAXTER MORTON.