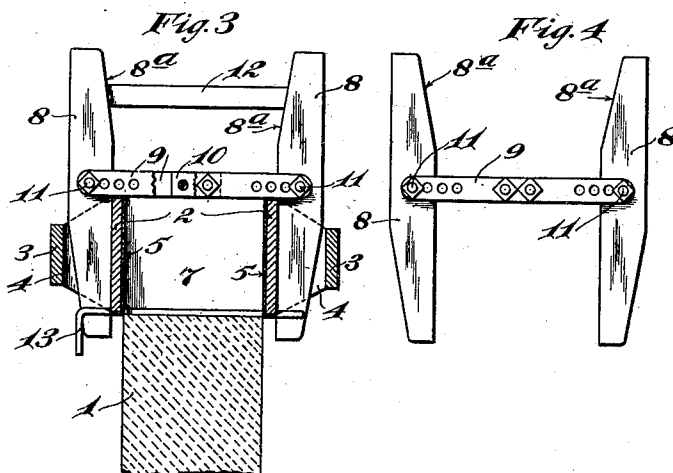
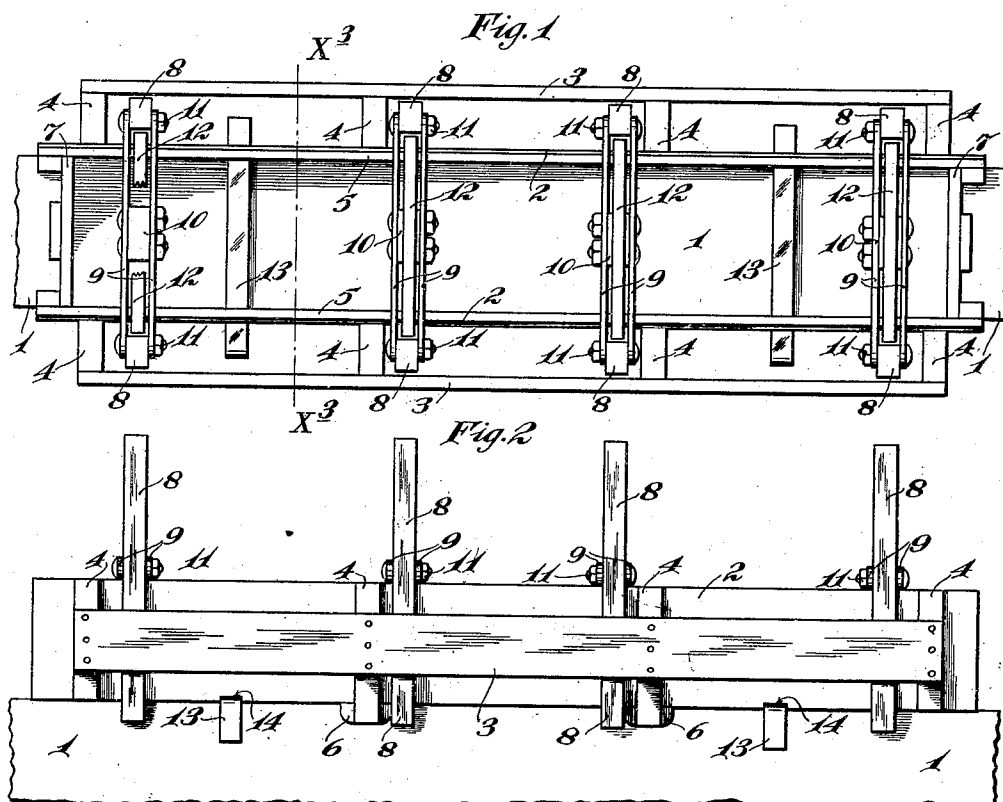


J. CARLEN.
CONCRETE MOLD.
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978,845.

Patented Dec. 20, 1910.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN CARLEN, OF HAVANA, NORTH DAKOTA.

CONCRETE-MOLD.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN CARLEN, a citizen of the United States, and residing at Havana, in the county of Sargent and State of North Dakota, have invented certain new and useful Improvements in Concrete-Molds; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to the construction of monolithic concrete walls, and has for its object to provide an improved apparatus for use in the construction thereof.

To the above ends, the invention consists of the novel devices and combinations of devices hereinafter described and defined in the claims.

In the accompanying drawings, which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings: Figure 1 is a plan view of the apparatus showing the same applied to a wall in the process of construction; Fig. 2 is a side elevation of the parts shown in Fig. 1, with portions of the wall broken away; Fig. 3 is a transverse vertical section taken on a line X³ X³ of Fig. 1; and Fig. 4 is a detail view in elevation showing one of the mold board clamping devices.

The numeral 1 indicates a concrete wall, which is in the process of construction. The numeral 2 indicates long, flat, separable mold boards which are preferably stiffened longitudinally by a sort of a trussed frame work made up of stiffening bars 3, and spacing blocks 4, rigidly connected between said parts 2 and 3, by nails, screws, bolts or other suitable devices. As shown and preferred, the inner faces of the mold boards 2 are provided with thin sheet metal facings 5. The intermediate spacing blocks 4, as shown, depend below the lower edges of the boards 2 and hold in position clamping blocks 6 that are adapted to engage the sides of the upper edge of the wall 1, as best shown in Fig. 2. The numeral 7 indicates end boards which are clamped between the ends of the mold boards 2 when the device is applied in working position.

The box or form made up of the end boards 2 and 7 is adapted to be clamped together with its lower portion alined with the upper portion of the wall section and

with the blocks 6 clamping the sides of the said wall, by a multiplicity of clamping devices, each of which clamping devices comprises a pair of clamping levers 8 intermediately pivoted to the ends of links 9. These links 9 are preferably made up of laterally spaced metal straps bolted together at their centers and spaced apart by spacing blocks 10. The straps of the said links 9 are provided at their ends with rows of perforations adapting them to be adjustably connected to the levers 8 by bolts 11, so as to adapt the device to walls of various width. The clamping levers 8 are applied to the outer surfaces of the mold boards 2 with their lower ends in the space between the said mold boards and stiffening boards 3, and the links 9 should be so adjusted that the lower inner edges of the said clamping levers will be vertical when the mold boards are tightly pressed against the end boards and against the wall. The inner surfaces of the upper ends of the clamping levers 8 are beveled at 8^a and are adapted to be forced apart and held in working positions by thrust bars 12, the ends of which are preferably slightly beveled, as best shown in Fig. 3.

As is evident, when the mold boards 2 are tightly clamped onto the end boards, they will be held against dropping movements and the clamping blocks 6, assist in this action, and furthermore, prevent the intermediate portions of the mold boards from being sprung inward by the clamping levers. To temporarily hold the mold boards in their properly raised positions, quite thin metal bars 13 are preferably laid on the upper edge of that portion of the wall which has previously been constructed and the lower edges of the said mold boards are preferably slightly notched at 14, so that the said bars 13 will not raise the lower edges of the said mold boards above the upper edge of the wall. After the mold boards have been secured to the end portions, as above stated, and clamped against the sides of the wall, but before the concrete is thrown into the mold, the bars 13 may be withdrawn from position.

This molding device or form, as is evident, is adapted to be used in forming monolithic or slushed-in concrete walls, section by section. Otherwise stated, the wall will be built up a portion at a time, and allowed to set, at least to such an extent, that it is

self-sustaining, and the mold, from time to time, is moved upward and shifted longitudinally of the wall. In starting a wall from the foundation, the mold will be set directly
5 upon the ground.

The device above described is of simple construction and may be very quickly and easily applied in working position on a wall and removed therefrom, and at the same
10 time, is highly efficient for the purposes had in view.

What I claim is:

1. A mold for use in the construction of concrete walls, comprising laterally spaced
15 mold boards, clamping levers, the lower ends of which are detachably engageable with the outer surfaces of said mold boards and capable of lateral and longitudinal adjustments with respect thereto, the inner edges of the
20 upper ends of which are beveled so that they normally diverge upward, links intermediately connecting said levers in pairs, and thrust bars insertible between the beveled upper ends of said levers for holding the

latter clamped against said mold boards, 25 substantially as described.

2. In a mold for use in the construction of concrete walls, the combination with laterally spaced mold boards, of clamping levers, the lower ends of which are detachably en- 30 gageable and longitudinally adjustable with the outer surfaces of said mold boards, links adjustably pivoted to the intermediate portions of said levers and connecting said levers in pairs, said links adapted to rest 35 upon the upper edge of said mold boards for supporting said clamping levers, and thrust bars insertible between the upper ends of said levers for holding the same clamped against said mold boards, substan- 40 tially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN CARLEN.

Witnesses:

J. H. POWERS,
O. O. IRELAND.