

UNITED STATES PATENT OFFICE.

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MOLDING-FORM FOR CONCRETE WALLS.

SPECIFICATION forming part of Letters Patent No. 778,583, dated December 27, 1904.

Application filed March 19, 1904. Serial No. 199,006.

To all whom it may concern:

Be it known that I, EDGAR BEAUMONT JARVIS, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Molding-Forms for Concrete Walls, of which the following is a specification.

My invention relates to improvements in molding-forms for concrete walls, of which an application is pending in the United States under Serial No. 194,381, dated February 19, 1904; and the object of the present invention is to improve, simplify, and cheapen the construction, so that the uprights will be not only rigid, but vertically disposed to the cross-bars in which they are supported, and hence insure of the wall being built plumb and save time in adjustment, and a further object is to avoid notching the planks and the consequent detrimental marring in the appearance of the wall; to enable any bay or length to be taken down from top to bottom, and thus avoid the necessity, as in my previous invention, of taking down one board length from end to end starting at the top; to strengthen the planks between the principals, and thus prevent bulging, and to provide further means so that the upper portion of the form may be drawn through the floor to enable the lower portion to be removed from the formed wall; and it consists, essentially, of a tubular cross-bar and uprights connected to the same by tubular brackets, one of the said uprights being formed with a rigid bracing-frame, the outer end of which is connected to a tubular bracket designed to slide on the tubular cross-bar along with the tubular bracket at the bottom of the upright, hinged straddle-brackets attached to the planks on the outside and straddling the tubular uprights, intermediate uprights and a straddle-bracket and a U-shaped bar straddling one of the uprights and extending through the straddle-bracket placed on the other upright, and extension-uprights provided with a plug fitting into the top of the uprights, the parts being otherwise arranged and constructed in detail as hereinafter more particularly explained.

Figure 1 is a perspective view showing a portion of my concrete-wall molding-form.

Fig. 2 is a cross-section. Fig. 3 is an alternative form of bracket.

In the drawings like letters of reference indicate corresponding parts in each figure.

A is the tubular cross-bar, and B B' the standards, which are supported on the tubular cross-bar by the tubular brackets *b b'*, into which the ends of the standards extend and through which the bar extends. The tubular bracket *b'* is provided with lugs B², as indicated.

C is a bracket secured to the standard B' and provided with lugs *c*.

D is a tubular bracket located on the bar A and provided with lugs *d*.

E is a strut which extends from the lugs B² of the bracket *b'* to the lugs *d* of the bracket D, such strut being securely riveted between each pair of lugs.

F is a tubular brace which is riveted between the lugs *c* of the bracket C and the lugs *d* of the bracket D.

It will thus be seen that the standard B', together with the strut E and brace F, form a rigid frame, which is longitudinally adjustable on the tubular bar A, as indicated.

G represents hinged straddle-brackets one end of which is secured to the plank H and the opposite end of which is slotted and extends over a staple *h*, extending outwardly from the plank H, such end being securely held in position by the pin *g*.

B² B³ are extensions of the uprights B and B', respectively, such extensions being provided with internal plugs *b²*, secured within the same and designed to extend down into the top of the tubular standards. The tops of the extensions are connected together by the adjustable cross-bar I referred to in my former application.

J represents supplemental uprights located intermediate of the main uprights or principals and having upward extensions J' formed similar to the extensions B² and B³ and connected by a cross-bar J².

K represents straddle-bars U-shaped in form and extending through slots in the plank, the inner end of each bar K straddling one outer tube and the opposite end being held in place by pins *k*, located to the outside of the strad-

dle-brackets Z' , which have slots Z'' , through which the ends of the bars K extend.

The standards J , held together as hereinbefore described, serve to stiffen their principals and prevent the planks bulging out, and I am thereby enabled to make a wall of the same thickness throughout between the principals. It will also be seen that the straddle-brackets G may be readily unhinged, and any plank either at the top, intermediate, or bottom may be readily removed without disturbing the others, as such brackets may be clamped sufficiently tight to hold any board rigidly in position on the standards. By means of the brackets G it will also be seen that the notching of the planks as required in my former construction is entirely avoided, and thereby the surface of the wall will be made without any mark or blemish. Besides this the construction I have now described is much cheaper than I have heretofore used and very much more easily put up and taken down.

It will be noticed by making the extensions B^2 and B^3 that when such extensions in building walls extend through the joists they may be readily pulled up through the floor when the wall is finished and the tubular portions B and B' drawn laterally each way off the ends of the tubular bar A , and thereby the form readily separated preparatory to replacing at the end of the completed portion of the wall previous to molding another length of the wall.

Although I show the bracket G hinged at one side, it will of course be understood that the bracket may be made rigid from end to end and staples and pins provided at each end.

In Fig. 3 I show an alternative form of bracket in which the bracket G' has end ribs g' , which fit within grooved retaining-plates secured to the plank.

What I claim as my invention is—

1. The combination with the tubular cross-bar, of a standard-frame comprising the standard, a socket-bracket carrying the same through which the tubular bar extends, an upper bracket secured to the tubular standard, a brace connected to said upper bracket and a strut connected to said socket-bracket, said brace and strut being connected at their outer ends, substantially as described.

2. The combination with the tubular bar

and standards connected by a cross-bar at the top, of the socket-brackets located on the tubular cross-bar, the brackets secured to the standard and the brace connecting the bracket on the standard to the outer bracket on the cross-bar and the strut connecting the outer bracket of the cross-bar to the bracket at the bottom of the standard as and for the purpose specified.

3. The combination with the standards suitably supported, of the planks forming the side of the molding-form and the hinged straddle-bracket rigidly secured on one side of the standard to the plank and adjustably secured at the opposite side as and for the purpose specified.

4. The combination with the standards suitably supported, of the plank forming the side of the molding-form and the hinged straddle-bracket rigidly secured on one side of the standard to the plank and provided with a slotted opposite end, a staple secured to the plank and extending through the slot and a pin extending through the staple as and for the purpose specified.

5. The combination with the principals suitably supported and intermediate uprights of a U-shaped connecting-bar for said intermediate uprights, a bracket slidably mounted on said U-shaped bar and pins extending through holes therein in proximity to said bracket, substantially as described.

6. The combination with the tubular standards or uprights and the support for the same, of the upper extensions for the uprights and means for adjustably connecting them to the upright as and for the purpose specified.

7. The combination with the tubular standards or uprights and the support for the same, of the upper extensions for the uprights formed with plugs, which extend into the upper ends of the uprights as and for the purpose specified.

8. The combination with the standards suitably supported, of the plank forming the side of the molding-form and a straddle-bracket straddling each standard and means for securing the ends of the straddle-bracket to the plank as and for the purpose specified.

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Witnesses:

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