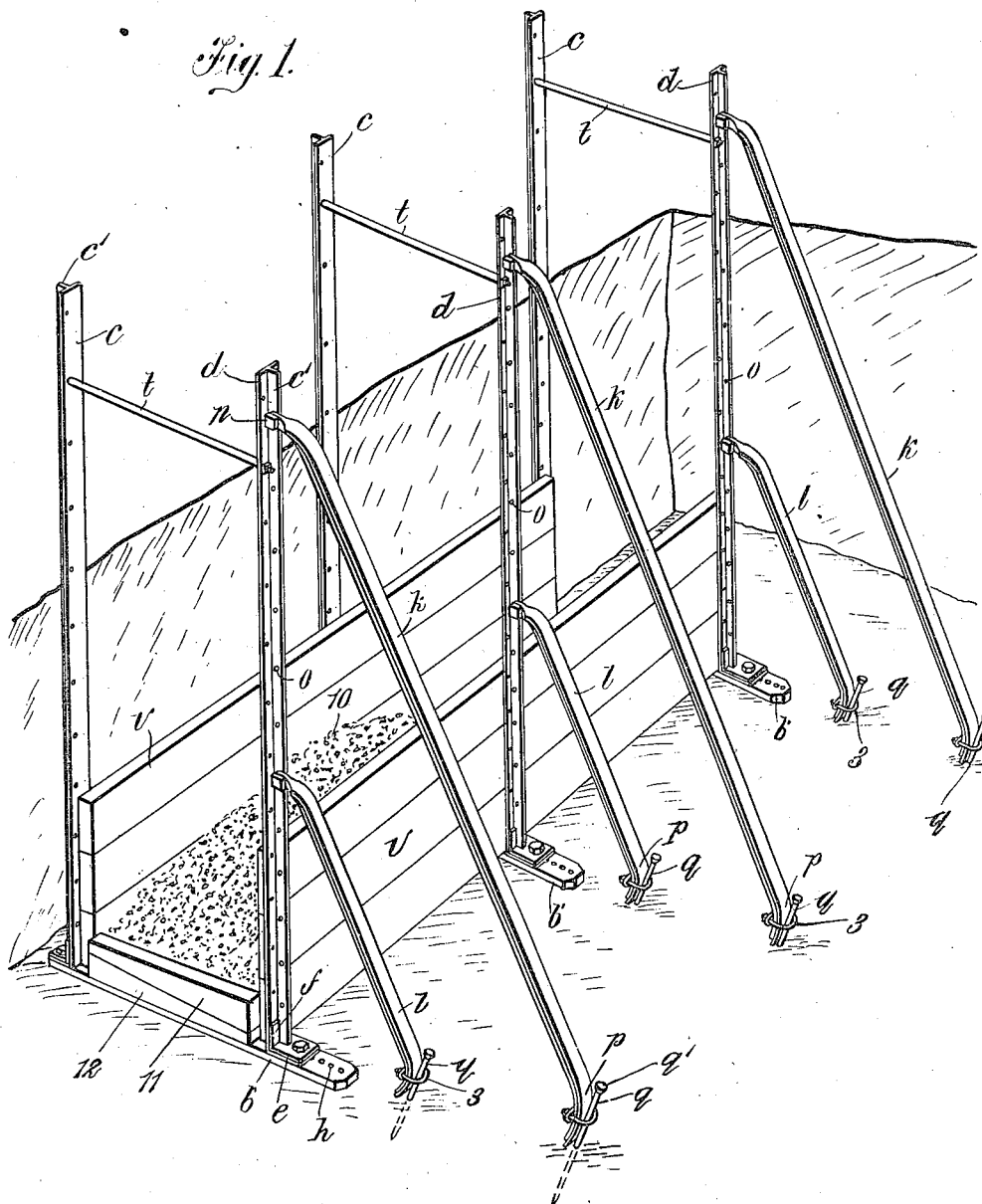


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WALL ERECTING APPARATUS.
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1,034,427.

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2 SHEETS—SHEET 1.



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WALL-ERECTING APPARATUS.

1,034,427.

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To all whom it may concern:

Be it known that I, HILDER DAW, of the city of Montreal, in the Province of Quebec and Dominion of Canada, have invented certain new and useful Improvements in Wall-Erecting Apparatus; and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention relates particularly to an apparatus for forming and supporting a mold to be used in the construction of concrete walls or the like.

The object of my invention is to provide a mold for concrete walls or the like, which may be readily dismembered, shifted and re-erected to continue the wall in a horizontal direction, after the completion of which it may be returned to its former position to allow the wall to be heightened; to provide displaceable spacing means for certain of the members of the mold structure, such structural member being held by the concrete during erection of the wall and the removal of the spacing means after the concrete has set permitting such structural members to be removed; to provide readily adjustable means for preventing the corners of the mold from spreading; and to improve the general construction of apparatus of this type.

My invention consists of the particular construction, arrangement and combination of parts hereinafter described and pointed out in the claims. For full comprehension, however of my invention reference must be had to the accompanying drawings forming a part of this specification, in which similar reference characters indicate the same parts and wherein—

Figure 1 is a perspective view illustrating my improved apparatus; Fig. 2 is a plan view partly in section of a corner thereof illustrating particularly the means for reinforcing the corner; Fig. 3 is a vertical sectional view taken on line A A Fig. 2; Fig. 4 is a detail perspective view of the means for reinforcing the corners of the apparatus; Fig. 5 is a similar view of the spacing means; Fig. 6 illustrates one of the bed plates in perspective view; Fig. 7 is a detail perspective view of a coupling forming

a part of my invention; and Fig. 8 is an elevation of the means for securing in place the reinforcing means illustrated in Fig. 4.

My improved apparatus is supported on structural members comprising a series of bed plates *b* placed on the ground at suitable distances apart, transversely to the wall about to be constructed. Secured to each of the bed plates near the opposite ends thereof, are two vertical standards *c* and *d* respectively composed of suitable lengths of T-iron disposed with their webs *c'* facing in opposite directions; these standards having feet *e* formed by cutting off the lower ends of the webs and bending the flanges thereof, the bent portions being braced by angular braces *f* riveted to the standards. These feet serve as a means of attaching the standards to the bed plates to which latter they are secured by bolts *g* passing there-through and through the braces *f* and screwed into the tapped holes *h* in the bed plates. The ends of the bed plates to which the standards *d* are secured being preferably provided with a series of the tapped holes *h* to permit of the standard being spaced apart varying distances from the standard *c* to provide for different thicknesses of walls.

The adjustable standards are each supported by a pair of T-iron struts *k* and *l* (composed of T-iron) the webs thereof being perforated at one end; these struts are secured one above the other to the webs *c'* by means of square headed bolts *m* which pass through the perforated ends of the struts and engage in holes *o* located at intervals along the length of the web, where they are secured by nuts *c²* the heads *n* of the bolts *m* being large enough to engage the flange of the standard to hold the bolt against rotation while the nuts *c²* are being screwed thereon. The struts *k* and *l* extend diagonally downward from the standard to the ground, the upper strut *k* being necessarily of greater length than the lower strut *l*. The lower ends of such struts are curved downwardly as at *p* and bear with such curved ends against anchor pins *q* presenting at their upper ends heads *q'* and having such curved ends secured thereto by clamps

each consisting of a member 3 of U-form, one end of which is reduced and inserted through a connecting link and bent to form an eye 6 pivotally securing the link 4 thereto. The U-member straddles the anchor pin *q* and the curved end of the strut while the connecting link extends across the underside of the latter, the opposite end 4 of the U-member being inserted through the connecting link, such last mentioned end being screw-threaded and adapted to receive a nut 8 which is screwed against the connecting link 4 thus tightening the clamp. The upper ends of the struts are slightly curved and have the flange 9 thereof turned down as at *r* to clear the webs *c'* of the standards.

The standards *c* and *d* are connected together near their upper ends, and the relative distance therebetween maintained, by rods *s* screw-threaded at their opposite ends. Each of these rods has a sleeve *t* passed thereover leaving the screw-threaded ends exposed which are inserted through the flanges of the standards, the rods being held in place by nuts *u* which bear against the outer faces of such flanges, the opposite ends of the sleeves engaging the inner faces thereof and acting as distance pieces for the standards, the height of such sleeves being determined by the desired thickness of the walls.

The above described framework being completed, boards *v* are then set on edge flat against the standards and built up to the required height thus presenting a space which constitutes the mold now in readiness to receive the concrete 10. To permit of the ready removal of the bed plates when desired, they have placed over them removable spacing blocks 11 and 12 of a size equal to the exposed surface of the bed plates on which latter the blocks are placed, such blocks being each composed of a pair of oppositely facing wedge-blocks placed with their inclined faces in contact as illustrated in Fig. 1. By constructing the covering blocks in such a manner they can be easily removed as the lower block does not contact with the concrete either on its top or bottom and can thus be easily struck out without disturbing the concrete after which the upper block and bed plate can be readily removed.

When a corner is being formed the boards of one side of the wall abut against the surface of the boards forming the wall at an angle thereto and to prevent the tendency of such boards to spread apart at this connecting point and so cause the corner to be roughly formed, an angle iron having one flange *x* of greater length than the other flange *y*, is placed vertically over this corner and arranged to have the longer flange extend over the exposed ends of the boards forming the outer wall of the mold for one

side of the corner and overlap the ends of the boards abutting thereagainst. The angle iron is held in place by means of a chain *z* having attached thereto at its opposite ends a pair of eye bolts *y'* inserted through the webs *c'* of the two outside standards *c* adjacent to such corner, and having nuts 14 threaded thereon which bear against the sides of the webs and serve to tighten the chain *z*.

By my improved construction the same structure may be utilized in the construction of a horizontal continuation of the wall as was used for the original portion as follows:—When the concrete has become sufficiently hardened to dispense with a support the struts *k* and *l* are first disconnected from the standards by removing the bolts *m* and the clamps 3, the standards being then disengaged from the bed plate *b* by removing the bolts *g* and the boards *v* are then removed leaving the bed plates *b* and the anchor pins *q* undisturbed. The boards *v*, standards *c* and *d* and struts *k* and *l* are then again erected as above described in the position necessary for the continuation of the wall thus doing away with the necessity of providing at one time a structure for the complete wall.

When it is desired to heighten the wall and the concrete has hardened sufficiently to support such extension the boards, standards and struts are placed in their original positions which may be readily assumed by reason of the bed plates and anchor pins having been left in place, so that when the wall is completed there is no unevenness on the surface of the wall.

When it is desired to build a wall having battened sides the standards *d* are given the desired inclination, the series of holes *o* before mentioned, permitting the struts to be secured to the standards with the latter having different angles of inclination.

What I claim is as follows:—

1. In a wall erecting apparatus, the combination of a pair of standards, a bed plate securing said standards together, and a pair of readily removable spacer blocks of wedge form placed over said bed plate to permit of the removal of the latter after completion of the wall.

2. In a wall erecting apparatus, the combination of a bed plate, a pair of members resting on the bed plate and spaced apart to form the sides of a mold to receive the material composing the wall, and a pair of oppositely arranged wedge shaped spacing blocks placed upon said bed plate.

3. In a wall erecting apparatus, the combination with a pair of angularly disposed and abutting members forming the outer sides of a mold for a wall corner, and an angle strip placed over such members at a point where they form the corner, of a chain

passing around the outer faces of such angle strip, and means whereby such chain may be tightened to cause it to bear against the angle strip.

- 5 4. The combination with a standard and an anchor pin driven into the ground, of a strut pivoted at one end to the standard and having its other end bent downwardly and abutting against the anchor pin, and a yoke

device clamping the bent end of the strut 10 to the anchor pin.

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

HILDER DAW.

Witnesses:

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