June 26, 1923. 1,460,197

A. GEORGE

APPARATUS FOR BUILDING WALLS

Filed March 29, 1920

Fig. 1.

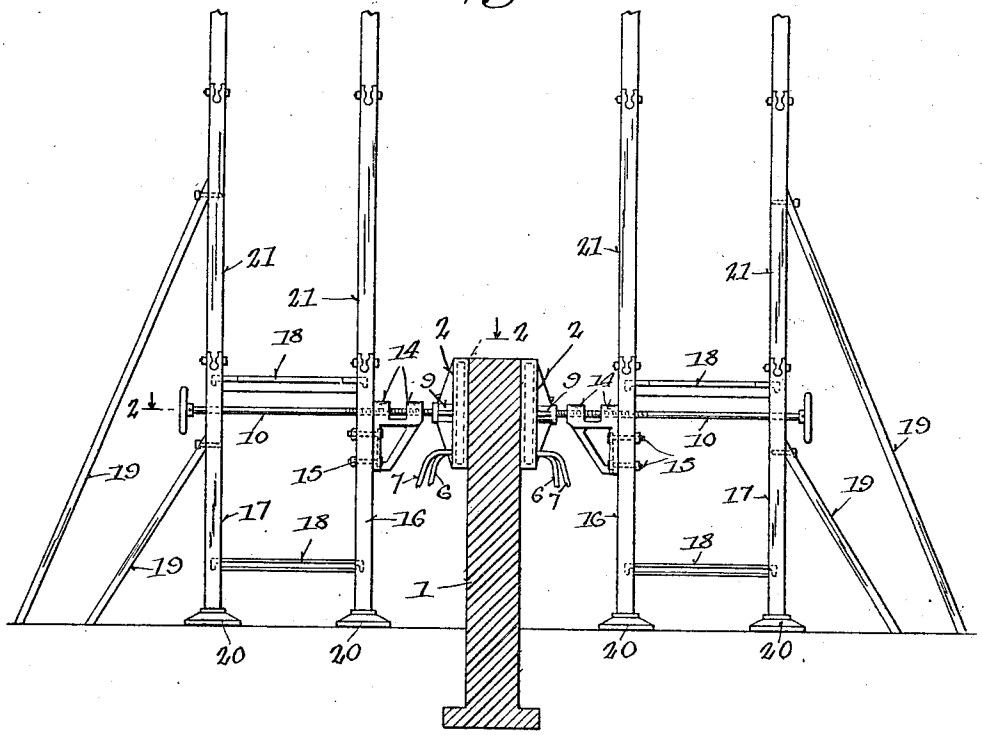


Fig. 2.

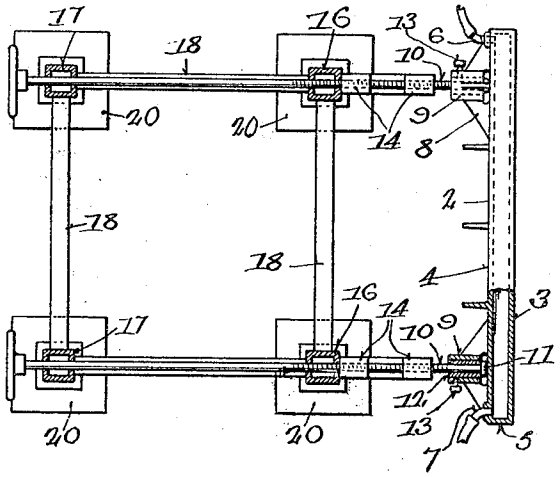
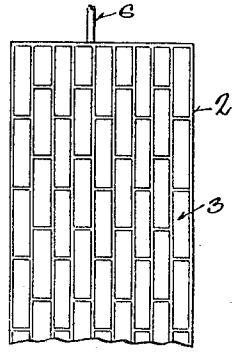


Fig. 3.



Inventor
Ayoob George
By Erwin Wheeler & Woodard
Attorneys.

Patented June 26, 1923. 1,460,197

UNITED STATES PATENT OFFICE.

AYOOB GEORGE, OF FOND DU LAC, WISCONSIN.

APPARATUS FOR BUILDING WALLS.

Application filed March 29, 1920. Serial No. 369,610.

To all whom it may concern:

Be it known that I, AYOOB GEORGE, a citizen of the United States, residing at Fond du Lac, county of Fond du Lac, and State of Wisconsin, have invented new and useful Improvements in Apparatus for Building Walls, of which the following is a specification.

This invention relates to forms for building walls and to a method of building walls.

One of the objects of this invention is to provide a form for use in building a wall of concrete or other material which form may be heated to hasten the drying of the wall and to allow the walls to be poured or formed in cold weather, the heat from the form preventing the freezing of the moisture in the walls.

A further object is to provide heated forms between which the walls may be clamped, the forms being arranged for adjustment so as to occupy successively advanced positions as the wall progresses.

Other objects are to provide a method of building a wall, whereby the drying of the wall may be either hastened or assured; whereby climatic disturbance conditions can be minimized; and whereby freezing of the moisture in the wall before the wall has become set, is prevented.

It is a further object of this invention to provide a supporting framework for the forms upon which a platform may be erected for the workmen without requiring additional scaffolding.

In the drawings:

Fig. 1 is a vertical elevation showing the wall partly in section and showing a fragment of the framework for supporting the forms.

Fig. 2 is a section on the line 2—2 of Fig. 1 drawn to an enlarged scale.

Fig. 3 is a fragmentary view of the face of the form.

The wall 1 is shown partially completed, with the upper portion thereof clamped between heated forms 2, 2. Each of these forms comprises a hollow metal chamber, which is provided with a front wall 3 adapted to engage the concrete wall 1, a rear wall 4, and side, top, and bottom members 5, thereby forming a closed chest, or box. The heating fluids, steam, hot water, or other fluid, may enter the form through a fitting 6, arranged at one end thereof, and leave the form through a fitting 7 at the other end. These fittings 6 and 7 may be arranged one above the other, or in any manner that is found desirable so that a supply of heating fluid may be continuously supplied, or passed thru, the casings or forms 2. Adjacent each end of the form 2, webs 8 extend rearwardly and merge into a hub or thickened portion 9. Into these thickened portions, or hubs 9, spindles 10 pass and may be rotatively secured therein by providing a flanged base member 11 upon the spindles 10 and a bushing 12 secured by means of a set screw 13 within the hubs 9.

The face of the form may be made with corrugation and depression so as to cause the surface of the wall moulded thereby to have any desired design impressed thereon. For instance, the face of the form may be shaped as in Fig. 3 so as to make the moulded wall appear as if made of brick.

The spindles 10 are threaded and engage threaded members 14 which are bolted at 15 to an upright 16 which forms one portion of the supporting framework. This framework comprises the members 16 and parallel upright members 17 which may be arranged at the four corners of a rectangle and joined by suitable connecting members 18. If desired, the upper member 18, Fig. 1, may support a platform for the workmen so that the upper portion of the walls may be readily reached. The framework is suitably braced against outward motion by means of struts 19, the four uprights 16 and 17 which are similar in each of the frame members upon either side of the wall, are supported by enlarged bases 20 which rest upon the ground and may be secured in position.

The framework is adapted to be extended, as required, and may be formed of a plurality of interlocking members 21, which go to make up the uprights 16 and 17. These members 21 interlock with the lower member and, as the additional members 21 are added, each group, or set, may be secured or braced by member 18, which also may be formed to interlock with the uprights.

It will thus be seen that a heated form for each side of the concrete wall has been provided together with suitable cooperating means for clamping the wall between the forms and that means has been provided whereby these forms may be furnished with the necessary amount of heat to secure a rapid and thorough drying of the wall independently of climatic conditions.

The method of building a wall in accordance with this invention is to adjust the forms 2, 2 so as to allow for the proper width of wall, to form a portion of the wall therebetween, and tothen heat the forms so as to impart heat to the wall. This method allows the building of a wall during weather which would ordinarily prevent building when the usual methods were employed. It is to be understood that the wall, or even the entire building, may be made in one piece by this method and that these forms may or may not be used with additional devices such as cores or other apparatus for forming air spaces within the wall or other parts of the building. If desired, these forms may be arranged one above the other so that as the wall is dried by the lowest form, it may be moved to the top position above the uppermost form so that the construction of the wall may be constantly advancing and at the same time that the recently formed portions of the wall may be subjected to the heat treatment by the forms.

It is to be understood that when the term "concrete" is used, in this application, that concrete, cement, clay composition, mortar, and other similar compounds are intended to be indicated by this term.

In severe weather, freezing of the moisture in the wall before the wall has set, is prevented; the drying of the wall may be hastened in either severe or mild weather.

I claim:

1. In an apparatus for building concrete molds, the combination with a supporting framework, of a spindle, a form, and means associated with said framework, spindle and form adapted when said spindle is rotated to adjust said form in any one of a plurality of positions.

2. In an apparatus for building concrete walls, the combination with a supporting framework, of a spindle, a hollow box-like form provided with means adapted to circulate heated fluid through said form, and means associated with said framework, spindle and form adapted when said spindle is rotated to adjust said forms in any one of a plurality of positions.

3. In an apparatus for building concrete walls, the combination with a supporting framework, of a bracket adjustably secured to said framework, a spindle threadably engaging said bracket and a hollow box-like form supported from said spindle and provided with means engaging said spindle whereby when said spindle is rotated said form may be adjusted to any one of a plurality of horizontal positions.

4. In an apparatus for building concrete walls, the combination with a supporting framework provided with means for supporting a platform, of a bracket adjustably secured to said framework, a spindle threadably engaging said bracket, and a hollow box-like form supported from said spindle and provided with a patterned face adapted to impress the pattern upon said walls.

5. In an apparatus for building concrete walls, the combination with a hollow box-like form provided with a plurality of hubs and means adapted to allow the circulation of heated fluid through said form, of a supporting framework, a plurality of brackets adjustably secured to said framework, and spindles threadably engaging said brackets and provided with means adapted to rotatably engage said hubs, whereby said forms may be supported in and adjusted to molding position.

6. In an apparatus for building concrete walls, the combination with a supporting framework, of a form provided with means adapted to transmit heat to said walls, and means adjustably secured to said framework adapted to position said form in any one of a plurality of positions relative to said framework.

7. In an apparatus for building concrete walls, the combination with a supporting framework provided with means adapted to support a platform, of a form provided with means adapted to transmit heat to said walls, and means adjustably secured to said framework adapted to position said form in any one of a plurality of vertical or horizontal positions, said means comprising brackets attached to said framework and adjustable vertically thereof, and spindles adjustable transversely of the framework and having bearings in said form.

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

AYOOB GEORGE.

Witnesses:
LOUISE JOSEPHINE SCHOLL,
JOHN P. MCGALLOWAY.