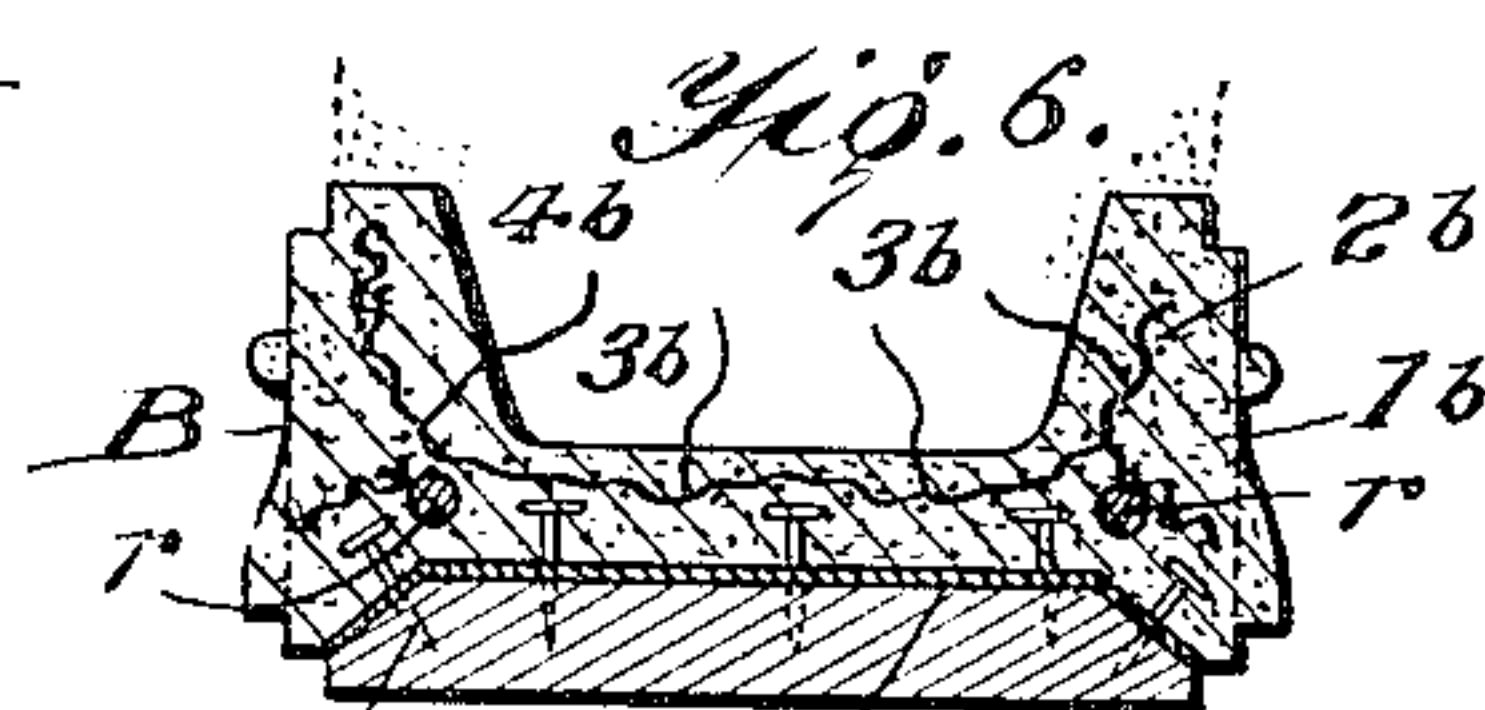
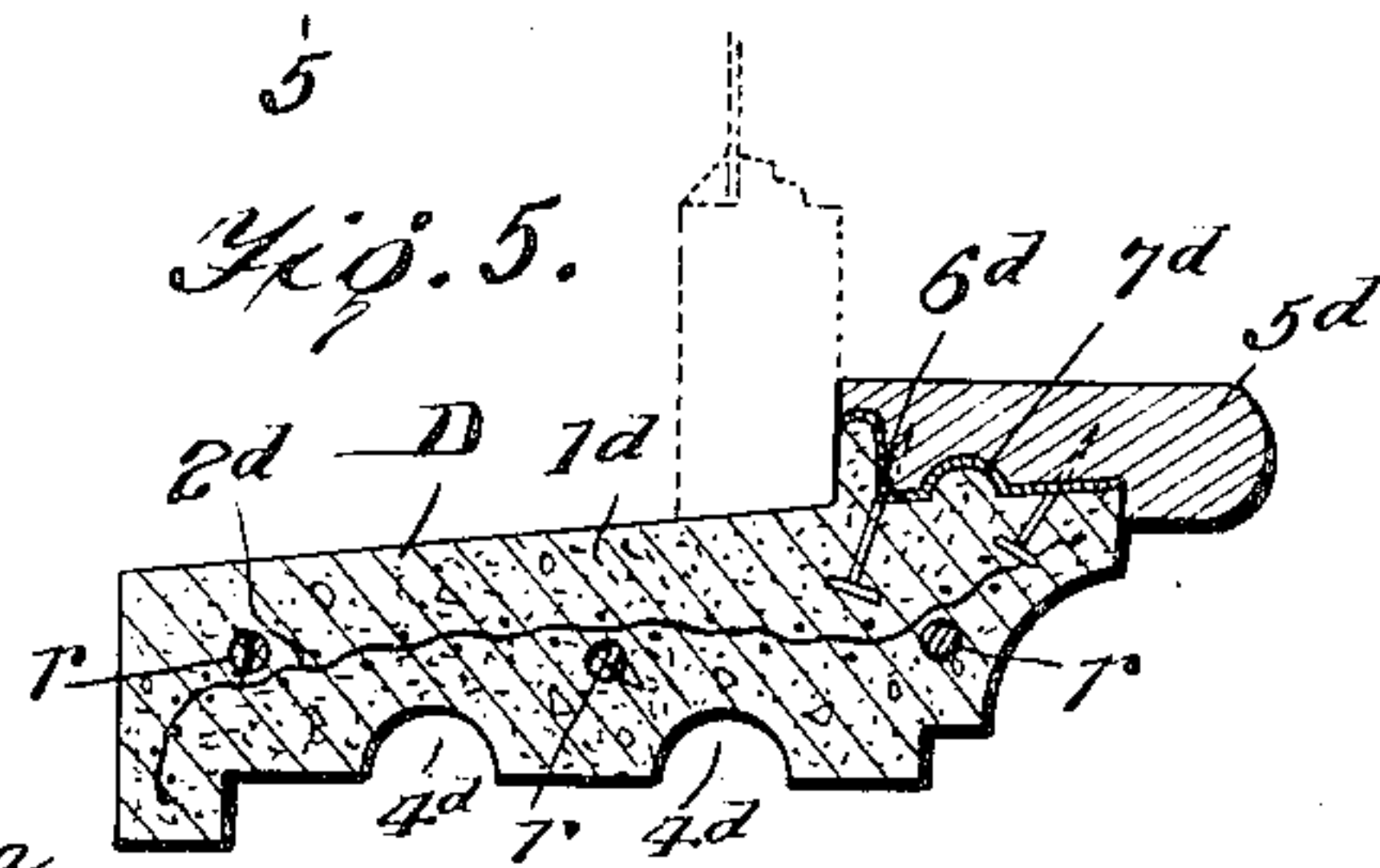
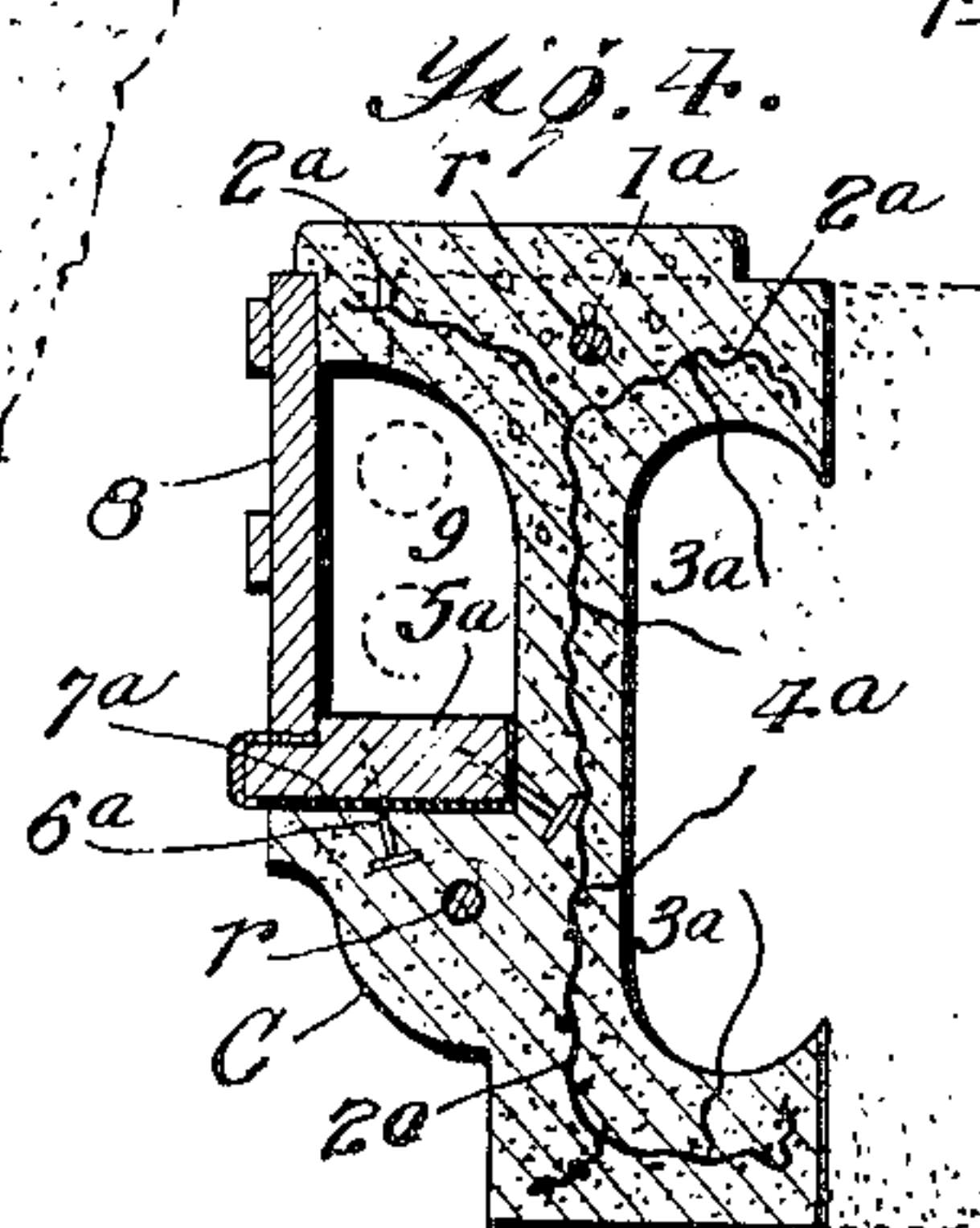
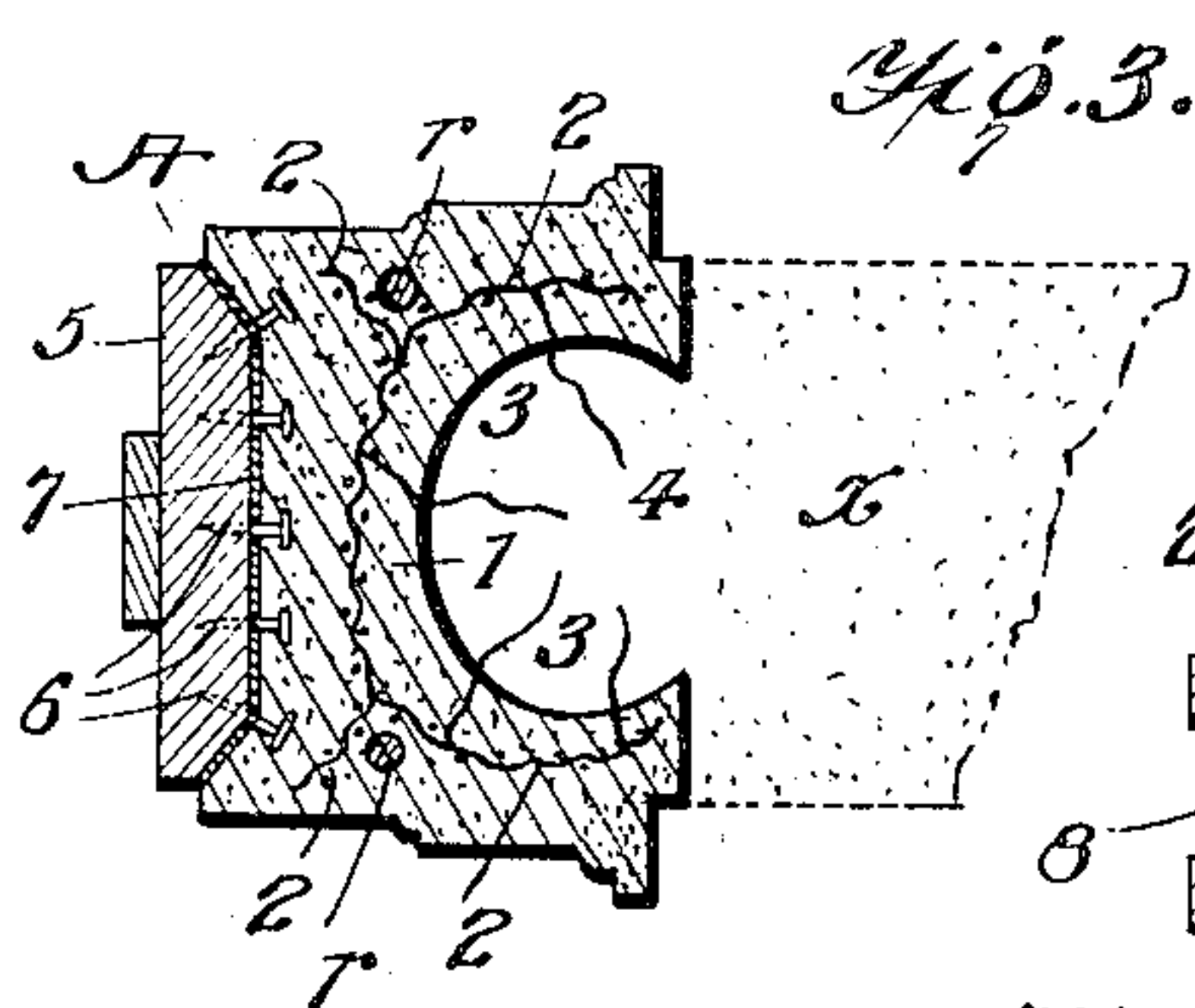
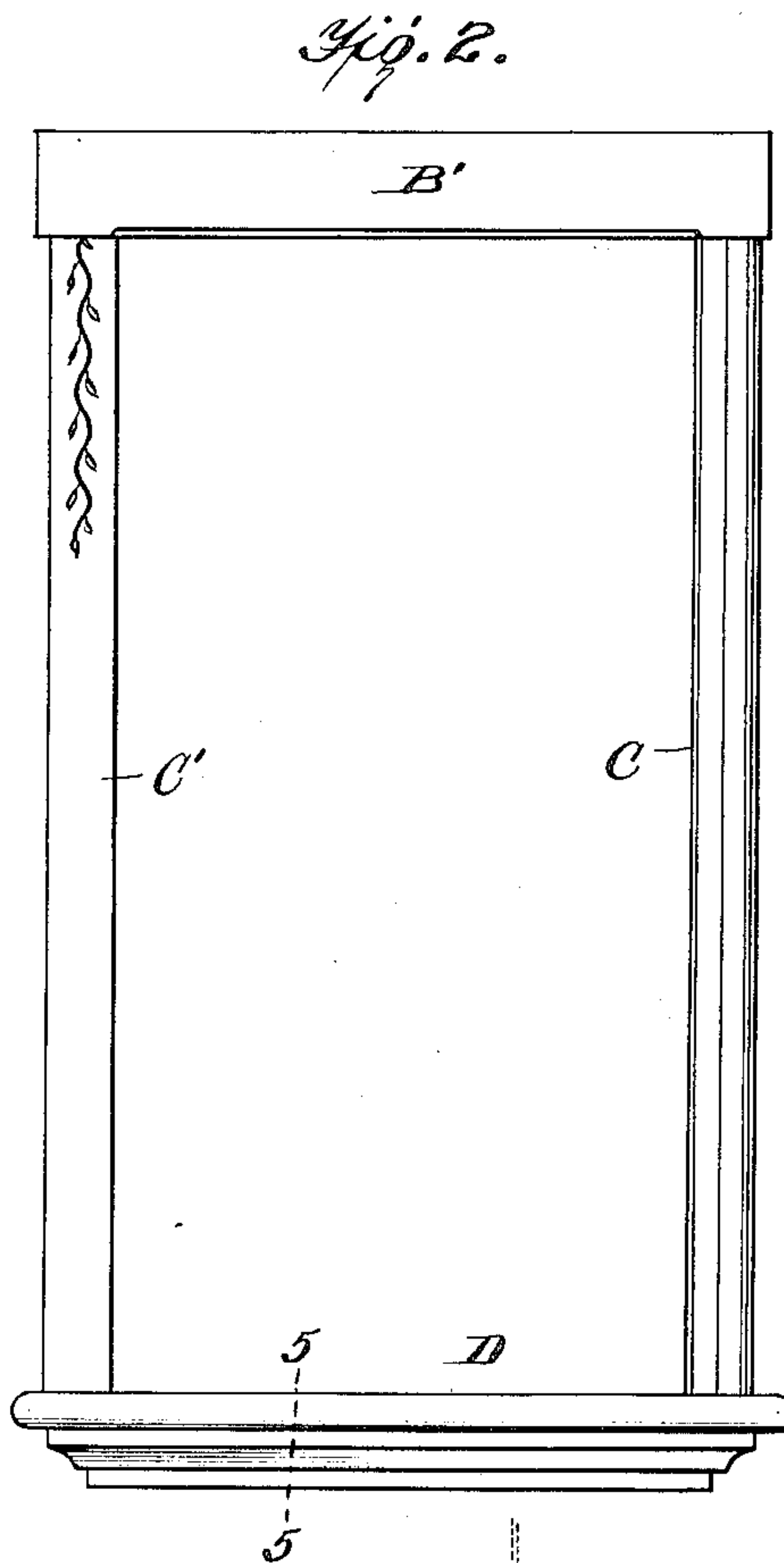
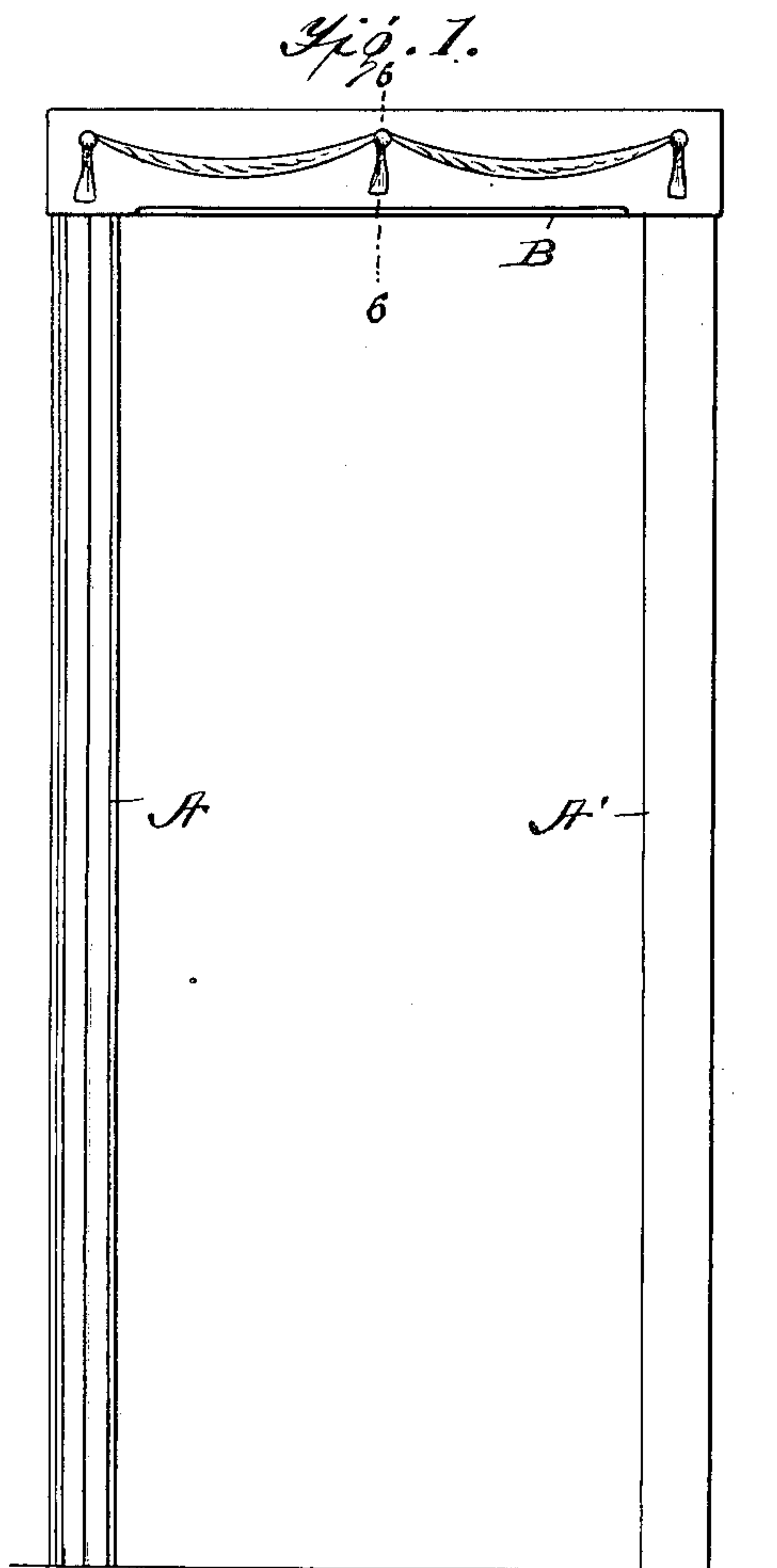


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 CONCRETE FRAME FOR DOOR AND WINDOW OPENINGS.
 APPLICATION FILED NOV. 2, 1908.

914,590.

Patented Mar. 9, 1909.



WITNESSES

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CONCRETE FRAME FOR DOOR AND WINDOW OPENINGS.

No. 914,590.

Specification of Letters Patent.

Patented March 9, 1909.

Application filed November 2, 1908. Serial No. 460,739.

To all whom it may concern:

Be it known that we, JOHN H. MAGDIEL, a subject of the King of Norway, and DANIEL H. MAGDIEL, a subject of the Crown of Great Britain, both residing at Salt Lake City, in the county of Salt Lake and State of Utah, have invented certain new and useful Improvements in Concrete Frames for Door and Window Openings, of which the following is a specification.

Our invention relates to frame members for doors, windows, arches, etc., made as jambs, lintels and sills, which are cast or formed of some mineral composition to render them fire proof and it consists in a novel construction and arrangement of the parts of such members made of reinforced concrete and formed entire as a new article of manufacture ready to be set up in the wall to make a tight, substantial and fire proof filling around such openings, as will be hereinafter more fully described with reference to the drawing, in which—

Figure 1, is a face view of a door frame, Fig. 2, a similar view of a window frame, Fig. 3, is a cross-sectional view on a larger scale of the door jamb member, showing our novel construction, Fig. 4, is a similar cross-section on a still larger scale, showing the window jamb member, Fig. 5, is a cross-section through the window sill, on line 5—5 of Fig. 2, and Fig. 6, is a cross-section through the lintel on line 6—6 of Fig. 1.

In the drawing Fig. 1, A A¹ represent the jamb members of the door. These may be molded, as at A, or plain as at A¹. B represents the lintel which may also be made with an ornamental face as shown in Fig. 1, or be plain as shown at B¹ in Fig. 2. C C¹ represent the jamb members of the window and these in like manner may be plain or ornamental, a molded form of uniform cross section being shown at C and a figured form at C¹. The construction of these members is best shown in detail in Figs. 3 to 6.

Referring to Fig. 3, which is the jamb member for a door, the body 1 of the same is formed of concrete having a large longitudinal channel 4 on its back side where it joins on to the wall, shown in dotted lines at *a*. This channel is narrower at its outlet on

the face than it is inside for the purpose of allowing the concrete *x*, or other material of which the wall is formed, to be keyed into the jamb member, so that the latter cannot pull away from the wall. In the outer face of the jamb member the concrete is molded to form a shallow channel with flaring edges in which is permanently seated a jamb facing 5 of wood or other material. Between this wood facing and the concrete is a thin layer 7 of some water proof material, such as tar paper or the like, which prevents the wood from absorbing the water from the wet concrete and warping. Instead of this layer of water proof material, the contacting face of the wooden jamb may be painted or coated with asphaltum, or other water resisting paint. The wooden jamb facing is made a permanently attached part of the concrete body and for this purpose headed nails 6 are driven into the wooden jamb and the concrete is molded around the heads so as to bond the casing to this concrete. Centrally within the body of the concrete is embedded a reinforcing of woven wire 2 which extends longitudinally from end to end of the jamb member and which in transverse section is U-shaped and extends well out into the flanges of the concrete on each side of the channels. Connecting with this reinforcing and extending out through the concrete into the back channel 4 are bond wires 3 which, when embedded into the concrete of the wall *x*, make a firm union. There are a number of these wires which extends from the concrete on the side next to the channel into the latter and terminate in free terminal ends. These ends are capable of being deflected back and forth and embedded by suitable bends or intertwists in the concrete wall filling *x* as it is packed in the channel, to make a very firm bond. As a further reinforcement, metal rods *r* are embedded longitudinally in the concrete. In Fig. 3, the sides of the body of the concrete member are extended beyond the vertical plane of the wall *x* and form the molded architraves of the door without other casings.

In Fig. 4, the same general construction is employed for the jamb members of the

windows; thus 1^a is the concrete body, 2^a the reinforcing wire extending into the flanges, 3^a the bond wires, 4^a the back channel and 8 the jamb facings for the sash to slide in. In this instance a second channel 9 is formed for the weights of the sash to play in, as seen in dotted lines and on one side of this weight channel, a side strip of wood 5^a is secured by headed nails 6^a to the concrete and forms an attachment on that side for the jamb facings 8, the latter being secured on the other side to jamb blocks molded in the concrete as shown by dotted lines. The exposed edge of strip 7^a is faced with sheet metal.

In Fig. 5, showing the sill, 1^a is the concrete, 2^a the reinforcement of wire, 4^a channels on the lower side, 5^a a wooden facing to form the stool, 6^a the headed nails connecting the same to the concrete and 7^a the water proof lining.

In Fig. 6, showing the lintel, 1^b is the concrete body, 2^b the reinforcing wire, 3^b the bond wires, 4^b the back channel, 5^b the wooden facing, 6^b the headed nails, and 7^b the water proof lining.

The jambs, lintels and sills are to be made complete in various lengths and sizes ready to be put up, but the jambs may be made in sections for large doors and windows if desired.

Some of the advantages we claim for these frame members are that they are fire proof and can be used on any kind of building. That they make possible a perfect bond between jambs and wall, thereby positively excluding draft or flame. They become by their peculiar shape and reinforcement one with the walls, thereby strengthening and bracing the walls, especially brick walls, to a very great extent. They are constructed especially to be used in connection with a system of wall construction where the jambs are set up and the wall mold worked from one to the other. They are more economical than any other frames, as when they are set up the opening is cased on the inside as well as outside, reducing the carpenter's work to a minimum. By using these jambs full casings are always obtained in the corners of rooms, as the jamb with casings on is always set before the walls are built, or where the casings are omitted it is deep enough to prevent the wall coming too close for the casings. Where lumber casings are wanted, wood blocks are cast in the jambs for the perfect fastening of these. By using these jambs, the putting on of plastering grounds becomes unnecessary as the jambs are always straight and afford a better gage for the plastering than anything else that could be used, as it always gives the thickness of the wall and thereby prevents all trouble with putting up finishing trimmings.

Although these frame members are designed to be made and sold as separate articles of manufacture, we may form them around the openings at the same time that the adjoining walls are built.

We claim:

1. A frame member for the openings of doors, windows, etc., consisting of a body portion of molded and frangible mineral material formed with a longitudinal channel on the side adjacent to the wall, and a U-shaped reinforcement embedded longitudinally in the material and extending into the flanges on each side of the channel.

2. A frame member for the openings of doors, windows, etc., consisting of a body portion of molded and frangible mineral material formed with a longitudinal channel on the side adjacent to the wall, and a U-shaped reinforcement embedded longitudinally in the material and extending into the flanges on each side of the channel, and a facing on the opposite side secured in the molded material by headed projections.

3. A frame member for the openings of doors, windows, etc., consisting of a body portion of molded fire proof material formed with a longitudinal channel on the side adjacent to the wall, and a reinforcement embedded longitudinally in the material and extending into the flanges on each side of the channel, and a facing of wood on the opposite side secured in the molded material by headed projections and a water proof layer of material interposed between the wood and the molded material.

4. A frame member for the openings of doors, windows, etc., consisting of a body portion of molded and frangible mineral material formed with a longitudinal channel on the side adjacent to the wall, and a U-shaped reinforcement embedded longitudinally in the material and extending into the flanges on each side of the channel, said channel being made narrower at its outlet side than it is within, to key and lock to the wall.

5. A frame member for the openings of doors, windows, etc., consisting of a body portion of molded and frangible mineral material formed with a longitudinal channel on the side adjacent to the wall, and a U-shaped reinforcement embedded longitudinally in the material and extending into the flanges on each side of the channel, and a plurality of bond wires embedded in said molded material on the side next to the channel and projecting into the channel in the form of free terminal ends to tie into the adjoining wall.

6. A window jamb member, consisting of a molded body portion of fire proof material having a channel on one side to receive a wall and a channel on the other side to form

weight pockets, said weight pockets having
a wooden strip on one side secured by headed
projections in the molded material and a re-
inforcement of woven wire embedded longi-
5 tudinally in the jamb member and extending
transversely into the flanges on each side of
the longitudinal channels.

In testimony whereof we affix our signa-
tures in presence of two witnesses.

JOHN H. MAGDIEL.
DANIEL H. MAGDIEL.

Witnesses:

NEPHI L. MORRIS,
LOUIS R. WELLS.