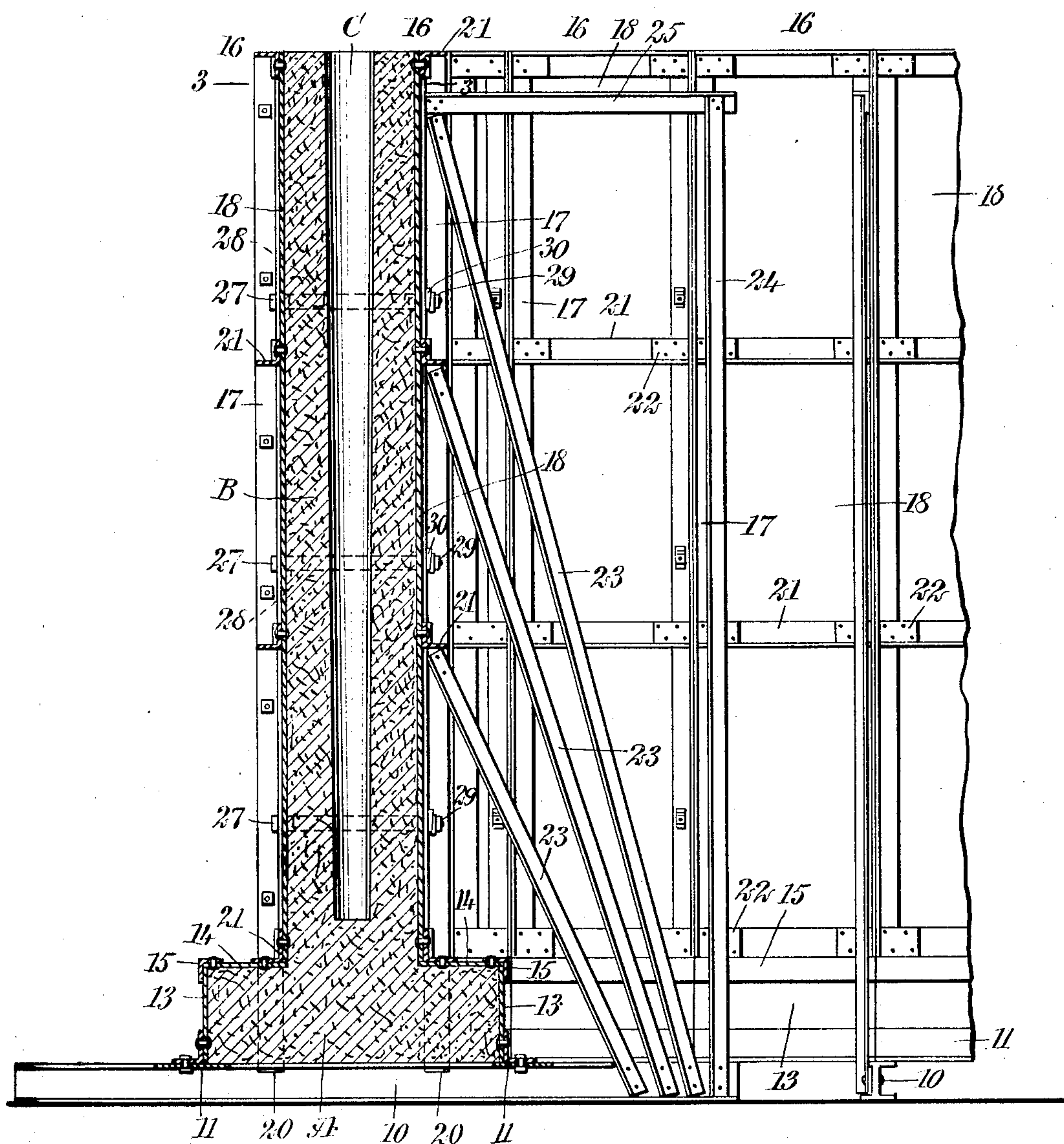


940,463.

J. R. KAY.
MOLD.
APPLICATION FILED MAR. 27, 1908.

Patented Nov. 16, 1909.
3 SHEETS—SHEET 1.

Fig. 1



WITNESSES

J. A. Proply
J. H. Brachvogel

INVENTOR

John R. Kay

BY *Mumford & Co*

ATTORNEYS

J. R. KAY.

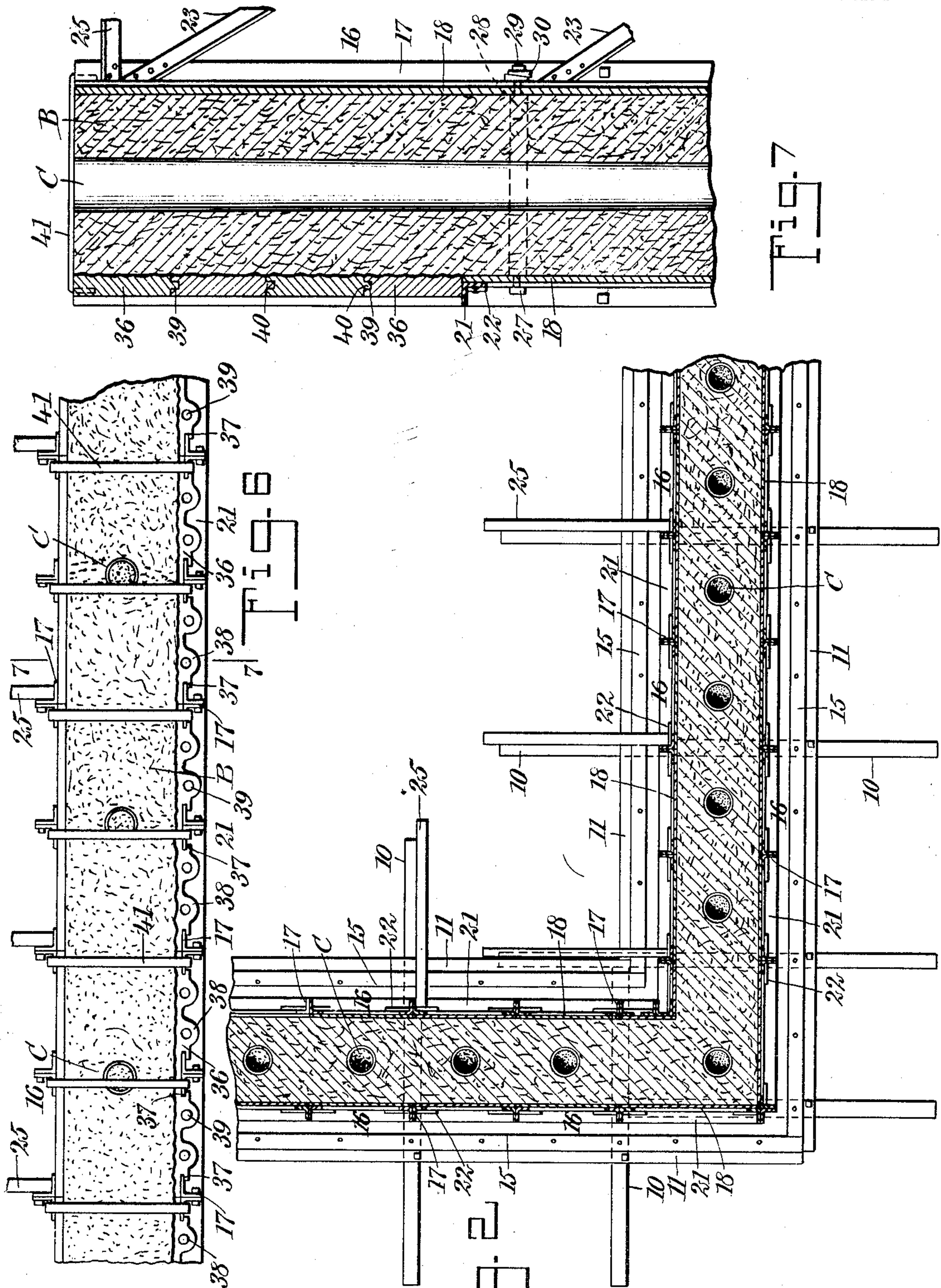
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3 SHEETS—SHEET 2.

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WITNESSES

J. A. Brophy
J. K. Backus

INVENTOR

John R. Kay

BY *Mumford*

ATTORNEYS

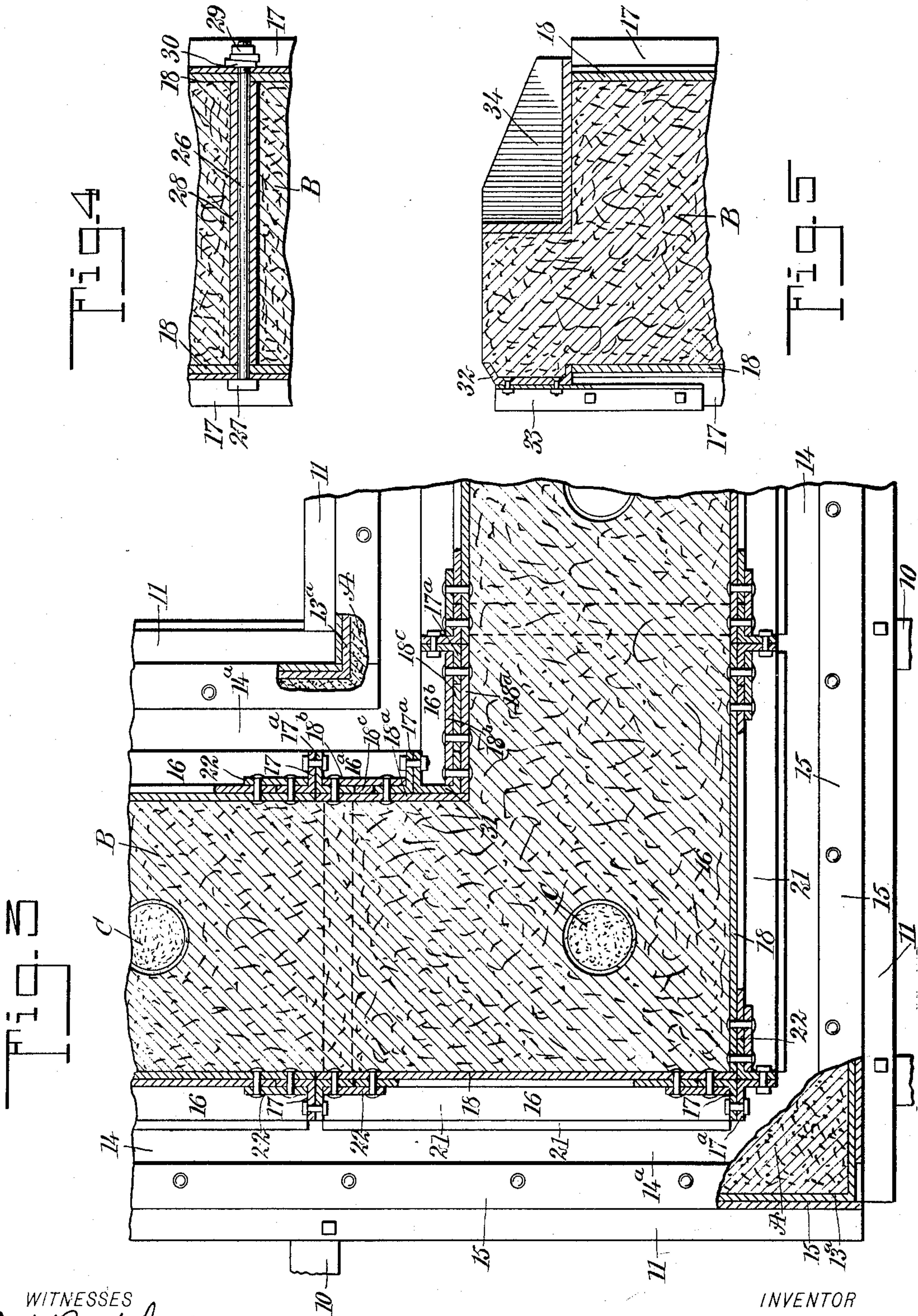
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3 SHEETS—SHEET 3.

940,463.



WITNESSES
J. A. Brophy
G. K. Brachvogel

INVENTOR
John R. Kay
BY *M. W. Co.*
ATTORNEYS

UNITED STATES PATENT OFFICE.

JOHN R. KAY, OF NEW YORK, N. Y.

MOLD.

940,463.

Specification of Letters Patent.

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Application filed March 27, 1908. Serial No. 423,558.

To all whom it may concern:

Be it known that I, JOHN R. KAY, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Mold, of which the following is a full, clear, and exact description.

This invention relates to molds, and more particularly to molds for forming concrete or cement walls, foundations and other similar monolithic structures.

More specifically, the invention relates to a mold consisting of separable sections which can be removably though rigidly mounted in position for forming cellar walls and the like, the component members of which consist of standard structural iron pieces, and which comprises transverse base members, wall sections mounted thereupon and having uprights, the uprights of adjacent sections being removably secured together, means for spacing the opposite wall sections, and braces connecting the base members and the uprights, the uprights of each section being connected by cross strengthening members.

An object of the invention is to provide a simple, strong and durable mold for forming monolithic bodies of concrete, cement and the like, which comprises removable and separable parts which can be easily mounted in position and taken down, and which is fashioned from standard structural members of metal or other material.

A further object of the invention is to provide a device of the class described, by means of which cellar walls, foundation walls and the like can be fashioned, which is adjustable to permit its use for the forming of similar structures of different sizes, and which is rigid and of great strength.

A still further object of the invention is to provide a mold for fashioning walls by means of which can be formed wall footings, water tables, as well as facings simulating cut stone, and the like.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a transverse section of the mold

having a cellar wall formed therein, and showing a portion of the wall in elevation. Fig. 2 is a longitudinal section of the mold; Fig. 3 is an enlarged longitudinal section on the line 3—3 of Fig. 1, showing a section of the mold for forming a corner of a wall; Fig. 4 is an enlarged section showing a member used for spacing the opposite walls of the mold; Fig. 5 is an enlarged transverse section showing the form of the mold used for fashioning a cellar wall having a water table at the top thereof; Fig. 6 is a plan view of a section of the mold showing means for fashioning a wall with a facing simulating cut stone; and Fig. 7 is an enlarged transverse section on the line 7—7 of Fig. 6.

Referring more particularly to the drawings I provide transverse base members 10 for the mold, which consist preferably of standard I-beams. Angle irons 11 are removably secured upon the base members 10 by means of bolts or the like and are arranged transversely of the base members, that is in the direction of the length of the wall to be formed. Plates 13 are riveted to the angle irons 11 and are arranged in substantially vertical planes. Similar substantially horizontal and inwardly extending plates 14 are secured at their longitudinal edges to the upper edges of the plates 13 by means of angle irons 15. The plates and angle irons are riveted or otherwise securely fastened together. The plates 13 and 14 serve to form the footing A of the wall B. It will be understood that as the angle irons 11 are removably and adjustably mounted upon the I-beams 10 the dimensions of the footing of the wall can be altered to suit individual preference or special conditions.

Mold sections 16 serve to form the wall B and each consists of uprights 17 preferably angle irons, and wall plates 18 riveted or otherwise firmly secured to the flanges of the angle irons. Outwardly disposed flanges of the adjacent angle irons of the adjacent sections 16 are removably secured together by means of bolts or in any other suitable manner. The plates 14 have openings therebetween to receive the lower ends of the uprights which extend through the footing to the I-beams 10, the latter having recesses or cut away parts 20 to receive the lower ends of the uprights. The uprights 17 of each of the sections 16 are connected by bracing cross members 21 consisting preferably of angle irons which have flanges adjacent to

the wall plates 18 and have the same flanges cut away at the ends to receive the flanges of the uprights 17. Retaining plates 22 riveted or otherwise mounted in position secure the uprights 17, the wall plates 18 and the cross members 21 firmly together. The bottom angle iron 21 of each of the sections 16 is riveted or otherwise fastened to the adjacent plate 14.

At the ends, the I-beams 10 have the upper flanges cut away so that braces or guys 23 can be bolted or otherwise removably secured to the webs of the I-beams. The upper ends of the braces 23 are removably bolted or similarly fastened to the uprights 17 of the wall sections. If necessary, the I-beams 10 can each carry an upright 24 having a cross bar 25 at the upper end removably secured to an upright 17. The cross bars 25 serve to carry staging or platforms for the workmen engaged in filling and tamping the mold.

The opposite wall plates 18 together with flanges of their uprights 17, have registering openings in which are arranged rods 26 each having at one end a head or nut 27 and carrying between the wall plates, a spacing sleeve 28, each end of which engages one of the plates 18. At the end opposite to the head 27 the rod 26 is threaded and carries a nut 29. Bifurcated wedges 30 riding upon the rod are inserted between the nut 29 and an adjacent flange of an upright 17 so that the opposite sections can be adjusted and firmly held relatively to one another by means of the rods 26 and the sleeves 28.

In forming a corner wall the outer edge or corner of the footing A is formed by means of an angle plate 13^a riveted or otherwise secured to the adjacent angle irons 11. Similarly, an angle plate 14^a is used to form the upper surface of the corner footing, and this is secured to the angle irons 15 and 21. The inner corner of the footing is formed by similar, suitable angle plates 13^a and 14^a. The outer wall sections 16 which come together at the vertical outer edge of the corner have their adjacent uprights 17 removably secured by means of a suitable angle iron upright 17^a, bolted or otherwise removably fastened to the adjacent uprights 17. The inner corner of the wall A is formed by means of suitable short sections 16^a and 16^b. The former comprises a wall plate 18^a and uprights 17^a consisting of angle irons and riveted, together with a connecting plate 18^b and an intermediate strip 18^c, or otherwise firmly secured to the wall plate 18^a. The section 16^b comprises the wall plate 18^a, an angle iron upright 17^a and at the opposite end a channel 31. The upright 17^a and the channel 31 of the section 16^b are riveted, together with a connecting plate 18^b and an intermediate strip 18^c, or otherwise secured to the wall plate 18^a. The channel 31 is

bolted or otherwise removably secured to the adjacent upright 17^a of the section 16^a.

To save concrete or other material in fashioning the wall, cores may be employed to provide the walls with longitudinal recesses or openings C.

To form a water table at the top of the wall when the latter is used for instance, as a cellar wall to support a brick house wall, water table mold plates 32 are arranged longitudinally of the upper edges of the outer wall plates 18. Each mold plate 32 is bolted or otherwise secured to carriers 33 which in turn, are bolted or similarly fastened to the uprights 17. At the inside, a suitable form 34 is carried at the upper edges of the sections to form the usual step or recess in the top of the wall.

When it is desired to provide a wall with an outer face representing dressed stone or the like, the outer mold sections are not carried as far up as the inner wall sections and have at the top, cross members 21 consisting of angle irons, riveted or otherwise mounted in position. The uprights 17 are however, carried up to the top of the wall, the wall plates 18 alone, being stopped at the top cross members 21. Mold plates 36 having the inner faces so fashioned that the concrete or other molded material receives an impression simulating cut stone or the like, are arranged upon the top members 21 and upon each other, as is shown most clearly in Figs. 6 and 7. The mold plates 36 at the outer faces, have transverse extended portions or ribs 38 having openings 39 at the upper ends, which receive dowel pins 40 carried at the other edges of the adjacent mold plates. At the ends and intermediate the ends, the mold plates have grooves or recesses 37 which receive the adjacent flanges of the uprights 17 and which thus permit the mold plates to be firmly mounted in position. It will be understood that the mold plates can be arranged with their ends adjacent to the uprights 17 and extending at the inside of other uprights 17. The form of the mold plates permits them to be staggered in the adjacent rows. I employ straps 41 having the ends laterally disposed to hold the top mold plate 36 and the upper edge of the back mold sections together. The ends of the straps 41 engage at the upper ends of opposite uprights 17. It will be understood that the straps 41 are also employed when the mold plates 36 are not used, that is, when the back and front sections of the mold are carried through the top of the wall.

If a wall is to be molded adjacent to an already completed wall it is necessary to use one side of the mold only, the other side of the mold being formed by the completed wall. This is possible with my invention, as the opposite sides of the mold are entirely independent. The braces 23 can be

dispensed with at one side of the mold if necessary, when the latter is set up for example, adjacent to another wall or building, or at the side of an excavation.

5 Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A mold having transverse base members, wall sections mounted upon said base members and movable longitudinally thereof whereby the thickness of the mold can be varied, said sections having at the longitudinal edges, uprights, the uprights of adjacent sections being removably secured together, spacing members between opposite wall sections, cross strengthening members connecting the uprights of each section at the outside thereof, and braces removably connecting said uprights and said base members.

2. A mold having transverse base members, wall sections mounted upon said base members and adjustable longitudinally thereof, said wall sections at the longitudinal edges having uprights, said uprights seating upon said base members, said wall sections having wall plates carried by said uprights, said wall sections at the lower ends having offset portions adapted to form a wall footing, said offset portions extending at the outside of said uprights, means for spacing the opposite wall sections, and means for bracing said wall sections.

3. A mold having transverse base members consisting of I-beams, wall sections consisting of wall plates and angle iron uprights, the uprights of adjacent wall sections being removably secured together, said uprights resting upon said I-beams, angle irons removably secured to said I-beams and extending transversely thereof, footing plates secured to said angle irons and said wall plates, and braces removably secured to said I-beams and said uprights, said I-beams having the upper flanges cut away to permit said braces to be secured to the webs of said I-beams.

4. A mold having transverse laterally extended base members provided with recesses at the upper edges, wall sections adjustably mounted upon said base members and having uprights adapted to have the lower ends removably received by said recesses, braces removably connecting said uprights and said

base members, further uprights removably mounted upon said base members, and cross-bars removably connecting said further uprights and said uprights of said wall sections, said cross bars being adapted to carry a staging.

5. A mold having a wall section, uprights extending above said wall section, and mold plates mounted upon said wall section and adapted to engage said uprights at the ends of said plates and intermediate the ends of said plates.

6. A mold having wall sections each provided with flanged uprights, the uprights of adjacent sections being removably secured together, and mold plates mounted upon said wall sections and having recesses adapted to engage said uprights near the ends of said plates, said plates further having recesses intermediate the ends, adapted to engage said uprights whereby said mold plates can be staggered.

7. A mold having opposite wall sections each provided with flanged uprights, straps removably connecting the upper ends of said uprights, said uprights extending outwardly beyond said wall sections, and mold plates mounted upon said wall sections and each having recesses near the ends and intermediate the ends, said recesses being formed to receive the flanges of said uprights, whereby said mold plates can be staggered and can be removably mounted in position, said mold plates having projections adapted to engage adjacent mold plates.

8. A mold having wall sections provided with flanged uprights extending above said wall sections, and mold plates mounted upon said wall sections and having recesses to receive the flanges of said uprights, said recesses being located at the ends of said plates and intermediate the ends thereof, said plates having extensions each having recesses and dowel pins to engage with corresponding dowel pins and recesses of adjacent plates.

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

JOHN R. KAY.

Witnesses:

JOHN K. BRACHROGEL,
JOHN P. DAVIS.