

No. 849,885.

PATENTED APR. 9, 1907.

J. M. CARMODY.  
CONCRETE FORM.

APPLICATION FILED AUG. 4, 1906.

2 SHEETS—SHEET 1.

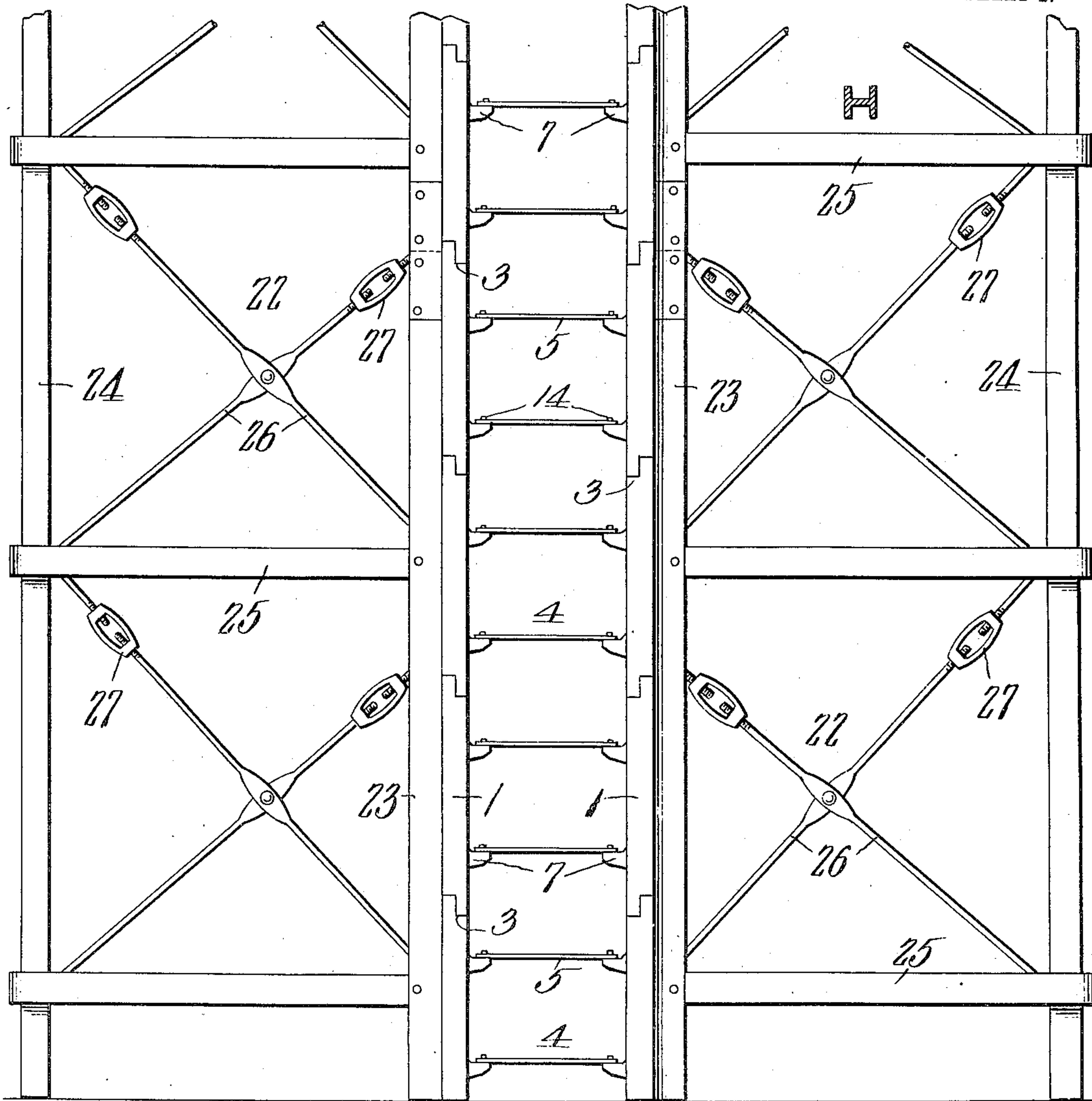


Fig. 1.

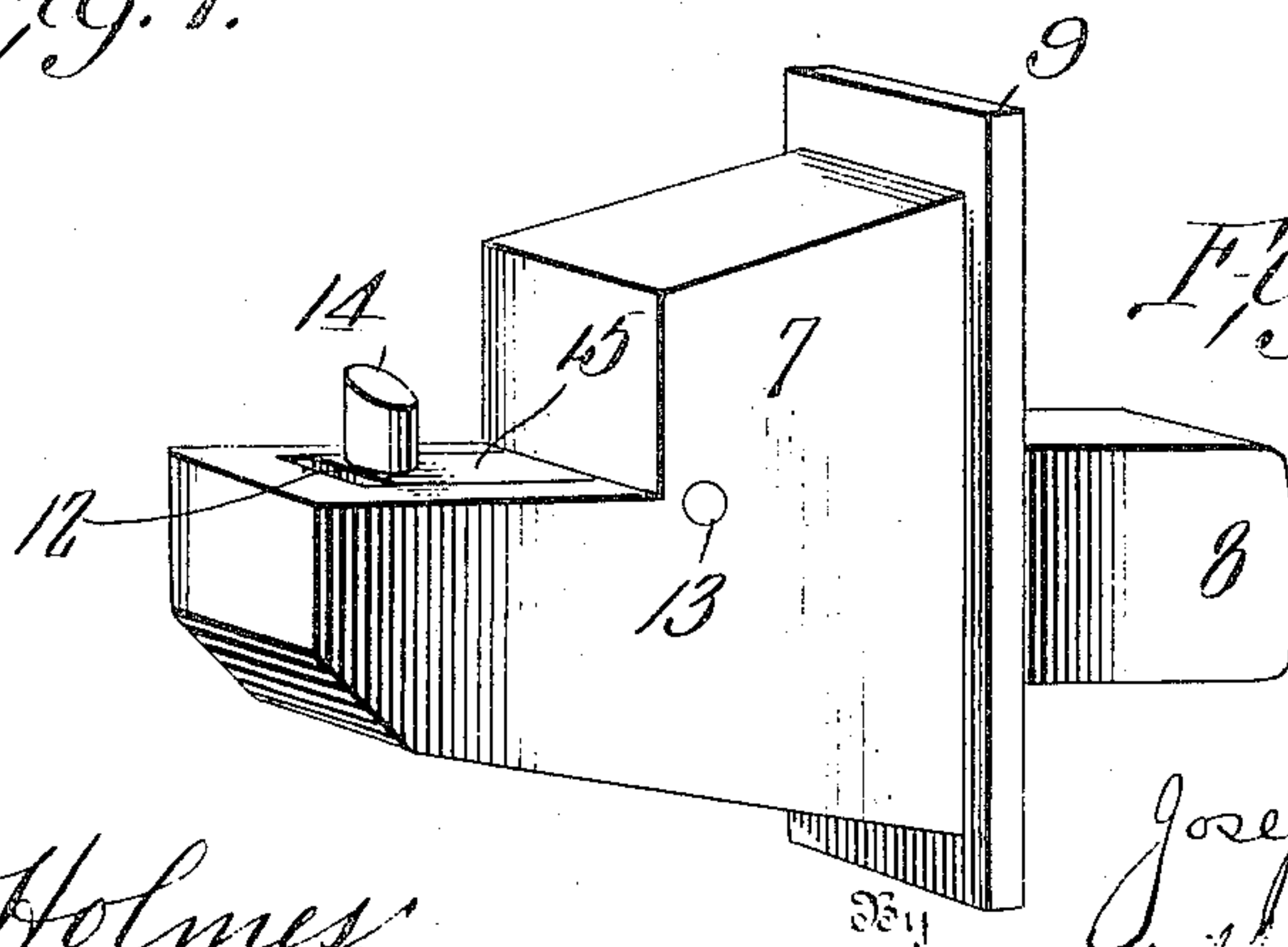


Fig. 2.

Witnesses

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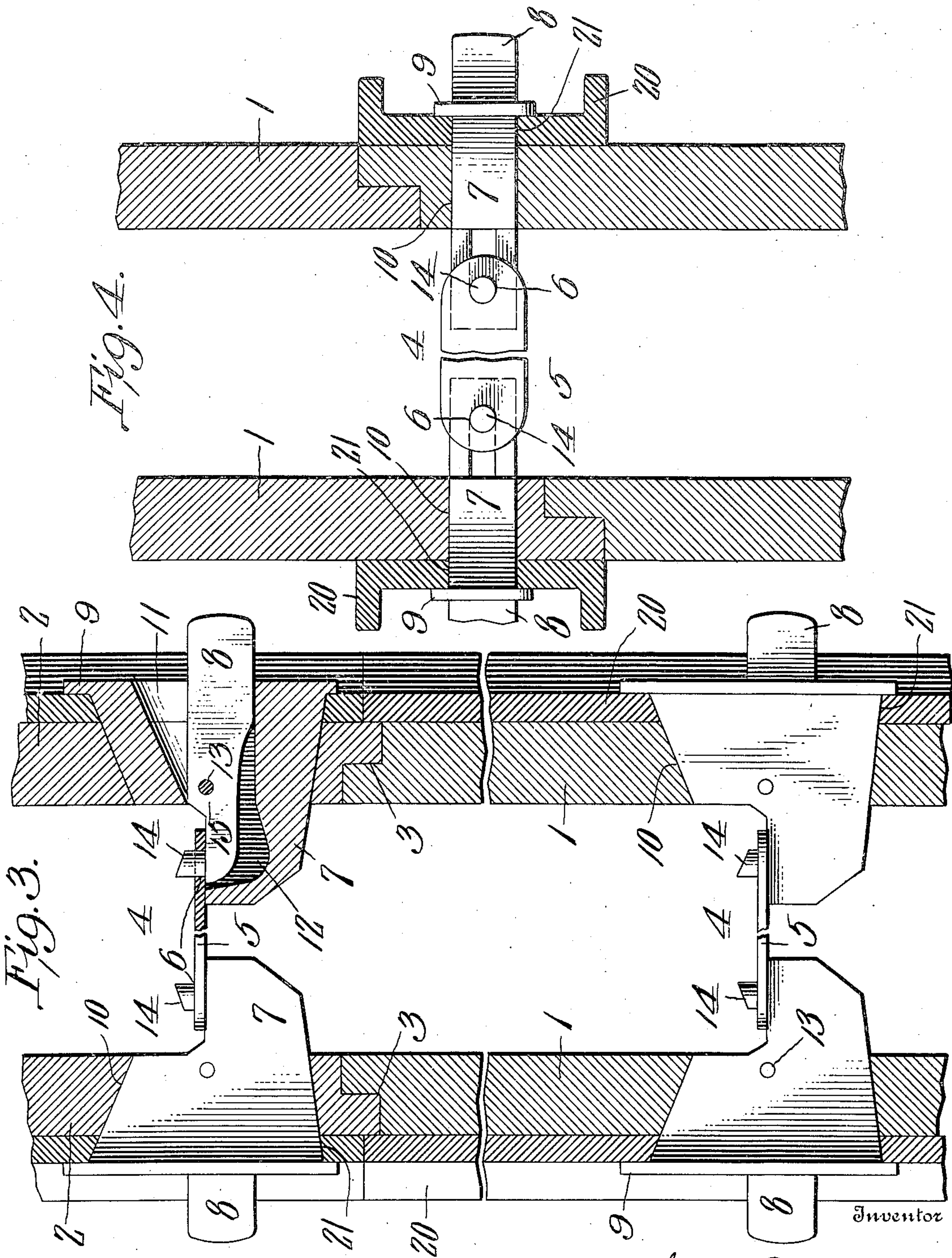
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Witnesses

O. W. Holmes  
Aloysius M. Carthy.

Joseph M. Carmody,  
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# UNITED STATES PATENT OFFICE.

JOSEPH M. CARMODY, OF WASHINGTON, DISTRICT OF COLUMBIA.

## CONCRETE FORM.

No. 849,885.

Specification of Letters Patent.

Patented April 9, 1907.

Application filed August 4, 1906. Serial No. 329,226.

*To all whom it may concern:*

Be it known that I, JOSEPH M. CARMODY, a citizen of the United States, residing at Washington, District of Columbia, have invented certain new and useful Improvements in Concrete Forms, of which the following is a specification.

My invention has reference to apparatus for molding walls and other bodies of concrete or other plastic material; and it contemplates the provision of an apparatus with which a true, homogeneous, one-piece concrete wall may be expeditiously and easily produced without the assistance of skilled labor and one embodying such a construction that subsequent to the setting or hardening of the concrete or other plastic material its molding sections may be quickly and easily removed, and this without disintegrating any part of the wall or marring the surfaces or sides thereof.

The invention will be fully understood from the following description and claims when the same are read in connection with the accompanying drawings, forming part of this specification, in which—

Figure 1 is an elevation illustrative of the manner in which the apparatus constituting the present and preferred embodiment of my invention is employed in the molding of a wall of concrete or other plastic material. Fig. 2 is a perspective view of one of the end members of the couplings through the medium of which the opposite mold-sections are connected together and held in proper relation during the formation of a wall. Fig. 3 is an enlarged broken detail section illustrating two courses of mold-sections and the couplings complementary thereto. Fig. 4 is a horizontal section taken through one of the said couplings.

Similar numerals designate corresponding parts in all of the views of the drawings, referring to which—

1 1 are the opposite mold-sections of one horizontal course, and 2 2 are the opposite mold-sections of the next upper horizontal course. These mold-sections are preferably, though not necessarily, made of a wood compatible with the purpose of the invention, and the joints between the lower and upper sections are preferably broken, as indicated by 3, in order to assure the maintenance of continuous smooth surfaces at the inner sides of the sections as well as to assist in retaining

the upper sections in vertical alinement with the lower sections.

4 4 are the couplings, through the medium of which the opposite mold-sections in a course are connected together and held in proper relation until the concrete or other plastic material rammed and molded between the same has hardened or set. As many of the couplings 4 may be employed between opposite sections in a course as the length and height of the sections demand or render necessary and inasmuch as the said couplings are identical in construction a detailed description of the coupling shown at the top of Fig. 3 and in Fig. 4 will suffice to impart a definite understanding of all. The mentioned coupling 4 is made, by preference, of iron or other suitable metal and comprises an intermediate member, preferably a horizontally-disposed plate 5, having vertically-disposed apertures 6, adjacent to its ends, end members 7, and lever-catches 8, which effect detachable connection of the end members to the intermediate member, as best shown at the top of Fig. 3. The end members 7 have flanges 9 at their outer ends and are preferably tapered or gradually reduced in size from the said flanges 9 inward, so as to snugly occupy the correspondingly-shaped openings 10 in the opposite mold-sections of the course.

Interiorly the end coupling members 7 are shaped as shown at the right of the upper portion of Fig. 3—that is to say, they have inwardly-tapered openings 11, which extend inward from the outer ends of the sections and merge at their inner ends into chambers or recesses 12, open at their upper sides. The lever-catches 8 of the coupling are fulcrumed at 13 in the end members 7 and are arranged to be swung vertically. Their outer arms extend outward beyond the outer ends of the members 7 and are proportionately long and heavy, as shown, whereby it will be seen that they will assume and normally rest in the position shown and in that way retain the pins 14 on their inner short arms 15 in the apertures 6 of the intermediate member 5 and preclude casual disconnection of the end members from said intermediate member. In virtue of the outer arms of the lever-catches 8 extending outward beyond the outer ends of the end coupling members said lever-catches may obviously be quickly and easily disengaged from the intermediate member 5 to effect disconnection



of the end members from said intermediate member. It will also be noted that when the outer arms of the lever-catches 8 are raised for the purpose stated the inner arms 5 15 and the pins 14 thereon will be drawn down into the recesses 12 in the end members 7 and below the upper sides of the inner portions of said end members, this in order to preclude disintegration of or injury to the 10 wall when the end members 7 are drawn out of the wall and the openings in the opposite mold-sections.

In the practical use of my novel apparatus the mold-sections are arranged one course 15 above the other, and the opposite sections are connected together through the medium of the couplings 4, as illustrated. The concrete or other plastic material is then put in the form and rammed in the usual manner, 20 and the mold-sections are left in the positions shown until the material of the wall has set or hardened. When the material employed has solidified into a homogeneous mass, the end coupling members 7 are disconnected from the intermediate members 5, 25 and said end coupling members are withdrawn endwise from the plastic wall, after which the mold-sections are removed. To disconnect the end members of the couplings 30 from the intermediate members, it is essential to raise the outer arms of the latch-levers 8, and when this is done the inner arms of said levers are received entirely in the recesses 12 of the coupling members 7. In 35 virtue of this and the taper form of the coupling members 7 it will be seen that the withdrawal of the said coupling members 7 is attended by no disintegration of or injury to the wall whatever, which is an important consideration. The intermediate members 5 of 40 the couplings 4 are left in the wall of plastic material, and subsequent to the withdrawal of the end coupling members 7 the spaces that were occupied by the same are filled in 45 any approved manner with plastic material of the same character as that originally employed.

With a view of lending strength and stability to the apparatus at the joints between 50 the mold-sections of the lower course and those of the upper course as well as to assure the mold-sections resting in vertical alinement I prefer to employ the metallic plates 20. (Best shown in Fig. 3.) These plates 20 have 55 apertures 21, which receive the end members 7 of the couplings 4, and they are snugly retained in position against the sides of the mold-sections by the flanges 9 of the end members 7 of couplings 4 after the manner 60 illustrated.

22 22 are brace-frames positioned at opposite sides of the site of the wall and designed to reinforce the superposed mold-sections. These frames may be of any construction 65 compatible with the purpose of my invention

without involving departure from the scope thereof, though I prefer to have them comprise inner upright bars 23, disposed against the sides of the mold, outer upright bars 24, horizontal bars 25, connecting the bars 23 70 and 24, and struts 26, crossed and pivotally connected together and connected at their opposite ends to the uprights 23 and 24, each of the said struts being provided with a turn-buckle 27, whereby it may be increased or 75 diminished in length as occasion demands. When desirable, the brace-frames 22 may comprise sections superposed and connected together in any approved manner.

It will be gathered from the foregoing that 80 when my novel apparatus is employed a wall may be expeditiously formed of plastic material with the expenditure of but a minimum amount of effort and without the employment of skilled labor, and it will also be noted 85 that subsequent to the setting or hardening of the material incorporated in the wall the parts of the apparatus may be quickly and easily removed.

I have specifically described the construction and relative arrangement of the parts 90 included in the present embodiment of my invention with a view of imparting a definite understanding of the same; but it is obvious that in practice such changes or modifications 95 may be made as fairly fall within the scope of my invention as claimed.

Having described my invention, what I claim, and desire to secure by Letters Patent, is— 10

1. In a molding apparatus, the combination of opposite mold-sections having transverse openings, and a coupling between said mold-sections comprising an intermediate member, end members removably arranged 10 in the transverse openings of the mold-sections and movable rectilinearly outward through said openings, and adjustable devices carried by the end sections and detachably connecting the same with the intermediate sections. 11

2. In a molding apparatus, the combination of opposite mold-sections having transverse apertures, and a coupling comprising an intermediate member, end members 11 removably arranged in the apertures of the mold-sections, and adjustable devices carried by the end members and detachably connecting the same to the intermediate member; said adjustable devices being arranged 12 when disengaged from the intermediate member to assume positions entirely within the end members.

3. In a molding apparatus, the combination of opposite mold-sections having openings, and a coupling between said mold-sections, comprising an intermediate member, and end members removably arranged in the openings of the mold-sections and movable rectilinearly outward through said openings 13



and having latches engaging the intermediate member and detachably connecting the members together.

4. In a molding apparatus, the combination of opposite mold-sections, and a coupling between said mold-sections comprising separable intermediate and end members latched together the end members arranged to move rectilinearly outward through the mold-sections when unlatched from the intermediate member.

5. In a molding apparatus, the combination of opposite mold-sections having apertures, and a coupling comprising an intermediate apertured member, end members removably arranged in the apertures of the mold-sections and provided with means for holding themselves against inward movement, and latches carried by the end members and detachably connecting the same to the intermediate member.

6. In a molding apparatus, the combination of opposite mold-sections having apertures, and a coupling comprising an intermediate member, end members removably arranged in the apertures of the mold-sections, and latches carried by the end members and detachably connecting the same to the intermediate member; the said end members being arranged when the latches are dis-

gaged from the intermediate member to entirely receive said latches.

7. In a molding apparatus, the combination of opposite mold-sections having apertures, and a coupling comprising an intermediate member, end members removably arranged in the apertures of the mold-sections and open at their outer ends and having recesses in their inner portions, and latch-levers carried by and extending through the end coupling members and detachably connecting the same to the intermediate member.

8. In a molding apparatus, the combination of opposite mold-sections having apertures, and a coupling comprising an intermediate member having vertical apertures adjacent to its ends, end members removably arranged in the apertures of the mold-sections and open at their outer ends and having recesses in the upper sides of their inner portions, and latch-levers fulcrumed in and extending through the end coupling members and having pins removably arranged in the apertures of the intermediate member.

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

JOSEPH M. CARMODY.

Witnesses:

WM. CHAS. LEDERER,  
HENRY J. GROSS.