

No. 875,700.

PATENTED JAN. 7, 1908.

P. T. C. DUMAIS.
MOLD.

APPLICATION FILED JUNE 20, 1907.

2 SHEETS—SHEET 1.

Fig 2

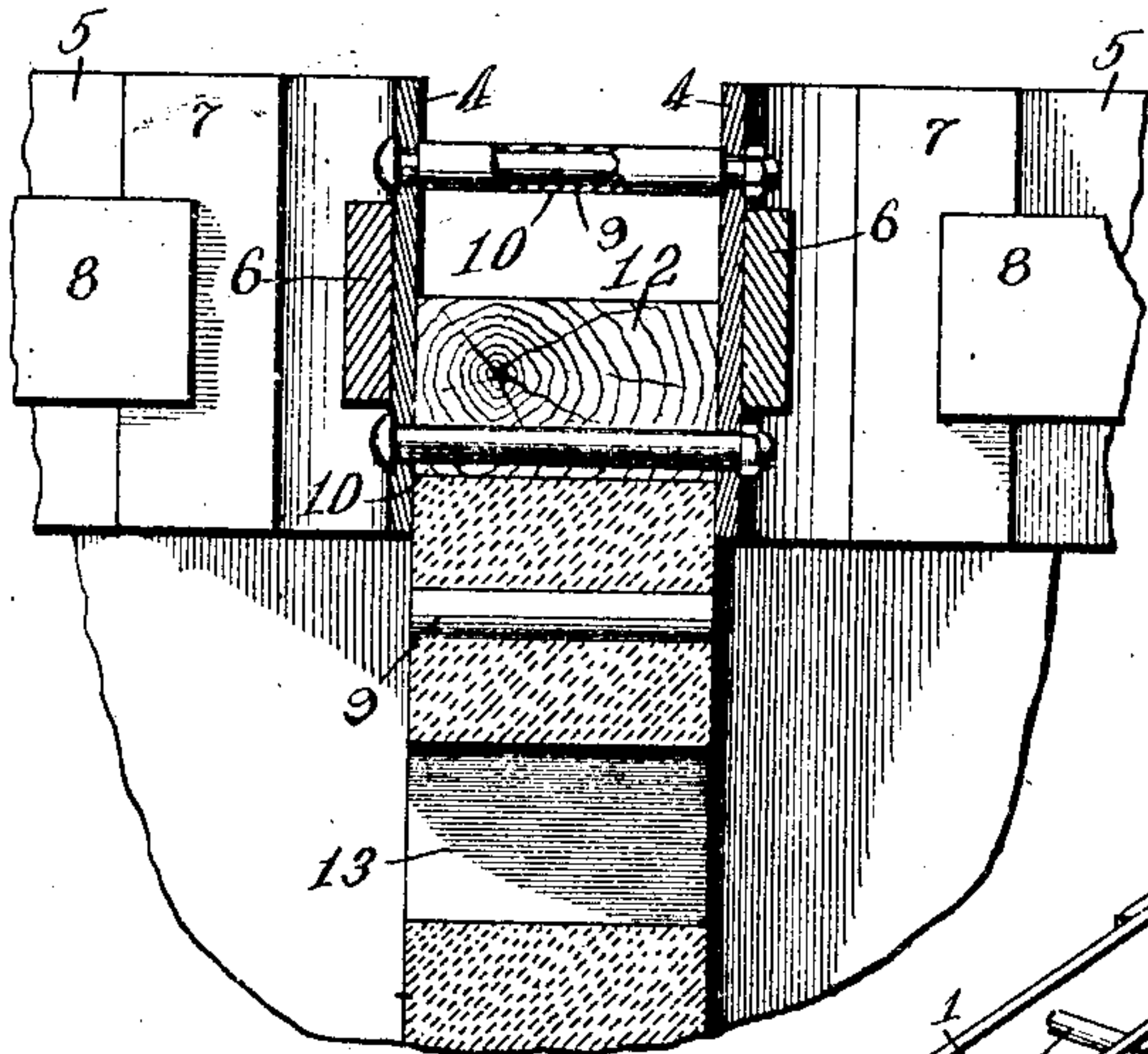
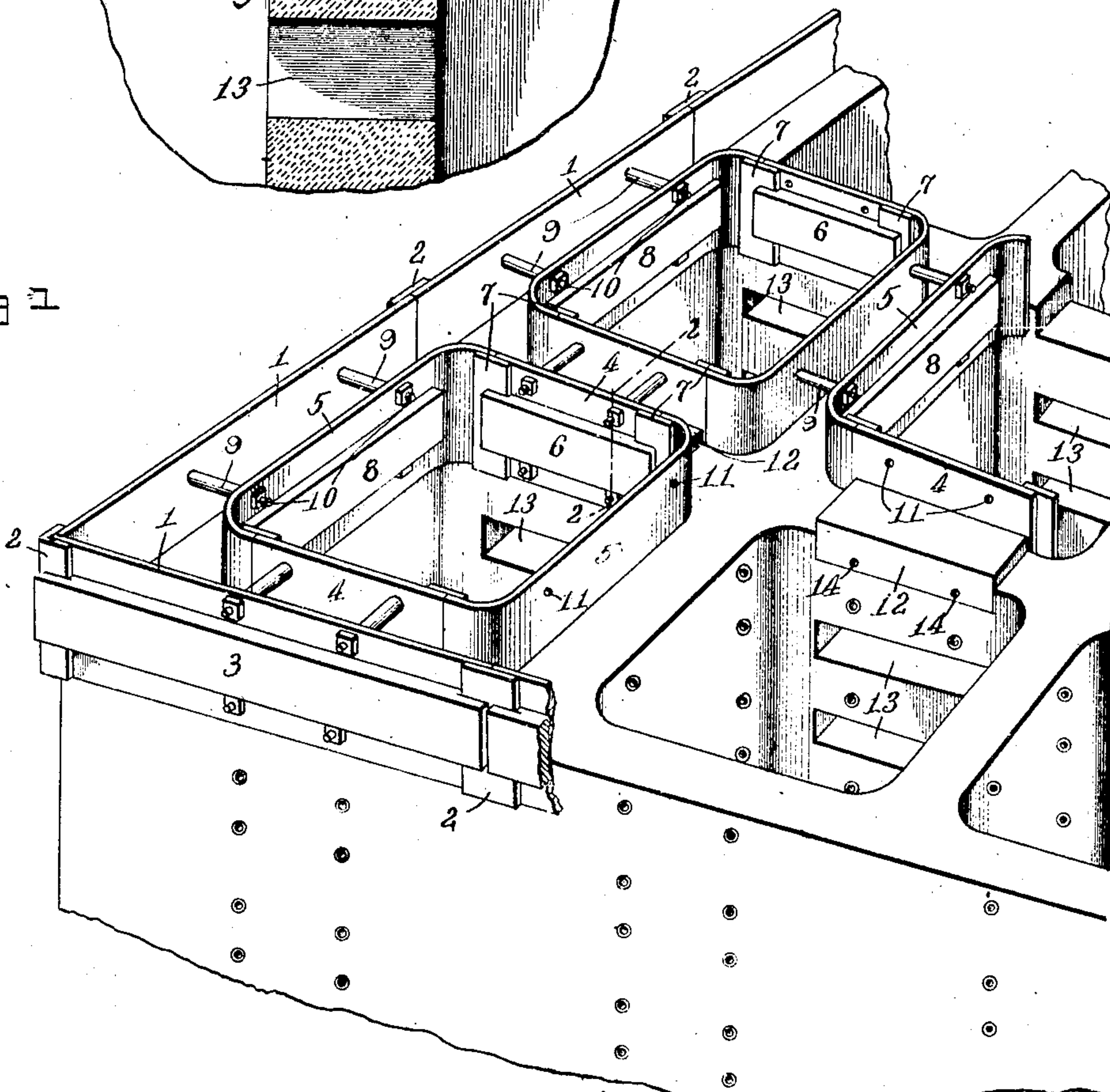


Fig 1



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Witnesses

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2 SHEETS—SHEET 2.

Fig 3

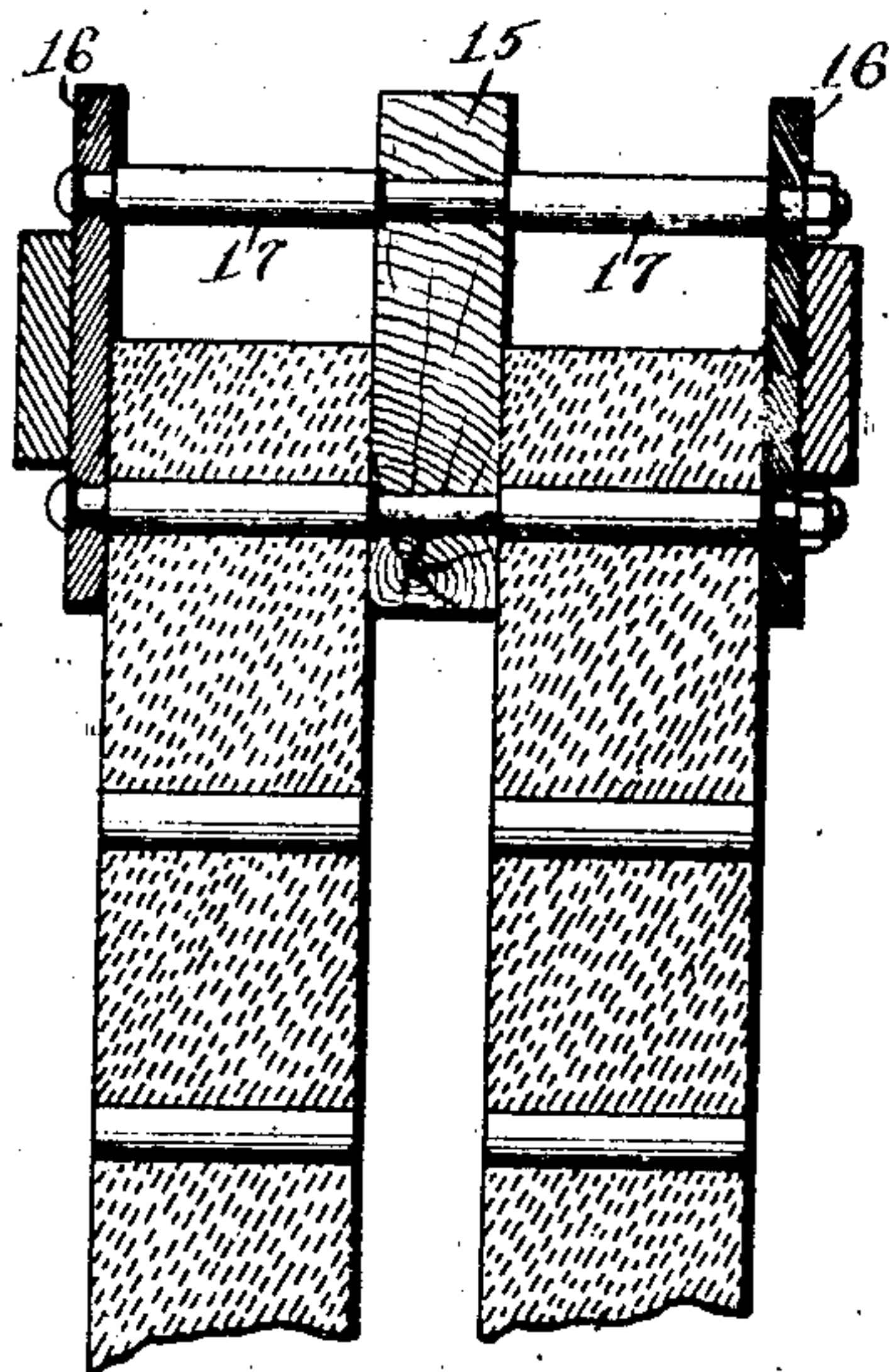


Fig 4

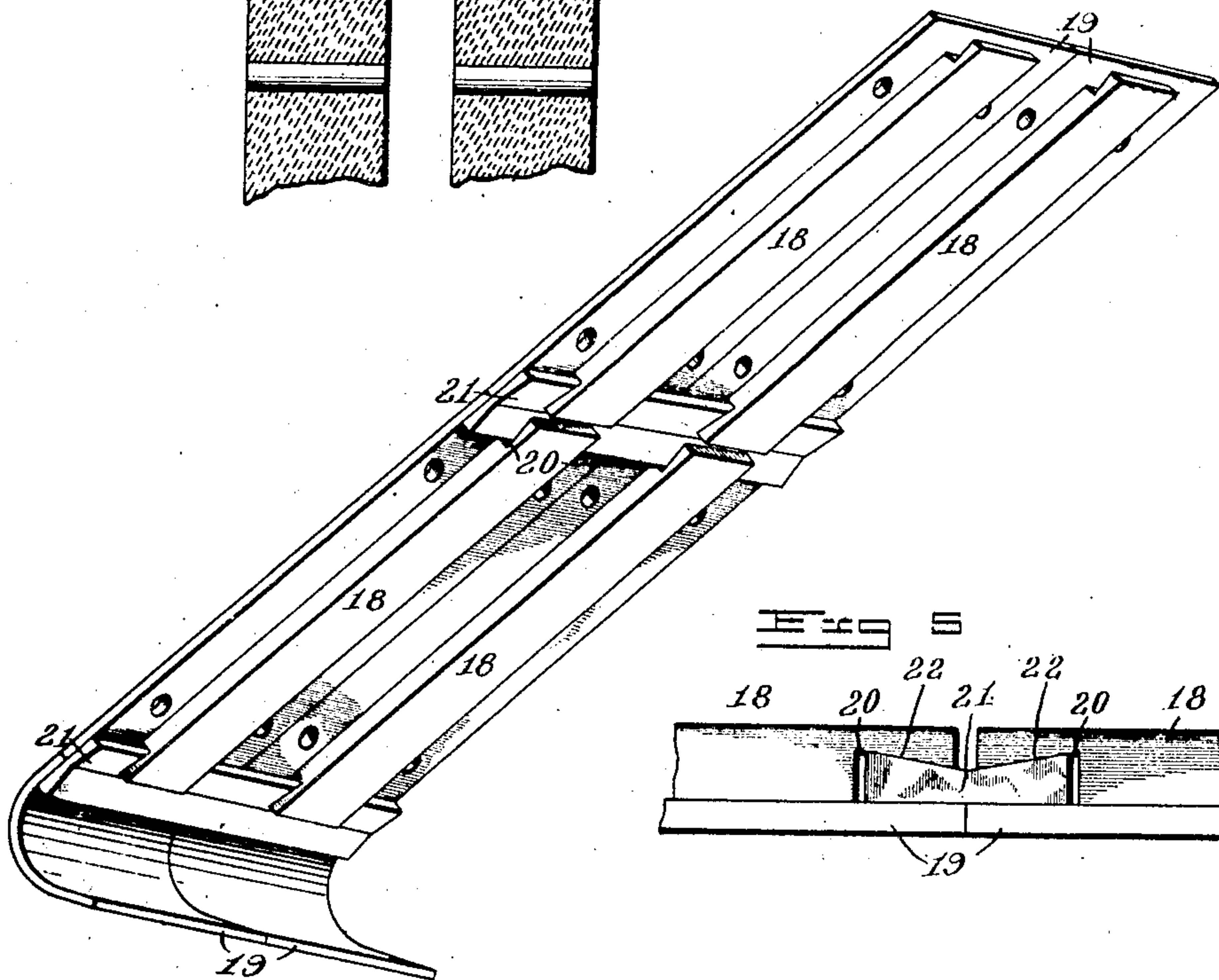
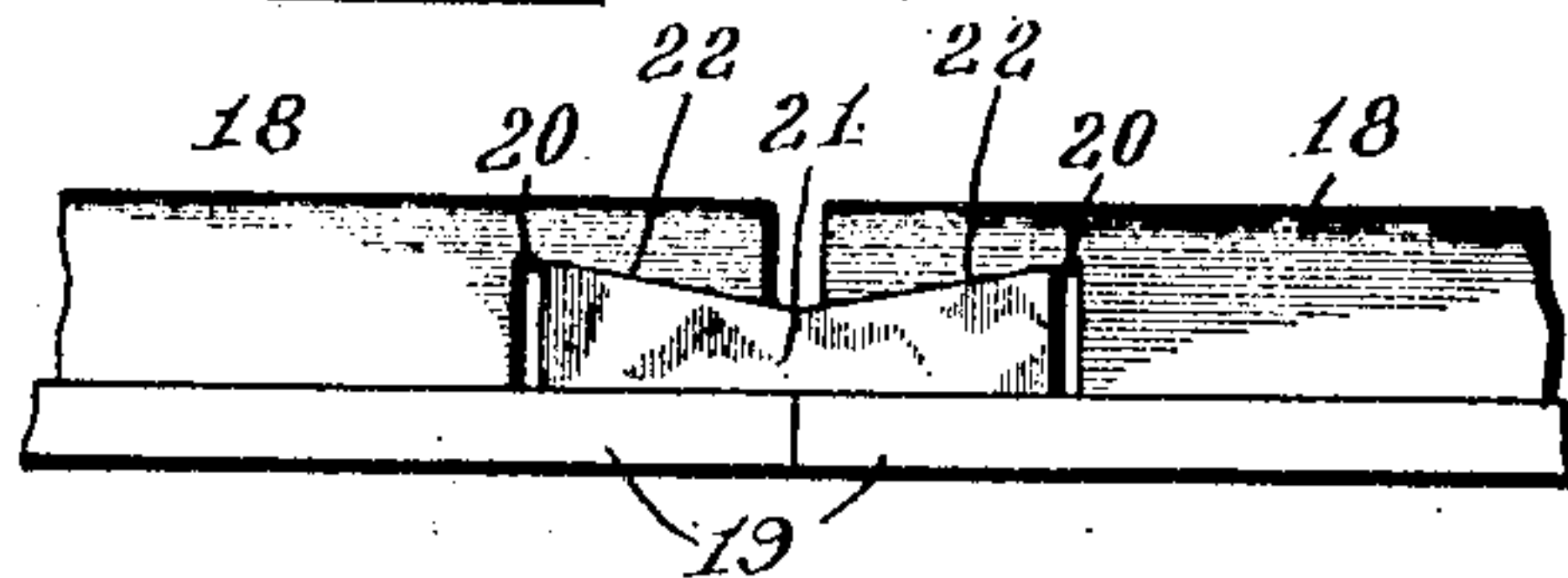


Fig 5



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UNITED STATES PATENT OFFICE.

PAUL THOMAS CONCORD DUMAIS, OF HULL, QUEBEC, CANADA.

MOLD.

No. 875,700.

Specification of Letters Patent.

Patented Jan. 7, 1908.

Application filed June 20, 1907. Serial No. 379,842.

To all whom it may concern:

Be it known that I, PAUL THOMAS CONCORD DUMAIS, a subject of the King of Great Britain, residing at Hull, county of Ottawa, in the Province of Quebec, Canada, have invented certain new and useful Improvements in Molds; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in molds employed in the construction of concrete walls and structures, and it consists in the constructions, combinations and arrangements herein-described and claimed.

An object of my invention is to provide a simple and durable form of mold comprising a plurality of mold plates adapted to be conveniently assembled to provide continuous molding faces of any required sizes or dimensions for meeting all conditions arising in practice.

A further object of my invention is to provide an inexpensive mold, which can be employed with a minimum amount of labor for constructing the different types of concrete structures.

A further object of my invention is to provide an improved mold comprising universal plates adapted to be rigidly locked together for providing continuous mold faces of any required dimensions; the universal mold plates being so constructed that a common locking means can be employed for locking any one of said plates to any other thereof.

Referring to the drawings forming a part of this application and in which similar reference symbols indicate corresponding parts in the several views:—Figure 1 is a fragmentary perspective view, illustrating one embodiment of my invention as employed in progressively building up monolithic crib work, or other structures; Fig. 2 is a detail sectional elevation on the line 2—2 of Fig. 1; Fig. 3 is a detail sectional view through a hollow concrete wall, illustrating my mold applied to the progressively building up of said wall; Fig. 4 is a perspective view of several mold plates secured together by a slightly modified form of locking means; and Fig. 5 is a plan view of the locking means shown in Fig. 4. Figs. 1 and 2 illustrate one use of my invention for progressively building up a mono-

lithic structure, such as a crib work. In this operation, a suitable foundation, such as a bed of concrete, is prepared.

A plurality of suitable mold plates 1 are placed on the foundation and secured together to provide a continuous molding face for the outer surface of the desired structure. The mold plates 1 have braces 3 secured along their rear faces; said braces terminating a slight distance from the ends of the mold plates and being provided with recesses for slidingly receiving the lock plates 2.

Where the mold plates 1 are arranged at an angle to provide a corner to the superstructure, I employ a lock plate 2 formed at an angle corresponding to that of the desired corner in the structure, as shown in Fig. 1. It will be noted that each of the lock plates 2 extends across the joint between the abutting mold plates and is maintained in close engagement with the rear faces of said plates, thereby constituting a rigid backing extending across the joints between the abutting plates and insuring regularity in the continuous molding face formed by the several mold plates.

Suitable mold plates 4 and 5 are set on the foundation and secured together to provide the required molding faces for the desired inner surfaces of the structure. The plates 4 are provided with braces 6 corresponding to the braces 3 of the plates 1. The mold plates 5 are provided with resilient curved ends arranged to engage lock plates 7 inserted in the recesses of the braces 6. Braces 8 are shown on the rear faces of the plates 5, but such braces extend only to the curved portions of the plates and are not provided with recesses. The various sections of mold plates thus assembled on the foundation are spaced apart in the desired manner by sleeves 9 of the required length, which extend between and engage the mold faces of adjacent sections. The mold sections and sleeves are securely clamped together by bolts 10 extending through said sleeves and arranged with the bolt head and nut engaging the rear faces of corresponding mold sections. This provides a very advantageous construction, since by the use of sleeves 9 of various lengths, the mold sections can be conveniently clamped rigidly together with any desired spacing. The sleeves 9 can advantageously be formed of

paper, or tar paper, but they can be formed in any manner, preferably of porous material.

The mold plates are shown formed of 5 metal face plates provided with openings 11 for the insertion of the clamping bolts, and having braces riveted, or otherwise secured, on their rear faces. The braces insure proper rigidity to the face plates and provide means for engaging the locking plates. 10 The mold plate indicated by numeral 5 is a special form for convenient use in forming a mold face or core for the inner surfaces of the structure. It will be obvious that the 15 forms of the mold plates can be varied to meet the different requirements of practice. The space between the mold sections is then filled in with concrete, and the mold sections left in position until the concrete is sufficiently hardened to prevent injury or distortion thereof. The clamping bolts 10 are then withdrawn, and the lock plates detached for permitting convenient removal and handling of the mold plates. The spacing sleeves 9 remain in the walls of the structure and permit ready withdrawal of the clamping bolts 10; said spacing sleeves can be suitably filled up or plugged, as by a filling of concrete or other suitable material. 20 The mold plates are then again assembled and positioned to bring the lower series of bolt openings in the mold plates into registry with the upper series of spacing sleeves previously molded into the walls of the structure. Spacing bolts 10 are then inserted through such registering bolt openings and sleeves, and the bolt nuts screwed down to securely clamp the mold sections to the previously formed portions of the walls. In 40 this position of the parts, the mold sections will extend above the walls to provide molding faces for the further progressive building of said walls, as shown in Fig. 1. Clamping bolts 10 are inserted through the upper series of bolt holes in the mold plates and through suitable spacing sleeves 9 interposed therebetween, for rigidly clamping the several mold sections together. The space between the several mold sections is 50 then filled in with concrete, and the above steps repeated until the walls of the structure have been progressively built to the required dimensions.

It will be obvious that a plurality of mold 55 plates can be locked together for providing a molding face having any desired length and breadth. Thus, by employing locking plates of necessary length, one or more series of mold plates could be assembled to provide 60 a continuous molding face with the plates 1, and the several series of mold plates rigidly locked together by the common locking plates 2.

Fig. 4 shows a locking plate having a 65 length equal to twice the width of a mold

plate, and constituting a common locking means for the abutting edges of four mold plates. Core blocks 12 are provided for forming any desired openings 13 or recesses in the walls of the structure. The core 70 blocks can be constructed in any suitable manner, and are provided with bolt openings 14 to permit insertion of the bolts there-through for rigidly clamping the core blocks in position with the mold sections, as shown 75 especially in Fig. 2. In Fig. 1, two of the core blocks are shown in position for receiving concrete above their upper portions, and the previously formed openings 13 in the walls of the structure are shown with the 80 core blocks removed therefrom.

Fig. 3 illustrates one embodiment of my invention for progressively building up hollow walls. In this construction, a core block 15 is suitably spaced from the mold sections 85 16 by spacing sleeves 17. The sleeves 17 are similar to the previously described spacing sleeves, and remain in the concrete walls upon removal of the clamping bolts, cores and mold sections. The openings formed in 90 the walls by the spacing sleeves 17 can be closed with concrete, and tie bolts can be inserted in any desired part of said openings. The two portions of the hollow wall can be rigidly bound together with solid concrete at 95 any desired portions by omitting the core block 15 and suitably spacing the mold section 16 by spacing sleeves 17 extending therebetween; a shield of sheet metal, or other material, being placed on top of the wall portions to bridge the space therebetween and prevent entrance of the concrete. 100

Figs. 4 and 5 illustrate a slight modification, in which the braces 18 on the rear faces of the mold plates 19 are provided with inclined recesses 20; the locking plate 21 being 105 formed with oppositely tapered portions 22 for engaging the corresponding recesses in the braces of abutting mold plates. This construction strongly forces together the 110 abutting edges of the mold plates and insures the maintenance of regularity and smoothness in the continuous molding face provided by the several mold plates.

I have illustrated and described preferred 115 and satisfactory constructions, but, obviously, changes could be made within the spirit and scope of my invention.

Having thus described my invention, what I claim as new therein and desire to secure by 120 Letters Patent is:

1. A snap mold for concrete, comprising independent mold plates adapted to be assembled to constitute mold sections for providing continuous molding faces of any required dimensions, braces carried on the 125 backs of said mold plates and provided with end recesses, locking plates fitting such recesses for locking together the abutting mold plates of said sections, and adjustable clamp- 130

ing means for clamping together said mold sections with any desired space between their molding faces, substantially as described.

5 2. A snap mold for concrete, comprising independent mold plates adapted to be assembled to constitute mold sections for providing continuous molding faces of any required dimensions, braces carried on the
10 backs of said mold plates and provided with end recesses, locking plates fitting such recesses for locking together the abutting mold plates of said sections, said locking plates constituting rigid backings extending across
15 the joints between said abutting mold plates, and adjustable clamping means for clamping together said sections with any desired space between their molding faces, substantially as described.

20 3. A snap mold for concrete, comprising

independent mold plates adapted to be assembled to constitute mold sections for providing continuous molding faces of any required dimensions, braces carried on the
25 backs of said mold plates and provided with inclined recesses, locking plates formed with oppositely tapered portions for engaging such inclined recesses to lock together the abutting mold plates of said sections and
30 strongly forcing together the abutting edges of said plates, and adjustable clamping means for clamping together said sections with any desired space between their molding faces, substantially as described.

In witness whereof I have hereunto set my
35 hand in the presence of two witnesses.

PAUL THOMAS CONCORD DUMAIS.

Witnesses:

A. BRAY,

I. A. CHASSÉ.