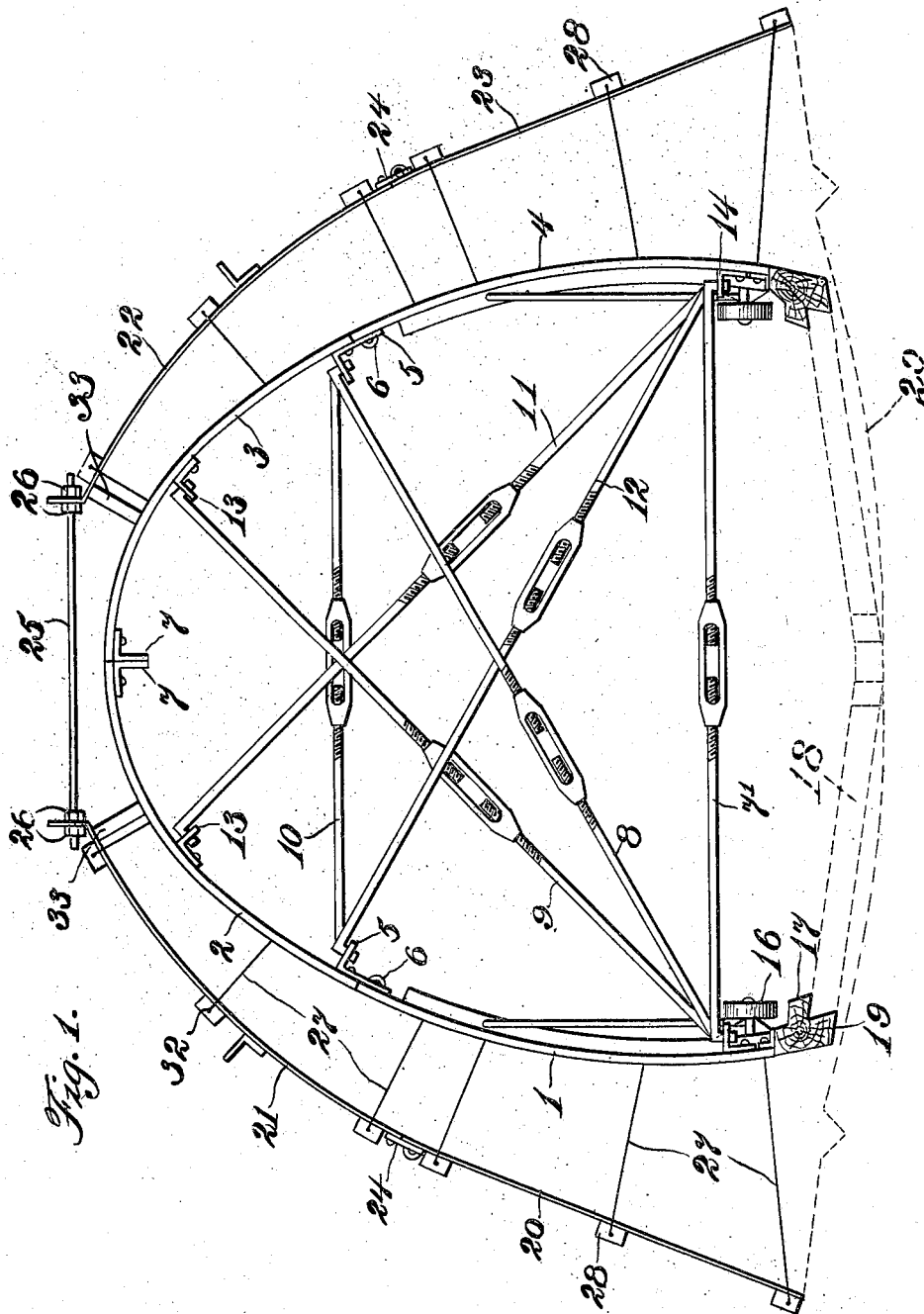


No. 853,956.

PATENTED MAY 21, 1907.

J. B. BLAW.
CENTERING MOLD.
APPLICATION FILED NOV. 12, 1906.

2 SHEETS—SHEET 1.



WITNESSES
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J. C. Bradley

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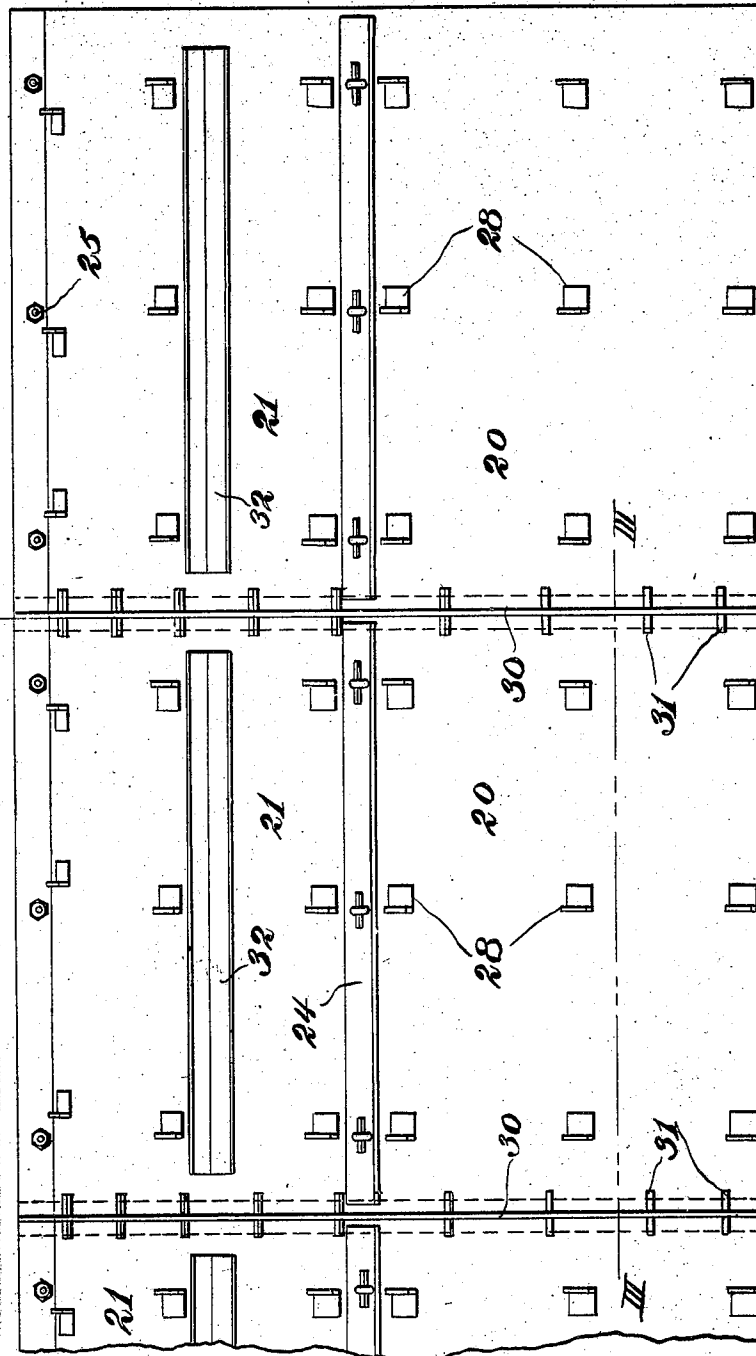


Fig. 2.

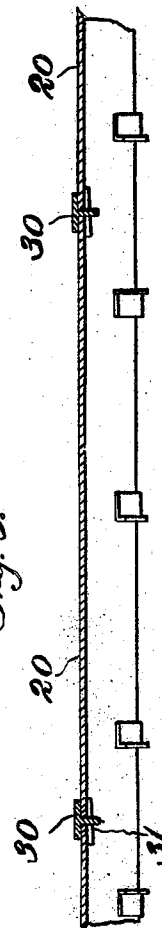


Fig. 3.

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Fig. 2.

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UNITED STATES PATENT OFFICE.

JACOB B. BLAW, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO BLAW COLLAPSIBLE STEEL CENTERING COMPANY, OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF NEW JERSEY.

CENTERING-MOLD.

No. 853,956.

Specification of Letters Patent.

Patented May 21, 1907,

Application filed November 12, 1906. Serial No. 343,009.

To all whom it may concern:

Be it known that I, JACOB B. BLAW, a citizen of the United States, residing at Pittsburgh, county of Allegheny, in the State of Pennsylvania, have invented certain new and useful Improvements in Centering-Molds, of which the following is a specification.

My invention relates to molds for use in constructing concrete sewers, conduits, and similar passages, and particularly to the outer forming portion or sheathing. The invention has for its objects; to provide a sheath adapted to be used with a collapsible mold, which sheath may be easily handled and securely held in position from the inner mold; to provide a sheath which can be built up in sections as the concrete is filled in about the inner mold; and to provide a very light sheath of inexpensive construction which shall effectually confine the concrete and insure a uniform thickness of material about the inner mold. These and other advantages are secured by my invention one form of which is shown in the accompanying drawing, in which—

Figure 1 is an end view showing the sheathing in position about the collapsible inner mold.

Figure 2 is a side view, and

Figure 3 is a section on the line III—III of Fig. 1.

Heretofore when sewers or conduits were constructed from concrete, difficulty has been experienced in securing the proper thickness of material over the inner form, due to the tendency of the concrete to flow downwardly, and furthermore difficulty was experienced in packing the concrete firmly about the inner mold. My device is designed to overcome these difficulties and provide a light and inexpensive means which can be used repeatedly for positively confining the concrete and thus securing the proper thickness of material over the inner mold and allowing the packing and working of the concrete into a firm mass.

Referring to the drawing, I have shown in end elevation a collapsible inner mold suitable for forming large sewers together with my improved sheath for confining the concrete about the inner collapsible mold. The inner collapsible mold may be of any im-

proved form, but as shown it consists of four sheet metal plates numbered 1, 2, 3, and 4, suitably secured together by the overlapping angles 5 together with the loops 6 and wedges as is common in the art, and also by the angles 7, 7. This mold member is stiffened by the braces or turnbuckles 7', 8, 9, 10, 11, and 12, secured to the angles 5, 13, and 14, and adapted when contracted to loosen the mold member from the concrete. The member is provided with wheels 16 at its lower edges for riding upon the track 17 when the mold is contracted, which track members 17 are secured to the framing 18 adjacent the timbers 19. This framing and track is supported on the concrete floor previously laid and indicated by the dotted lines 20 in the drawing.

Spaced away from the inner mold member is the sheathing comprising in the present case four thin metal sheets 20, 21, 22, and 23, detachably secured together at the sides by means of the butt straps 24 and the loop and wedge construction heretofore referred to, and at the top by means of the cross rod 25 and clamping nuts 26. The sheathing is secured to the inner mold member by means of a plurality of joining members 27 which in the present instance are wires which pass through the sheathing at their outer ends and through the plates of the inner mold member at their inner ends. In order to reinforce the sheathing plates at the point of support of the wire, the small angle sections 28 are provided through which the wire passes. The wire may be secured to the plates of the inner mold members in a number of different ways but is preferably engaged by simply passing through the plate at one point and back through the plate at a point slightly removed thereby providing a loop, which can be easily cut from the inside when the concrete has set and it is desired to collapse the inner mold member. In freeing the sheathing, it is of course necessary either to cut the wire adjacent the members 28 or in case the ends have simply been twisted together at this point to untwist them. It is obvious that other temporary or releasable holding means than the wires might be substituted, it only being necessary that such means be releasable both from the sheathing and from the inner mold member. In using

the device the plates 20 and 23 will ordinarily be first applied outside the inner mold member which has previously been placed in position, and the space between the inner mold member and the plates 20 and 23 filled with concrete, after which the upper sheathing members 21 and 22 can be secured to the lower members 20 and 23 and the remaining concrete necessary filled in at the open space adjacent the cross rods 25. After the concrete has set the wires 27 are released from the sheathing and from the inner mold member, after which the inner mold member may be collapsed and moved along to a new position, and the sheathing removed by detaching the connecting rods 25 and then removing the plates 21, 22, 20, and 23.

Figures 2 and 3 illustrate the manner in which the sections 20—21 are joined at the edge to each other along their vertical edges. This is accomplished by means of the T-irons 30 which not only serve as joining members, but also as stiffening members. The head of the T lies on the inside of the plates with its flange projecting between the edges as shown in Figure 3, and the plates are held tightly against the head of the T by means of the wedges 31 which pass through slots in the T and press against the plates. This gives a secure fastening to the edges and makes a tight joint preventing the escape of any of the concrete. The plates may be stiffened longitudinally if desired, by means of angles 32, and the upper edges of the plates 21 and 22 additionally braced from the inner mold members by means of struts 33 (Figure 1). It will be apparent that the T-bars add greatly to the rigidity of the sheathing, and might under some circumstances sufficiently support the structure to permit of the disuse of the wires 27, and on the other hand other forms of joints might be readily substituted for the T joint, and that I am not limited to the use of this particular joint. It will be seen from the foregoing that the thickness of the cement over the inner mold member is

positively controlled by the sheathing and that the material may be packed in between the mold and sheath to any desired extent. It will also be apparent that because of the holding members 27 the sheathing can be held in proper position even though this be of very light and flimsy material, thus permitting of an easily handled and inexpensive sheath. The number of sections used in the sheath is of course not limited to four, and a greater or less might be used, depending upon the conditions of the work.

Having thus described my invention and illustrated its use, what I claim as new and desire to secure by Letters Patent, is the following:

1. In combination in a mold, a collapsible inner mold, a thin flexible outer sheath spaced therefrom, and detachable means connecting the mold and the sheath for supporting such sheath.

2. In combination in a mold, a collapsible inner mold, a thin flexible outer sheath spaced therefrom, and a plurality of wires connecting the mold and sheath for holding the sheath in position.

3. In combination in a mold, a collapsible U shaped mold, a larger U shaped sheath of thin flexible material thereover and open at the top, and detachable means connecting the mold and sheath for holding the sheath in position.

4. In combination in a mold, a thin flexible sheath composed of a plurality of vertical strips, joining and stiffening means for the adjacent edges comprising a T-bar having its flange provided with slots and lying between the plates, and wedges for engaging the slots and bearing against the plates.

In testimony whereof, I hereunto sign my name in the presence of the two subscribed witnesses.

JACOB B. BLAW.

Witnesses:

J. C. BRADLEY,
ARCHWORTH MARTIN.