No. 853,954. PATENTED MAY 21, 1907.

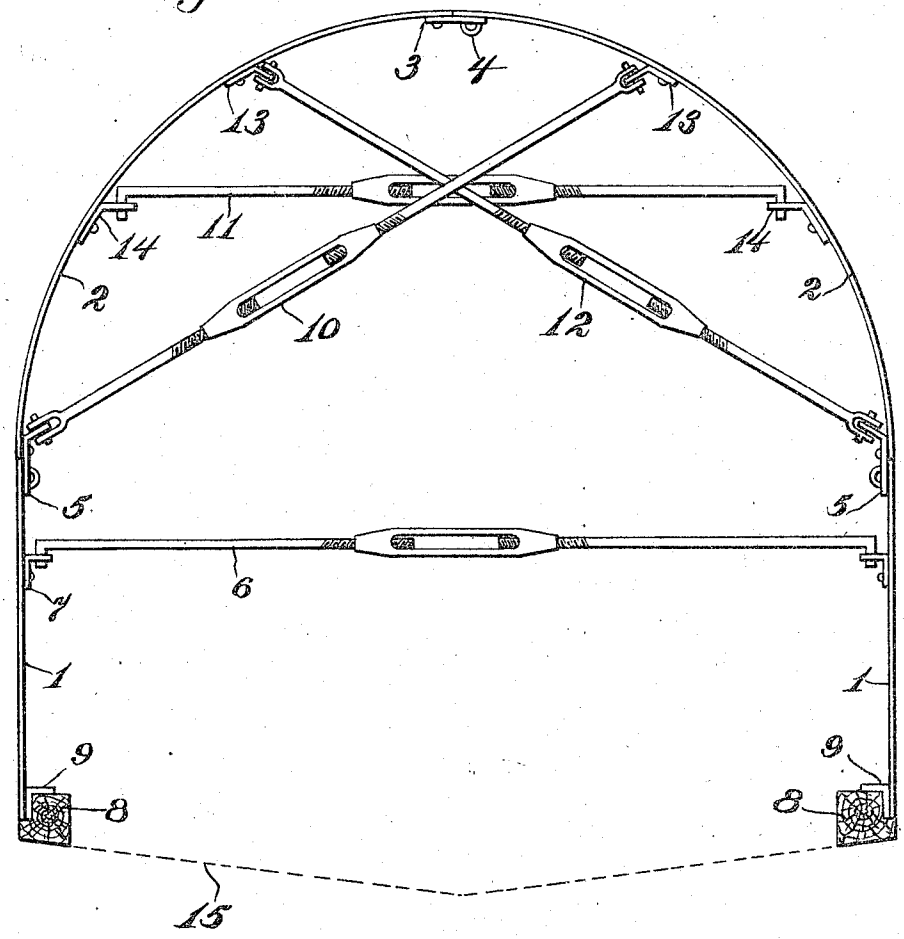
J. B. BLAW.

CENTERING MOLD.

APPLICATION FILED NOV. 12, 1906.

2 SHEETS—SHEET 1.

Fig. 1.



WITNESSES

Henry L. Ledoux

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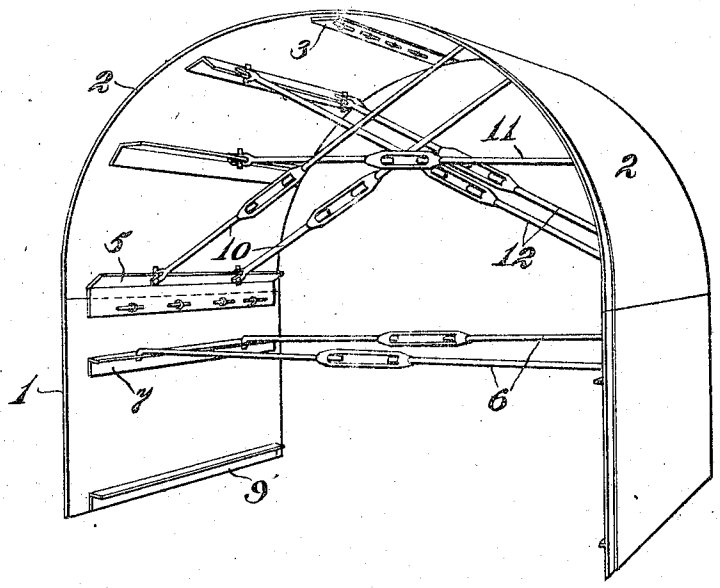
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CENTERING MOLD.

APPLICATION FILED NOV. 12, 1906.

2 SHEETS—SHEET 2.

Fig. 2.



WITNESSES

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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. 853,954. Specification of Letters Patent. Patented May 21, 1907.

Application filed November 12, 1906. Serial No. 343,007.

To all whom it may concern:

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

My invention relates to collapsible molds for constructing concrete sewers and similar passages of substantially reverse U or horse-shoe shape in cross section; and has for its objects; to provide a mold of flexible material which may be easily collapsed and handled; to provide a mold having superior bracing and collapsing means; and finally to provide a collapsible mold of the above type having improved means for supporting the side sections. These and other objects are accomplished by my invention one embodiment of which is illustrated in the accompanying drawing in which,

Figure 1 is an end view of the mold, and

Figure 2 is a perspective of such mold on a reduced scale.

My device is preferably constructed of thin sheet metal which can be easily handled and further can be detached from the concrete by a gradual or peeling action. The mold is designed primarily for the larger size of horse-shoe or U shaped sewer, although it could be applied to sewers of small size, and consists in the main of two opposing vertical side plates and an arched upper member adapted to be detachably secured to the side plates, together with collapsing and supporting means for all the sections.

Referring to the drawing, it will be seen that the mold is composed of four independent sections which are numbered 1, 1 and 2, 2, the members 1, 1 being the flat side members and the members 2, 2 being the arched ones, which arched members are detachably connected together at their upper edges and at their lower edges are detachably secured to the upper edges of the members 1, 1. The means for detachably connecting together the members 2, 2 is as shown, a butt strap 3 riveted to the left hand member and extending past the opposing member and adapted to be secured thereto by means of the loop 4 extending through the strap 3 and secured to the right hand member 2. The loop is held in the position shown by means of a wedge (not shown). The lower securing means between the plates 1 and 2 are the angles 5 which are riveted to the upper members 2 and detachably secured to the lower member 1 by means of the loop and wedge construction above described. The upper portions of the members 1 are supported by means of turn buckles 6 extending transversely of the mold and detachably engaging the angles 7 which angles are riveted to the members 1. The turnbuckles also serve as a collapsing means for springing in the edges of the plates 1. The lower edges of the plates 1 are supported on the beams 8 by means of the engagement of the angles 9 therewith, which angles are secured rigidly to the edges of the plates. The upper members 2 are supported by the crossed turnbuckles 10, 11, 12, the turnbuckles 10 and 12 being engaged with the angles 5 at their lower edges and with the angles 13 at their upper ends while the turnbuckle 11 extends transversely across the mold and engages the angles 14. The ends of all the turn buckles fit removably into holes in the angles. The molds are ordinarily made in 5 foot lengths and require two of each of the turn buckles as indicated in the perspective view, Figure 2.

The operation in handling the mold is as follows: The floor of the sewer having been constructed along the level indicated by the dotted lines 15 in Figure 1, the beams 8 are placed in position and the plates 1 set in place thereon, and the turn buckle 6 adjusted to proper length, after which the concrete is placed behind the plates 1. The plates 2 are then fixed in the position shown in Figure 1 and the lower edges joined to the plates 1 and the upper edges secured together, after which the turn buckles are put in position and adjusted to the proper length. The placing of the concrete about the mold is then completed and after such concrete has set the turn buckles 10 and 12 are tightened gradually peeling the metal of the plates 2 from the concrete and when a sufficient area has been released the turn buckle 11 is tightened to produce a further release. The upper portion of the mold can then be taken from the sewer and the lower plates 1 released by means of the turn buckle 6. It will be seen from the foregoing that an advantageous

means for support and release from the concrete is secured as the substantially radial pull of the turn buckles 10 and 12 gives a positive release of the edges of the plates 2, 2 and when the turn buckles are tightened for supporting the thin metal the resistance offered by the turn buckles is exerted in the proper direction with respect to the strain on the mold. The lower portion of the mold is also securely supported as the angles 5 give a certain amount of support to the upper edges of the plates 1, the turn buckles 6 stiffen the mold below the angles 5 and the engagement of the lower edges of the plates with the beams 8 prevents any displacement at this point. The construction is not restricted of course to the use of four sections as it would be an obvious matter in case of a very large sewer to construct the mold in a larger number of sections for convenience and handling.

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, a U shaped mold member of flexible material comprising an upper arched portion having means for collapsing it, and a pair of substantially flat side members co-operating with the top member and provided with collapsing means adjacent the upper edges thereof.

2. In combination, a U shaped mold member of flexible material comprising an upper arched portion having means for collapsing it, and a pair of side members co-operating with the top member and provided with transverse stiffening and collapsing means for the upper edges, and means for supporting the lower edges of the side members and for preventing lateral movement thereof.

3. In combination, a U shaped mold member of flexible material comprising an upper arched portion having means for collapsing it, and a pair of side members co-operating with the top member and provided with transverse stiffening and collapsing means for the upper edges, and angle irons on the inside of the lower edges of the side members for supporting such edges.

4. In combination, a U shaped mold member of flexible material comprising an upper arched portion having means for collapsing it, and a pair of side members co-operating with the top member and provided with transverse stiffening and collapsing means for the upper edges, supporting timbers, and angle irons on the inside of the lower edges of the side members for engaging the timbers.

5. In combination, a U shaped mold member of flexible material comprising a pair of substantially flat side members having supporting means for the upper and lower edges, and collapsing means, and an upper arched portion having a pair of crossed turn buckles substantially radial with respect to the arch and adapted to spring in the edges of the arched portion.

6. In combination, a U shaped mold member of flexible material comprising an upper arched portion having stiffening and collapsing braces engaging the edges of such portion, and a pair of substantially flat side members supported at their upper edges on the lower edges of the arched member, means for supporting the lower edges of the side members against lateral movement, and a collapsing and supporting brace intermediate the upper and lower edges.

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

JACOB B. BLAW.

Witnesses:
J. C. BRADLEY,
ARCHWORTH MARTIN.