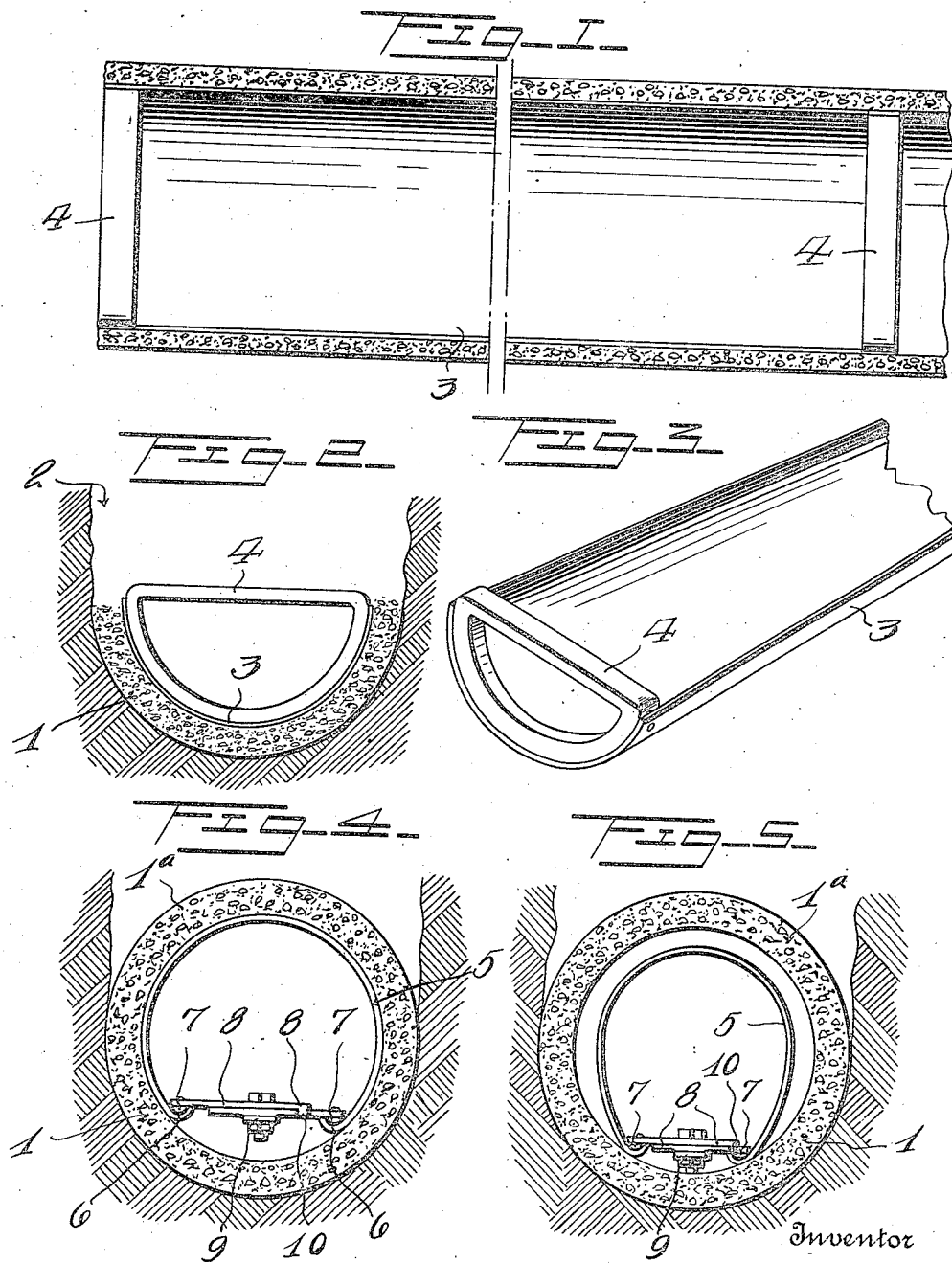


Jan. 16, 1923.

J. C. LYMAN.
PIPE MOLD.
FILED AUG. 5, 1921.

1,442,691

2 SHEETS-SHEET 1



Witness
J. P. Hoge

Inventor
J. C. Lyman

By *A. B. Rousseau*
Attorneys

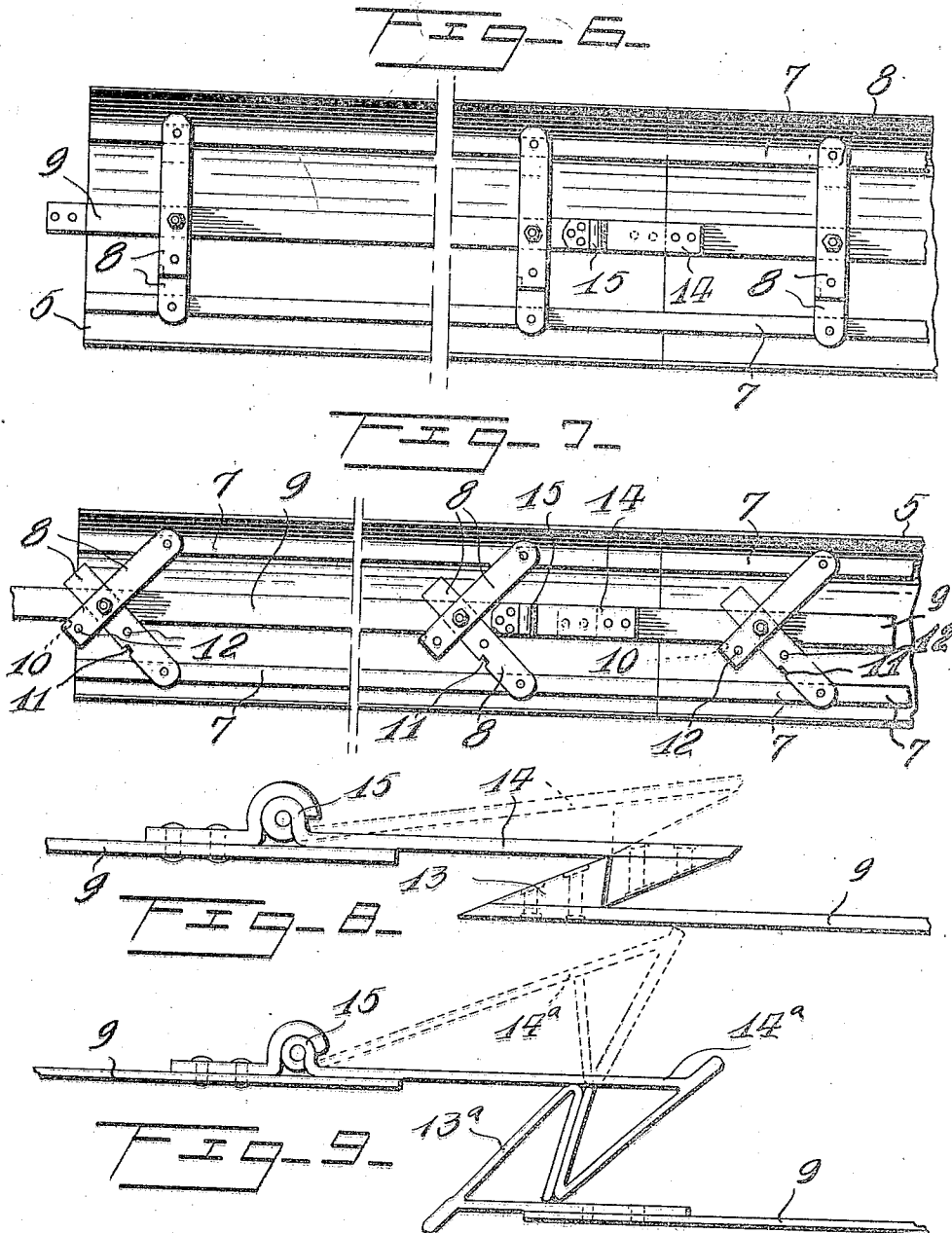
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Attorneys

UNITED STATES PATENT OFFICE.

JOHN CALLISTER LYMAN, OF SALT LAKE CITY, UTAH.

PIPE MOLD.

Application filed August 5, 1921. Serial No. 490,119.

To all whom it may concern:

Be it known that I, JOHN CALLISTER LYMAN, a citizen of the United States, residing at Salt Lake City, in the county of Salt Lake and State of Utah, have invented certain new and useful Improvements in Pipe Molds; and I do declare the following to be 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 pipe molds and more particularly to those for continuously casting and laying cement pipe lines in or on the earth, by first forming the lower half of the pipe and then completing the same after the lower half has set to the necessary extent.

An improved form of contractible sectional core is used in casting the upper half of the pipe, each core section being provided with an operating bar for its contracting means, and the principal object of my invention is to provide for detachably coupling the operating bars of the several core sections to each other, whereby a plurality of said sections may be simultaneously contracted for withdrawal from a completed stretch of the pipe.

Each core is preferably formed of an arched sheet of metal, and a further object of the invention is to provide improved means for re-inforcing the edges of the metal sheet and for attaching the contracting means thereto.

With the foregoing in view, the invention resides in the novel subject matter described and claimed, the descriptive matter being supplemented by the accompanying drawings.

Figures 1 and 2 are respectively a top plan view and an end elevation showing the manner of forming the lower half of the pipe.

Figure 3 is a perspective view of the shaping mold shown in Figs. 1 and 2.

Figure 4 is an end elevation showing one of the core sections in use to form the upper half of the pipe.

Figure 5 is a duplicate of Fig. 4 with the exception that it illustrates the core section in contracted position, ready for withdrawal.

Figure 6 is a horizontal sectional view showing the manner of coupling the operating bars of the core sections together.

Figure 7 is a duplicate of Fig. 6 with the exception that it illustrates the core in contracted position.

Figure 8 is a detail elevation of the contracting coupling members which are employed on the operating bars of the core contracting means.

Figure 9 is a view similar to Fig. 8 but showing a different form of construction.

In Figures 1, 2 and 3 I have shown the manner of forming the lower half 1 of a cement pipe, by pouring the cement into a ditch 2 or other suitable form, a substantially semi-cylindrical mold 3 being employed for imparting the desired shape to the upper surface, this mold, being preferably provided with a pair of handles 4 in the form of open frames secured to the ends of the mold member so as to re-inforce the same. A stretch of the lower pipe half 1 is formed of any desired length, for instance, one hundred feet or more, and when it has set sufficiently, the upper half, 1^a of the pipe is formed thereon as indicated in Figs. 4 and 5, a novel form of core being used in casting said upper half 1^a. This core consists of a plurality of sections 5, each of which is preferably formed from a single arched piece of metal with its lower edges turned inwardly and upwardly to provide longitudinal channels 6. Reinforcing bars 7 are suitably secured in these channels and the expanding and contracting means of each core section is connected with said bars. This means is shown in the form of toggle links 8 pivotally connected with a longitudinal operating bar 9, one of these bars being located in each of the core sections 5, so that by shifting the bar in one direction, the links 8 are operated to expand the core, while movement of said bar in the opposite direction will contract the device. To limit the expanding movement of the links 8 they are by preference provided with stops 10 receivable in notches 11 and the links may, if desired, be provided with openings 12 to receive a locking pin if it is advisable to secure said links in the position shown in Fig. 6. In most instances, however, this pin is not used since it would interfere with simultaneous contraction of a plurality of the core sections.

One end of each bar 9 is provided with a coupling member of the form indicated at 13 in Fig. 8 or of the type disclosed at 13^a in Fig. 9. The other end of each bar 9 is

provided with another coupling member 14 or 14^a which is by preference pivotally mounted as shown at 15. When the operating bar 9 of one of the mold sections is forced toward the section last used, the adjacent coupling members are self-engageable as will be seen by reference to Figs. 8 and 9, thereby connecting the operating bars 9. This is of great advantage since after a plurality of the core sections 5 have been used in completing the casting operation on a length of pipe, a pull on the bar 9 of the last used section will simultaneously move all of the operating bars 9 to core-contracting position, thereby simultaneously placing all of the core sections in condition for withdrawal from the completed pipe. The coupling members also serve to detachably connect the several core sections 5 so that by pulling upon one, the others may be withdrawn.

From the foregoing, taken in connection with the accompanying drawings, it will be seen that a very novel molding apparatus has been devised for accomplishing the object of the invention and attention is directed to the fact that long stretches of cement pipe may be easily and rapidly molded by the use of my improved device.

I claim:

1. A pipe molding core comprising a plurality of contractible core sections adapted to be disposed end to end, means within said core sections for contracting the same, including longitudinal operating bars in said core sections respectively, and coupling members on the ends of each of said operating bars, one coupling member of each bar being self-engageable with the other coupling member of the bar of the next adjacent core section when one section is forced into abutting relation with another, whereby all of said core sections may be simultaneously contracted after molding the pipe upon the same.

2. A pipe molding core comprising an arched sheet of metal having its edges turned inwardly and upwardly and forming channels, a pair of bars mounted in said channels, and means extending between said bars for expanding and contracting the core.

In testimony whereof I have hereunto set my hand.

JOHN CALLISTER LYMAN.

Witnesses:

A. CALDER MACKAY,
RALPH T. STEWART.