

W. D. HARRELL.

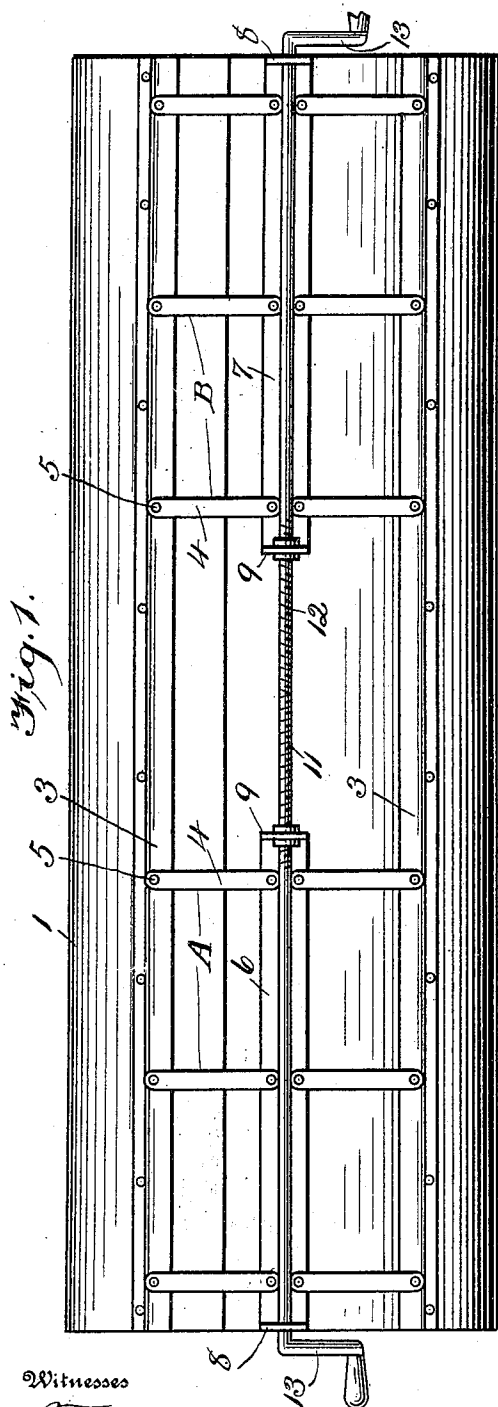
MOLD.

APPLICATION FILED MAR. 17, 1909.

981,557.

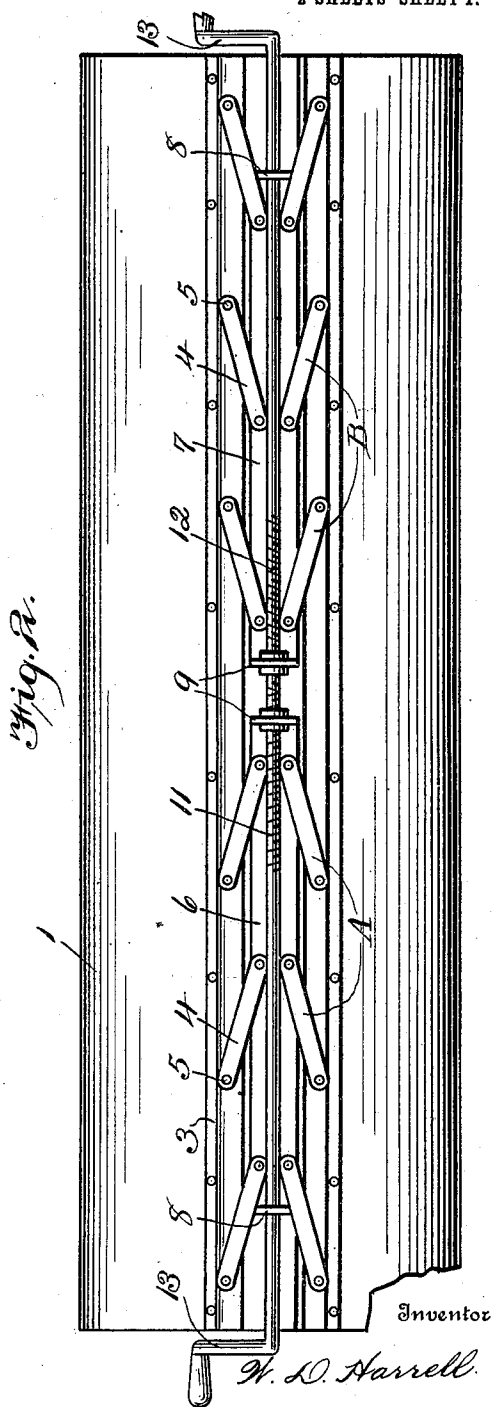
Patented Jan. 10, 1911

2 SHEETS-SHEET 1.



Witnesses

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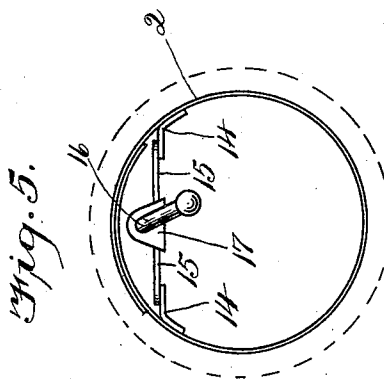
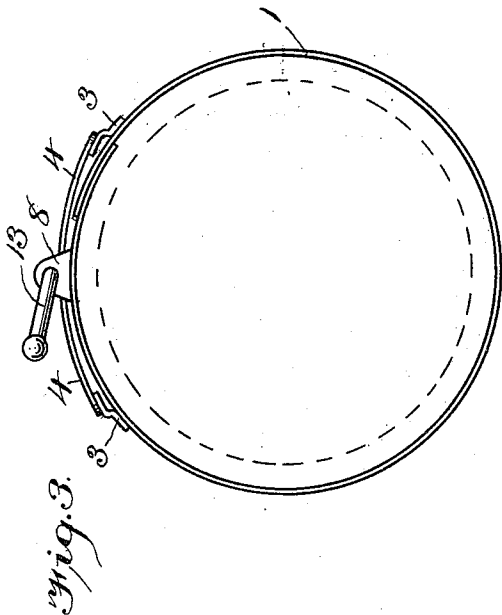
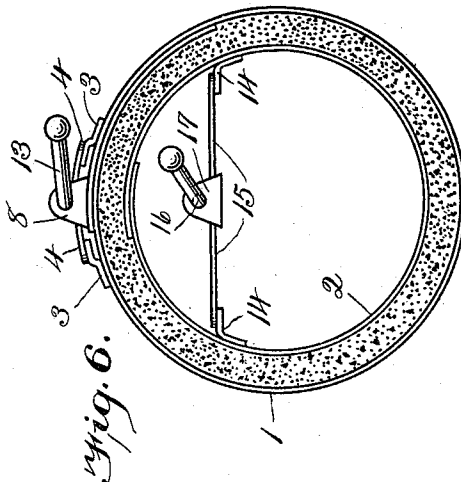
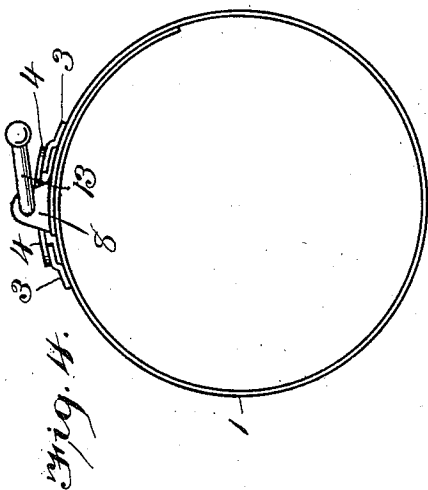
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2 SHEETS—SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM DRAKE HARRELL, OF LAGRO, INDIANA, ASSIGNOR OF ONE-THIRD TO JAMES FRANKLIN RAMSEY AND ONE-THIRD TO CHARLES BREUNINGER, BOTH OF LAGRO, INDIANA.

MOLD.

981,557.

Specification of Letters Patent.

Patented Jan. 10, 1911.

Application filed March 17, 1909. Serial No. 484,034.

To all whom it may concern:

Be it known that I, WILLIAM DRAKE HARRELL, a citizen of the United States, residing at Lagro, in the county of Wabash and State of Indiana, have invented certain new and useful Improvements in 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to molds to be used in making road sewer culverts, water basins, manholes, cisterns and all similar devices; and my invention has for its object to provide an expanding and contracting metal drum so constructed and arranged that a culvert or the like can be quickly and accurately molded.

With this object in view my invention consists in the novel means for expanding and contracting the drum.

Referring to the accompanying drawings: Figure 1 is a plan view of the outer drum in an expanded position. Fig. 2 is a similar view showing the drum in a contracted position. Fig. 3 is an end view of the outer contracting drum. Fig. 4 is an end view of the drum in its contracted position. Fig. 5 is an end view of the inner drum in its contracted position, and Fig. 6 is an end view of the cistern or man-hole showing the drums in operative position.

Like numerals of reference indicate the same parts throughout the several figures in which:

1 indicates the outer contracting drum and 2 the inner expanding drum. As will appear from Figs. 1 and 2 two straps 3 are suitably secured longitudinally of the outer drum 1 to which straps 3 suitable links 4 are pivoted at 5.

The links 4 are arranged in two series A and B, the series of links A being pivoted at their inner ends to a traveling bed 6; while the series of links B are pivoted at their inner ends to a similar traveling bed 7. Each of the beds 6 and 7 are provided at their outer ends with a wall 8 and at their lower ends with a wall 9, the walls 9 of each of the traveling beds 6 and 7 being threaded to receive the operating rod 10.

The threads in the wall 9 of the traveling bed 7 are left hand, while the threads in the wall 9 of the traveling bed 6 are right hand, an operating rod 10 being provided with a left hand threaded portion 11 and a right hand threaded portion 12 as clearly shown in Figs. 1 and 2, suitable cranks 13 being secured on each end of the operating rod 10 as clearly shown in the drawing.

Referring now to the inner expanding drum 2 it will be seen that two longitudinal straps 14 are arranged on the inside of the drum 2, said longitudinal straps 14 carrying links 15 which are pivoted to the straps 14, the links 15 operating rod 16 and traveling beds 17 being precisely the same as those applied to the outer drum and as is shown in Figs. 1 and 2.

Having thus described the several parts of my invention its operation is as follows: When it is desired to mold a culvert, basin, manhole, cistern or the like wherein it is required to use both drums the inside drums are placed in position shown in Fig. 6 and the cement, concrete or the like of which the article is to be molded is arranged between the drums as shown in Fig. 6. In order to contract the outer drum 1 the operating rod 10 is rotated which draws the two traveling beds 6 and 7 toward each other thus carrying the links 4 into position shown in Fig. 2, thereby contracting the outer drum 1, the amount of contraction depending of course upon the amount of rotation of the operating rod 10. In order to expand the inner drum 2 the operating rod 16 is rotated in order to force the traveling beds 17 away from each other in such manner as to carry the links 15 into position shown in Fig. 1, thereby expanding the drum 2, the amount of expansion depending of course upon the extent of rotation of the operating rod 16.

It is of course obvious that in certain classes of work only the inner drum 2 is required, while in other classes only the outer drum 1 may be used. In this instance the outer drum 1 is contracted as just described, while the inner drum 2 for use alone is expanded in the manner as just set forth.

With the construction of the drums shown and described it is not absolutely necessary that the plastic material be allowed to set very hard, for the reason that in expanding the outer drum 1 away from the material or

in contracting the inner drum 2 away from the material the surface of the drums draw away from the material in a shearing manner in such a way that the tendency to pull loose the concrete, cement or the like is entirely obviated. By my construction of drums therefor I am enabled to complete a piece of work in a minimum amount of time; while owing to the extreme simplicity of construction the drums are extremely light and can be readily transported from place to place. It will also be seen by referring to Figs. 5 and 6 that when utilizing the inner drum 2 in a horizontal position the entire lower portion of the drum 2 is unobstructed, thereby allowing a free passage of water and trash through the drum while the same is yet in position.

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent of the United States is:—

1. A device of the character described, comprising a longitudinally split drum, a handled shaft extending longitudinally of said drum and having right and left handed screw-threads extending from the center of said shaft toward its ends, carrying plates having upstanding end lugs, the inner end lugs having engagement with the right and left screw-threads of said shaft, the outer

end lugs having unthreaded connection with said shaft and series of links, each carrying plate having a series of links connected tandem-fashion thereto at their inner ends at opposite sides of the shaft, the outer ends of the series of links being connected to said drum at opposite sides of its slit, respectively.

2. A device of the character described, comprising inner and outer longitudinally split drums, a handled shaft for each drum having right and left screw-threads extending from its center toward its ends, carrying plates having upstanding end-lugs, the inner end lugs having engagement with the screw-threads of a shaft, the opposite end lugs having unthreaded connection with a shaft and series of links connected tandem fashion thereto, a series being connected at their inner ends to each plate upon each side of a shaft, the opposite ends of said links being connected to a drum upon opposite sides of its split, respectively.

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

WILLIAM DRAKE HARRELL.

Witnesses:

JOHN REYNOLDS,
L. S. McCLANAHAN.