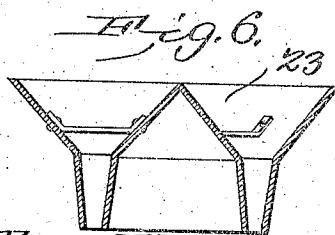
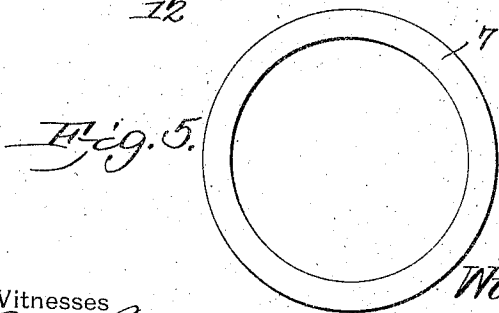
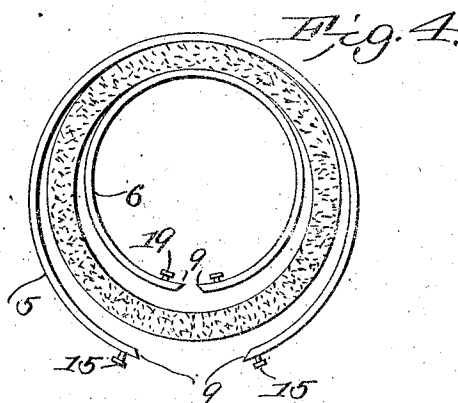
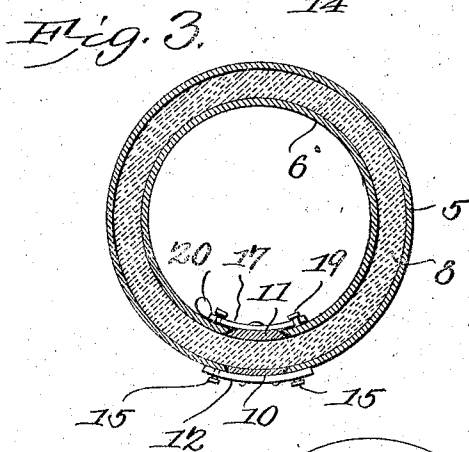
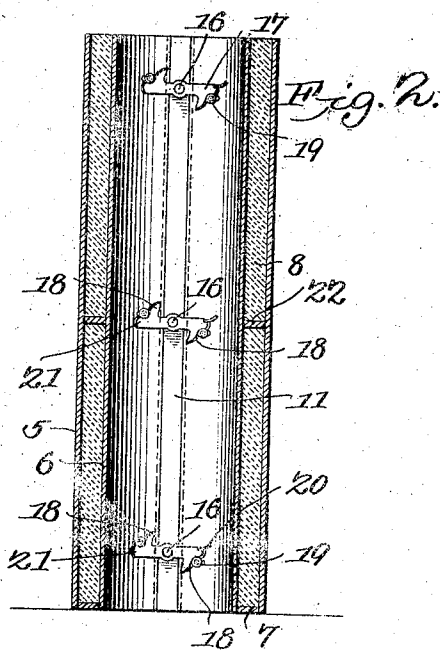
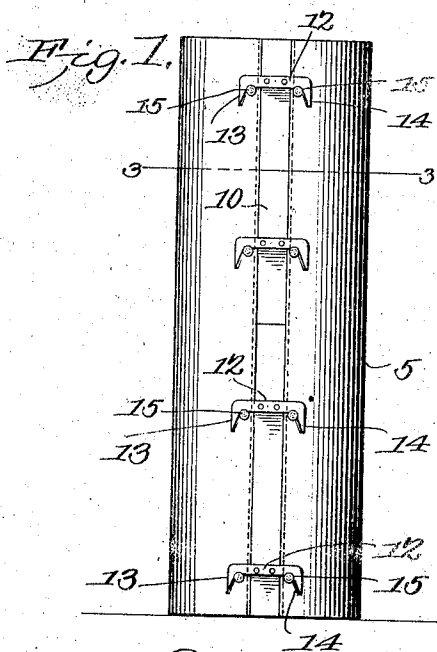


No. 823,963.

PATENTED JUNE 19, 1906.

W. F. McNAMIRE.
CEMENT MOLD,
APPLICATION FILED SEPT. 6, 1905.



Witnesses
E. J. McNamee
L. A. McKen

Willard F. McNamire,
Inventor.
by *C. A. Brown & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

WILLARD F. McNAMIRE, OF MENDON, OHIO.

CEMENT-MOLD.

No. 823,963.

Specification of Letters Patent.

Patented June 19, 1906.

Application filed September 6, 1905, Serial No. 277,144.

To all whom it may concern:

Be it known that I, WILLARD F. McNAMIRE, a citizen of the United States, residing at Mendon, in the county of Mercer and State of Ohio, have invented a new and useful Cement-Mold, of which the following is a specification.

This invention relates to molds for manufacturing sections of pipe such as are employed in the construction of sewers, drains, culverts, and the like.

The object of the invention is to provide an inexpensive, durable, and efficient mold of this character capable of being conveniently transported from place to place and quickly set up for use when the occasion requires.

A further object of the invention is to construct the mold in such a manner as to permit the formation of a plurality of pipe-sections at one molding operation.

A still further object is to provide novel means for locking the several mold-sections in closed or operative position.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in form, proportions, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

In the accompanying drawings, forming a part of the specification, Figure 1 is a side elevation of a mold constructed in accordance with my invention, showing the latter in position for forming a pipe or tile. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a transverse sectional view taken on the line 3-3 of Fig. 1. Fig. 4 is a top plan view showing the mold-sections released to permit the removal of the molded product. Fig. 5 is a similar view of the spacing-ring or annular partition. Fig. 6 is a longitudinal sectional view of the hopper or feed-spout.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The improved mold comprises an outer section or shell 5 and an inner section or shell 6, said sections being spaced apart by a removable ring 7 to form an annular chamber for the reception of the cement, concrete, or other plastic material 8.

The mold sections or shells 5 and 6 are each preferably formed of a single sheet of spring metal or other suitable material bent into cylindrical form, as shown, and having their adjacent longitudinal edges inclined or beveled, as indicated at 9, for engagement with the correspondingly-beveled edges of removable slides or keys 10 and 11. The inner shell 6 has a tendency to contract, while the outer shell 5 has a tendency to expand, so that after the cement has set and the slides or keys are removed the two shells will assume the position shown in Fig. 4 of the drawings, thereby permitting the pipe or drain to be readily detached from the mold.

The key or slide 10 is preferably formed in two sections, as shown, and riveted or otherwise rigidly secured to said slide-sections are a plurality of transverse locking-bars 12, provided with terminal depending extensions 13, having inclined faces 14 for engagement with locking lugs or pins 15, secured to and spaced inwardly from the longitudinal edges of the outer shell 5. By having the locking-bars formed in this manner when the two sections of the slide 10 are placed in position the adjacent longitudinal edges of the outer shell will be drawn together and forced into engagement with the spacing ring or member 7.

Pivoted, as indicated at 16, to the inner key or slide 11 are a series of pivoted locking-bars 17, having their terminal portions provided with oppositely-extending inclined lugs 18, adapted to engage suitable pins 19, secured to the inner shell or mold-section 6. The pins 19 are arranged one slightly in advance of the other, as shown, so that when the slide 11 is inserted and the locking-bars moved to the position shown in Fig. 2 by pressing downwardly on the finger-pieces 20 the inclined lugs 18 will engage the pins 19 and expand the inner shell, the downward tilting movement of the bars 17 being limited by the extensions 21.

A removable partition 22 is preferably used in conjunction with the mold, whereby two or more pipes or drains may be manufactured at one molding operation, said partition being inserted from the top of the mold and positioned between the inner and outer shells, as shown. A suitable feed hopper or funnel 23 is also provided for feeding the material into the mold.

In operation the mold-sections are placed on a temporary floor or other smooth surface and slides or keys inserted, thereby locking

the inner and outer shells in contact with the spacing - ring. The cement, concrete, or other plastic material is then shoveled or otherwise introduced into the hopper, from whence it passes into the space between the shells, being subsequently tamped to produce the required homogeneous shell forming the pipe or drain. After the cement has thoroughly set the keys or slides are removed, which permits the inner shell to contract and the outer shell to expand, thereby releasing the molded product, which latter may be conveniently removed and carried to drying-racks until sufficiently hard for use. When it is desired to make two or more short sections of pipe at one molding operation, the lower section of the slide 10 is inserted and the cement introduced at the top of said slide, after which the annular partition is inserted and the upper section of the slide 10 placed in position, the space between the position and the top of the mold being subsequently filled with cement.

While the inner and outer shells comprising the mold are each preferably formed integral, it is obvious that said shells may be formed in two or more sections detachably secured together by the slides or keys.

Having thus described the invention, what is claimed is—

1. A mold comprising inner and outer split expansible shells provided with locking-pins, a spacing member interposed between the shells, a sectional slide connecting the adjacent longitudinal edges of the outer shell, a continuous slide connecting the longitudinal edges of the inner shell, and locking members secured to the slides and engaging the locking-pins for retaining the shells in engagement with the spacing member.

2. A mold comprising inner and outer split shells spaced apart and having their adjacent longitudinal edges provided with locking-

pins, slides connecting the longitudinal edges of said shells, transverse bars rigidly secured to one of the slides and provided with wedge-shaped lugs for engagement with the locking-pins on the outer shell, and locking members pivoted to the connecting-slide of the inner shell and provided with oppositely-extending inclined lugs adapted to engage the pins on said inner shell.

3. A mold comprising inner and outer split shells spaced apart and having their adjacent longitudinal edges provided with locking-pins, slides connecting the longitudinal edges of said shells, locking-bars secured to the slide of the outer shell, and adapted to engage the pins on said outer shell, locking members pivoted to the slide of the inner shell and provided with oppositely-extending inclined lugs adapted to engage the pins on the inner shells, and finger-pieces secured to the pivoted locking member for operating the same.

4. A mold comprising inner and outer split shells spaced apart and having their longitudinal edges provided with locking-pins, a detachable partition interposed between said shells, slides connecting the longitudinal edges of the shells, locking-bars rigidly secured to the connecting-slide of the outer shell and adapted to engage the pins on said shell, locking members pivoted to the slide of the inner shell and provided with oppositely-extending inclined lugs adapted to engage the pins on said inner shell, extensions formed on the locking members for limiting the tilting movement of the same, and finger-pieces for operating said members.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLARD F. McNAMIRE.

Witnesses:

J. H. DOUGHTY,
C. E. LEWIS.