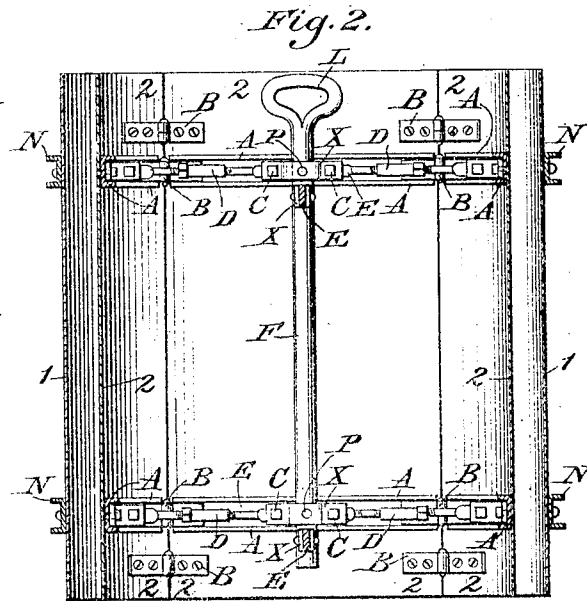
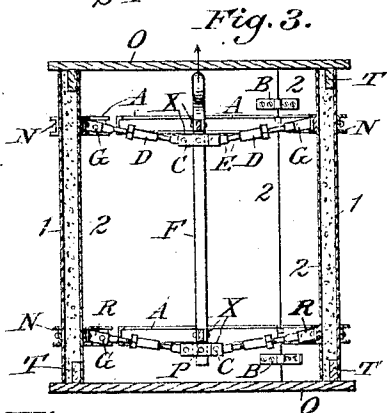
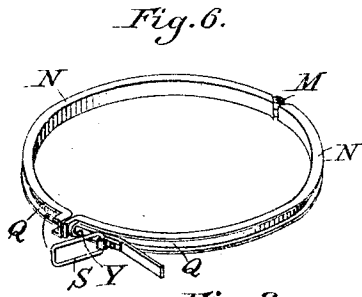
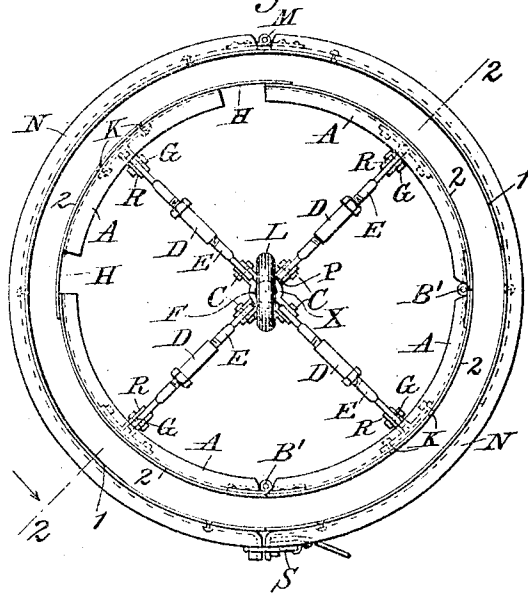
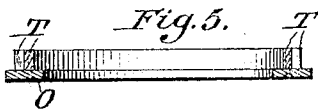
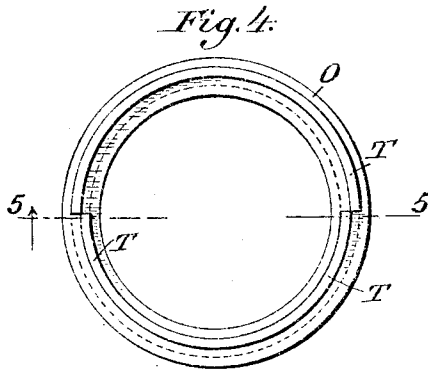


S. L. SHEETS.  
MOLD FOR FORMING CONCRETE DRAIN TILE.  
APPLICATION FILED MAY 2, 1907.

904,900.

Patented Nov. 24, 1908.

Fig. 1. 2 SHEETS—SHEET 1.



Witnesses:

A. G. Trogdon  
Ida Trogdon

Inventor:

Samuel L. Sheets

S. L. SHEETS.  
MOLD FOR FORMING CONCRETE DRAIN TILE.  
APPLICATION FILED MAY 2, 1907.

904,900.

Patented Nov. 24, 1908.

2 SHEETS—SHEET 2.

Fig. 7.

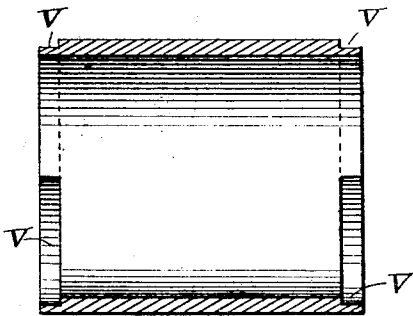


Fig. 8.

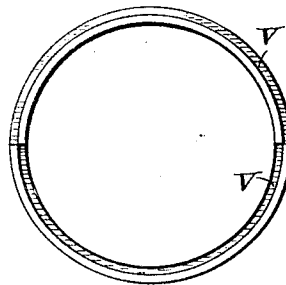


Fig. 9.

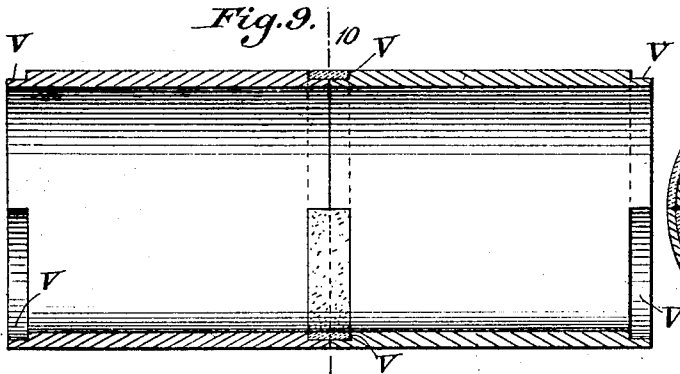


Fig. 10.

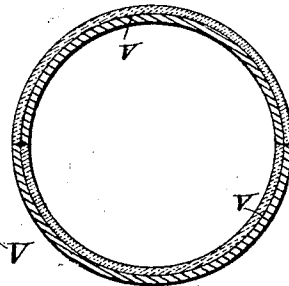
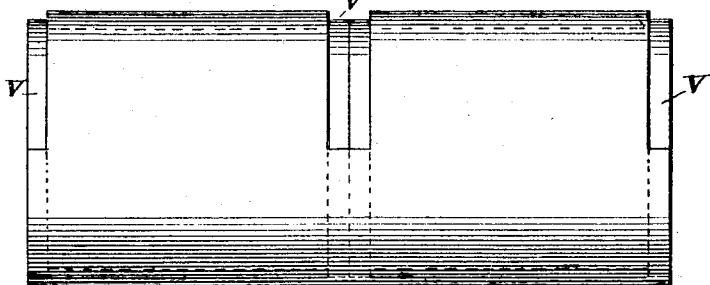


Fig. 11.



Witnesses:

A. J. Progdon  
Ida Progdon

Inventor:

Samuel Lee Sheets

# UNITED STATES PATENT OFFICE.

SAMUEL LEE SHEETS, OF PARIS, ILLINOIS.

## MOLD FOR FORMING CONCRETE DRAIN-TILE.

No. 904,900.

Specification of Letters Patent.

Patented Nov. 24, 1908.

Application filed May 2, 1907. Serial No. 371,510.

To all whom it may concern:

Be it known that I, SAMUEL LEE SHEETS, a citizen of the United States of America, residing at No. 806 South Central avenue, Paris, in the county of Edgar and State of Illinois, have invented a new and useful Form for Molding Concrete Drain-Tile and Connection for Connecting Concrete Tile so as to Form One Solid Pipe.

My invention, a form for molding concrete drain tile sewer pipe and connection, is shown in the accompanying drawings.

Figure 1 is a plan view of the shells of my form for molding concrete drain tile, or sewer pipe and connection, showing the mold in position to receive the concrete, which is poured between the two cylindrical shells. Fig. 2 is a vertical section of the two shells showing the arrangement of the hinges to the shell sections, and also the arrangement of the arms to the shell sections and the centerpost respectively. Fig. 3 is a vertical section of the entire form for molding the tile with the joint connection, showing the cleats on the pallets, which leave the spaces on the upper outside of the tile and on the lower inside to be filled with cement when laid, and also the position of the shells and the pallets until the concrete sets. Fig. 4 is a plan view of the pallet, for making the connection of tiles, showing the arrangement of the cleats. Fig. 5 is a vertical view of the pallet. Fig. 6 is a view of one of the channel bands, and clasp hinge used to fasten the outside cylindrical shell. Fig. 7 is a view of the tile showing the joint formed by means of the cleats on the pallet. Fig. 8 is a view showing the ridged surface of the spaces on the upper outside of tile and lower inside of the tile made by the cleats, and to be filled with the cement to form the solid joint of the pipe when the tiles are laid. Fig. 9 is a view of the joint of the tiles filled with cement forming a continuous pipe. Fig. 10 is a view showing the joint on the upper outside, and on the lower inside of the tiles filled with cement. Fig. 11 is a view of the tiles laid in position showing the joint of tiles ready to receive the cement.

Similar letters and numerals refer to similar parts throughout the several views.

Reference numeral 1 represents the halves

of the outside cylindrical shell; 2 represents the quarter sections of the inside cylindrical shell. A, the four sections of the channel bands on the inside of the inner shell, B' the hinges of these channel bands; B B<sup>2</sup> represents strap hinges, which may be used on the sections of the shell 2; C represents the bolt and nut hinges on collars X. D the turn-buckle in center of each arm; E; F the center post, L the hand hold, G the bolt and nut hinges of arms to angle irons R, K the bolts and nuts which fasten the angle irons through the channel bands to the sections of the inner cylindrical shell 2; M represents the hinge which joins the sections of channel bands N on the outside of the outer cylindrical shell; S represents the clasp hinge which closes the outside shell at channel bands. Q is the groove in the channel bands N into which the point Y fits when the clasp hinges are turned back to fasten the shell. A represents the sections of channel bands on the inside of the inner cylindrical shell; O represents the pallet, and T the semicircular cleats. V represents the connection in the tile joint, or spaces filled with cement when tile is laid.

The outside cylindrical shell is made of two similar parts of sheet steel 1 banded near each end with a channel band at N, which is riveted on the outside of the halves of the cylindrical shell. Each channel band N is in two sections, which are hinged together on one side with a bolt and nut hinge M, and drawn taut on the opposite side by an iron clasp hinge S, near the upper and lower edges of the cylindrical shell; this clasp hinge enables the operator to open the closed molds with expedition when the tiles are ready for removal from forms.

The inside cylindrical shell is formed of four sections 2 and banded on the inside near each end of shell by sections of channel iron bands A, which are riveted to the inner shell. Three sections of the channel bands are hinged together by bolt and nut hinge at B. B<sup>2</sup>; one section of shell being free and movable with respect to the two adjacent quarter sections, the end of the channel bands in these three sections butt together when the shell is collapsed by lifting L. Three sections of the inner cylindrical

shell may be joined by strap hinges as shown at B B<sup>2</sup>.

The four quarter sections of the inside cylindrical shell are connected by the arms E E to an inch iron pipe in the center, or center post F, by a bolt and nut hinge C. At the center of each section 2 of inside shell are riveted two angle irons R R; the outer ends of the arms are hinged to the angle irons by means of a bolt and nut at G. The arms E E are composed of two half inch iron rods, the inner ends of the arms are joined to the collars X by a bolt and nut hinge C. The collars are made of two iron straps riveted at P to center post F; each arm has in the center a turnbuckle D, with bolt for adjustment of the inside cylindrical shell. The arms are arranged around the center post in sets of two arms each; two sets just underneath the hand hold and two sets lower down on the center post. The arms are hinged to collars X, which are riveted to F at right angle to each other, one collar just above the other, leaving the lower set of arms on an incline to centerpost. The sets of arms on lower end of center post are arranged in the same way. When the mold is in position two sets of arms are on an incline and two sets stand horizontally. When the centerpost is lifted all the arms incline toward the shell, and the one movable section being loosened slides over the edges of the two adjacent sections, as the inner cylindrical shell is removed from the tile by the operator.

The pallet O consists of a circular platform, with two semicircular cleats T on top, so placed that the outer edge of one cleat meets the inner edge of the other cleat; said cleats may have a rise of two inches. Said cleats may be square, beveled, oval or ridged on face or top. Said pallets may be cast in metal or made of wood. Remove the cleats from pallet then you have molds for plain round tile.

The operation of a form for molding concrete drain tile and connection constructed as above described is as follows: The outside cylindrical shell is closed by means of the iron clasp hinges, and set on the pallet so that one of the cleats, which is one half the thickness of the tile desired, rests against the inside of the outer shell, and the other cleat which is half the thickness of the tile desired, will rest against the outside of the inner cylindrical shell when the inside cylindrical shell is placed on the pallet. The operator adjusts the width of the space for the thickness of the tile between the two shells, by means of a turnbuckle in each arm, and by pushing down handle L the arms force the sections of the inner shell outward, and the outer sides of the movable section, which

extends over the adjacent edges, slide toward the edges of the two adjacent sections and holds the shell fast, leaving the space between the inside and outside cylindrical shells for the reception of the concrete. When the space has been filled with the concrete, reverse a pallet for a lid on the shells, so that the tile when molded will have a semicircular space, the rise of the cleat, halfway around each end or rim of the tile. When the tiles are laid there will be a space double the rise of the cleat on the top of the tile on the outside, and a space double the rise of the cleat on the lower side of the tile on the inside. These spaces are to be filled with cement when laid, forming a continuous pipe and a perfect connection of tile, and saving material and labor in laying the tile; as the ditch would have to be no larger than the tile, thus saving labor in excavating for tiles which are made to join over, or into each other; and less danger of breakage in handling and laying.

I claim:

The combination in a form of molds for concrete drain tile, or sewer pipe, of a pallet, the semicircular cleats oppositely arranged on the pallet, a separate outside cylindrical shell divided vertically into two similar parts, the channel iron bands riveted on the outside of the shell sections near either end; the hinge of the channel iron bands with a bolt and nut hinge on one side of the shell, the hinged iron clasps, which fasten the sections of the shell together at the front edges of the channel bands; a separate collapsible shell divided vertically into four sections, the operating centerpost movable longitudinally in said shell by means of a hand hold, the hand hold, the collars arranged in sets of two at right angles to each other near each end of the centerpost, the collars riveted around the centerpost, the four sets of two arms each, pivotally joined to the collars with a bolt and nut; the turnbuckles in the arms, the hinge of the arms to the shell sections by means of a bolt and nut through the angle irons, the angle irons riveted to the shell sections through the channel bands; the channel bands riveted to the shell sections on the inside near each end; the hinge of the channel bands by a bolt and nut, which join the three sections of the shell together; the one independent section of the shell pivotally connected to the centerpost by arms, said section being movable over the outside edges of the two adjoining sections of the shell, by means of the operating centerpost when the shell is expanded or collapsed; the hinge of the arms to the centerpost by means of a bolt and nut through the collar; the strap hinges joining the shell sections; two sets of arms connect-

ing said shell sections to said centerpost, being arranged obliquely with respect to said centerpost, and the other two sets being horizontally arranged to said centerpost, when  
5 the shell is expanded; and the mold for the tile joint, all substantially as described and for the purpose specified.

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

SAMUEL LEE SHEETS.

Witnesses:

A. Y. TROGDON,  
IDA TROGDON.