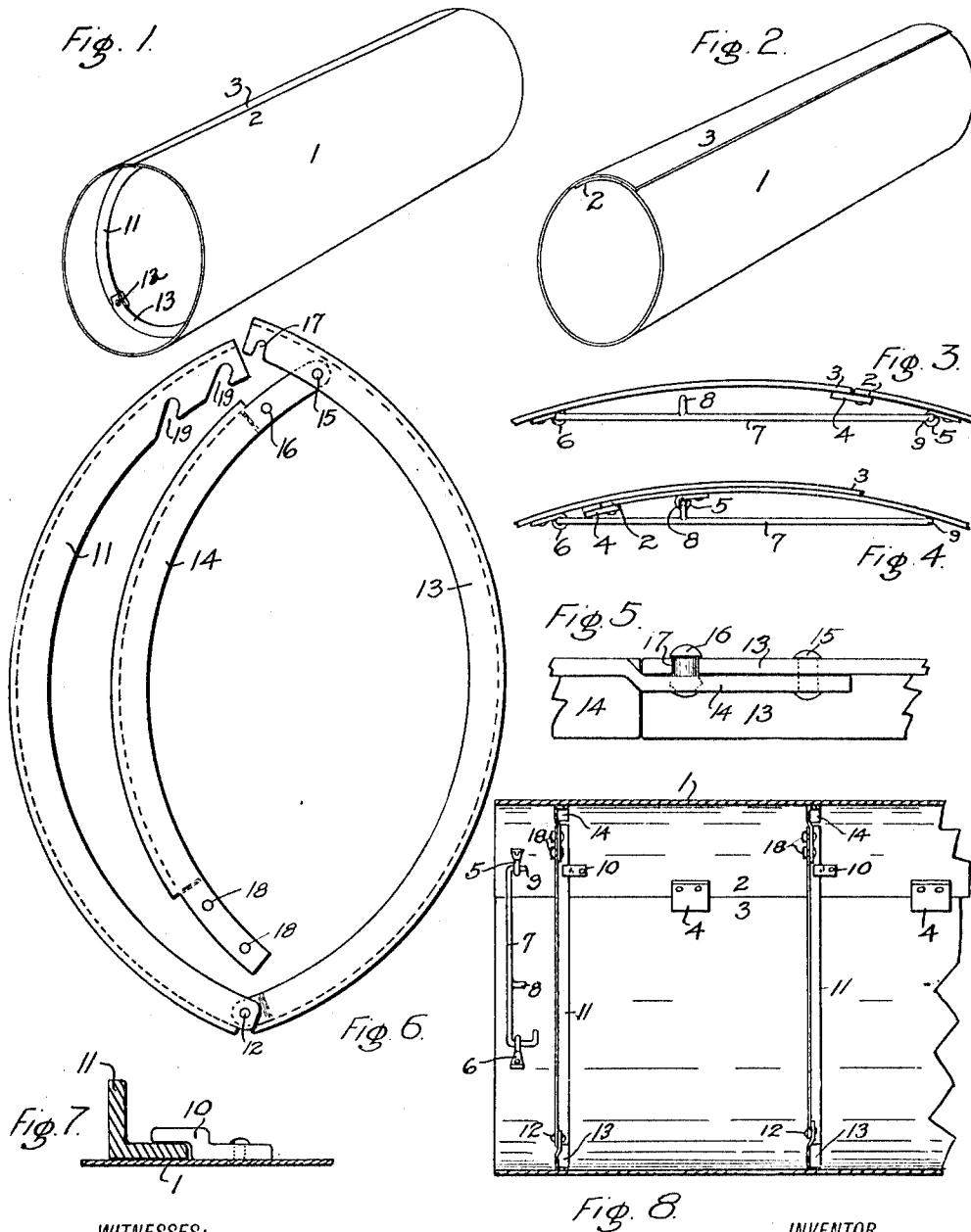


L. Y. STAYTON.
 CENTER CORE FOR CONCRETE PIPES.
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1,120,102.

Patented Dec. 8, 1914.



WITNESSES:

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CENTER CORE FOR CONCRETE PIPES.

1,120,102.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, LORENZO Y. STAYTON, a citizen of the United States, and a resident of Tacoma, in the county of Pierce and State of Washington, have invented a new and useful Center Core for Concrete Pipes, of which the following is a specification.

This invention relates to cores used in making concrete pipes, manholes, and other similar hollow structures, and has for its objects to provide a core which is especially adapted for use when a pipe line is made in one continuous length, such being generally known as monolithic construction, in which a core can be left in place until the concrete is thoroughly set and may then be reduced in size to pass through the cores adjacent to it which are being used (the concrete being not yet sufficiently set) and may be set up again in line therewith to form a core for a new length of pipe.

Other objects are to improve the means for holding the core sheet in extended or collapsed positions; and to provide a removable reinforcement or rib for the core sheet.

I attain these and other objects by the devices illustrated in the accompanying drawings in which—

Figure 1 is a perspective view of the core in shape for use; Fig. 2 is a similar view thereof when it is reduced; Figs. 3 and 4 are front elevations of a part of the core sheet showing the edges thereof when it is extended for use and reduced, respectively, together with the holding means; Fig. 5 is an elevation of one of the joints of one of the reinforcing rings; Fig. 6 is a plan of one of said rings, folded; Fig. 7 is a section of a ring and a portion of the core sheet showing the clip on the sheet for holding the ring; and Fig. 8 is a longitudinal section of the core sheet as set up for use.

Similar numerals of reference refer to similar parts throughout the several views.

The core sheet 1 is made of metal of such width as to extend entirely around the circumference of the inside of the pipe and of a convenient length. When set up for use its edges 2 and 3 butt against each other (Figs. 1 and 3) but when it is reduced in size one edge 2 is drawn within the circle and is overlapped by the other edge 3 (Figs. 2 and 4). In order that the edges 2 and 3 will be brought into line to form a continuous surface, I fix the projecting plates 4 at

intervals to the edge 2 so as to overlap past the other edge 3 when the sheet is set up (Figs. 3 and 8).

In order to fixedly hold the sheet in extended or reduced positions I provide, at suitable intervals, the following fastening means:—An eye 5 is secured near the edge 2 and a similar eye 6 is secured farther from the edge 3, the distance therefrom depending on the amount of lap between the edges when the sheet is reduced. A bar 7 is loosely mounted at one end in the latter eye 6 and has two hooks or projections 8 and 9 thereon. The projection 8 is near the end of the bar which is mounted in the eye 6 and the other hook 9 is formed on the end of the bar 7 and is removed from the hook 8 by the distance which the edges are to overlap. The projection 8 is offset toward the sheet 1. When the sheet is extended the hook 9 engages the eye 5 (Fig. 3) but when it is reduced the said eye 5 is engaged by the inner hook 8 (Fig. 4). Thus the sheet is held in either of its two positions. Now, when the sheet is in use, it is of course under considerable compressive strain from the soft concrete surrounding it, and since the sheet must be sufficiently flexible to allow of its being reduced in diameter in order to be passed through the sheets in use, it is evident that while it is in use it must be reinforced. I accomplish this purpose by means of the folding ribs, illustrated in Figs. 5-8, which are placed at convenient intervals in the pipe.

A number of clips 10 are secured to the sheet 1 in suitable positions thereof, each clip having its end offset from the sheet to allow one leg of the angle-iron, of which the rib is constructed, to pass thereunder and be held thereby. The clips are shown in action in Fig. 7. I prefer to have several of these clips in position to engage each rib. Each rib consists of three pieces of angle-iron, all bent to the same circle and connected together in such a way that they fold one toward the other when collapsed (Fig. 6). The piece 11, forming one end of the rib, is hinged by a single pin 12 to the intermediate piece 13, the outer faces of the pieces being cut away so that when the two parts are extended into working position the ends thereof will abut, and the other leg of one being offset at the joint so that the two pieces will lie in the same plane. Similarly the third

piece 14 is hinged by a pin 15 to the other end of the piece 13 but this pin 15 is located a short distance from the end of the said piece. The end of the piece 14, forming
 5 the joint with the piece 13, is offset to lie under the leg of the piece 13 (Fig. 5) and has a pin 16 secured to it and extending outward from it, said pin 16 engaging in a slot 17 formed close to the end of the piece
 10 13, said slot being formed on a curve having the pin 15 for its center. The outer face of the end of the piece 14 is cut away at this joint to fit the end of the face of the piece 13. The face of the other end of the piece
 15 14 is similarly cut away to fit the end of the face of the piece 11, while the other leg thereof extends out from the face and is offset to pass under the leg of the piece 11 and is provided with two pins 18, similar to
 20 the pin 16, extending therefrom and adapted to engage the two slots 19 in the piece 11, said slots being formed on a curve having the pin 15 for its center when the pieces 11 and 13 are extended into operative position.
 25 The rib thus formed is folded, as shown in Fig. 6, when it is to be removed out of place, but when it is in use it forms a complete

stiff circular rib extending entirely around the inside of the sheet.

Having described my invention what I 30 claim is:—

In a device of the class described, the combination of a single sheet of flexible metal bent to bring its side edges together and forming thereby a closed circular core 35 having only a single joint in its periphery; clips secured to said sheet; and a removable folding ring of angle iron, the sections thereof being hinged together to form a plurality of links, said ring having one leg 40 engaging under said clips and said leg in each link having a butt joint with the corresponding legs of the adjacent links, and the other leg extending inward from said sheet to form a stiffening therefor and said 45 leg in each link being offset at its ends to overlap the corresponding leg of the adjacent links and engaging said corresponding legs by means of pins.

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."