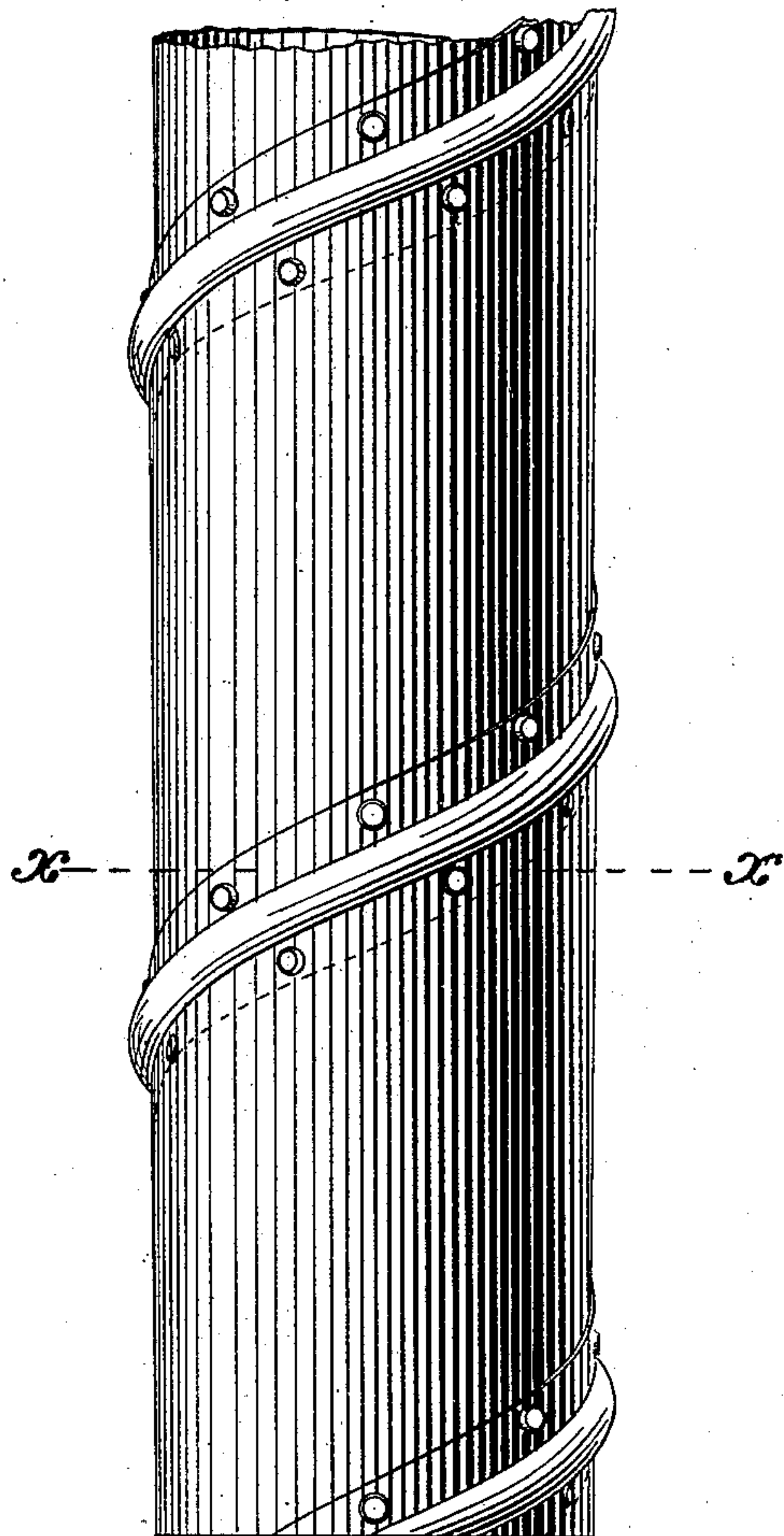


(No Model.)

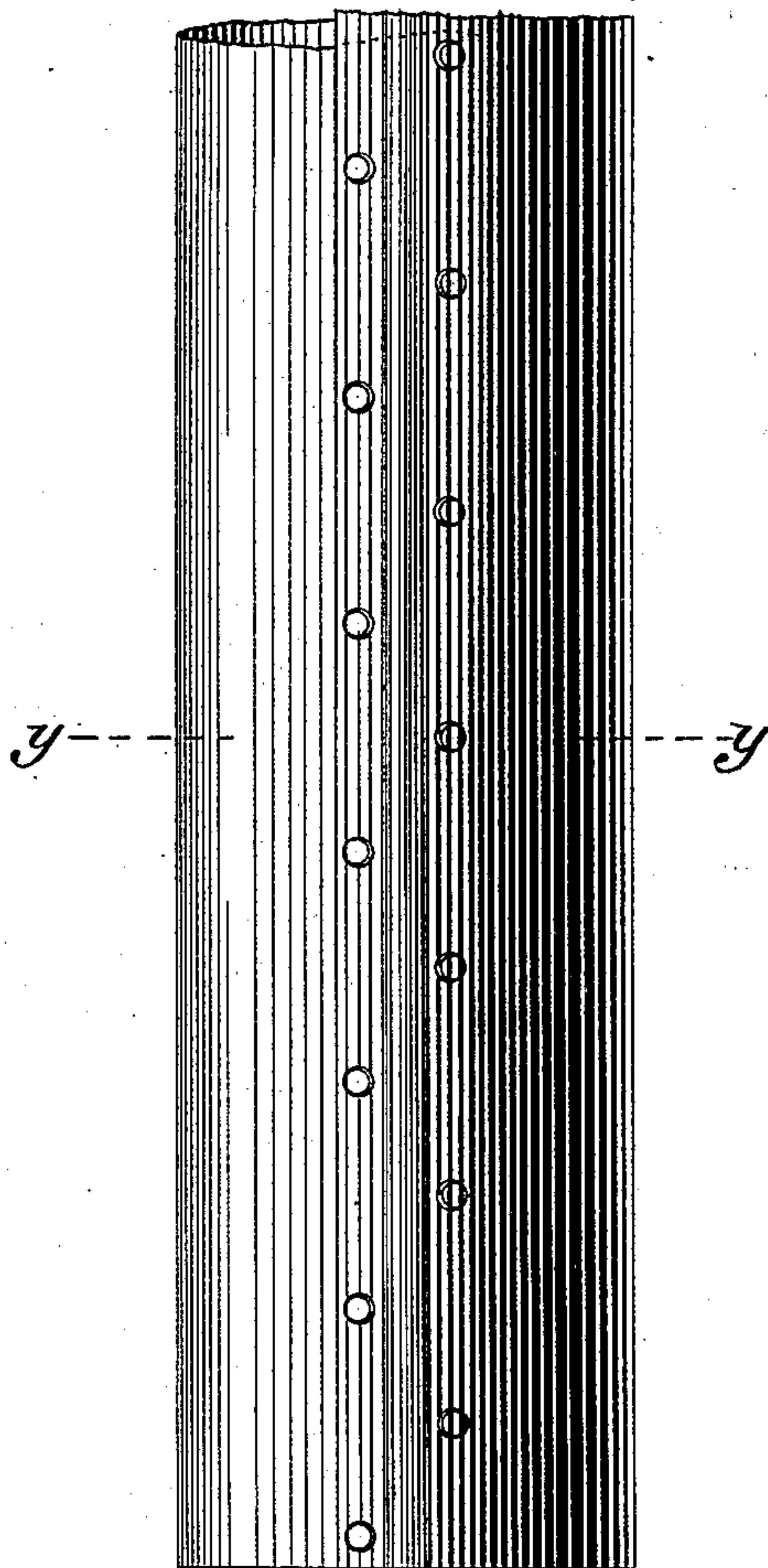
W. D. WOOD.  
PIPE.

No. 358,370.

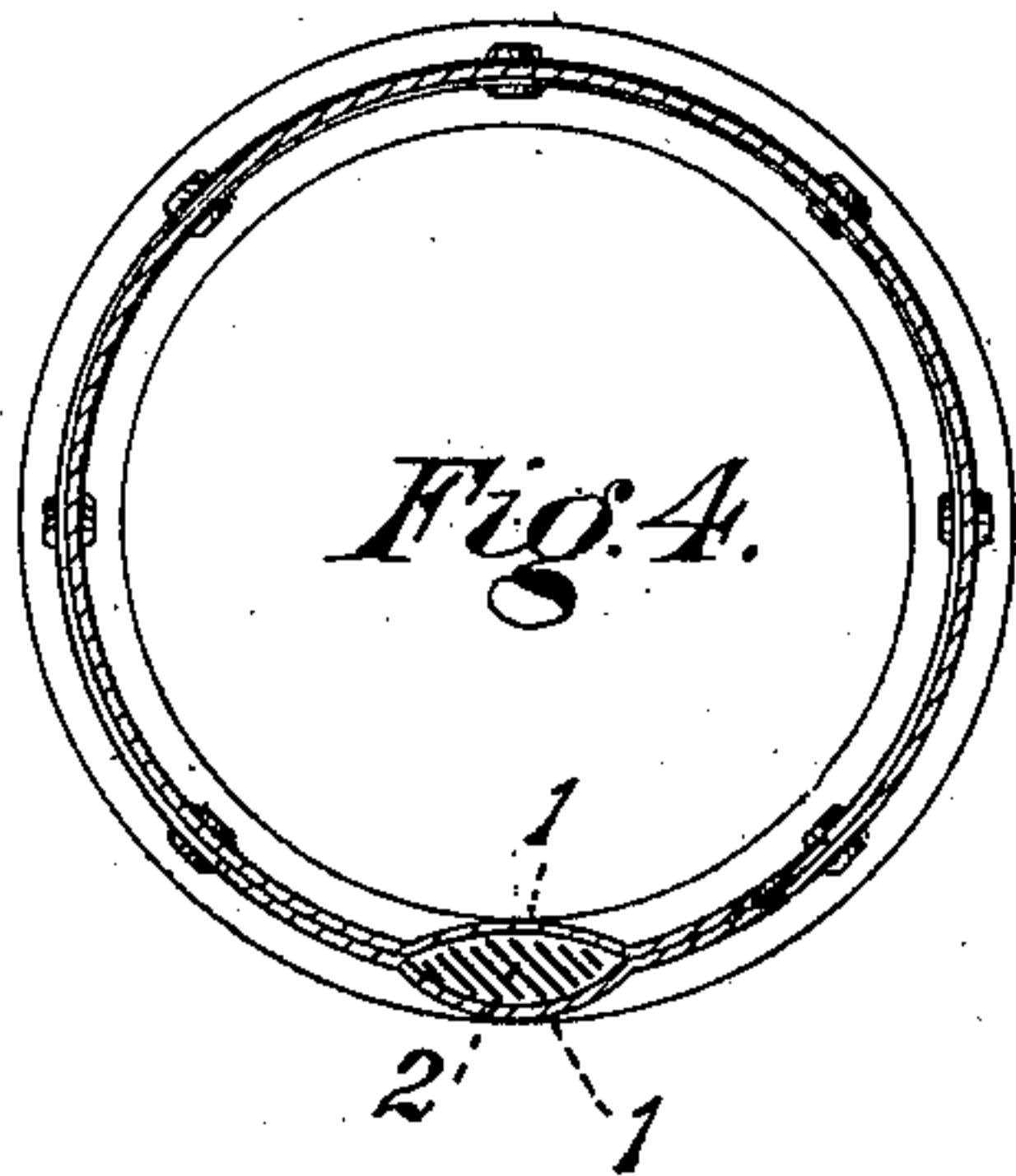
Patented Feb. 22, 1887.



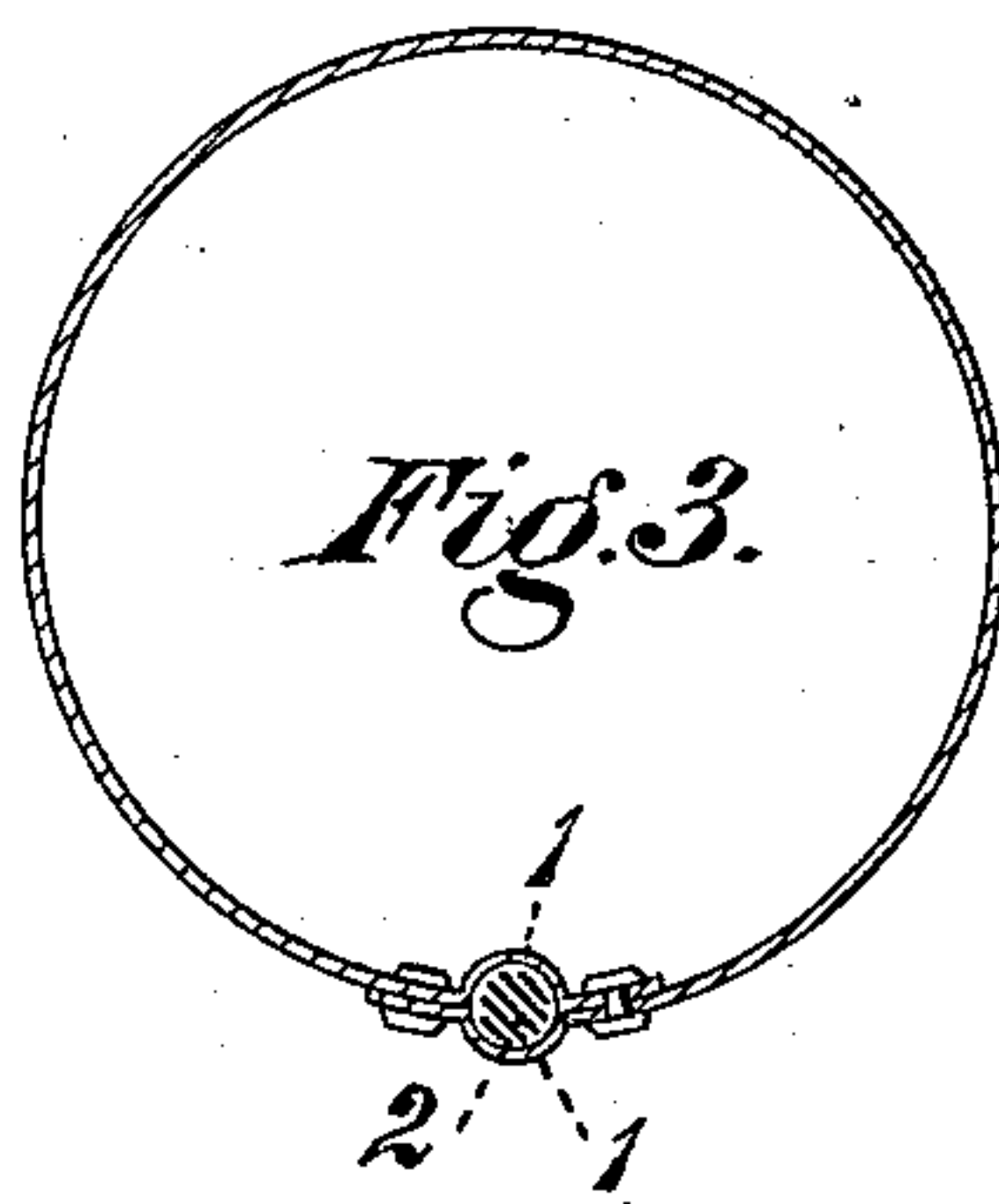
*Fig. 2.*



*Fig. 1.*



*Fig. 4.*



*Fig. 3.*



*Fig. 5.*

WITNESSES:

*C. M. Clarke.*  
*J. Snowden Bell.*

INVENTOR,

*W. Devere Wood.*  
*Darwin & Wolcott*  
Att'y.



# UNITED STATES PATENT OFFICE.

W. DEWEES WOOD, OF PITTSBURG, PENNSYLVANIA.

## PIPE.

SPECIFICATION forming part of Letters Patent No. 358,370, dated February 22, 1887.

Application filed December 2, 1886. Serial No. 220,430. (No model.)

*To all whom it may concern:*

Be it known that I, W. DEWEES WOOD, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, a citizen of the United States, have invented or discovered certain new and useful Improvements in Pipes, of which improvements the following is a specification.

In the accompanying drawings, which make part of this specification, Figure 1 is a view in side elevation of a pipe-section embodying my invention. Fig. 2 is a similar view of a modified construction. Fig. 3 is a transverse sectional view on the line *x x*, Fig. 1. Fig. 4 is a similar view on the line *y y*, Fig. 2.

The invention herein relates to certain improvements in what is known in the art as "cement-pipes." These pipes consist of a shell of sheet-metal lined with a comparatively thick cylinder of cement, the sheet-metal cylinder being formed by riveting together the opposite edges of comparatively thin sheets of metal, and the cement lining being poured within the cylinder around a core of suitable diameter. While these pipes are serviceable for conducting fluids under low pressure, it has been ascertained that the riveted joints yield and open up under high pressure.

The object of the invention herein is to provide a joint for the edges of the metal cylinder which shall be tight and strong under great pressures of fluid; and to this end the invention consists in the construction and combination of parts, substantially as hereinafter described and claimed.

In the practice of my invention, before bending the sheets into cylindrical form, I form, by means of suitable rolls, semicircular grooves 1 along the two meeting edges when the sheet is bent into a cylinder, said grooves being on opposite sides of the sheet, as shown in Fig. 3, so that when the sheet is bent, as abovestated, and the meeting edges lapped one over the other said semicircular grooves will register and form a circular passage, 2, along the joint. The overlapping edges of the sheet are riveted together on both sides of the circular passage,

which is then filled with asphaltum, cement, lead, or other suitable material. This filling will serve not only as a packing for the joint, but also as a key re-enforcing the action of the rivets to prevent a rupture of the joint by the radially-acting internal pressure, which tends to cause the overlapping edges to slide over each other.

The construction above described as applicable to a pipe-section formed by bending a sheet into cylindrical shape is equally applicable to pipe-sections formed by a strip of sheet-metal coiled into a spiral, the adjacent edges of the strip overlapping each other and oppositely grooved, so as to form the circular passage 2.

After the shell or cylinder has been formed it is lined with cement in the usual manner; but my invention is equally applicable to other forms of pipe, whether lined, coated, or not.

It is not essential to the practice of my invention that the grooves should be exactly semicircular in form, as the grooves may be changed in contour to suit the requirements of use, and in some instances the bead formed in grooving one edge of the sheet may fit within the groove in the opposite edge, as shown in Fig. 5, in which case the entering bead should not be of such depth as to entirely fill the groove. For some purposes the overlapping edges need be notched together only along one side of the filling-passage.

I claim herein as my invention—

A pipe-section having in combination a sheet of metal bent into cylindrical or approximately cylindrical form, having its overlapping edges grooved, as described, and riveted along the side of said grooves, and a filling located in the passage formed by said grooves, substantially as set forth.

In testimony whereof I have hereunto set my hand.

W. DEWEES WOOD.

Witnesses:

W. B. CORWIN,  
DARWIN S. WOLCOTT.