

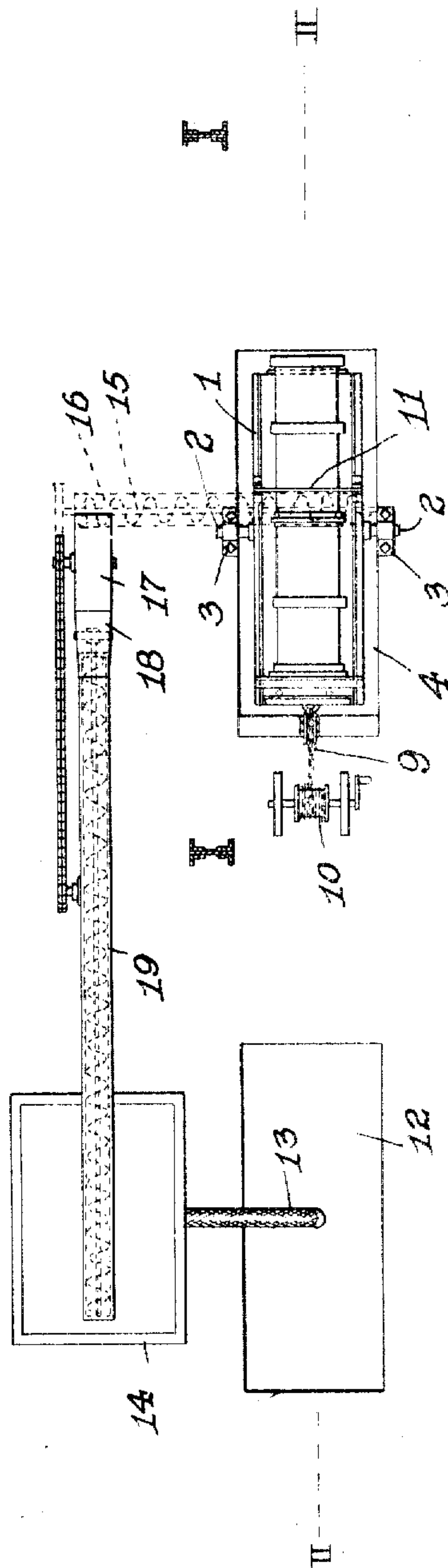
W. C. ROBINSON.  
PLANT FOR SHERARDIZING.  
APPLICATION FILED MAY 29, 1909.

935,058.

Patented Sept. 28, 1909.

3 SHEETS—SHEET 1.

FIG. 1.



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INVENTOR

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*by Christy & Christy*  
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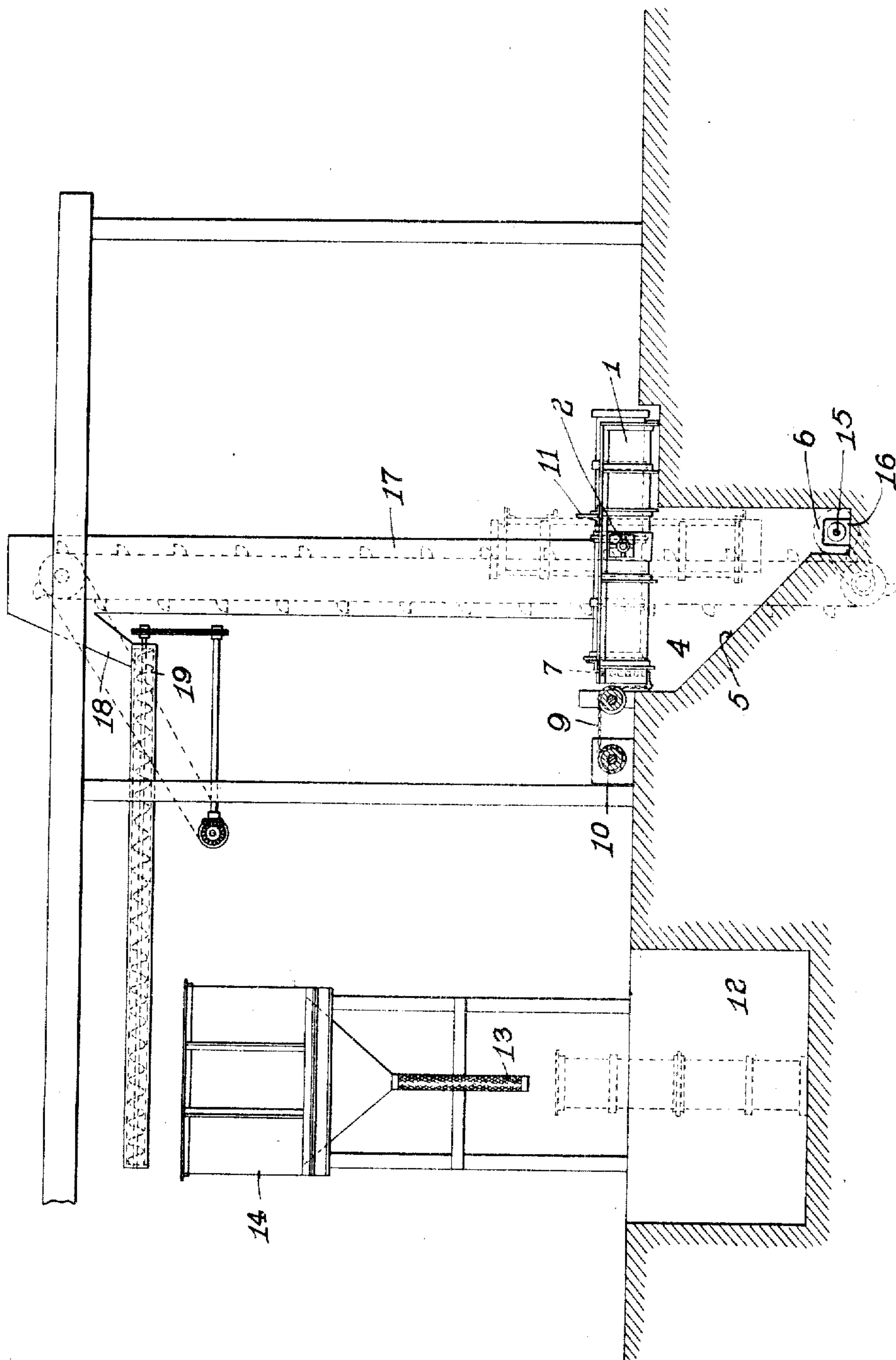
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3 SHEETS—SHEET 2.

FIG. 2.



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935,058.

Patented Sept. 28, 1909.  
3 SHEETS—SHEET 3.

FIG. 3.

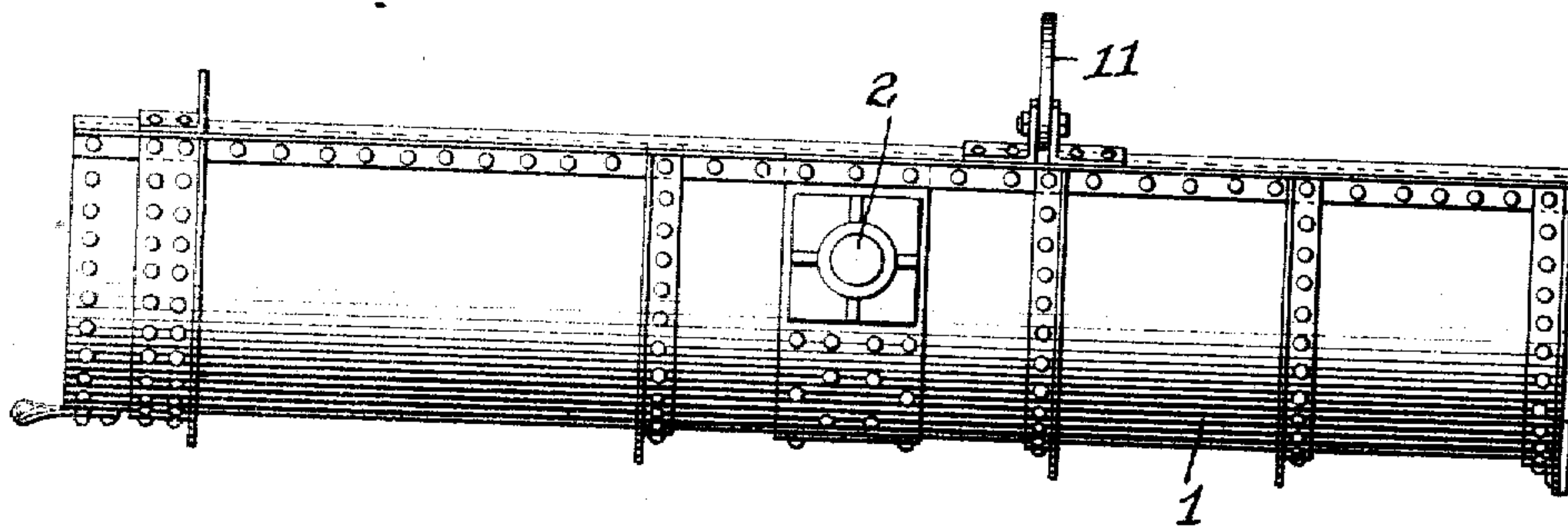


FIG. 4.

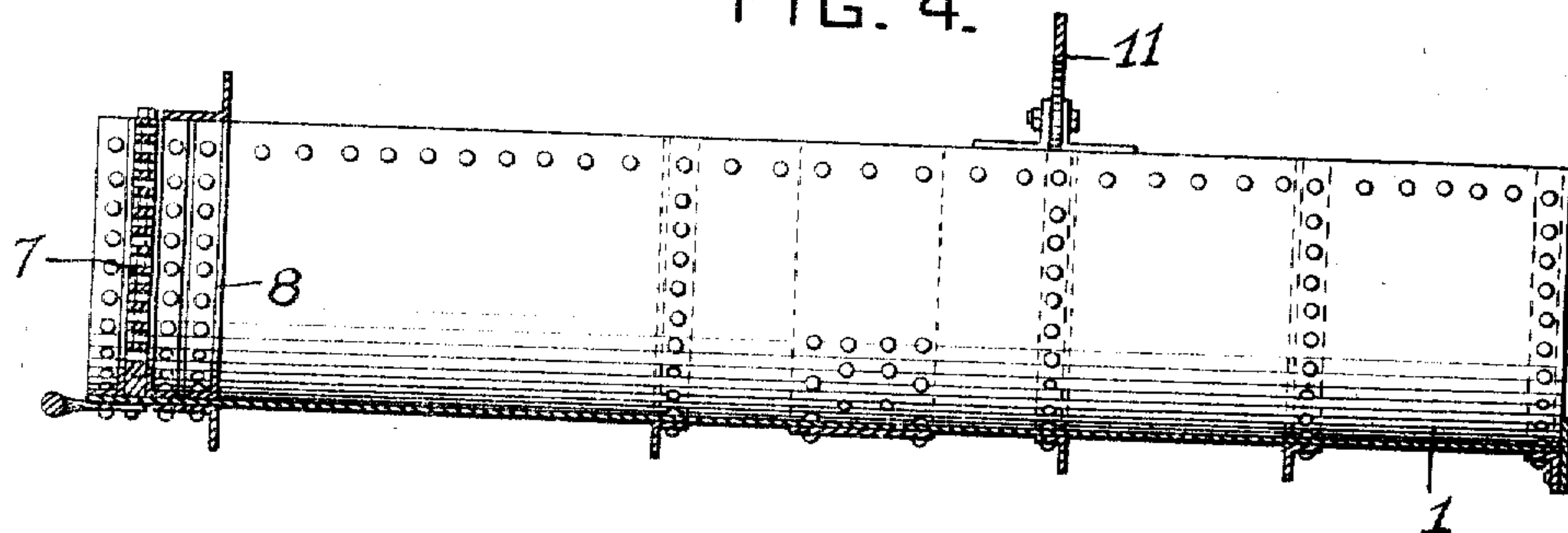


FIG. 5.

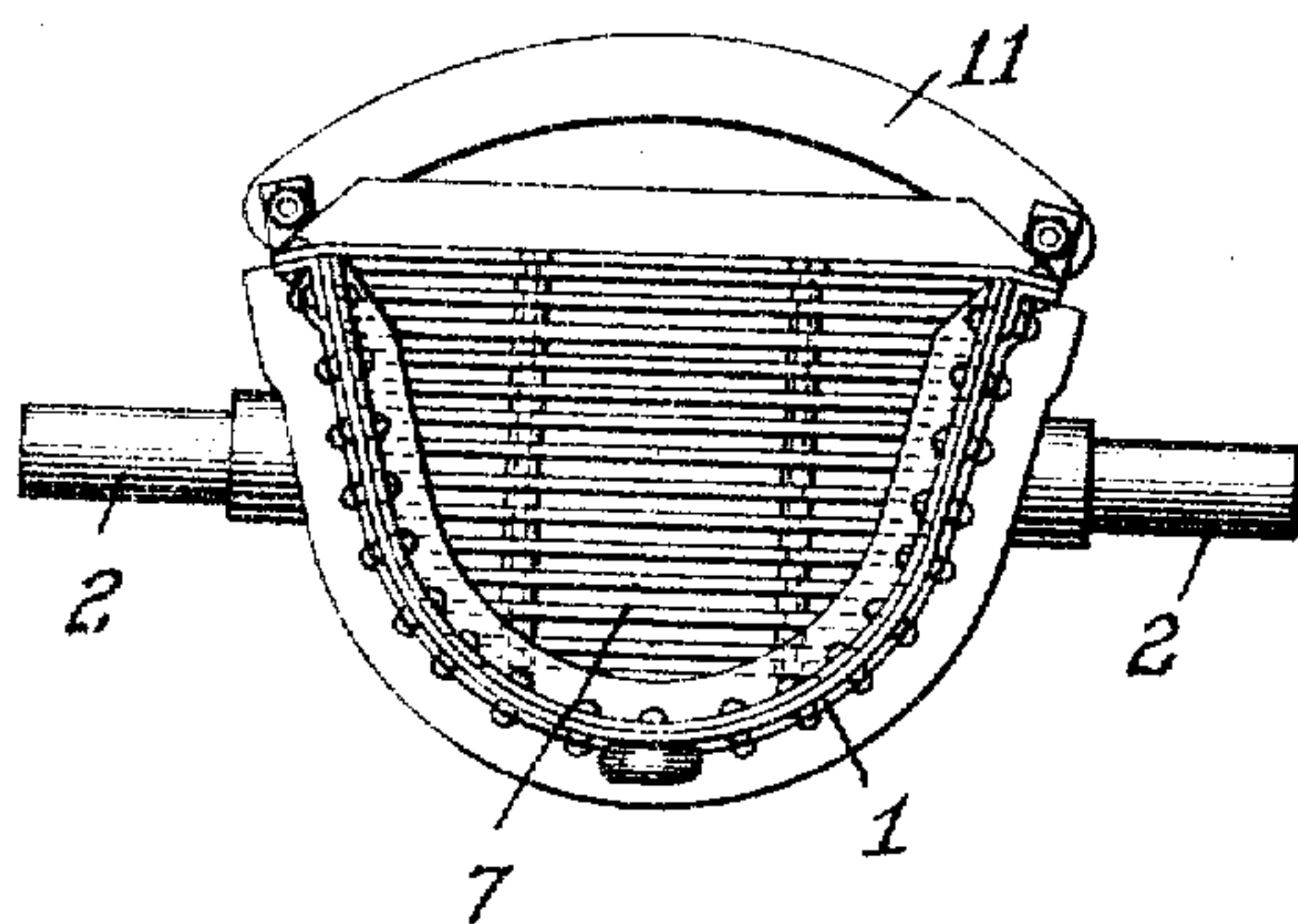
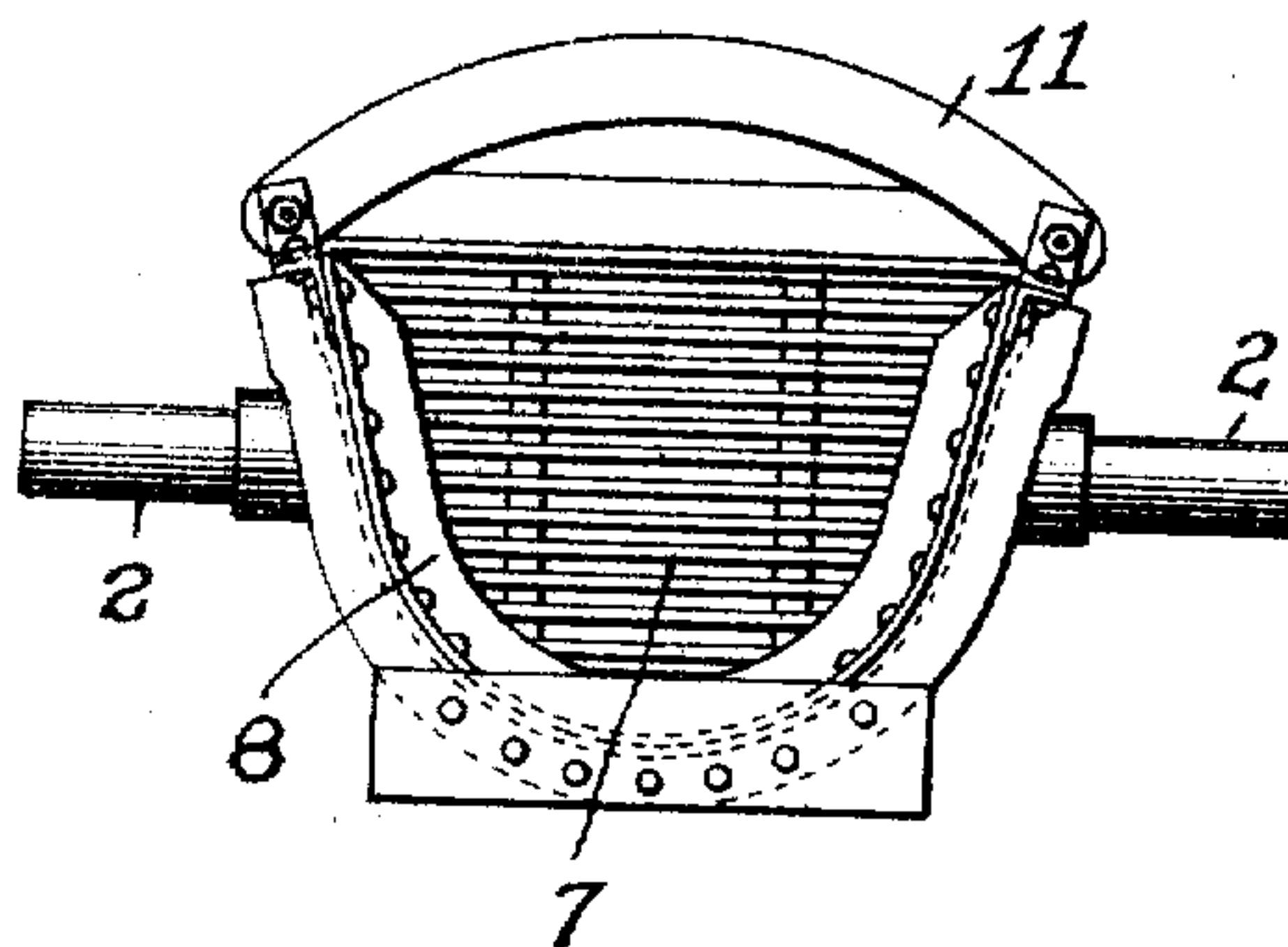


FIG. 6.



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# UNITED STATES PATENT OFFICE.

WILLIAM C. ROBINSON, OF PITTSBURG, PENNSYLVANIA.

PLANT FOR SHERARDIZING.

935,058.

Specification of Letters Patent. Patented Sept. 28, 1909.

Application filed May 29, 1909. Serial No. 499,224.

*To all whom it may concern:*

Be it known that I, WILLIAM C. ROBINSON, 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 Plants for Sherardizing, of which improvements the following is a specification.

The invention described herein relates to certain improvements in apparatus for conducting the sherardizing process, in which the articles to be treated are packed with zinc dust or other suitable finely comminuted metal in a suitable retort, and then subjected to a sufficient heat to effect a deposition of metal on the articles.

The improvement described herein relates to certain improvements in apparatus for charging the retort with the articles and the zinc or other metallic dust and also removing the charge from the retort after the completion of the operation.

The invention is hereinafter more fully described and claimed.

In the accompanying drawings forming a part of this specification, Figure 1 is a plan view showing a desirable arrangement of the several parts of the charging and discharging apparatus. Fig. 2 is a sectional elevation on a plane indicated by the line II—II Fig. 1; Fig. 3 is a side elevation of the cradle; Fig. 4 is a sectional elevation of the same; and Figs. 5 and 6 are views of the respective ends of the cradle.

In the practice of my invention the cradle 1, which is trough-shaped, and provided with trunnions 2, is so located on the cradle that, when free to move, the latter will assume a vertical position. These trunnions are supported in suitable bearings 3 on opposite sides of a pit 4, which preferably has one wall as 5, sloping so that any material dropping onto the sloping wall will slide down into a pocket 6 at the lower end of the pit. The opposite wall of the pit is substantially vertical and the bearings 3 for the trunnions are so located as regards this vertical wall, that when the cradle swings to a vertical position, the lower end of the latter will strike against this vertical wall with a considerable jar, loosening the material carried in the retort as hereinafter described. Across the end of the cradle the more distant from the trunnions, is formed a screen 7 consisting of properly spaced slats or bars

of metal as clearly shown in Figs. 4 and 5. The cradle is provided a short distance from the screen, with an abutment consisting of an angle bar 8 riveted to the cradle and adapted to support the end of the retort when the cradle with the retort is swung to vertical position as shown in Fig. 2.

When it is desired to discharge a retort after the completion of the process, the latter is placed in the cradle, the latter being held in a horizontal position by any suitable means as for example a chain 9 connected to the cradle, and passing around a drum 10 suitably operated. In placing the retort within the cradle the end from which the cap has been removed is placed against the abutment 8. After being placed in position the retort is secured within the cradle by means of a holding bar 11 pivoted at one side of the cradle and adapted to be detachably secured to the opposite side, as clearly shown in Fig. 6. After the holding bar has been secured in position, the drum 10 is rotated in such direction as to permit the heavier end of the cradle containing the retort to drop down freely and its movement is arrested by striking against the vertical wall of the pit jarring the contents of the retort so that they will drop onto the screen 7 through which the powdered zinc dust will pass into the pit, leaving only the treated articles partially in the cradle and partially in the retort. After the dust has been discharged, the cradle is drawn back by the drum 10 to horizontal position and the retort removed, leaving the treated articles within the cradle. The retort is then shifted over into the pit 12 where it is placed in a vertical position with the closed end downward under a spout 13 leading from the storage bin 14 where the zinc dust is placed. The articles are then placed within the retort and the dust also admitted or directed therein through the spout 13.

In the pocket 6 at the bottom of the pit 4 is arranged a screw conveyer 15 which will move the dust collection therein along a passage 16 to the lower end of an elevator 17 by which the dust is carried upward and discharged into a spout 18 and thence into a trough 19 along which the dust is carried to a point over the bin 21, into which it is finally discharged.

I claim herein as my invention:

1. In a sherardizing plant, the combination of a pivotally mounted cradle for the

reception of a retort, a screen arranged transverse of the cradle and means for controlling the rocking movement of the cradle.

2. In a sherardizing plant, the combination of a pivotally mounted cradle for the reception of a retort, an abutment for supporting the retort when the cradle is shifted from a horizontal position and a screen arranged transverse of the cradle on the side of the abutment opposite that occupied by the retort.

3. In a sherardizing plant, the combination of a cradle provided with supporting trunnions so placed that the cradle will have a bias to swing to vertical position, an abutment in the cradle for supporting a retort when the cradle moves from horizontal position, a screen arranged transverse of the cradle on the side of the abutment opposite

that occupied by the retort and means for controlling the movements of the cradle.

4. In a plant for sherardizing, the combination of a cradle for the discharge of a retort pivotally supported in such relation to a pit that the contents of the retort will be discharged into the pit when the cradle and retort swing from horizontal position. means for separating the treating material from the articles treated, a charging bin, and means for tempering the treating material from the pit to the charging bin.

In testimony whereof, I have hereunto set my hand.

WILLIAM C. ROBINSON.

Witnesses:

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