

J. A. MENSCH.  
STRAINER FOR PUMPS, &c.  
APPLICATION FILED JAN. 25, 1908.

2 SHEETS—SHEET 1.

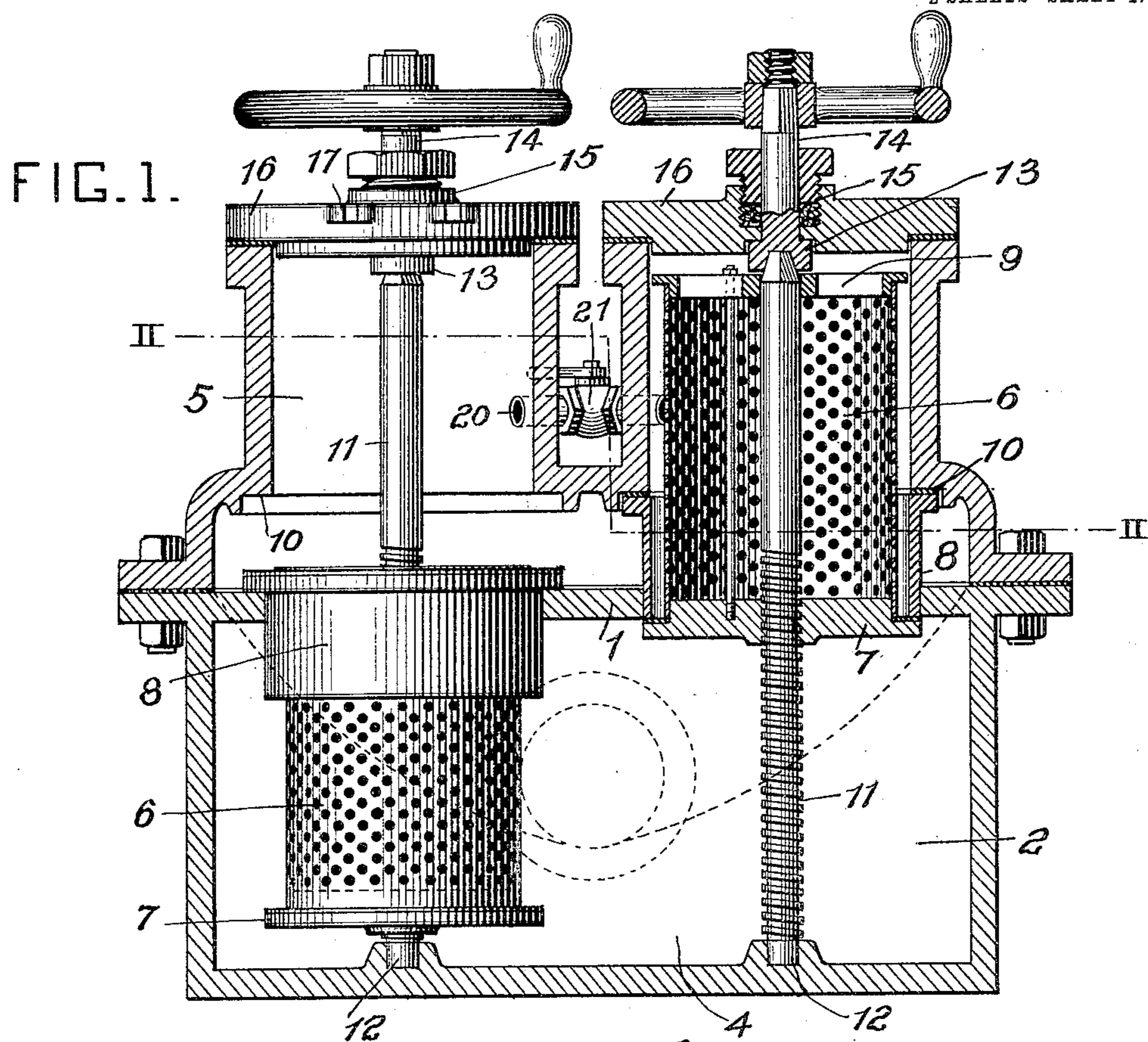
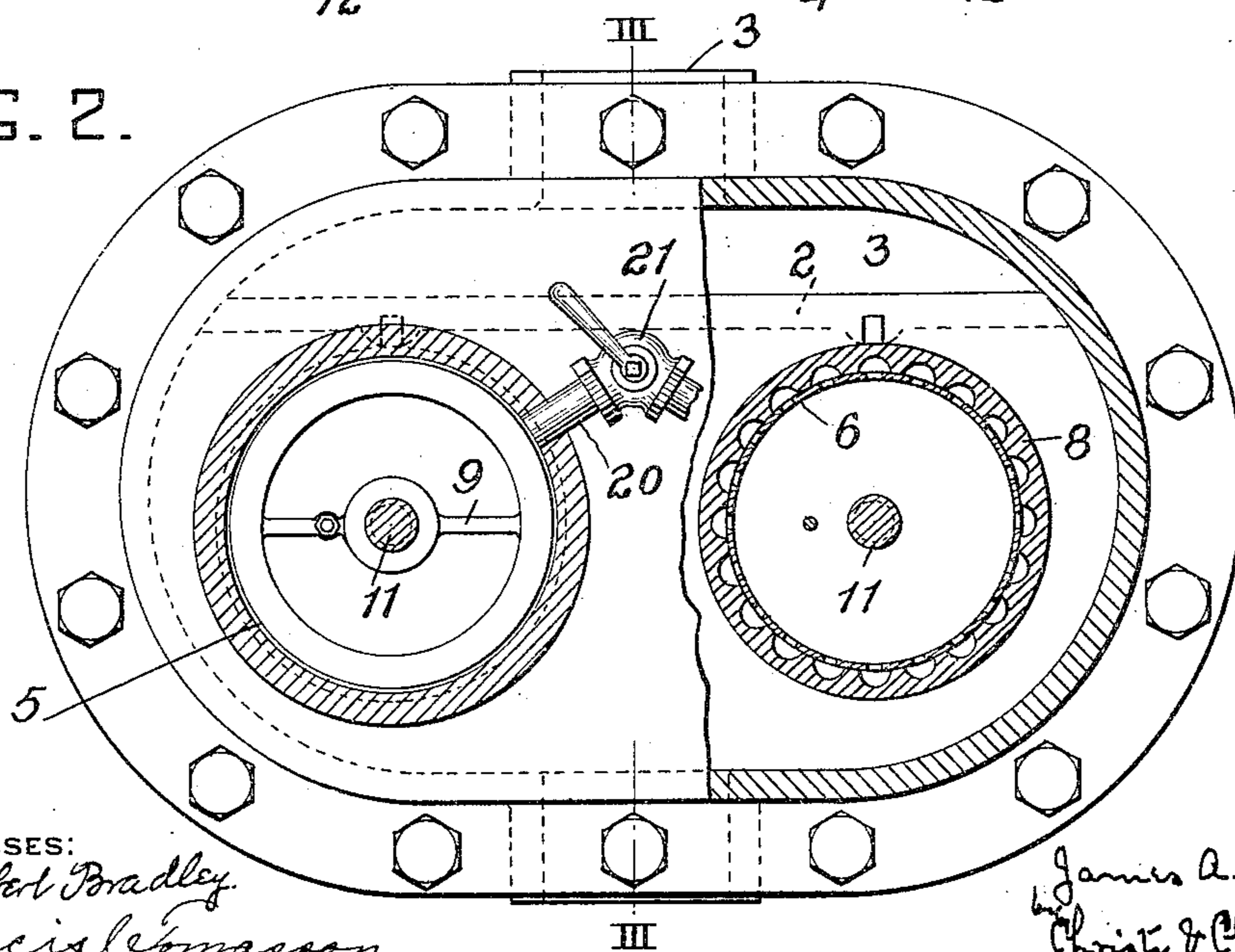


FIG. 2.



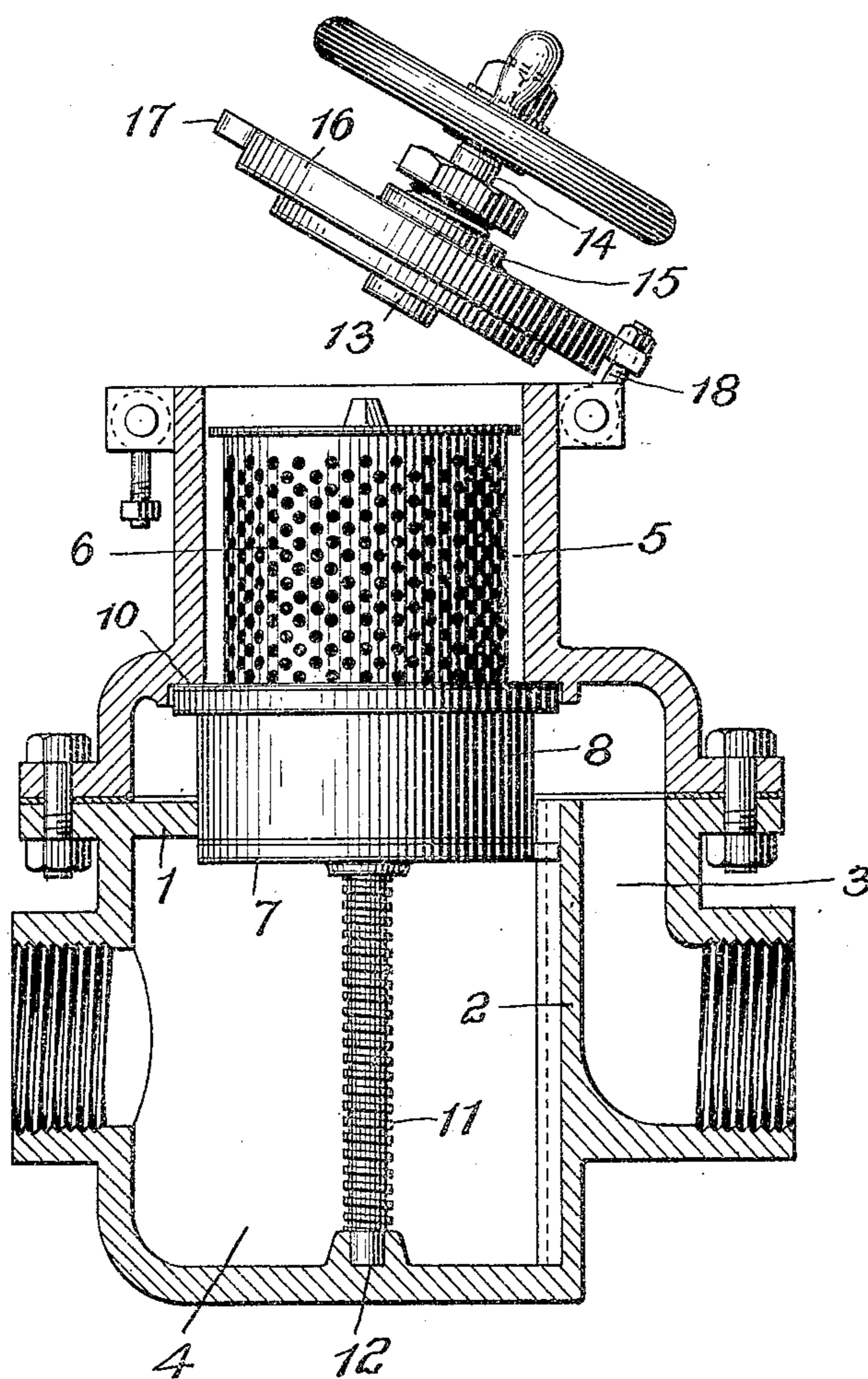
WITNESSES:  
*J. Herbert Bradley*  
*Francis Comasson*

INVENTOR  
*James A. Mensch*  
*Christy & Christy, Attys*

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FIG. 3.



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# UNITED STATES PATENT OFFICE.

JAMES A. MENSCH, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO CHARLES F. OVERLY, OF PITTSBURG, PENNSYLVANIA.

## STRAINER FOR PUMPS, &c.

No. 897,123.

Specification of Letters Patent.

Patented Aug. 25, 1908.

Application filed January 25, 1908. Serial No. 412,538.

*To all whom it may concern:*

Be it known that I, JAMES A. MENSCH, 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 Strainers for Pumps, &c., of which improvements the following is a specification.

The invention described herein relates to certain improvements in strainers for the inlets of pumps, etc., and has for its object a construction and combination of parts or elements whereby the foreign matter caught by the strainer may be easily and quickly removed without interfering with the continuous flow of water to the pump, etc.

The invention is hereinafter more fully described and claimed.

In the accompanying drawings forming a part of this specification Figure 1 is a sectional elevation of my improved strainer; Fig. 2 is a sectional plan view, the plane of section being indicated by the line II—II Fig. 1; and Fig. 3 is a sectional elevation on a plane indicated by the line III—III Fig. 2.

In the practice of my invention, the case or shell of the strainer is made in two sections united in any suitable manner, as by bolts passing through flanges on the sections. The case or shell is so constructed and divided by partitions 1 and 2 as to form an inlet chamber 3, a strainer chamber 4 and a cleaning chamber 5. The cleaning and straining chambers are in line with each other and preferably at right angles to the inner portion of the inlet chamber or passage 3. The straining cylinder 6, which is made of perforated metal or other suitable material has its lower end secured to a disk or plate 7 adapted when the straining cylinder is moved into the cleaning chamber, to close the lower end of the annular valve 8. This valve has an internal diameter somewhat greater than the external diameter of the straining cylinder which it surrounds. This valve is supported normally by the partition 1, the body of the valve projecting through the opening in the partition. The strainer cylinder is open at its upper end which is braced by a spider 9. The upper end of the annular valve bears on a seat 10 adjacent to the lower end of the cleaning chamber and the valve is made of such a length that when its upper end bears on said seat its lower end will extend into the open-

ing in the partition 1, thereby preventing any flow of water from the inlet passage either into the cleaning chamber or through the opening in the partition into the strainer chamber. A threaded shaft 11 extends from the upper portion of the cleaning chamber, down through the spider 9 and a threaded opening in the disk valve 7, and has its lower end seated in the socket 12. The upper end of the threaded rod is made angular and projects into a correspondingly shaped socket 13 on the inner end of the stem 14, which projects through a stuffing box 15 on the cover 16. This cover is secured in such manner as to be easily removed. A convenient construction consists of an ear or lug on the cover pivotally connected by an eye bolt 18 to the shell and providing a slotted lug 17 on the opposite edge of the cover for the reception of a corresponding eye-bolt.

As shown in Figs. 1 and 2 the strainer chamber is made of sufficient length to permit of the use of two or more strainers either simultaneously or successively, and a cleaning chamber is arranged in line with each strainer cylinder.

In using this apparatus, when one of the straining cylinders becomes clogged, the other straining cylinder is moved to operative position, if not already in such position. The threaded shaft or rod of the clogged cylinder is then rotated causing the cylinder to move up through the annular valve or protecting sleeve 8 into its cleaning chamber. As the straining cylinder moves up the disk valve 7 closes the lower end of the annular valve, which thereafter will move up with the straining cylinder until its upper end bears on the seat 10. When the parts are in this raised position, the lower end of the annular valve is closed by the disk 7 and the annular valve extends entirely across the inlet passage, so that the straining cylinder will be entirely inclosed, and the cleaning chamber closed as against inflow of water. The cover can be turned back or taken off, the foreign materials in the straining cylinder removed, and the cover replaced. While one cylinder is being cleaned the other cylinder is in operative position so that the water need not be cut off. To shift a cylinder to operative position, the threaded rod is turned in reverse direction causing the cylinder to move and pull the annular valve down to its normal position.

When the cylinder etc. are in cleaning position there will be considerable upward pressure on the disk valve 7, rendering the initial movement to normal position difficult.

5 In order to equalize pressures after the cover has been replaced on a cleaning chamber a by-pass 20 having a valve 21 connects the cleaning chambers.

I claim herein as my invention:

10 1. A strainer for pumps having in combination a shell or case provided with straining and cleaning chambers and having an inlet passage, a straining element, means for moving the straining element from the  
15 straining to the cleaning chamber and means for closing the portion of the case or shell normally occupied by the straining element when said element has been shifted to the cleaning chamber.

20 2. A strainer for pumps, etc., having in combination a shell or case provided with straining and cleaning chambers, a straining element, means for moving the straining element from the straining to the cleaning  
25 chamber, and means for closing the cleaning chamber when occupied by the straining element.

3. A strainer for pumps, etc., having in combination a case or shell provided with an  
30 inlet passage and with straining and cleaning chambers arranged respectively on opposite sides of the inlet passage, and in line with each other, a cylindrical straining element, a sleeve surrounding the cylindrical strainer,  
35 means carried by the strainer for closing the lower end of the sleeve and means for moving the strainer into the cleaning chamber and the sleeve transverse of the inlet passage.

4. A strainer for pumps, etc., having in  
40 combination a shell or case provided with an inlet passage and with straining and cleaning chambers arranged respectively on opposite sides of the inlet passage and in line with each other, a cylindrical straining element,  
45 a sleeve surrounding the cylindrical strainer, means for moving the strainer into the clean-

ing chamber and shifting the sleeve transverse of the inlet passage.

5. A strainer for pumps, etc., having in combination a case or shell provided with 50 straining and cleaning chambers and an inlet passage, a strainer element, means for moving the strainer element from the straining to the cleaning chamber, and means operative by the strainer element for closing the  
55 cleaning chamber and preventing the flow of water through the portion of the case or shell occupied by the straining element when in normal operative position.

6. A strainer for pumps, etc., having in 60 combination a case or shell provided with a straining chamber, a plurality of cleaning chambers and an inlet passage, a plurality of strainer elements, means for moving said elements independently from the straining  
65 to the cleaning chambers, and means operative when one of the strainer elements is in its cleaning chamber to direct the water entering by the inlet passage through the other strainer element. 70

7. A strainer for pumps, etc., having in combination a case or shell provided with a straining chamber, a plurality of cleaning  
75 chambers and inlet passage intermediate of the straining and cleaning chambers, a plurality of cylindrical strainer elements having their lower ends closed, sleeves surrounding the strainer elements and movable by the strainers in the openings connecting the inlet passage with the straining chamber,  
80 means for moving the strainers into the cleaning chambers, the sleeves being shifted by the strainers to positions preventing the flow of water into the cleaning chambers through the openings between the straining  
85 chamber and the inlet passage.

In testimony whereof, I have hereunto set my hand.

JAMES A. MENSCH.

Witnesses:

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FRANCIS J. TOMASSON.