

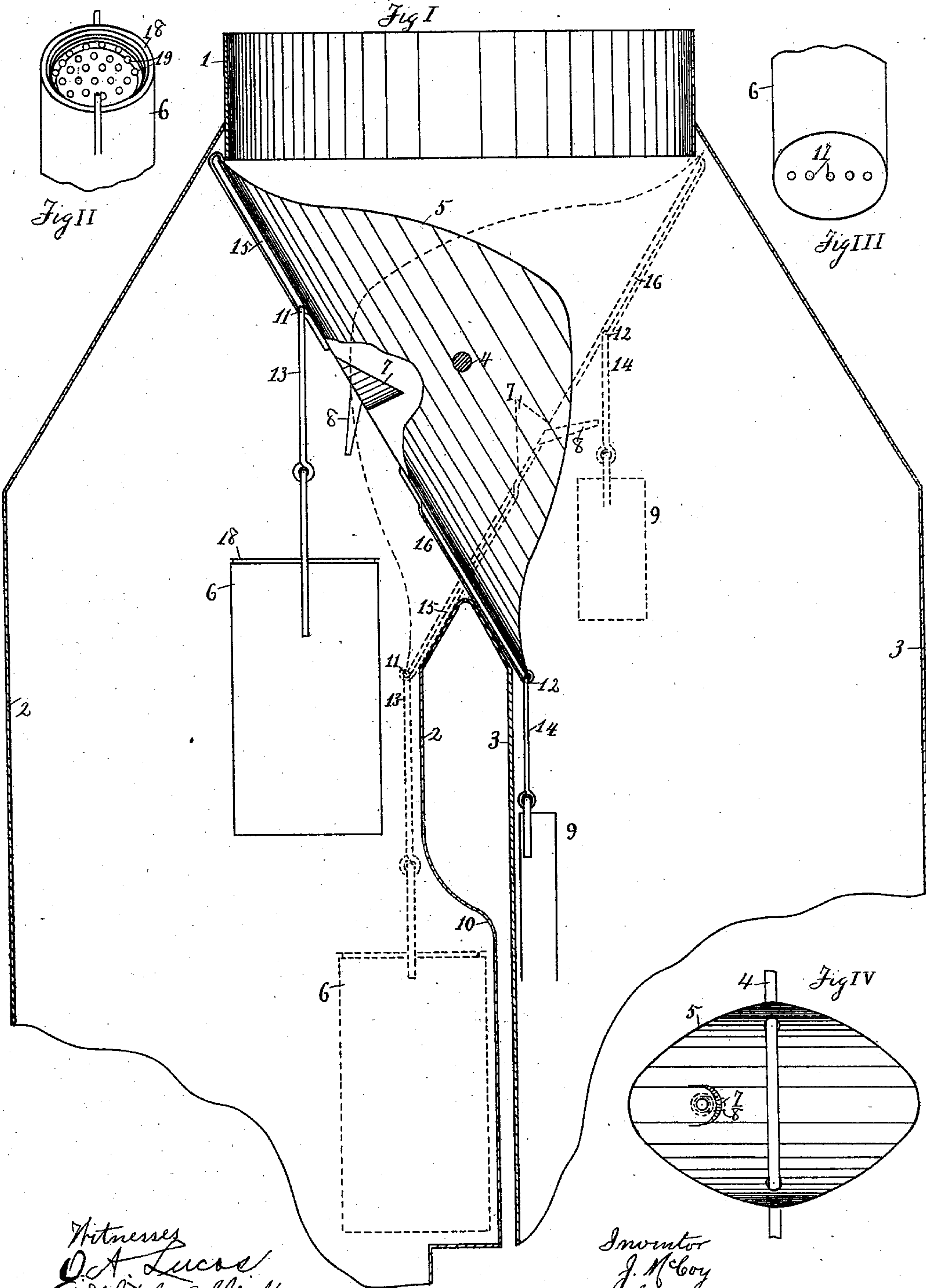
(No Model.)

2 Sheets—Sheet 1.

J. McCOY.
CISTERN CUT-OFF.

No. 603,338.

Patented May 3, 1898.



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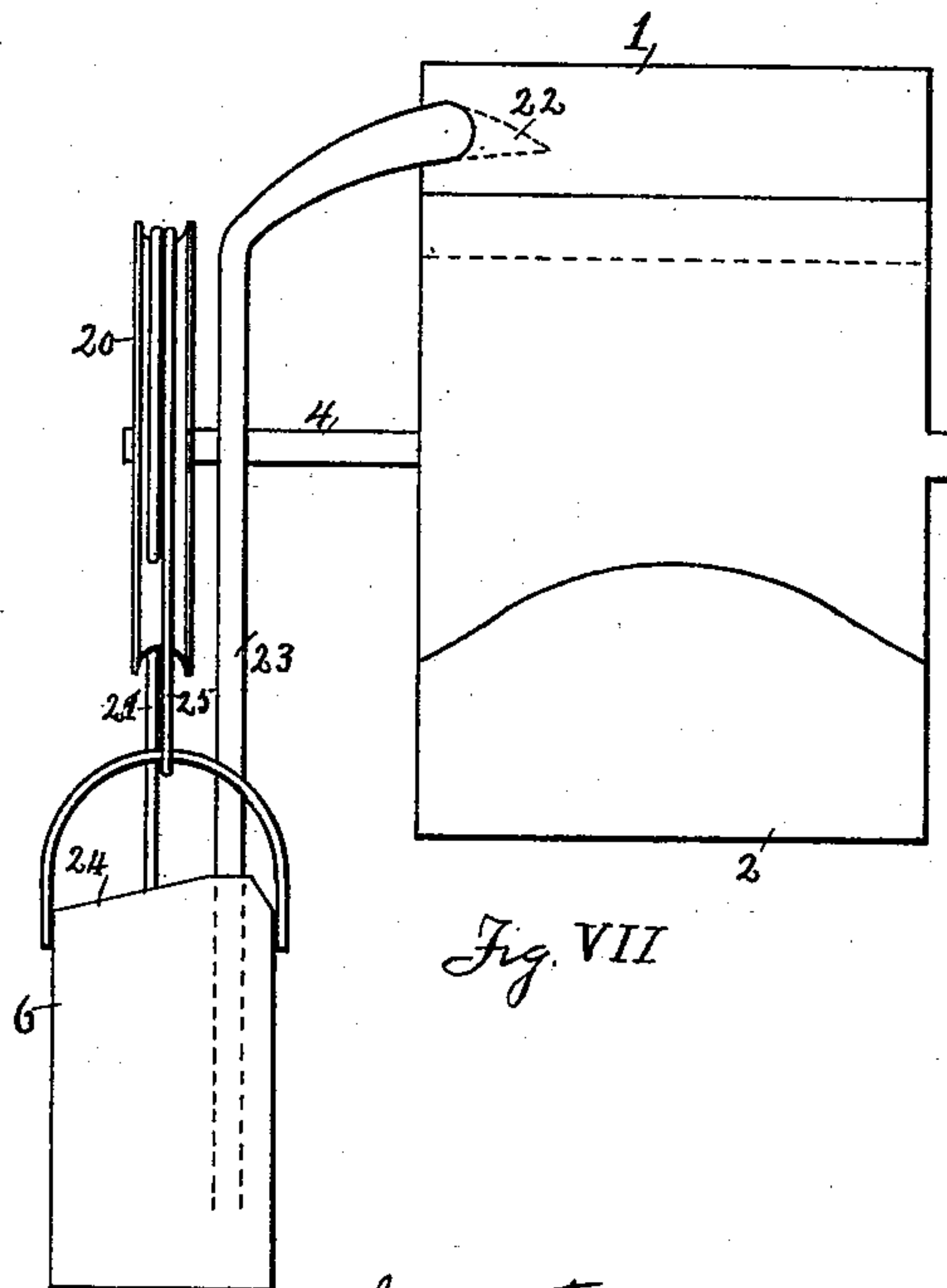
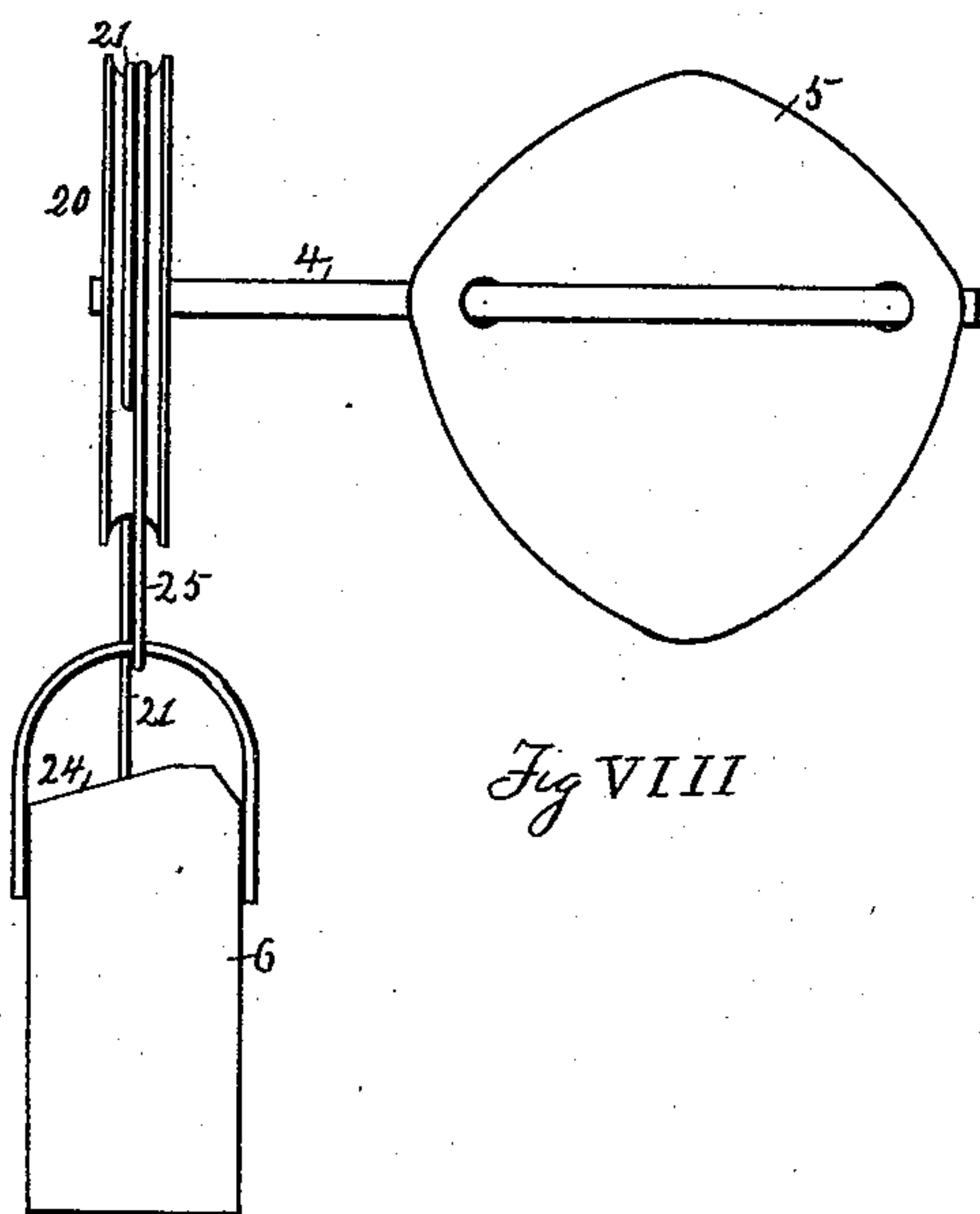
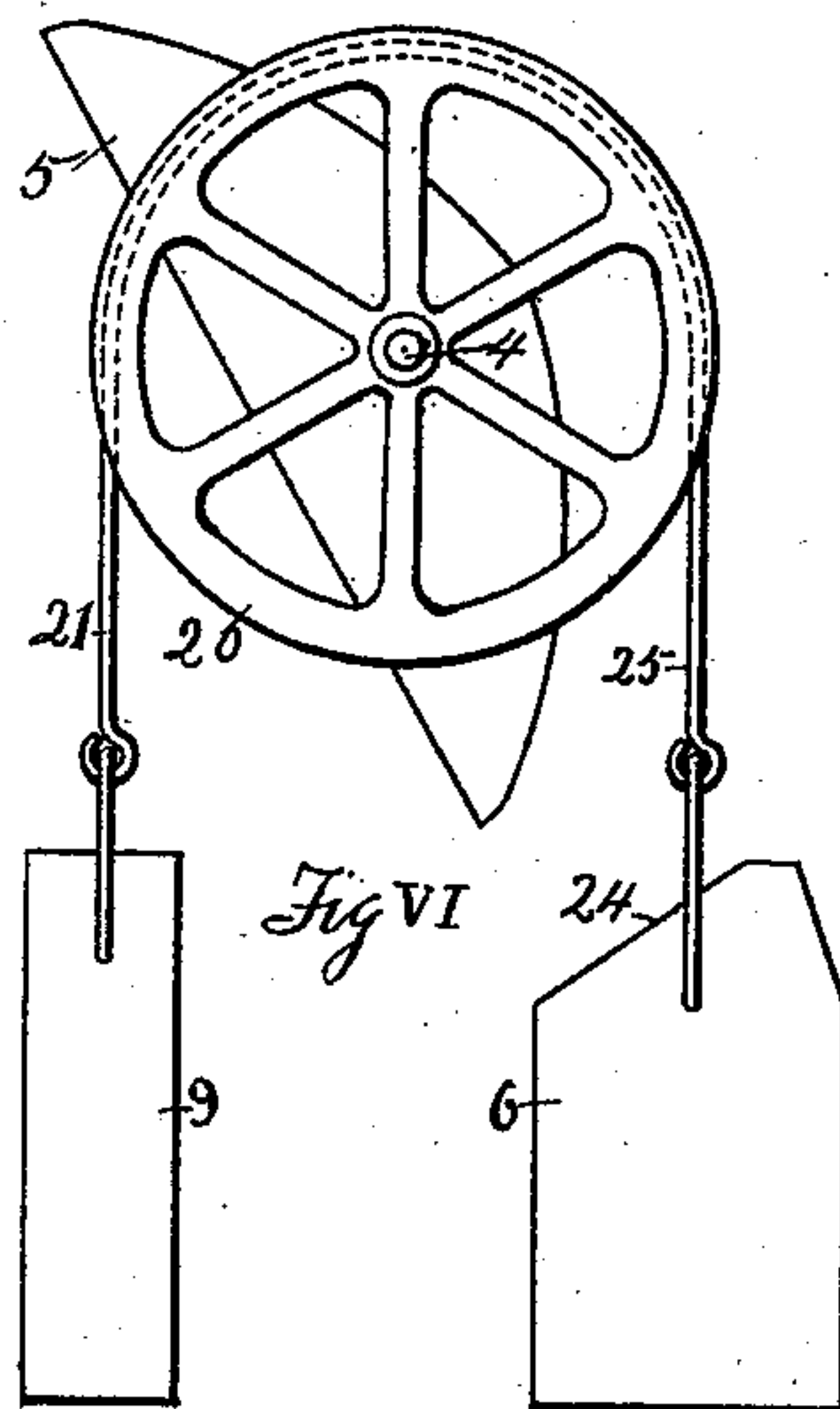
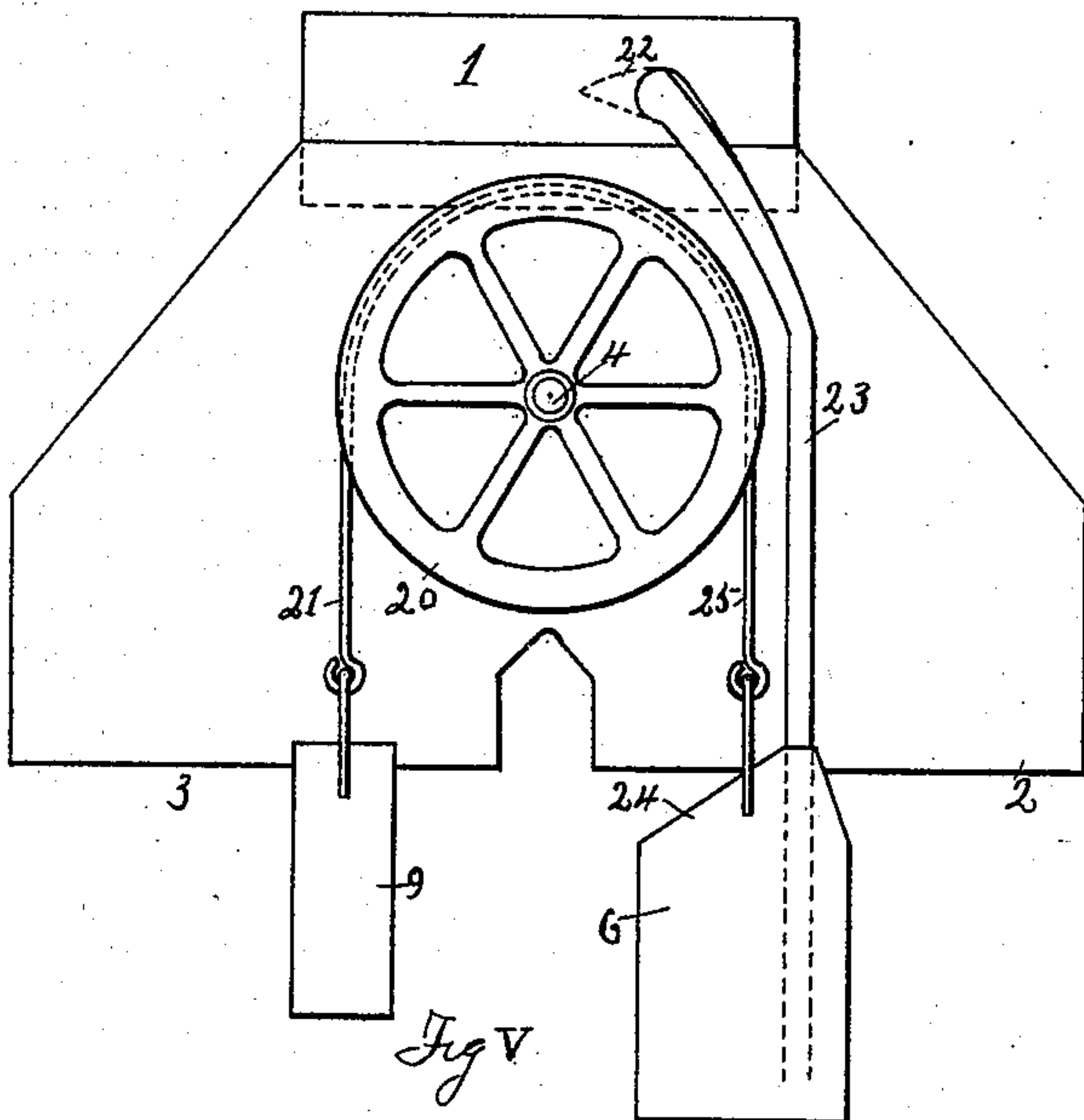
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2 Sheets—Sheet 2.

J. McCOY.
CISTERN CUT-OFF.

No. 603,338.

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UNITED STATES PATENT OFFICE.

JOSEPH MCCOY, OF INDEPENDENCE, MISSOURI.

CISTERN CUT-OFF.

SPECIFICATION forming part of Letters Patent No. 603,338, dated May 3, 1898.

Application filed June 1, 1897. Serial No. 638,888. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH MCCOY, a citizen of the United States, residing at Independence, in the county of Jackson, in the State of Missouri, have invented certain new and useful Improvements in Cistern Cut-Offs, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to certain new and useful improvements in cistern cut-offs, and is designed to provide an automatic cut-off in that class of cistern pipes or spouting in which the pipe leading from the roof branches before reaching the cistern, one branch leading to the cistern and the other to the sewer or other wasteway; and my invention consists in certain features of novelty hereinafter described, and pointed out in the claim.

Figure I represents a cistern-pipe of the class mentioned provided with my improvements, the pipe being shown in cross-section to show the arrangement thereof. Fig. II represents a view of the top of the bucket. Fig. III represents a view of the bottom of the same. Fig. IV represents a view of a portion of the cut-off, showing the cup therein. Fig. V represents a front elevation showing a different arrangement of the weight and water vessel with relation to the axial line of the cut-off. Fig. VI represents a side elevation of the device as shown in Fig. V with the cut-off removed from the spouting. Fig. VII represents a side elevation of the device as shown in Fig. V. Fig. VIII represents a side elevation of the device as shown in Fig. VI.

Similar numerals refer to similar parts throughout the several views.

1 represents the pipe leading from the roof, having the branch 2, leading to the cistern, and the branch 3, leading to the sewer or other wasteway.

In the throat formed by the union of the branches with the roof-pipe and substantially in line with the point of bifurcation is mounted on the pivot 4 the switch or cut-off 5, so arranged that when tilted in one direction it will close the pipe leading into the cistern and convey the water coming down through the pipe 1 into the sewer-pipe, and when tilted in the opposite direction it will close the pipe

leading to the sewer and convey the water into the pipe leading into the cistern. To effect this tilting automatically, so that when the rain comes the cut-off will be turned to lead water into the cistern and when the rain is over the cut-off will be returned to position to lead the water to the sewer, is the object of my invention. To do this, I suspend from the cut-off on one side of the plane of the axis the bucket 6. In the cut-off I provide a cup 7, and on the under side of the cut-off a funnel 8, communicating through a hole with the upper side, the relation of the parts being such that when the cut-off is in position to close the pipe leading to the cistern the cup will be in position to intercept and catch some part of the water coming down from the roof-pipe, which water will pass through the funnel and empty into the bucket. On the opposite side of the plane of the axis I suspend the weight 9, the relation of the weight being such that when the bucket is empty the weight is heavier than the bucket and will overbalance it and cause the cut-off to assume the position shown in heavy lines in Fig. I, turning the water out of the cistern and into the sewer-pipe; but when the bucket becomes filled with water it is heavier than the weight and overbalances it and causes the cut-off to assume the position shown in dotted lines in said figure, turning the flow of water into the cistern and cutting off the sewer-pipe. In this position the bucket will swing partly into the pocket or recess 10, formed in the side of the pipe, where it will not interfere so much with the free flow of the water through the pipe, but will yet receive sufficient water to keep it filled during the continuation of the rain and consequent flow of water. When the rain stops and the consequent flow of water ceases, the water in the bucket will leak out through the openings 17 in the bottom and the weight 9, being heavier than the empty bucket, will turn the cut-off on its axis, causing it automatically to again assume the position shown in heavy lines, shutting off the cistern-pipe and opening the waste or sewer pipe.

I preferably suspend the weight and bucket, as shown in the figure, so that the loops 11 and 12 of the connecting cable or cords 13 and 14 shall slide, respectively, in the elongated

ways 15 and 16 along the under side of the cut-off as the cut-off changes its position, and thus giving an increased leverage to the weight or bucket as the one or the other occupies the lower position and rendering the device in a degree more stable.

As shown in Figs. V to VII, without departing from the principle of my invention, instead of connecting the weight and vessel directly to the cut-off, as shown in Fig. I, a grooved wheel or sheave 20 may be mounted on the extended axis or pivot 4 of the cut-off and the weight 9 suspended therefrom on one side by a cord or cable 21, passing over the sheave and secured thereto on the opposite side, and the bucket 6, suspended from said sheave on the other side by a cord or cable 25, passing over the sheave and secured thereto on the opposite side. In the construction a lip or cup 22 is formed on the inside of the spout above the branches, arranged to catch the water as it comes down the spout, and from said lip or cup the water is carried by the pipe 23, communicating therewith, into the bucket, and the bucket may be provided with a conical-shaped cover 24 to prevent leaves and trash blowing therein, and the pipe may be extended a distance into the bucket to insure the water entering the same. By this construction and arrangement is provided a cut-off purely automatic in its action in closing and opening the pipe leading to the cistern, being governed and controlled entirely by the rainfall and requiring no attention after being once put in place. Among its principal advantages are that, requiring

no attention, the benefit of the rainfall in filling the cistern will not be lost through neglect to turn the cut-off in its proper direction, and, again, the bucket requiring a certain time to fill and operate the cut-off, time will be given for the rainfall to wash the dust and dirt accumulating on the roof into the sewer before the water is turned into the cistern, and thus the cistern is kept free from these impurities. The bucket may be kept open at the top, or it may be covered by the lid 18, having the opening 19 therein, so that it will not be filled so rapidly, but sufficient time will be allowed in which the impurities from the roof will be washed off and carried into the waste-pipe, the relation also between the holes in the lid and the holes in the bottom of the bucket being such that the water will run into the bucket faster than it runs out.

Having thus described my improvements, what I claim, and desire to secure by Letters Patent, is—

The combination with a pivoted cut-off in a cistern-pipe of a weight connected with said cut-off, a vessel connected with said cut-off and means for filling and emptying said vessel, the construction and arrangement being such that as said cut-off changes its position the relation of said weight and vessel to the axis will correspondingly change, substantially as set forth.

JOSEPH MCCOY.

Witnesses:

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