(No Model.)

A. J. WELSH.

CUT-OFF FOR WATER PIPES.

No. 561,148. Patented June 2, 1896.

Fig. 1.

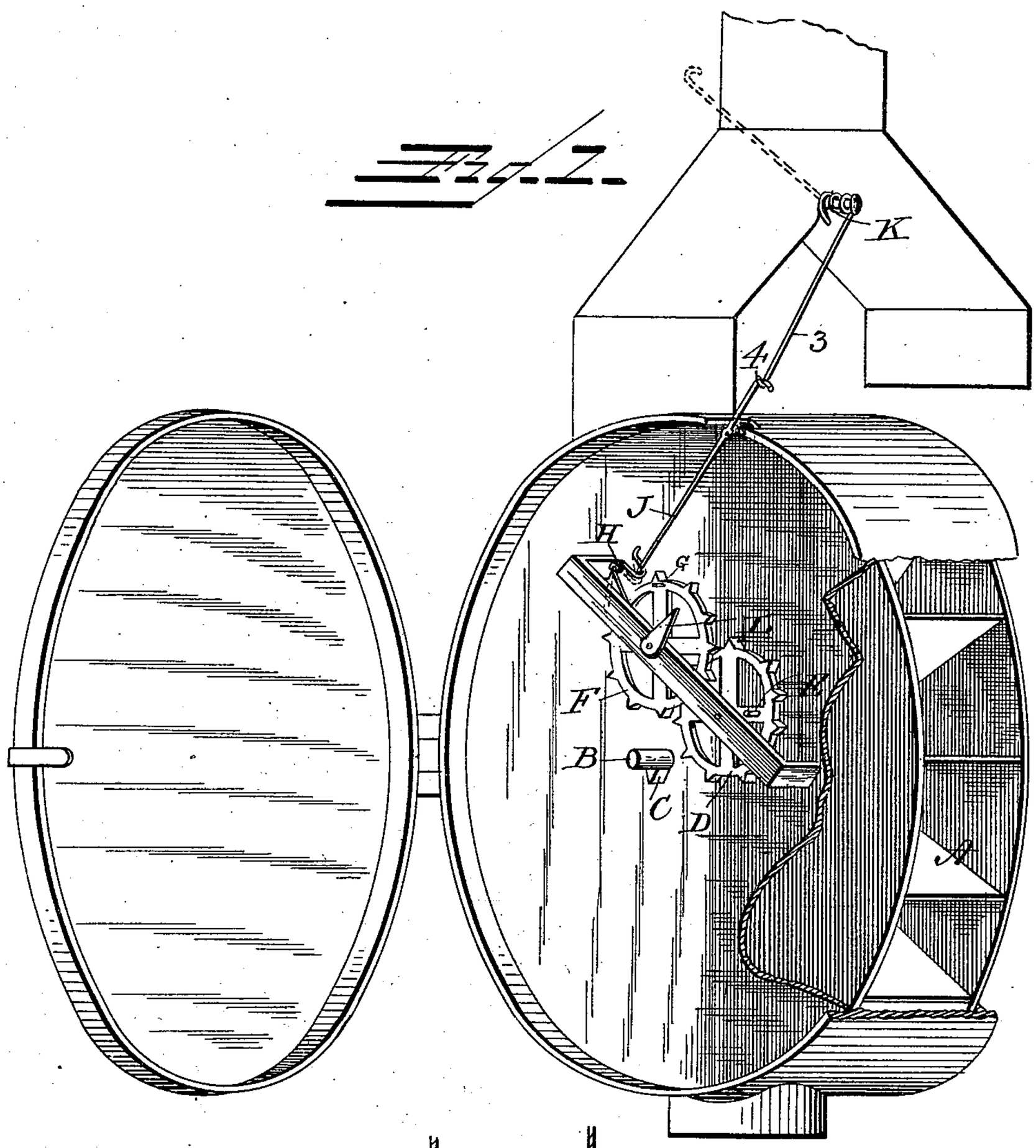
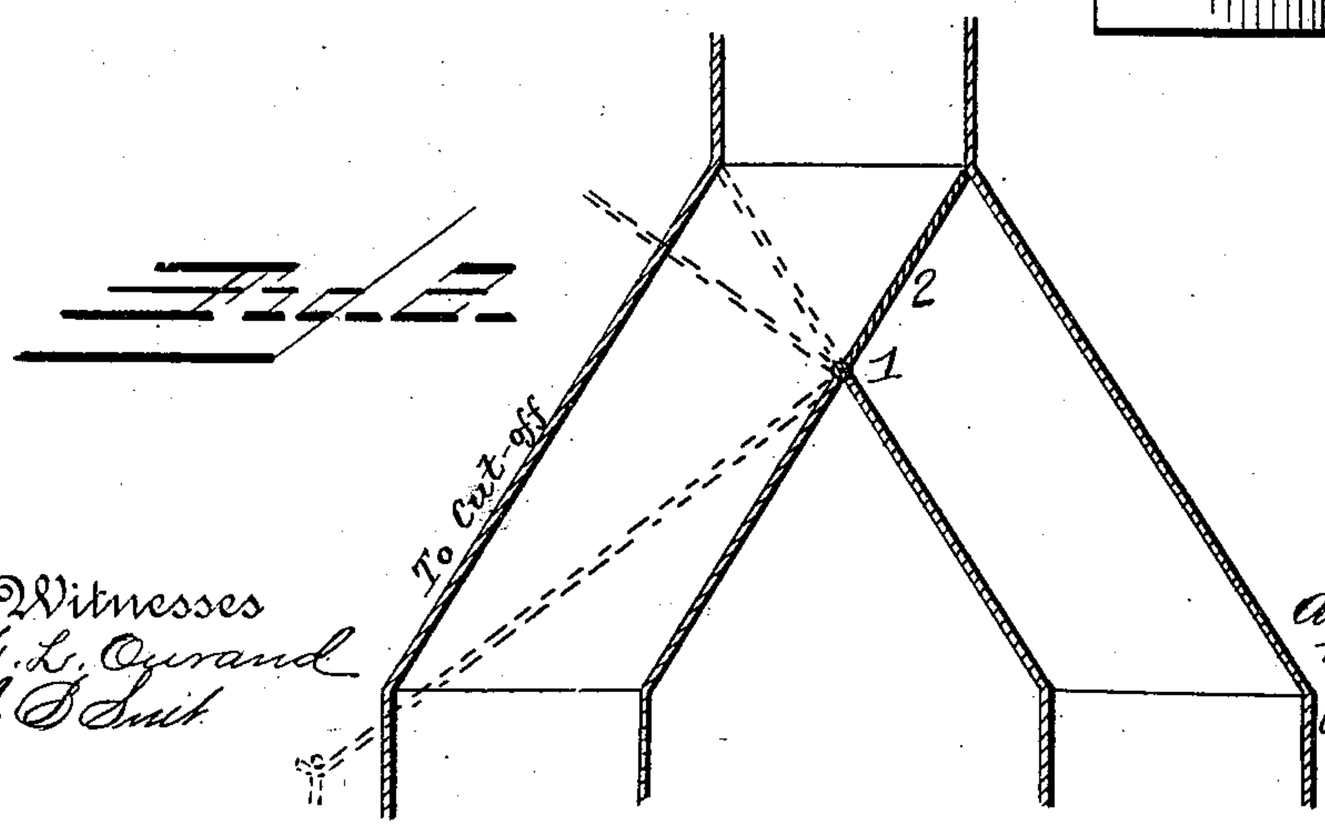


Fig. 2.



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UNITED STATES PATENT OFFICE.

ANDREW J. WELSH, OF MINNEAPOLIS, KANSAS.

CUT-OFF FOR WATER-PIPES.

SPECIFICATION forming part of Letters Patent No. 561,148, dated June 2, 1896.

Application filed October 12, 1894. Serial No. 525,739. (No model.)

To all whom it may concern:

Be it known that I, ANDREW J. WELSH, a citizen of the United States, residing at Minneapolis, in the county of Ottawa and State of Kansas, have invented a new and useful Automatic Cut-Off for Water-Pipes, of which the following is a specification.

The object of my invention is to operate the cut-off in rain-water pipes automatically by the power afforded by the water falling down the pipes in such way as to secure the thorough washing off from the roof of all dust, soot, &c., and then change the cut-off automatically to over the cistern-pipe from the gutter or waste-pipe and run only clean water into the cistern, thus avoiding going out in the rain or getting up at night, it may be, to change the cut-off. I accomplish this object by means of the mechanism shown in the accompanying drawings—

Figure 1 of which shows in perspective a view of the entire device inclosed in a casing of tin or other suitable material, provided at the top with a portion of pipe containing a cut-off ready to attach to the down-spout of the house and also the pipe leading to the cistern and at the bottom to attach to the waste-pipe. Fig. 2 is a sectional detail view of the spring-actuated cut-off valve.

The following description will explain its construction and operation.

At the lower right hand a portion of the wheel-casing is broken away to show a portion of the water-wheel A, which may be made of tin or other suitable material, and should have openings at the bottom of each cup or division to drain quickly to prevent freezing or rusting. This wheel is rigidly mounted on a shaft B, the end of which is seen at the center of the wheel-casing projecting through it. Near the end of this shaft is a cog or post C, adapted to engage the cogs on the wheel D, so that every revolution of the water-wheel A moves the wheel D forward one cog. On the side of one of the spokes of the wheel D near the center of the wheel is a short post E, adapted to engage the cogs on the wheel F, so that each revolution of the wheel D moves the wheel F forward one cog, and on the side of one of the spokes of the wheel F near the periphery of the wheel is a short post G, adapted to engage the end of the handle of the stirrup H, pushing it forward enough to drop the stirrup below the end of the grip-lever J, thus releasing the grip-lever J, which in turn releases the handle or lever of the spring K, allowing the spring to throw the cut-off back over the waste-pipe, closing it and opening the cistern-pipe.

1 designates a shaft journaled in the coupling connecting the down-spout to the water-pipe and the cistern-pipe, said shaft extending transversely of the coupling and being provided with a cut-off valve 2. On its projecting end the shaft 1 is provided with a setting-lever 3, which is provided on the end of its lower portion with a hook 4, which is designed to engage the upper end of the pivoted grip-lever J when the cut-off is set to secure the washing of the dust from the roof and carry it off through the waste-pipe, at which time the lower end of the setting-lever 3 is in engagement with the stirrup H, and the indicator L is set at the zero or initial position of the train of gearing to permit the dust to be washed from the roof of the building before the rain-water is automatically directed into the cistern-pipe.

The quantity of water passing through the wheel before the cut-off is changed may be regulated by the indicator L. Turning it toward the left from the point shown in the drawings lessens the quantity, the drawings showing it set at its full capacity; also the quantity may be largely increased by constructing the device with larger cog-wheels, containing a larger number of cogs.

The dotted lines in the drawings indicate the position of the different levers after the cut-off has been thrown back. To reset the device, the levers are to be drawn back from the position shown by the dotted lines to the position shown by the solid lines.

What I claim, and desire to secure by Letters Patent, is—

In a cut-off and spout, the combination with a waste-pipe and a cistern-pipe connected with the down-spout by a coupling or Y, provided with a cut-off valve secured upon a spring-actuated shaft located in the coupling or Y and provided with a setting-lever located on its projecting end and having a hook at its lower end, of a pivoted grip-lever secured to the wheel-casing, a water-wheel mounted

on a shaft journaled in a wheel-casing and provided near one end with a tooth or cog adapted to engage the teeth of a train of gearing, a train of gearing supported in the wheel-casing near the tooth or cog on the shaft, an indicator for setting the train of gearing, and a stirrup secured to the gearing-frame and normally engaging the grip-lever, substantially as specified.

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