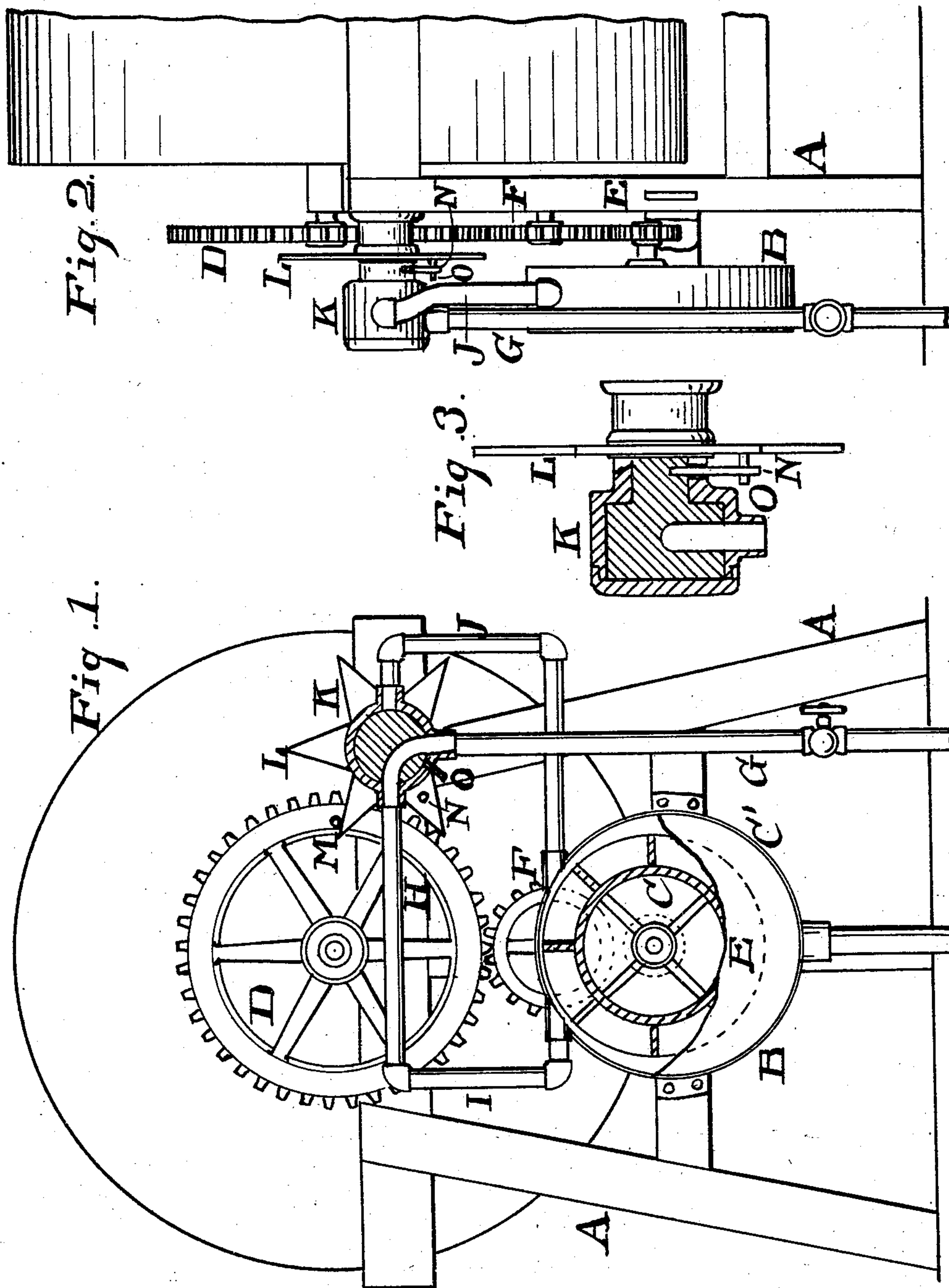


No. 747,352.

PATENTED DEC. 22, 1903.

G. E. AVERILL.
WASHING MACHINE MOTOR.
APPLICATION FILED FEB. 14, 1903.

NO MODEL.



Witnesses:
Frank R. Tibbitts
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Attorney.

UNITED STATES PATENT OFFICE.

GEORGE E. AVERILL, OF CLEVELAND, OHIO, ASSIGNOR OF ONE-HALF TO
HARRY S. LAVINE, OF CLEVELAND, OHIO.

WASHING-MACHINE MOTOR.

SPECIFICATION forming part of Letters Patent No. 747,352, dated December 22, 1903.

Application filed February 14, 1903. Serial No. 143,460. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. AVERILL, a citizen of the United States of America, and a resident of Cleveland, Cuyahoga county, and State of Ohio, have invented certain new and useful Improvements in Washing-Machine Motors, of which the following is a specification.

This invention relates to motors for washing-machines, and has for its object to provide a motor attachment for such machines whereby the machine shall be self-operative, and said motor has a means for self-reversing whereby the machine is made to have intermittent reversible rotary motions, thus providing an automatic washer to eliminate the tedious hand-labor heretofore employed for domestic washing or family machines.

This invention consists in the structure defined in the claim.

In the accompanying drawings, Figure 1 is an end elevation of a machine, showing the reversing-valve in section with its reversing attachment. Fig. 2 is a partial side elevation of the same, showing the valve in transverse position. Fig. 3 is a vertical section of the three-way cock, showing shifting lever N and the star-wheel L, with the pin O, that actuates said lever.

A represents a frame-support for a rotary washing-machine, which may be of any of the known varieties.

B is a water-motor attached to the side of the frame, and consists of a water-wheel C, journaled to revolve in an outer casing C'. Upon the journal of the washing-machine is mounted a large gear D. On the journal of the motor is provided a pinion E, and between the gear D and pinion E is provided an intermediate small gear F. This arrangement of the gear is to reduce the speed of the washer relative to that of the motor.

Water is conveyed to the motor through a main pipe G, leading from any suitable water-supply source. H is a branch pipe connecting the said pipe G with the motor B, having turned arms I and J, which connect, respectively, with two opposite sides at the top part of the motor-case C'. In the said branch pipe H at its junction with the main

pipe G is provided a three-way cock K, supported on the framework of the washing-machine for changing the current of the water from left to right, and vice versa, for operating the washer in alternate directions at intervals of six revolutions. At each of said intervals the motor is reversed by the changing of the current of water from one side to the other on the water-wheel C. For producing these changes of the revolutions of the motor a six-pointed star-lever L is loosely placed on the casing of the three-way cock K, which is actuated by a pin M on the large gear D striking on the points of said star L and turning it a short distance. Then when the star has been to the sixth point a pin N on the star will strike a depending lever O on the journal of the cock K and turn said cock to direct the course of the water in pipe H in the opposite direction, and immediately the motor will reverse and operate the gear oppositely, and then the star is also actuated in the opposite direction, and when it has been moved the six points it will again bring its pin N in contact with the depending lever O and turn the cock K back to reverse the current of water in pipe H and set the motor revolving in its former direction. It will thus be seen that by this means the motor is automatically reversed at stated intervals for producing the alternate revolutions of the washing-machine.

Having described my invention, what I claim is—

The combination substantially as described, consisting of a rotary water-motor, a gear D actuated thereby, pipes for providing a current of water to said motor, a three-way cock in said pipes, a star-pointed lever on said cock, a pin on the gear D for actuating the star, a pin on the star for turning the cock, back and forth, at stated intervals, for reversing the current of water to the motor, substantially as and for the purpose specified.

Signed by me at Cleveland, Ohio, this 10th day of February, 1903.

GEORGE E. AVERILL.

Witnesses:

GEO. W. TIBBITTS,
HARRY S. LAVINE.