No. 709,279. Patented Sept. 16, 1902.

N. SCHMIDT.

WATER MOTOR.

(Application filed Dec. 24, 1901.)

(No Model.)

Fig. 1.

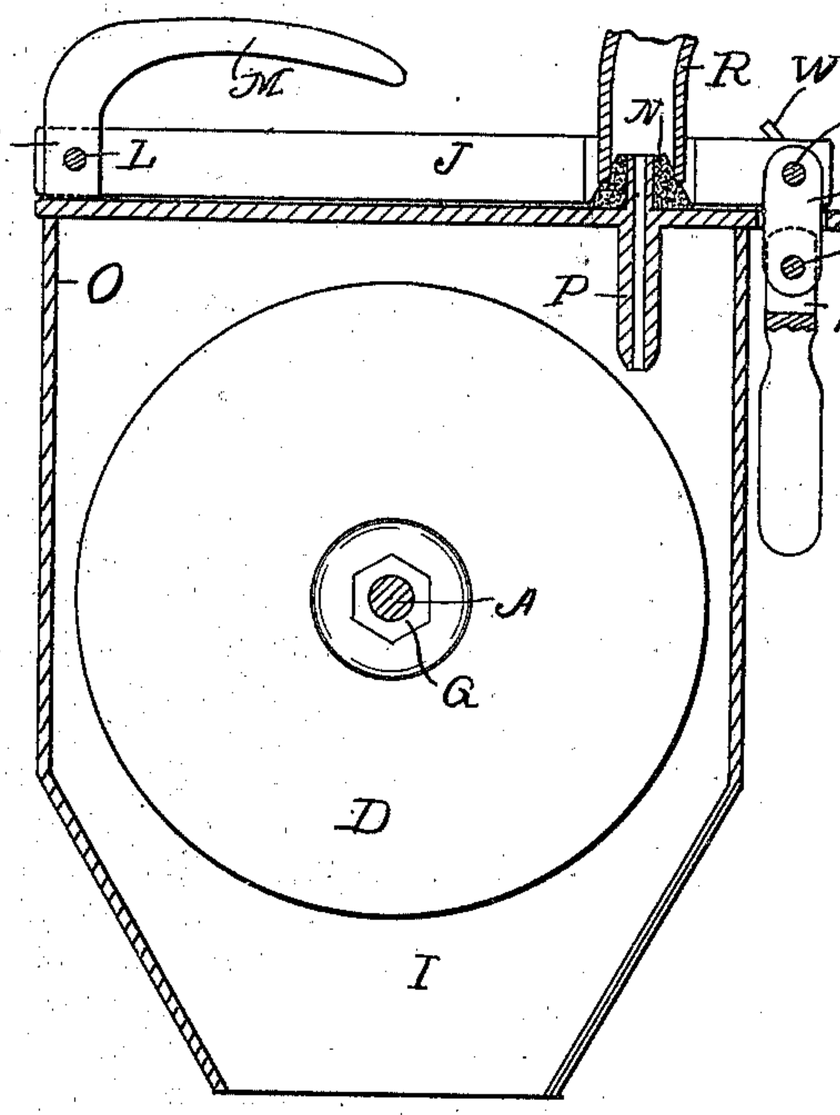


Fig. 2.

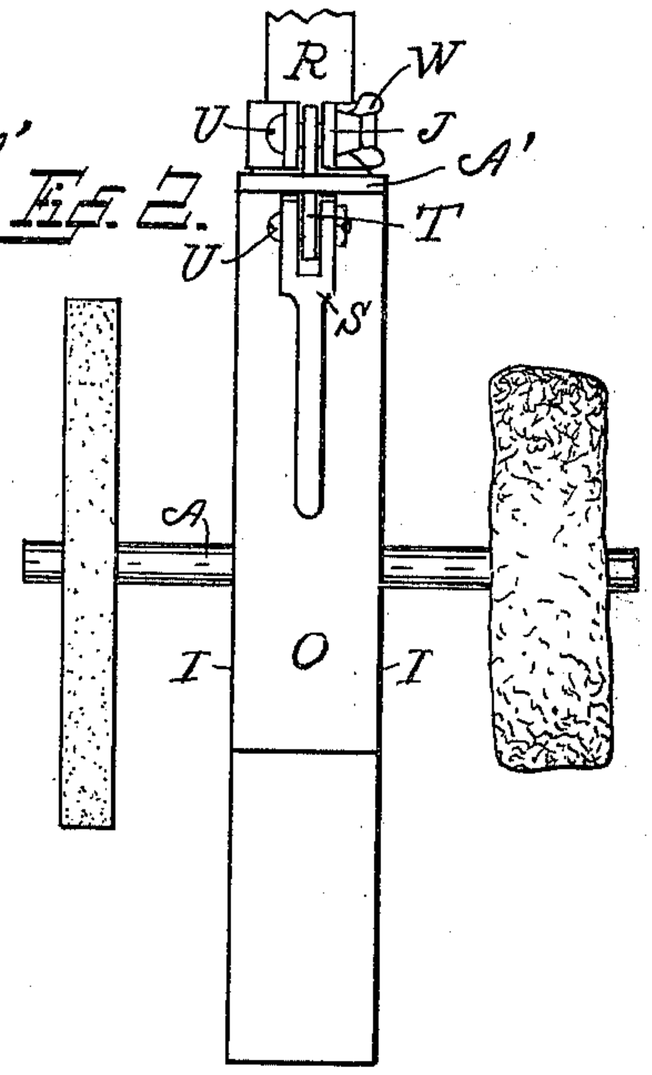


Fig. 3.

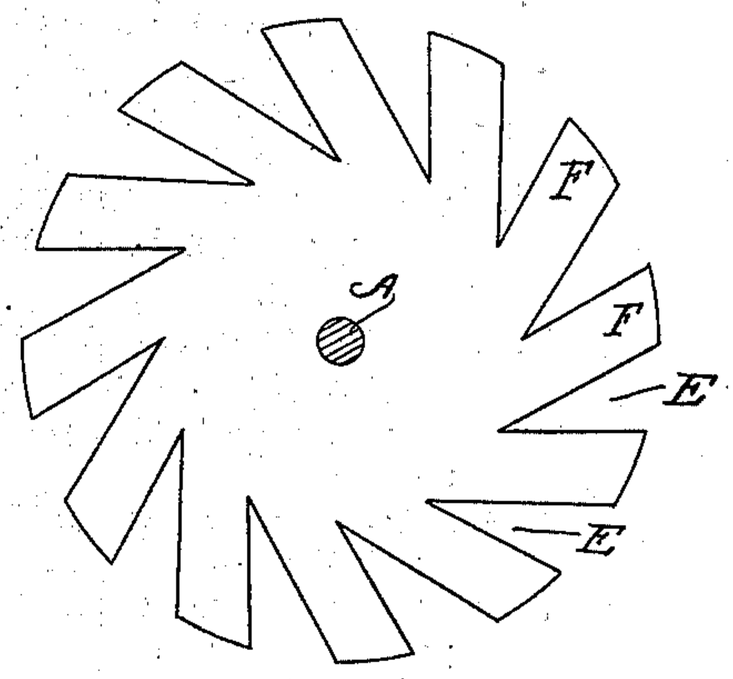


Fig. 4.

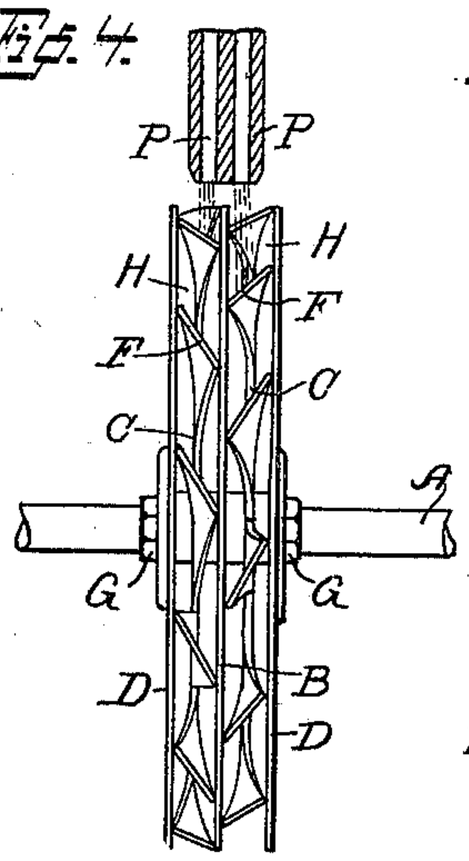
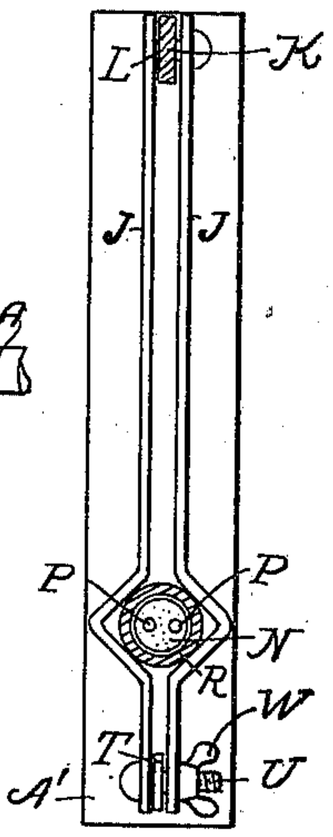


Fig. 5.



Witnesses:
F. A. Otto
C. L. Roesch.

Inventor
Nicolaus Schmidt
By Emrie & Wheeler
Attorneys.

UNITED STATES PATENT OFFICE.

NICOLAUS SCHMIDT, OF MILWAUKEE, WISCONSIN.

WATER-MOTOR.

SPECIFICATION forming part of Letters Patent No. 709,279, dated September 16, 1902.

Application filed December 24, 1901. Serial No. 87,078. (No model.)

To all whom it may concern:

Be it known that I, NICOLAUS SCHMIDT, a citizen of the United States, residing at Milwaukee, county of Milwaukee, and State of Wisconsin, have invented new and useful Improvements in Water-Motors, of which the following is a specification.

The object of my invention is to provide a simple, efficient, and inexpensive motor for domestic purposes—such, for example, as driving a small emery-wheel for grinding knives and a buffer for polishing silverware, &c.

My invention relates to that class of motors which are adapted to be detachably connected with an ordinary kitchen-faucet and driven by city water-power; and it pertains more especially to the construction of the wheel and the mechanism for clamping it to the faucet.

My construction is further explained by reference to the accompanying drawings, in which—

Figure 1 represents a vertical section drawn at right angles to the axis of the wheel. Fig. 2 represents a front exterior view. Fig. 3 represents a side view of one of the plates of which the wheel is constructed. Fig. 4 represents a front view of the wheel, and Fig. 5 represents a top view of the wheel-inclosing case with the connecting-tube and handle shown in section.

Like parts are identified by the same reference-letters throughout the several views.

The motor-wheel consists of a shaft A, central disk B, flanged disks C C, and two exterior side disks D D. The central disk B is formed of a thin flat sheet of metal. The flanged disks are also formed of sheet metal of the same diameter when a series of angular recesses E are cut in them from their peripheries toward the center, as shown in Fig. 3. When the recesses E have been cut, the outer ends of the radial arms F are bent at an angle to their central portions, as indicated in Fig. 4. This being done the central disk B is first placed on the shaft A, when the disks C C are placed upon the sides of said central disk B. The disks D D are then placed upon the sides of the disks C, when they are brought firmly up against said side disks D and rigidly secured in place by the clamping-nuts G or other equivalent means, whereby all of said disks are secured firmly in place upon the shaft A. It will be obvious that by this construction two series of buckets H H are formed, one upon each side of the central disk B. Before clamping said plates together, as described, the disks C are so adjusted that the buckets H will be caused to alternate with each other around the periphery of the wheel, whereby one of the jets of water by which the wheel is driven is acting while the other is being passed by the flange of the bucket. The wheel thus constructed is supported from the respective sides I I of the wheel-case O in ordinary journal-bearings. My device for fastening the case to the faucet consists of two horizontal clamping-plates J J. The clamping-plates are secured to the rear edge of the case upon the sides of the vertical projection K by the bolt L, which permits the front ends of said clamping-plates to be raised and lowered slightly as the wheel is being attached to the faucet. The upper end of the projection K is curved forwardly, forming a handle M.

N is a conical-shaped rubber packing which is secured to the top of the case O around the upper ends of the nozzles P P.

Two discharge-nozzles P are provided, one for each series of buckets of the wheel, whereby a more steady and uniform movement of the wheel is attained.

R represents the discharge end of the faucet.

S is a bifurcated eccentric lever, which is suspended from the clamping-plates J by the link T and bolts U U.

The elastic packing N is made conical in shape, so that it may be adapted to be fitted to faucets of various sizes when securing the motor to them.

The cam or eccentric lever S is turned to the horizontal position when the clamping-levers J are secured to the wall of the faucet R by turning down the hand-nut W upon the clamping-bolt U. This being done the motor-case is drawn upward, and the packing N is forced firmly within the walls of the faucet R by turning down the eccentric or cam lever S beneath the projecting plate A′ of the motor-case, when the motor-case will thereby be held firmly in place. The bearing of the eccentric lever S is so shaped that when the lever S is brought to the horizontal it will be thrown out of contact with the under side of

said plate A′, but when brought to the vertical will bear against the under side of said projection A′ and draw the same up toward the clamping-plates, thereby forcing said packing into the walls of the faucet, as stated.

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

1. In a water-motor, the combination of a motor-case; a shaft supported from the walls of said case; a motor-wheel having two separate sets of buckets, comprising a central plate or disk; two flanged disks located upon the sides of said central disk; two additional disks located upon the sides of said flanged disks in such a manner that a set of buckets is formed upon each side of said central disk between it and said side disks; means for clamping all of said disks together upon each set of buckets of said wheel, as set forth.

2. In a water-motor, the combination of a motor-case; a motor-wheel having two separate sets of buckets supported on a shaft from the oposing walls of said case; two water-discharge nozzles supported from said motor-case, each adapted to project a separate jet of water upon the respective set of buckets of the wheel; a single elastic packing inclosing the protruding ends of said discharge-nozzles and adapted to impinge against the inner walls of a faucet; means for clamping said case to a faucet; and means for forcing said packing up into the mouth of the faucet, to which it is clamped, as set forth.

3. In a water-motor, the combination of a motor-case; a motor-wheel having two separate sets of buckets supported on a shaft from the opposing walls of said case; two water-discharge nozzles supported from said motor-case, each adapted to project a separate jet of water upon the respective set of buckets of the wheel; a single elastic packing inclosing the protruding ends of said discharge-nozzles, and adapted to impinge against the inner walls of a faucet; two parallel clamping-plates, pivotally connected at one end to the rear side of the motor-case, and adapted to engage at their front ends around the lower end of the faucet; a clamping-bolt extending through apertures formed in the front ends of said clamping-plates; a nut operating on said clamping-bolt, and adapted, as it is turned down thereon, to draw said clamping-plates together around said faucet; a cam or eccentric lever suspended by flexible connections from said clamping-plates beneath a projection of said motor-case, and adapted, as it is turned in one direction, to impinge against said case projection, whereby said case is drawn upwardly and said packing is forced into the mouth of said faucet, all substantially as set forth.

In testimony whereof I affix my signature in the presence of two witnesses.

NICOLAUS SCHMIDT.

Witnesses:

JAS. B. ERWIN,

C. L. ROESCH.