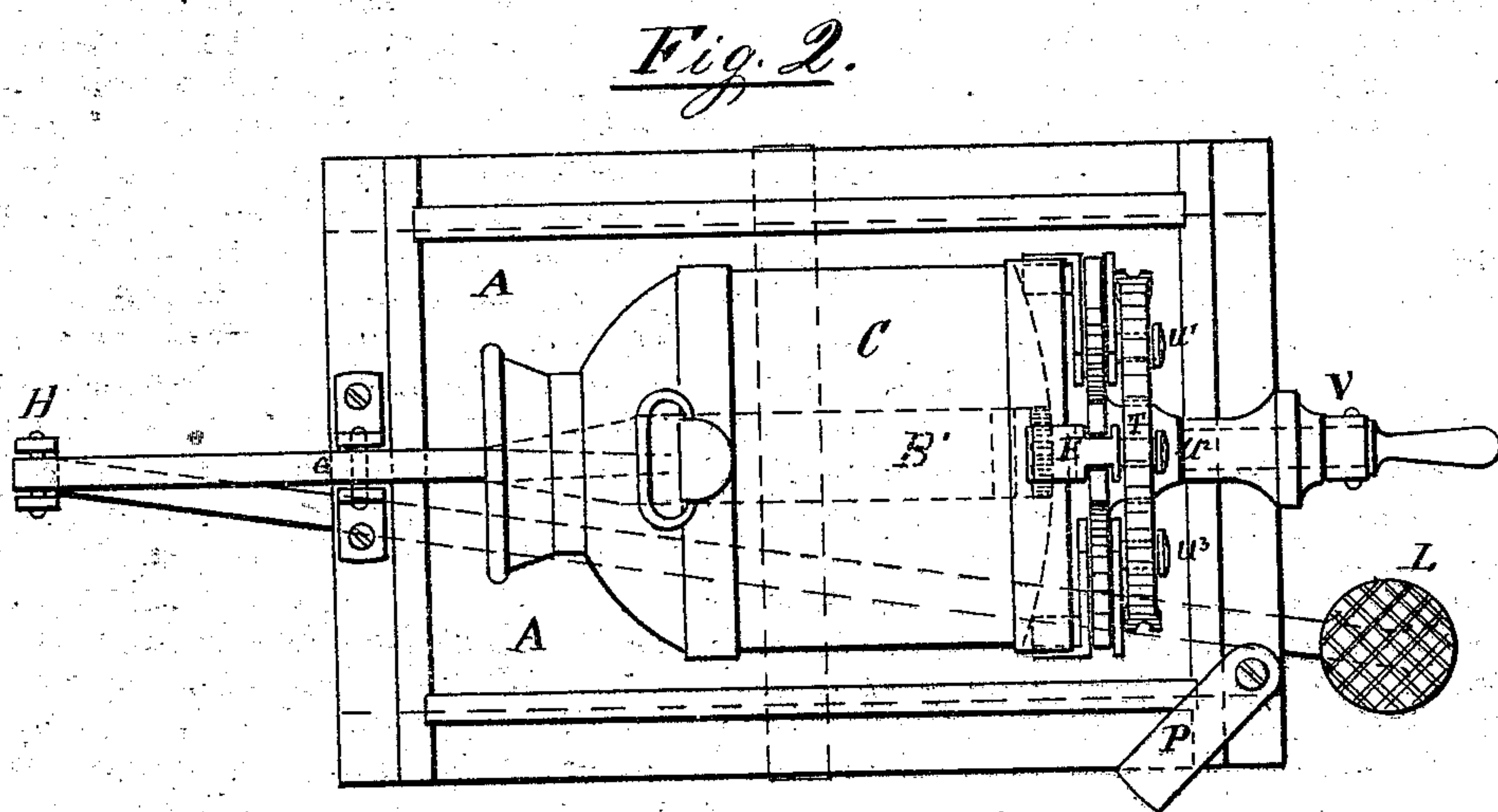
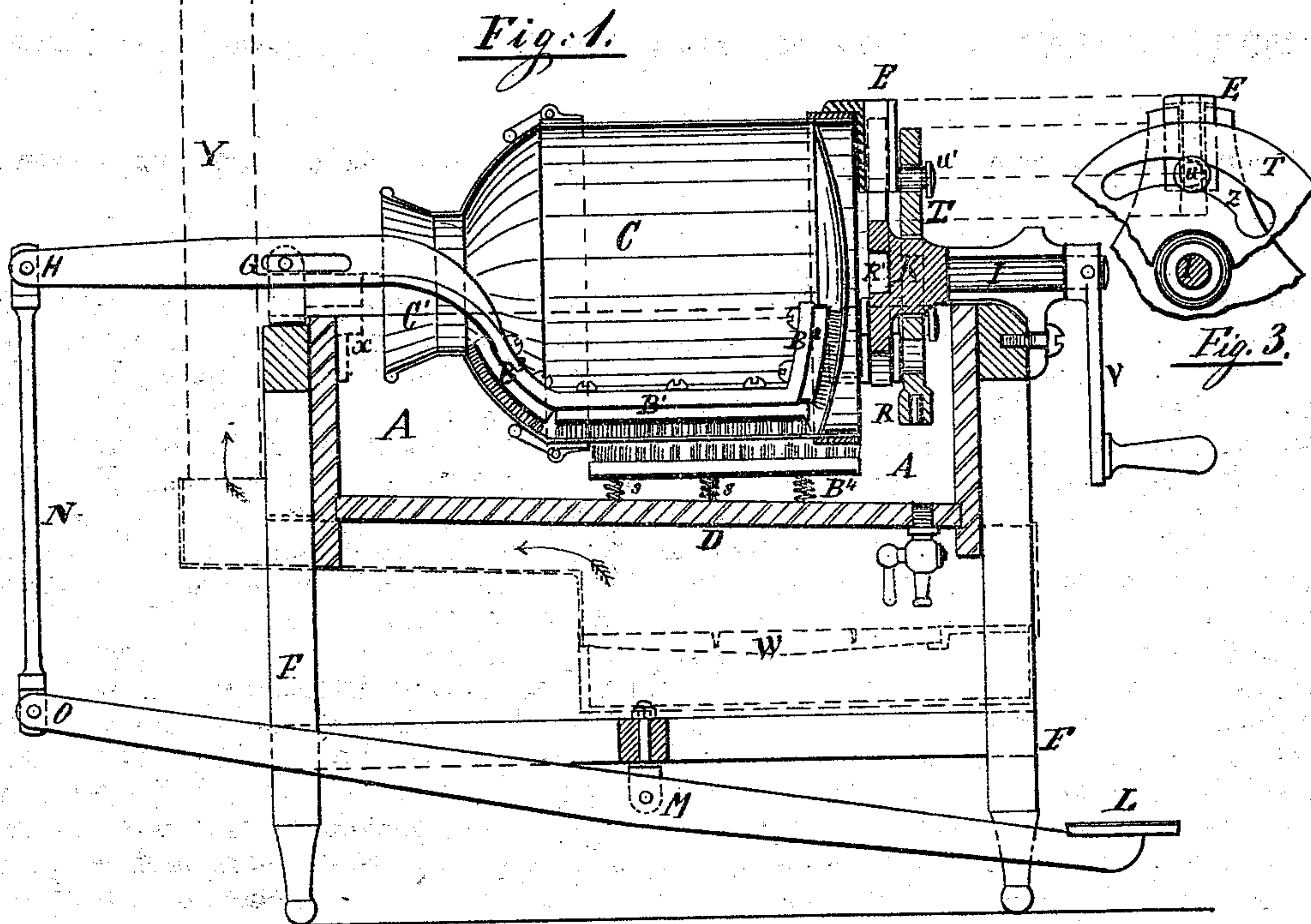


G. L. CHADBORN.
Washing-Machines for Cleaning Milk-Cans.

No. 154,318.

Patented Aug. 25, 1874.



WITNESSES:

Edward P. Morris
W. K. Hawks

INVENTOR:

George L. Chadborn

UNITED STATES PATENT OFFICE.

GEORGE L. CHADBORN, OF NEWBURG, NEW YORK.

IMPROVEMENT IN WASHING-MACHINES FOR CLEANING MILK-CANS.

Specification forming part of Letters Patent No. **154,318**, dated August 25, 1874; application filed January 30, 1874.

To all whom it may concern:

Be it known that I, GEORGE L. CHADBORN, of Newburg, in the county of Orange and State of New York, have invented a certain Washing-Machine for Cleaning Milk-Cans, of which the following is a specification:

The nature of my invention consists in the construction of a simple machine for the purpose of cleaning milk-cans inside and outside before they are filled again with milk to be sent to the cities. The milk-cans are mostly made all of the same shape and size, and, therefore, a brush firmly mounted on a frame which has the same shape as the inside of the can will clean all the cans alike. The cans themselves are, one after another, fastened with the bottom in a three-armed chuck, which can be turned by hand. This chuck is revolving in a journal at one end of a trough, which may be of iron or of wood. This trough is to be filled with warm or hot water, and in this the can is submerged. The can, being in a horizontal position, lets the water run in through the neck to fill it nearly one-half. The lever, with the brush attached, is thrust into the can by putting the can into the chuck, and is then pressed against the inside of the can, which, being turned by means of a hand-crank, is now cleaned by the brush. Inside, to the bottom of the trough, is fastened, on springs, another straight brush, against which the can is pressed when fastened to the chuck. This brush cleans the outside of the can when it is being turned. As the water must be warm, a furnace can be attached to the bottom of the trough, with a grate and smoke-pipe so arranged that a fire can be kept on the grate to heat the water and keep it hot during the operation of cleaning the milk-cans. This, of course, can only be done when the trough is made of metal, but it will be of great advantage, and make the machine more complete.

To describe the machine more completely I refer to the annexed drawing, in which—

Figure 1 is a longitudinal section. Fig. 2 represents a plan of the machine; Fig. 3, a front view of one arm of the chuck which holds the can.

A A represent the trough, which may be of iron or of wood, or any other suitable material. D is the bottom of the same; F F, the

frame to support it. At one end, in the center of the frame, is a shaft, I, with a crank, V, on the outside, and a plate, K, with three wings, on the inside of the trough. Each wing has a slot cut in it, running toward the center, and in each is moving a dog, E, with pin U attached. These pins U¹ U³ project through a plate, T, which rides on the hub of plate K, and which has three uniform eccentric slots, Z, cut in its face, one for each pin U. Turning this plate T one way, the pins U will be pulled toward the center, and with them the dogs E, which contract the space between the hooks to take hold of the lower rim of the can. Turning the plate T the other way, all pins U are pushed outside, and the hooks of the dogs E spread apart, and let go the rim of the can. At one place of the plate T is a socket, R, cast on for the purpose to insert a pin or a handle to turn the plate T, and to the frame of the trough a pawl, P, is attached, which can be turned so that it strikes a projecting point of the plate K to hold the chuck, while the plate T is being turned to fasten or to loosen the chuck to or from the can. C represents the can in position when it is fastened to the chuck. The trough being full of water, the can is filled to its center. B¹ B² B³ is the frame to which brushes are attached to clean the inside of the can. It projects through the neck of the can, and has a fulcrum, G, on the end of the trough, and a lever-arm, H, outside of it, to which a foot-lever, L M O, is attached by a connecting-rod, N. Stepping on the foot-lever L, the brushes inside are pressed against the sides, bottom, and neck of the can, and clean them when the can is being turned by the crank V. The oblong hole in the lever at G allows the parts where the brushes are attached to adjust themselves to the can if any variation in the shape of the can should exist. As soon as the pressure on lever L is removed a spring lifts it, and when the can is loosened it is easily pulled out the place. B⁴ represents another brush, mounted on springs S S, for the purpose of cleaning the can outside at the same time with the inside of the can.

If the trough is made of iron or other metal, a furnace can be directly attached to heat the water. W represents the grate; Y, a small

smoke-pipe to lead off the heat and smoke. This furnace does not interfere with the working parts of the machine, but it is a great benefit, as the water will be kept hot, without which it is impossible to clean the cans thoroughly, and no hot water need to be carried to the machine. A waste-cock at the bottom lets the water run off after the work is done.

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

1. The brushes B¹ B² B³ on the lever H G, or their equivalents, and connected to the foot-lever L M O, and the brush B⁴ in the bot-

tom of the trough A, in combination with the trough A, chuck K, and crank V, substantially as and for the purpose as specified.

2. The chuck for holding the milk-cans during the operation of cleaning, consisting of the three-winged plate K, dogs E, with pins U, plate T, with eccentric slots Z, and socket R, substantially as specified.

GEORGE L. CHADBORN.

Witnesses:

E. P. CORWIN,
W. K. HAWKS.