

J. RUNKLE.

Improvement in Washers and Boilers Combined.

No. 131,629.

Patented Sep. 24, 1872.

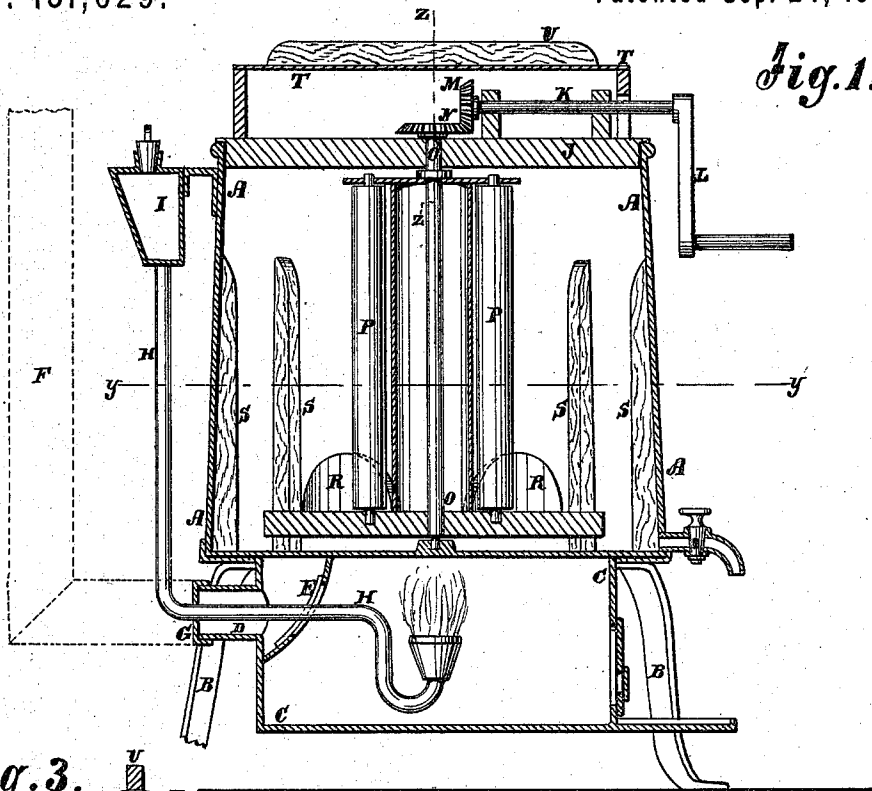


Fig. 1.

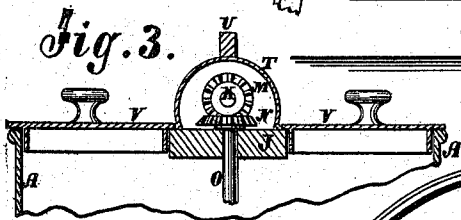


Fig. 3.

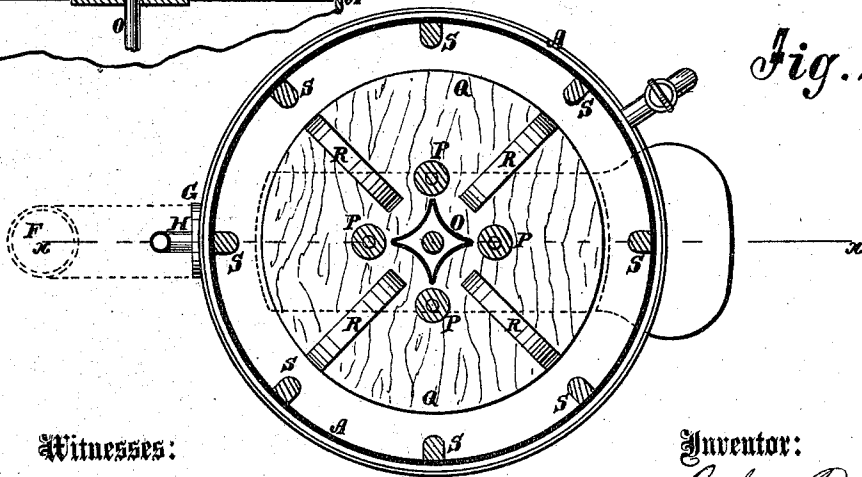


Fig. 2.

Witnesses:

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PER

UNITED STATES PATENT OFFICE.

JOHN RUNKLE, OF READING, PENNSYLVANIA.

IMPROVEMENT IN WASHERS AND BOILERS COMBINED.

Specification forming part of Letters Patent No. 131,629, dated September 24, 1872.

To all whom it may concern:

Be it known that I, JOHN RUNKLE, of Reading, in the county of Berks and State of Pennsylvania, have invented a new and useful Improvement in Combined Clothes Boiler and Washer, of which the following is a specification:

Figure 1 is a detail vertical section of my improved machine taken through the line *xx*, Fig. 2. Fig. 2 is a detail horizontal section of the same taken through the line *yy*, Fig. 1. Fig. 3 is a detail section taken through the line *zz*, Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved machine by means of which the clothes may be boiled and washed at the same time, and which shall be simple in construction, convenient in use, and effective in operation, washing the clothes quickly, thoroughly, and without injuring them; and it consists in the construction and combination of various parts of the machine, as hereinafter more fully described.

A represents a cylindrical vessel supported upon legs B of such a length as to raise the vessel A to such a height that a furnace, C, may be placed beneath it. The furnace C is an ordinary coal or wood furnace, and is made with a plate upon or surrounding its top, which should be concaved or recessed upon its upper side to allow the products of combustion to come in contact with a larger part of the bottom of the cylinder A before escaping through the flue D. The edge of the projecting top-plate of the furnace C is secured to the edges of the bottom of the cylinder A by lugs and keys, or by other convenient means. The egress-opening from the furnace C is provided with a damper, E, to enable the draft to be regulated at will. When coal or wood is used a pipe, F, is connected with the outer end of the flue D. When kerosene or other liquid fuel is to be used the pipe F is detached and a cap, G, placed upon the outer end of the flue D. In the cap G is formed a hole for the passage of the pipe H, the inner part of which passes through the flue D into the furnace C, and is provided with holes or burners for the effective com-

bustion of the liquid. The outer part of the pipe H passes up along the side of the cylinder A, and its upper end is connected with a reservoir, I, to contain the oil. To the top edges of the vessel A is attached a cross-bar, J, to which are attached bearings for the horizontal shaft K, to the outer end of which is attached a crank, L, for operating the machine. To the inner end of the shaft K is attached a bevel-gear wheel, M, the teeth of which mesh into the teeth of the bevel-gear wheel N attached to the upper end of the shaft O, which passes down through and revolves in bearings in the center of the cross-bar J, and its lower end revolves in a step or socket in the center of the bottom of the vessel A. The body of the shaft O is made square in its general form and with concave sides, as shown in Fig. 2. P are four rollers, one of which is placed opposite each of the corners of the shaft O, and the upper ends of which are pivoted to a plate or spider attached to the upper end of the body of the shaft O. The lower ends of the rollers P are pivoted to the circular plate Q attached to the lower end of the body of the shaft O, so as to be carried around by and with said shaft in its revolution. The circular plate Q is made smaller than the interior of the vessel A; and to its upper side are attached rounded projections, R, which act upon the water and clothes to throw them into violent commotion. To the inner surface of the sides of the vessel A are attached vertical ribs S, which operate, in connection with the projections R and rollers P, to throw the water and clothes into violent agitation and clean the clothes in a very short time. The cross-bar J and gearing K M N are covered with a cap or casing, T, which is provided with an upwardly-projecting flange, U, to which a wringer may be attached. The top of the vessel A, at the sides of the cross-bar J, is covered with segmental covers V, to prevent the water and steam from escaping while the machine is being used.

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

1. The concaved shaft O, rollers P, and rounded projections R, in combination with

the circular plate Q and vessel A, substantially as herein shown and described, and for the purpose set forth.

2. The combination of a furnace, C, whether arranged for solid or liquid fuel, or for both, with the vessel A, provided with the apparatus O P Q R S, substantially as herein

shown and described, and for the purpose set forth.

JOHN RUNKLE.

Witnesses:

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