

J. Wagoner & A. Severson, Jr.,

Washing Machine,

N^o 25,152

Patented Aug. 16, 1859.

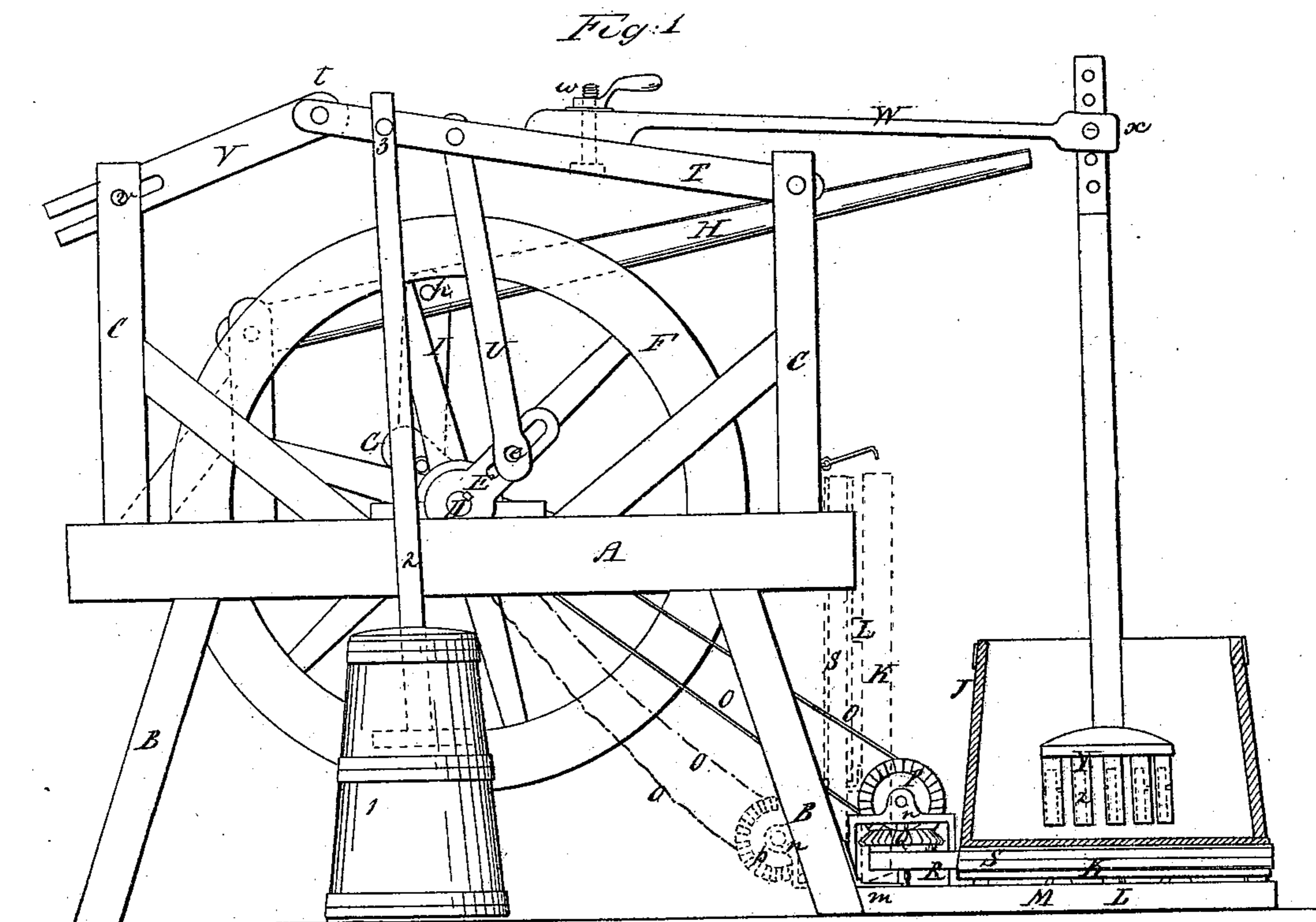
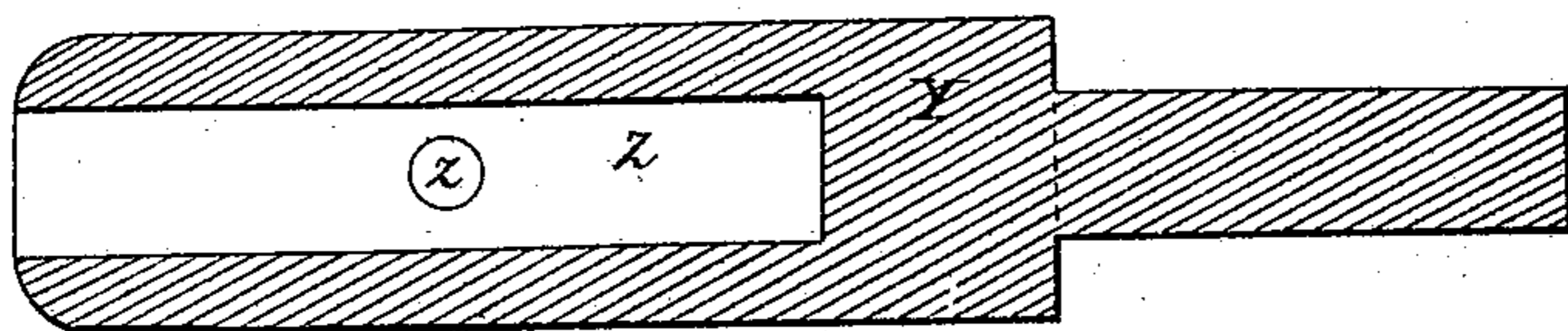


Fig. 2



Witnesses.
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JOHN WAGONER AND ABRAM SEVERSON, JR., OF GUILDERLAND CENTER, NEW YORK.

WASHING-MACHINE.

Specification of Letters Patent No. 25,152, dated August 16, 1859.

To all whom it may concern:

Be it known that we, JOHN WAGONER and ABRAM SEVERSON, Jr., of Guilderland, in the county of Albany and State of New York, have invented a certain new and Improved Washing-Machine; and we do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the annexed drawings, which we hereby declare to be a portion of this specification, in which—

Figure 1 is a side elevation of our improved machine complete and Fig. 2 is a section through the center of one of the details.

Similar letters of reference refer to like parts in both the drawings.

Our invention consists in mounting the revolving platform on which the tub or equivalent vessel is carried, and all the mechanism giving motion to the same, to a platform so hinged to the main frame of the machine that when the platform is turned up the driving belt is slackened and the whole lies within or by the side of the main frame, and when the platform is turned down in position for working, the gravity of the tub or equivalent vessel tightens the belt and causes the parts to operate properly without the expenditure of any labor in adjusting it.

To enable others skilled in the art to make and use our invention we will proceed to describe it by reference to the drawings and to the letters of reference denoted thereon.

A represents the front of a stout horizontal frame composed of three stringers laid side by side at a suitable distance apart and connected by cross pieces at their ends.

B B represent four or more stout legs or supports mortised into A as represented.

C C represent stout uprights fixed also into A and braced as shown. A B and C collectively compose the frame of the machine.

D is a shaft mounted in suitable bearings on the frame A. On this is fixed a slotted crank E and crankpin *e* also a heavy balance wheel or fly wheel F. This apparatus D E F is the immediate source or means from which our other principal parts receive

motion. A crank G is fixed on one extremity of D and a hand lever H is jointed to a fixed upright nearly above it.

From the lever H, at the point *h*, a connecting rod I conveys the motion of this lever to the crank G. Thus the shaft D and all its connections may be operated by a vertical motion of the hand, applied to the extremity of the lever H. The shaft D may if preferred by the substitution of a suitable crank for the purpose in lieu of crank G may be impelled by the direct application of the hand thereto. Any other means of impelling D may also be adopted at pleasure.

The tub, barrel, or other vessel in which the suds and clothing are placed, is designated by J. It stands upon a circular or other suitable platform K which is in turn mounted upon the upright shaft L so that it is free to turn thereon. A pulley is connected to or caused to encircle K, as represented by the cylindrical surface at the periphery of K.

The upright shaft L is mounted on a stout hinged portion M which is connected to the main frame by butts or hinges *m* as represented. A suitable framing *n* is also fixed on M and in this framing is mounted a pair of bevel gear wheels, each provided with a suitable pulley. The belt O conveys the motion of D to the uppermost of these pulleys and thus gives motion to the belt S which encircles both R and K thereby turning K and giving a moderate rotary motion to the tub J.

To the upright C is jointed the stout lever T. To the lever T is jointed at the point represented the connecting rod or link U which connects to the crank pin *e* in the crank E. The revolutions of the crank pin *e* consequently compel the lever T to vibrate in a vertical plane to an extent which is rigidly governed by the position of the crank-pin *e* in the slot in the crank E. If *e* is fixed in a position nearer the center of shaft D the vibrations of T will be less in extent and if *e* is fixed farther from the center of D the vibrations will be greater, but while *e* retains any given position in the slot the vibrations of T are uniform whatever may be the resistance. To the

extremity *t* of the lever T is connected by a knuckle joint or equivalent connection a forked or slotted rod V which passes through an opening in the opposite upright C. In this opening it passes freely astride of a pin *v* as represented which pin may if preferred be provided with a loose roller in order still further to reduce the friction. This forked or slotted rod V arranged in this manner serves as a guide to the lever T preserving it from all lateral strains but allowing it to vibrate vertically with very little friction. At each vibration of T its extremity *t* rises and sinks therewith and its slotted portion plays to a slight extent through the aperture in the upright C thereby producing some friction at the points *t* and *v* but this is very slight and the device serves to resist at the points *t* and *v* any side strain which is by any chance thrown upon the lever T, keeping the latter very nearly in the same vertical plane under all circumstances.

In the lever T at the point *w* is inserted a screw and hand nut, as represented or equivalent ready means of attaching and detaching another part at that point. To T at this point we attach a spring beam W of such length as to extend from *w* past the upright and to overhang the frame A B C as represented. The spring beam W is so formed and arranged that it does not touch the upright C nor the pin by which T is hinged thereto but passes freely beyond without any connection therewith except through the stout beam T. To the overhanging extremity of this spring beam is jointed at *x* the rod X, which extends downward into the tub J. The rod X and branches Y with the respective perforations Z *z* constitute collectively the pounder of our machine.

Operation.—Placing the water and clothes in the tub J motion is communicated by any suitable power to the shaft D so that it revolves with a continuous motion. The levers T and V are thus caused to vibrate to fixed extents and in a vertical plane but the extremity *x* of the spring beam W may vibrate to a less extent by reason of the elasticity of the spring beam W. This elasticity owing to the length of the beam and to the peculiar arrangement relatively to T allows it to yield indefinitely to any great resistance so that the clothes may be piled into J without fear of overstraining any part while by reason of the considerable thickness of W and the rigid unity of the heavy pounder X Y the clothes are operated upon very effectively. The lower extremity of the pounder is free to swing each way and thus strikes the cloth at a great variety of angles but the guide rod V preserves the mechanism from being affected by the irregular forces thus developed. The

gradual revolution of J presents every portion alike to the action of the pounder.

We place the center of our tube J out of the plane of the motion of the levers T and V. Our pounder therefore inclines to strike on one side of J and not in the center thereby increasing the uniformity of the effect on the contents. We also make the center of motion of our platform K movable within a certain limit and provide a spring not represented which by continuously urging the center in a direction opposite to the tension of the belt S serves to take up any slack which may gradually be made, and to allow for any irregularities either in the belt or pulley by yielding whenever the tension is greater than usual and extending whenever the belt is slackened. To aid the shaft L in supporting the platform K we provide several small wheels *l* in the part M which support the edges of K whenever their presence is necessary.

We so proportion and arrange the parts as represented that the part M with all its attachments L *l* K *n* P Q R and S can be folded up into close contact with A after the tub J is removed. The position when folded is shown by the red outlines and red letters. By such folding the belt O is slackened but is not otherwise disturbed and the belt S is in no wise affected. After being folded up for any period the machine is immediately put in condition for use by simply folding down the part M and putting the tub J in position. The folding up of M enables the machine to occupy less space when not in use and also preserves the belt O in working condition for a longer period than when it is kept always stretched. The belt O is sufficiently short to hold the platform M at a slight angle until the weight of J is added thereto. The addition tightens it very effectively and all the parts are ready at once for full operation without any further preparation.

The spring lever W is readily detached from T at pleasure by removing the nut from the bolt *w*.

In addition to what has now been described our machine is adapted to operate a churn very effectively either alone or simultaneously with the washing operation. The drawing shows the churn as operated simultaneously, but the arrangement of the churning parts are the same in case churning is performed alone. 1 is the churn and 2 the dash. The latter is hinged to the stout lever T by the aid of a stout pin 3 which projects laterally from T to a sufficient extent to enable the churn 1 to stand by the side of the machine, and not under it. All the churning parts may be readily detached and removed by unshipping 2 from 3.

Having now fully described our invention

what we claim as new therein and desire to secure by Letters Patent is—

Mounting the revolving platform K and the pulleys and gearing P Q R or their
5 equivalents on the hinged platform M and so arranging the whole that when M is turned up the driving belt O is slackened and the whole lies within or by the side of the main frame, and when M is turned down
10 the gravity of the tub or equivalent vessel

tightens O and causes the several parts to operate without any labor in adjusting.

In witness whereof we have hereunto affixed our names and seals.

JOHN WAGONER. [L. S.]
ABRAM SEVERSON, JR. [L. S.]

Signed and sealed in the presence of—

JOHN C. CHISM,
JOSHUA H. BEEBE.