

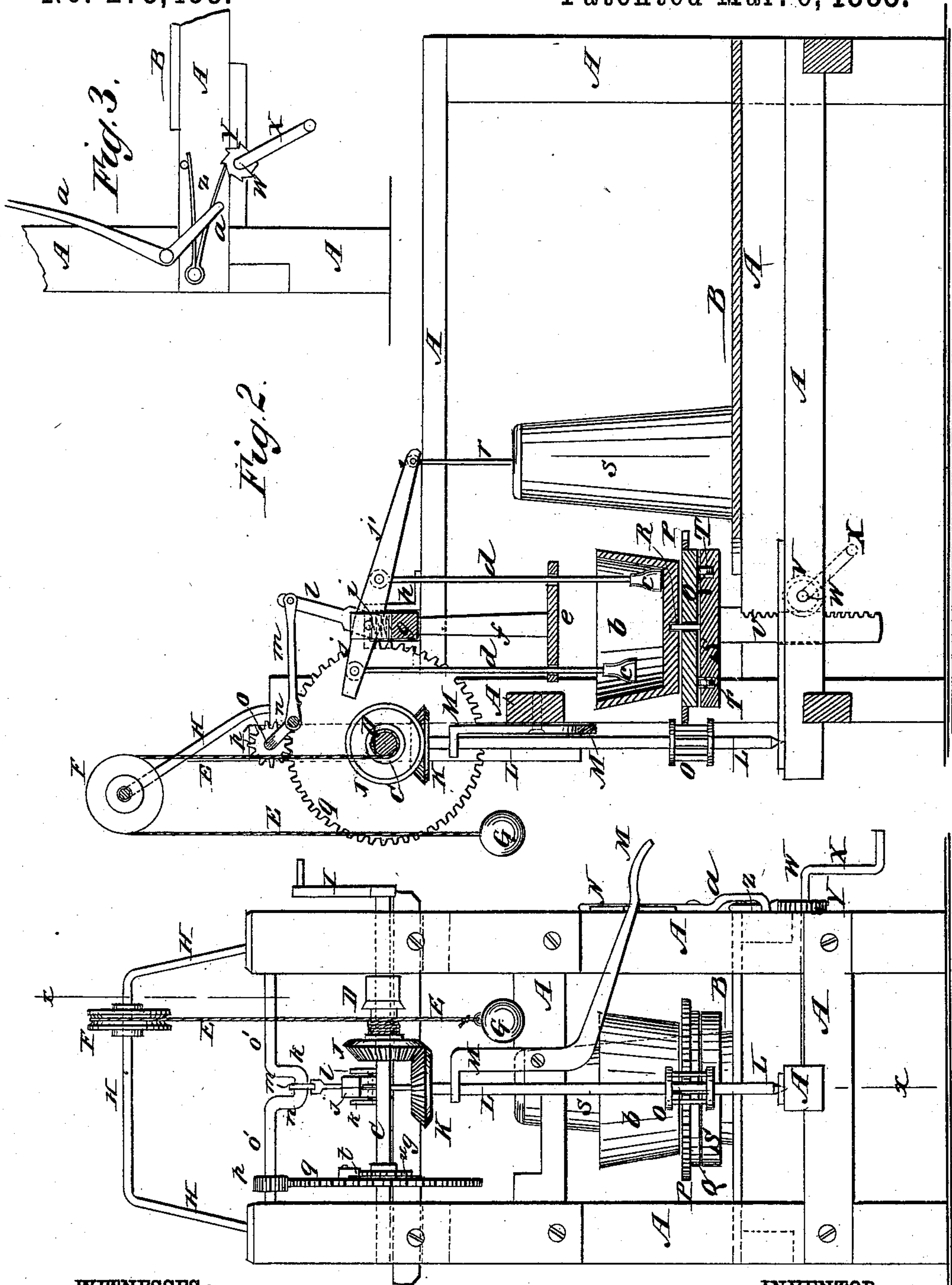
(Model.)

M. J. BRIDGES.

COMBINED CLOTHES WASHER AND CHURN.

No. 273,453.

Patented Mar. 6, 1883.



WITNESSES:

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BY

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UNITED STATES PATENT OFFICE.

MARY J. BRIDGES, OF WIMBERLY MILL, TEXAS, ASSIGNOR TO HERSELF
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COMBINED CLOTHES-WASHER AND CHURN.

SPECIFICATION forming part of Letters Patent No. 273,453, dated March 6, 1883.

Application filed July 19, 1882. (Model.)

To all whom it may concern:

Be it known that I, MARY JANE BRIDGES, of Wimberly Mill, in the county of Hays and State of Texas, have invented a certain new and useful Improvement in a Combined Clothes-Washer and Churn, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is an end elevation of my improvement. Fig. 2 is a sectional side elevation of the same, taken through the line *xx*, Fig. 1. Fig. 3 is a side elevation of a part of the same.

The object of this invention is to facilitate the operations of washing clothes and churning, and also to avoid the necessity of having a separate mechanism for each use.

The invention consists in the peculiar construction and arrangement of parts, as hereinafter fully described, and pointed out in the claims.

A represents the frame of the machine, to the lower part of which is attached the platform B.

To the front end posts of the frame A, near their upper ends, are attached bearings, in which revolve the journals of the driving-shaft C.

To the shaft C, or to a drum, D, attached to the said shaft, is secured the end of a cord, E, which passes over a pulley, F, and has a weight, G, attached to its other end, so that the shaft C can be driven by the gravity of the said weight G. The pulley F revolves loosely upon the straight middle part of the shaft H, the end parts of which are bent inward and downward, and are attached to the upper ends of the front end posts of the frame A.

To one end of the driving-shaft C is attached a crank, I, for turning the said shaft C to wind up the cord E, and which may also be used for operating the machine without using the weight. The machine may also be driven by steam-power, water-power, wind-power, animal-power, or any other convenient power.

To the driving-shaft C is attached a beveled-gear wheel, J, into the teeth of which mesh the teeth of a beveled-gear wheel, K, attached to the upper end of the vertical shaft L. The

lower end of the shaft L revolves in a step-bearing attached to a central beam of the frame A. The upper part of the shaft L revolves in a bearing in the inner end of the bent lever M, which is pivoted to a cross-bar of the frame A, with its other end projecting at the side of the machine, so that it can be readily reached and operated to throw the gear-wheel K into and out of gear with the gear-wheel J. The outer arm of the lever M projects across the edge of a catch-plate, N, attached to a post of the frame A, and which is provided with two notches to receive and hold the lever M when the gear-wheel K is in gear and when it is out of gear.

Upon the lower part of the vertical shaft L is placed a pinion-wheel, O, which is connected with the said shaft by a pin and groove, or other suitable means that will allow the said pinion-wheel to slide up and down upon the said shaft in its revolution. The pinion-wheel O meshes with the teeth of the gear-wheel P, attached to a circular plate or platform, Q, which revolves upon a pivot, R, attached to a circular block, S, and rests upon small rollers T, revolving in recesses in the face of the said block S. The block S is attached to the upper end of a rack-bar, U, which passes through a guide-slot in a central beam of the frame A, and into its teeth mesh the teeth of a small gear-wheel, V, placed in the same slot, and attached to a crank-shaft, W, revolving in bearings attached to the frame A, and having a crank, X, attached to its end. With this construction, by turning the crank X the block S and its attachments can be raised and lowered to adjust it to any desired height.

To the crank-shaft W is attached a ratchet-wheel, Y, with the teeth of which engages the spring-pawl Z, attached to the frame A, to hold the block S and its attachments securely in any desired position into which it may be adjusted. The spring-pawl Z is raised to allow the block S to be lowered by a bent lever, *a*, pivoted at its angle to the frame A, and the end of the lower arm of which is bent inward to pass beneath the said spring-pawl Z, as shown in Fig. 1.

The pinion-wheel O is made with flanged ends, between which the teeth of the gear-wheel P work, so that the said gear-wheel P, as it moves

up and down, will carry the said pinion-wheel with it, and will thus keep in mesh with the said pinion-wheel.

Upon the circular platform Q is placed a tub, 5 *b*, to receive the clothes to be washed, and within which they are operated upon by the pounders *c*, attached to the lower ends of the staffs *d*. The pounder-staffs *d* pass through guide-holes in the end parts of a bar, *e*, at- 10 tached to the lower end of a bar, *f*. The upper end of the hanging bar *f* is attached to a cross-bar, *g*, the ends of which pass through keepers *h*, attached to the top side bars of the frame A, and rest upon the said bars. The cross-bar *g* 15 is held down by spiral springs *i*, interposed between its ends and the said keepers *h*. The springs *i* allow the cross-bar *g* to rise should the clothes in the tub *b* be too thick to allow the pounders *c* to descend to the end of their 20 stroke. The upper ends of the pounder-staffs *d* are hinged to the lever *j* upon the opposite sides of and equally distant from its pivot. The lever *j* is pivoted to and between lugs *k*, attached to the upper side of the cross-bar *g*. 25 To the lever *j*, at its pivot-point, is rigidly attached an arm, *l*, which projects at right angles with the said lever, and to its outer end is hinged the end of a pitman, *m*. The other end of the pitman *m* is pivoted to a 30 crank, *n*, formed upon a shaft, *o'*, which revolves in bearings attached to the upper ends of the end posts of the frame A, or to supports attached to the said posts.

To the shaft *o'* is attached the small gear-wheel *p*, the teeth of which mesh into the teeth 35 of the large gear-wheel *q*, placed upon the driving-shaft C, so that the lever *j* will be vibrated to operate the pounders *c*, and at the same time the tub *b*, containing the clothes, will be 40 slowly rotated from the same driving-shaft, C, to cause the pounders *c* to strike the clothes each time in a new place. The tub *b* is raised and lowered to adjust it to the thickness of clothes to be operated upon by operating the 45 rack U and gear-wheel V by means of the crank-shaft W X, as hereinbefore described.

The gear-wheel *q* runs loose upon the shaft C, and is provided with a spring-pawl, *t*, which 50 engages with the teeth of the ratchet-wheel *u*, attached to the said shaft C, so that the said shaft, when turned forward, will carry the gear-wheel with it, but can be turned back without turning the said gear-wheel. This construction allows the shaft C to be turned back to

wind up the cord E and raise the weight G 55 without its being necessary to turn the gear-wheel *q* and operate the mechanism connected with the said gear-wheel.

The lever *j* is extended toward the tail of the machine, as at J, and to its end is hinged 60 the upper end of the dasher-staff *r* of a churn, *s*, placed upon the platform B of the machine, so that the churning can be done by the same mechanism that does the washing.

The machine can also be used as a sausage-meat chopper, as a rice-huller, and for various other uses.

Having thus fully described my invention, I claim as new and desire to secure by Letters 70 Patent—

1. In a combined clothes-washer and churn, the combination, with the frame A and the horizontal shaft C, provided with the bevel-wheel J, of the vertical shaft L, stepped in the lower part of the frame A, and provided with 75 the bevel-wheel K at its upper end, the bent lever M, pivoted to said frame and having a bearing for the shaft L in its upper end, and the catch N, substantially as herein shown and described, whereby the lever is made to serve 80 the double purpose of a bearing for the shaft L and means for throwing the bevel wheel K into and out of gear with bevel-wheel J, as set forth.

2. In a combined clothes-washer and churn, 85 the combination, with the horizontal shaft C, provided with the bevel-gear wheel J and means for rotating said shaft, of the adjustable tub-supporting gear-wheel P, and the vertical shaft L, provided with the bevel-wheel K at 90 its upper end, adapted to meet with the bevel-wheel J and the sliding pinion-wheel O on its lower portion, substantially as and for the purpose set forth.

3. In a combined washer and churn, the 95 combination, with the drive-shaft C, provided with the gear-wheel *q*, and the crank-shaft *o' n*, provided with the pinion *p*, of the pounders *c d*, the dasher-shaft *r*, the three-armed lever *l j j'*, the arm *j'* being longer than the arm *j* 100 and having dasher-shaft hinged to its end, and the pitman *m*, substantially as and for the purpose set forth.

MARY J. BRIDGES.

Witnesses:

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I. V. JULIAN.