

No. 659,223.

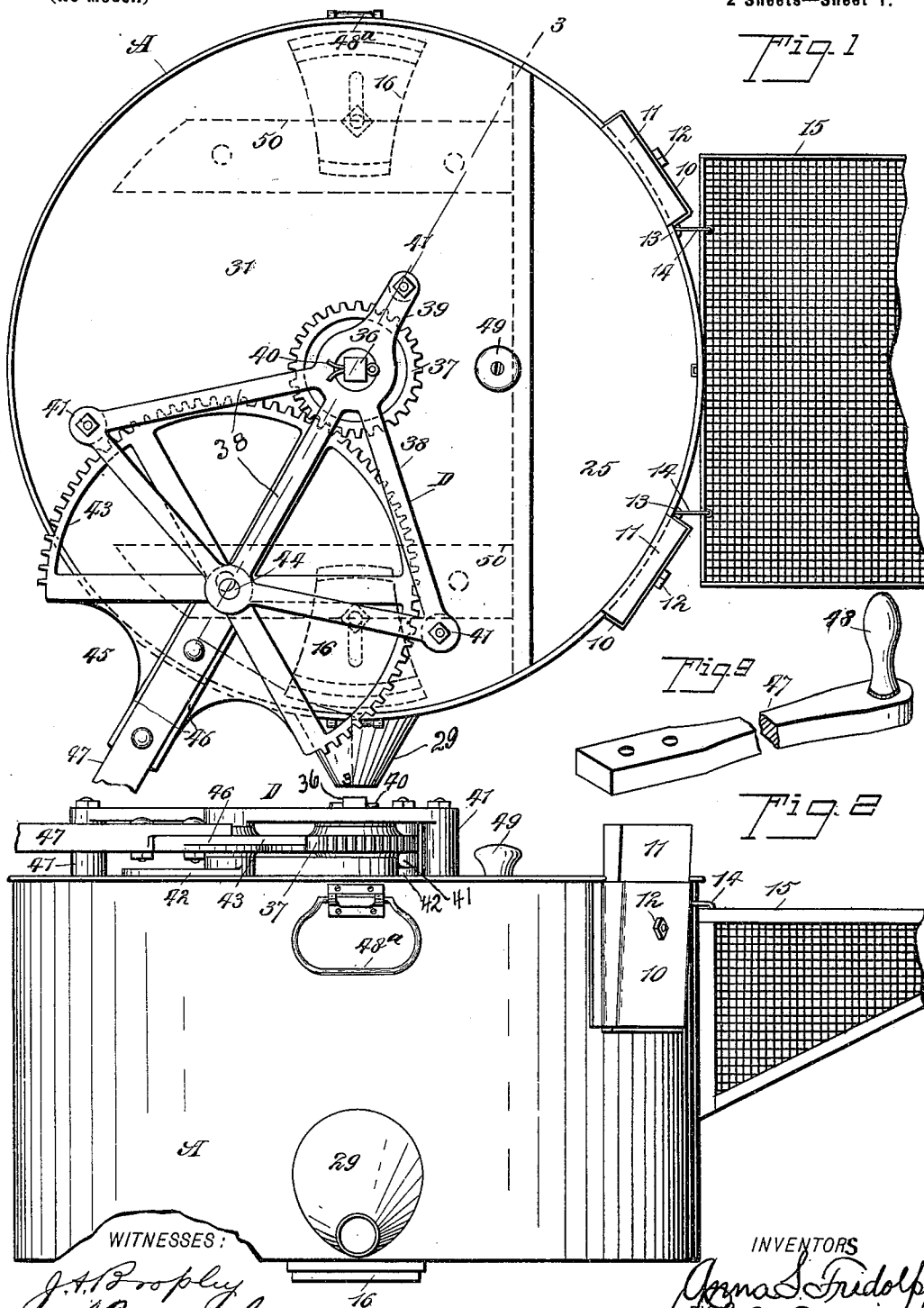
Patented Oct. 9, 1900.

A. S. & S. A. FRIDOLPH.
WASHING MACHINE.

(Application filed July 12, 1899.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

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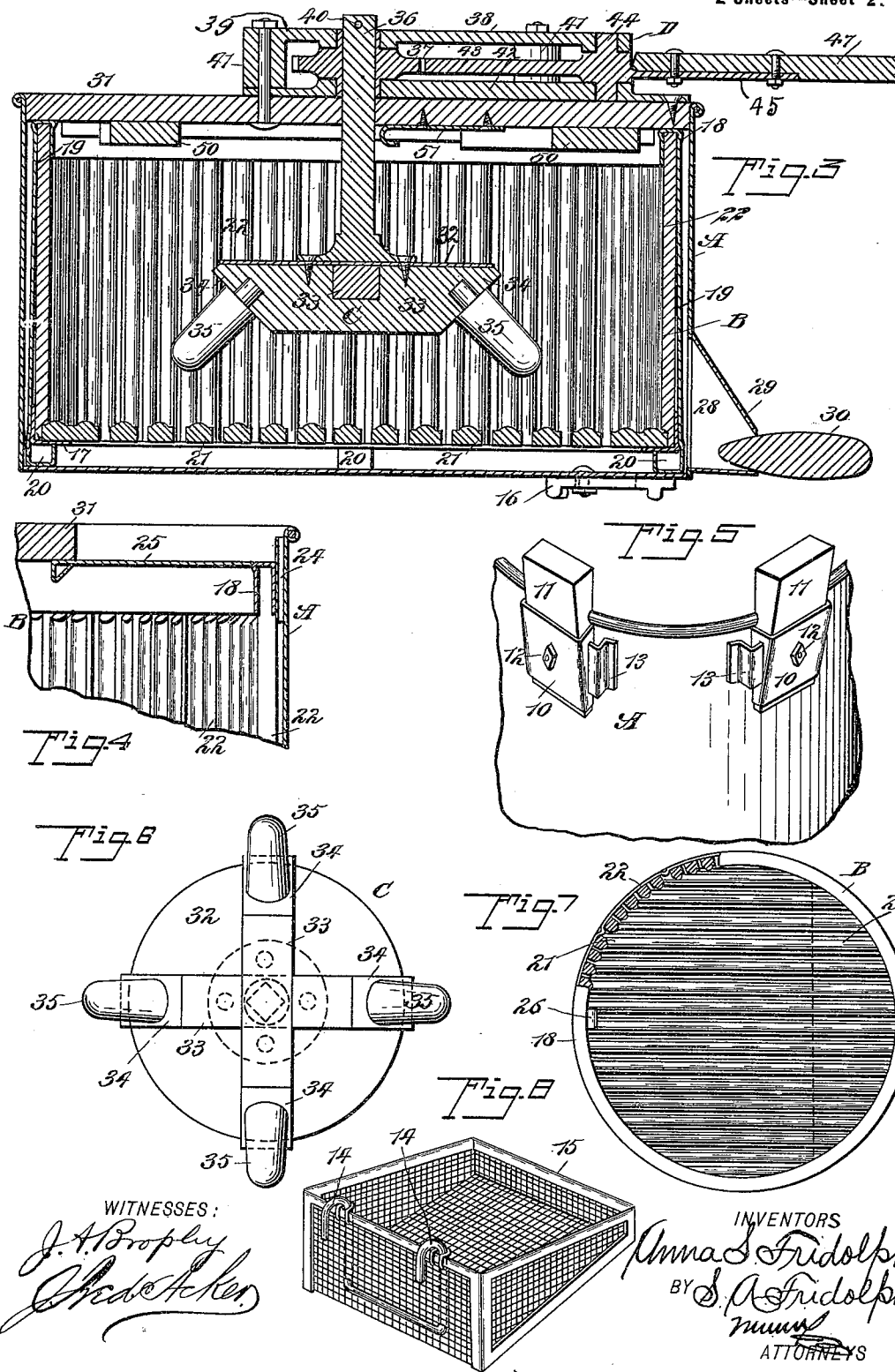
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UNITED STATES PATENT OFFICE.

ANNA SOPHIA FRIDOLPH AND SAMUEL AUGUST FRIDOLPH, OF VILLISCA, IOWA, ASSIGNORS OF ONE-THIRD TO PETER D. MINICK, OF SAME PLACE.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 659,223, dated October 9, 1899.

Application filed July 12, 1899. Serial No. 723,594. (No model.)

To all whom it may concern:

Be it known that we, ANNA SOPHIA FRIDOLPH and SAMUEL AUGUST FRIDOLPH, of Villisca, in the county of Montgomery and State of Iowa, have invented a new and Improved Washing-Machine, of which the following is a full, clear, and exact description.

The purpose of the invention is to improve upon the construction of that class of washing-machines which are operated by a crank or reciprocating handle and to so construct the machine that it may be worked while the operator stands erect and so that when the tub of the machine is placed upon a stove it will be held from shifting, enabling the machine to be used while over the fire.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

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

Figure 1 is a plan view of the improved machine. Fig. 2 is a side elevation of the same. Fig. 3 is a vertical central section taken practically on the line 3 3 of Fig. 1. Fig. 4 is a section through a portion of the tub and a portion of the basket introduced into the tub and likewise a section through a portion of the cover for the tub. Fig. 5 is a perspective view of a portion of the outside of the tub, illustrating the means provided for supporting a wringer and a tray. Fig. 6 is a bottom plan view of the agitator. Fig. 7 is a plan view of the basket, the upper partial cover being shown in dotted lines only. Fig. 8 is a detail perspective view of the tray adapted to be used in connection with the wringer, and Fig. 9 is a detail perspective view of the handle designed to be attached to the gearing of the machine.

The tub A is preferably made of metal and is of cylindrical contour. Upon the outer surface of said tub near the top downwardly-inclined sleeve-brackets 10 are secured, and each sleeve-bracket is adapted to receive a wedge-shaped block 11, the blocks extending above the upper edge of the tub, as shown in Fig. 5, and these blocks are adapted to re-

ceive the legs or the fastening devices of the wringer, the blocks being secured in the sleeve or socket brackets by means of bolts 12 or their equivalents. Sockets 13 are located on the exterior of the tub at the opposing faces of the said brackets 10, as is also shown in Fig. 5, and these sockets 13 are adapted to receive hooks 14, attached to a perforated or reticulated tray 15, which tray is designed to receive the clothes after they have been passed through the wringer, holding said clothes in position for further manipulation.

The tub or body of the machine is adapted to be placed on the top of a stove or range of any size for the purpose of heating the water in the machine. In fact, the machine is usually operated upon a stove or range.

Slotted plates 16, representing segments of an ordinary stove-lid, are adjustably attached by bolts or like devices to the bottom of the tub A at opposite sides, and these plates 16 are adapted to enter the openings of a stove, replacing the lids, and serve to hold the tub and the entire machine from having lateral movement or shifting from the position on a stove in which it is placed. It may here be remarked that the tub A is quite large, and therefore covers a large surface of the stove, and as a consequence the water that may be placed in the tub will become quickly heated.

A basket B is adapted to be fitted into the tub A. This basket consists of a bottom angular or L-shaped band 17, an upper inverted-U-shaped band 18, and straps 19, that extend from the upper band 18 to and below the lower band 17, at which point the straps are bent upon themselves, forming rectangular legs 20, as shown particularly in Fig. 3, which legs are adapted to rest upon the bottom of the tub when the basket is in position therein. The basket is completed by securing to the horizontal member of the lower band 17 a slat-bottom 21 and providing slats or slotted staves 22 for the sides of the basket, the lower portions of the slats or slotted staves 22 being made to bear, preferably, partially on the bottom slats 21 and partially on the bottom band, while the upper ends of the said slats or slotted staves 22 are made to enter the upper inverted-U-shaped band 18, being clenched or secured therein in any suitable or approved manner.

In order that the basket B shall not shift when placed in the tub A, the basket is provided at its exterior with a vertical groove 23, (shown in Fig. 7,) which groove receives a rib 24, formed upon the inner face of the tub, as illustrated in Fig. 4. A partial or segmental cover 25 is located at the top of the basket B at that portion which is presented to the blocks 11, adapted to receive the wringer. The bands 17 and 18 of the basket, together with the partial cover 25, are usually made of metal, while the bottom and sides of the basket are of wood. The basket is usually provided with a handle 26 upon its inner surface, which handle, together with the partial cover 25, enables the basket to be readily placed in position.

It will be observed that a space intervenes between the bottom of the basket B and the bottom of the tub A and that the dirt washed from the clothes by the agitator C, to be hereinafter described, will sift through the sides and bottom of the basket and find lodgment in this space below the basket. An opening 28 is made in one side of the tub, protected by a housing 29, also having an opening therein normally closed by a suitable plug 30, and the water in the basket and tub and the sediment in the bottom of the tub will find a ready exit through the opening 28 and the opening in the housing when the plug 30 is removed. This housing is provided in order that a suitable receptacle may be readily placed to receive the discharge from the machine.

A cover 31 is provided for the tub. This cover is segmental and rests upon the partial cover 25 of the basket and otherwise fits close to the inner surface of the tub, resting upon the upper edge of the basket, as shown in Figs. 1 and 3. The cover 31 supports an agitator C. This agitator preferably consists of a suitable top 32, having cross-bars 33 secured to its under face, the cross-bars being arranged to interlock at their centers, as shown in Figs. 3 and 6, and the ends 34 of the cross-bars are beveled downwardly and inwardly, and at each end of said cross-bars a finger 35 is secured, the fingers being at an acute angle to a perpendicular line drawn through the said agitator.

A stem or shank 36, polygonal in cross-section and usually square, is secured to the upper face of the agitator, and this stem or shank 36 is passed up through an opening in the cover 31 of the tub and is capable of end movement in said top or cover, so that the body portion of the agitator may accommodate itself to the bulk of clothes contained in the basket B. A pinion 37 is mounted on the upper portion of the shank 36; but the shank has end movement in said pinion, and a frame D is secured to the cover, being at an elevation therefrom, and this frame extends over the pinion 37, as shown in Fig. 1. The frame 65 consists of suitable bars 38 in skeleton ar-

range, and where the various bars connect at the reduced portion of the frame a horizontal extension 39 is provided, and the pinion 37 is located just below the frame where the extension 39 connects therewith, the shank 36 being carried up through the said frame D and provided at its upper end with a keeper-pin 40 or an equivalent device, that will prevent the shank from dropping entirely through the frame. The frame D, which may be called a "gear" frame or housing, is supported at its corners by suitable studs 41, and a bottom bar 42 extends from the stud at the extension 39 to the central portion of the wider part of the frame D, as shown in Fig. 3. The teeth of a horizontal segmental gear 43 engage with the teeth of the pinion 37, as shown in both Figs. 1 and 3, and the hub 44 of this gear 43 is journaled partially in the frame D and in the bottom bar 42, as is particularly shown in Fig. 3. At the cut-away portion of the segmental gear 43 a web 45 is formed, and upon this web ribs 46 are constructed, which ribs receive between them the inner end of a handle 47, which handle is secured to the said web, and the handle is provided at its outer extremity with a hand-pin 48. Suitable handles 48^a are provided for the tub, and usually a knob 49 is located on the cover 31 in order that it may be conveniently manipulated. The cover is braced by means of suitable battens 50, located upon its under face, and a hook 51 is likewise secured upon the under face of the cover 31, adapted to engage with the rim of the tub A when the cover is removed from the tub, so that the cover may be always conveniently at hand.

The device is exceedingly simple. It is durable and economic, may be conveniently operated, and, as stated, the entire operation of washing and wringing may be conducted on the stove or other heating agent employed.

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

1. In a washing-machine, a tub provided with adjustable plates upon its under face, adapted to hold the tub against lateral movement when placed upon stoves irrespective of the size of the stove.

2. In a washing-machine, a tub adapted to be placed upon a stove, plates adjustably secured upon the bottom of the said tub, adapted to enter the openings in the stove and preserve the tub against lateral movement, an agitating device located within the said tub, and means for imparting rotary reciprocating movement to the said agitating device, as and for the purpose specified.

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Witnesses:

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