Oct. 19, 1926. 1,603,738

E. M. BOLTON

WRINGER

Filed July 14, 1925 2 Sheets-Sheet 1

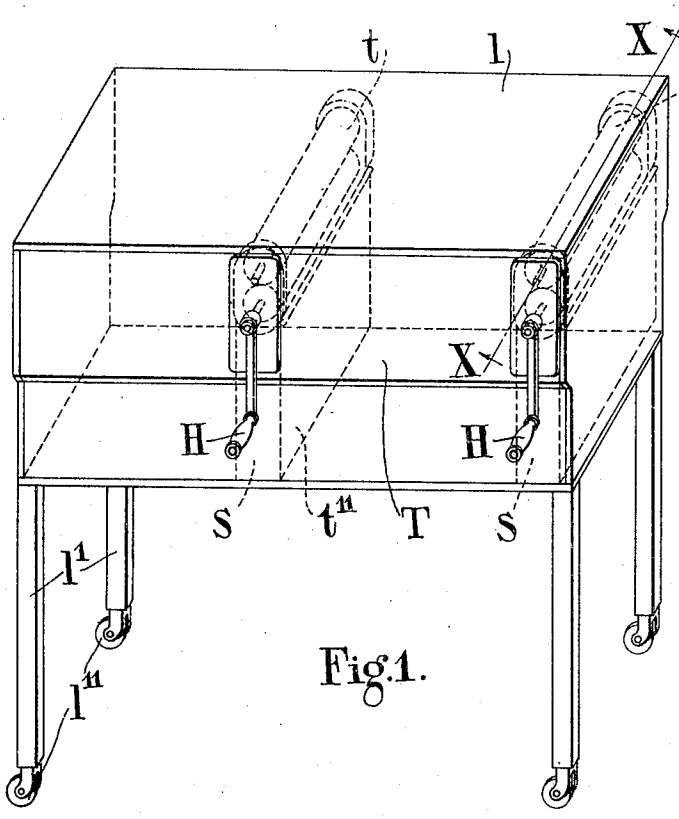


Fig.1.

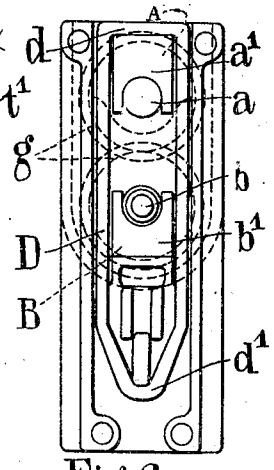


Fig.3.

INVENTOR:
Edith Mary Bolton
BY: Ruggles, Boyce & Bakeless
ATTORNEYS

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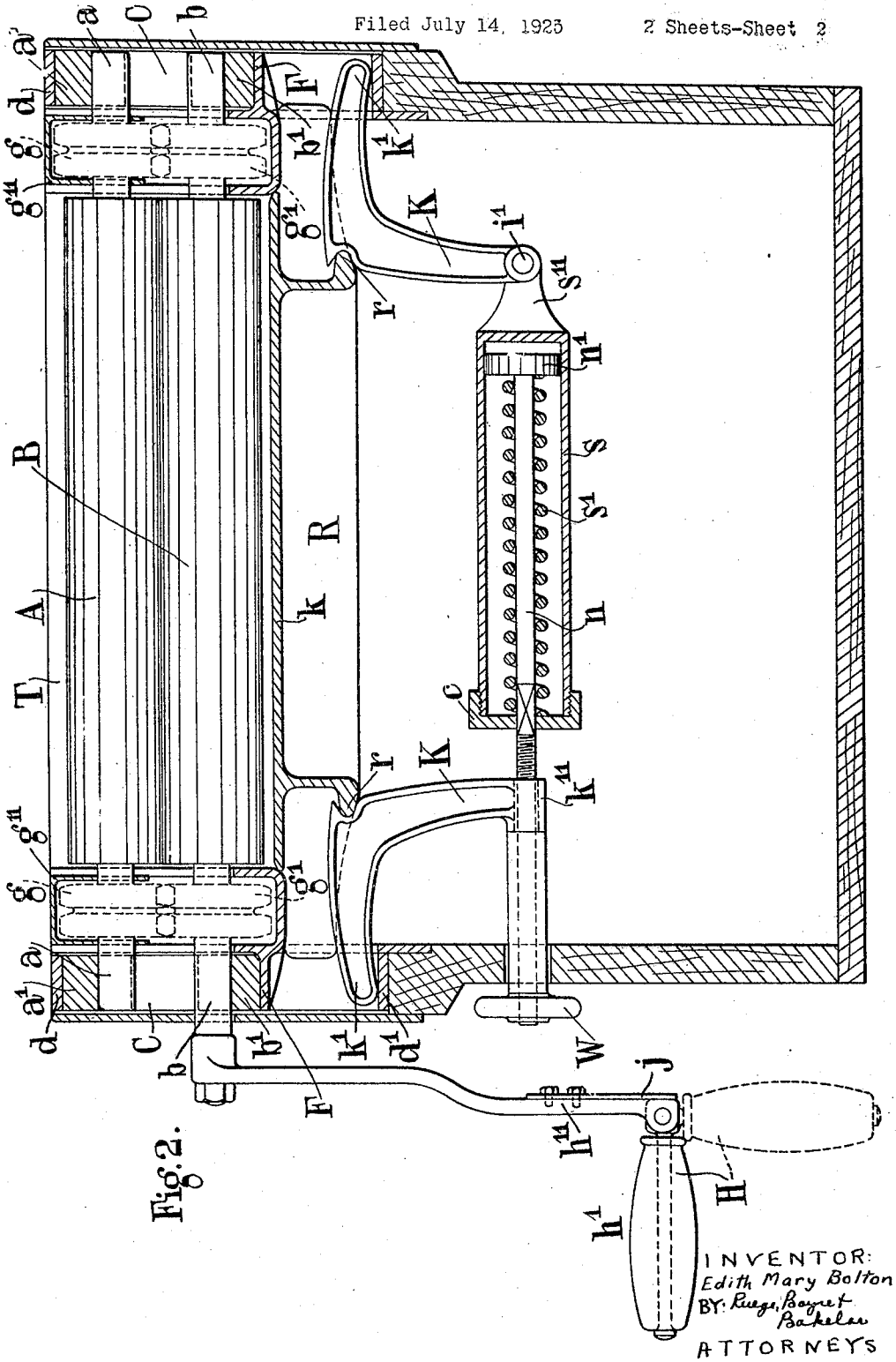


Fig. 2.

INVENTOR:
Edith Mary Bolton
BY: Riegel, Bogert & Bakelaar
ATTORNEYS

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UNITED STATES PATENT OFFICE.

EDITH MARY BOLTON, OF GERRARDS CROSS, ENGLAND.

WRINGER.

Application filed July 14, 1925, Serial No. 43,455, and in Great Britain July 18, 1924.

This invention relates to improvements in wringers for laundry purposes, the object of the invention being to provide a wringer which is particularly well adapted for use with washing machines which are constructed in such a way as to provide for soap water and for clear water within the same vessel and for accommodating separate wringers, one to be used in connection with the soap water and another in connection with the clear water, the wringers being so mounted in the machine that the lid of the latter may be closed without interference with the wringer mechanism.

In carrying this invention into effect I use a tub or tank preferably of wood and lined with metal. I form this tub or tank in two compartments separated by a partition and in the upper part of the said partition I fix a pair of wringer rollers of any suitable type and construction. These rollers I fix in such a way that the periphery of the upper one of the two when not in use does not project above the level of the side of the tank. I arrange for the upper roller to rise as may be necessary when in use in the usual way and I arrange any preferred type of springs to allow for this movement in suitable casings in the front and back of the tank or in the partition. I carry the shank of the lower roller through the front of the tank and fit thereon a suitable handle for turning the wringer. I arrange a similar wringer in a similar way in that end of the tank which is to the right hand of the operator, and these wringers I may arrange as a permanent attachment to the body of the tank or detachably fixed thereto. Thus each compartment of the tank has its own wringer.

I may use two or more compartments, each one provided if desired with a wringer.

My invention may be more precisely understood by reference to the attached drawings in which:—

Fig. 1 is a view of a washing tub or tank in perspective, illustrating the disposition of my improved wringers therein.

Fig. 2 is a cross section of same along the line X X in Fig. 1.

Fig. 3 is a side view of a wringer made according to this invention and with the cover plate removed.

Referring now to the figures:—

I form a washing tub or tank T either of metal or wood lined with metal as shown in Fig. 1 and I set an inverted wringer as described below in one or both ends t t' of this tank or in one or more partitions t'' of the same as shown, and I form the ends and partitions which are to be fitted with wringers so that they have a hollow space S within them to receive the bell cranks and spring case shown in Figs. 2 and 3 or I form such hollow space or gaps in the sides of my washing tub or tank to take wringers fitted with spiral springs as shown in Fig. 4 and described below.

I set my wringer in the washing tub or tank so that the top roller does not project above the edge of the tub or tank and I attach a lid l to my washing tub or tank such that it may form an ironing table when closed. I fit legs l' to my tub or tank and castors l'' as shown.

I sometimes fit two or more partitions in my washing tub or tank and I fit one or all of these with my inverted wringer.

I construct a wringer of an inverted type which may be used for the purposes above described and which will be understood by reference to Figs. 2 and 3. In these figures A, B, represent rollers of any convenient size and material and the shanks a, b, of these rollers are journalled in bearing blocks a' b' carried in the end casing C, C.

The two rollers are geared together at each end by the gear wheels g, g, and I form cups g' g' on the inner side of my casings and covers g'' g'' which protect the gear wheels and catch any oil which may fall from them.

The shank b is fitted at one end to take a handle for turning.

It will be understood that the process of wringing requires the upper roller A to move upwards and away from the lower roller B a distance that is regulated by the thickness of the articles to be wrung out.

In order to make this relative movement possible in my inverted wringer I form a bracket or abutment F in the casing C and I place the bearing block b' upon the bracket or abutment and I form a girdle D which encloses at its upper end d the bearing block a' but is free to slide past the bearing block b' and the bracket F. The lower end d' of this girdle forms a bearing or point of application for the springs or levers connected with them which regulate the pressure holding the two rollers together.

I form a cross bar R either integral with

the casings C, C, or attached thereto and having fulcrums r, r, and I construct bell cranks K, K, one arm of which takes a bearing k' in the lower end d' of the girdle D and the other arm has at its end a square hole k''.

I form a spring casing S with a spring s' and at one end of this casing I form a lug s'' which takes into the square hole k'' in the bell crank K and is held there by a pin l'. In the opposite end of this spring casing I form a cover or cap c and through a square hole in this cover or cap I pass a square rod n which also passes through the spring S' and carries a collar n' on its end upon which it may receive the thrust of the spring. The rod n passes through the end k'' of the bell crank K and carries a hand wheel W screwed on to the end thereof and taking a bearing upon the end of the bell crank.

It will be clear that when the various parts are arranged as above described any upward movement of the roller A due to the action of wringing will be communicated through the bearing blocks a' to the girdles D, D, and thence through the bell cranks K, K, to the spring S.

The spring will be compressed if both ends of the roller A rise together or if only one end rises and the spring case with its rod being a floating member it is free to adapt itself to the positions thus involved. By screwing up or unscrewing the hand wheel W the tension on the spring may be increased or decreased at will.

I construct the handle H for operating my wringer having the grip h' pivotally mounted on the lever h'' and controlled by a spring j which bears upon a flat surface of the pivoted grip. By this means the grip h' may be turned down into alignment with the lever h'' when not required for use as shown in dotted lines in Fig. 1.

I have herein described the methods of application of my invention which I have found advantageous in practice but I do not bind myself to the various details of the methods or application herein described.

What I claim is:—

An inverted wringer, comprising in combination, a frame, a roller mounted for rotation in bearings carried by said frame, a girdle mounted for vertical reciprocating movement in said frame at each end of the frame, a bearing carried by each of said girdles at the upper end thereof, a roller mounted for rotation in said bearings and normally in contact with said first roller, gearing for transmitting motion from one roller to the other, a bell-crank lever at each end of the frame, each of said levers being fulcrumed upon a portion of said frame and having an arm in engagement with the lower end of one of said girdles, a spring casing pivotally secured to the free arm of one of said levers, a spring within said casing, a piston mounted for reciprocation in the casing and having a stem passing through said spring and through the free arm of the other lever, and a member threaded on said stem and engaging said last free arm thereby to retract the piston and compress said spring for regulating the tension on said bell cranks.

In testimony whereof I have signed my name to this specification.

EDITH MARY BOLTON.