

(No Model.)

C. WHEELER, Jr.
CLOTHES WRINGER.

No. 502,646.

Patented Aug. 1, 1893.

Fig. 1

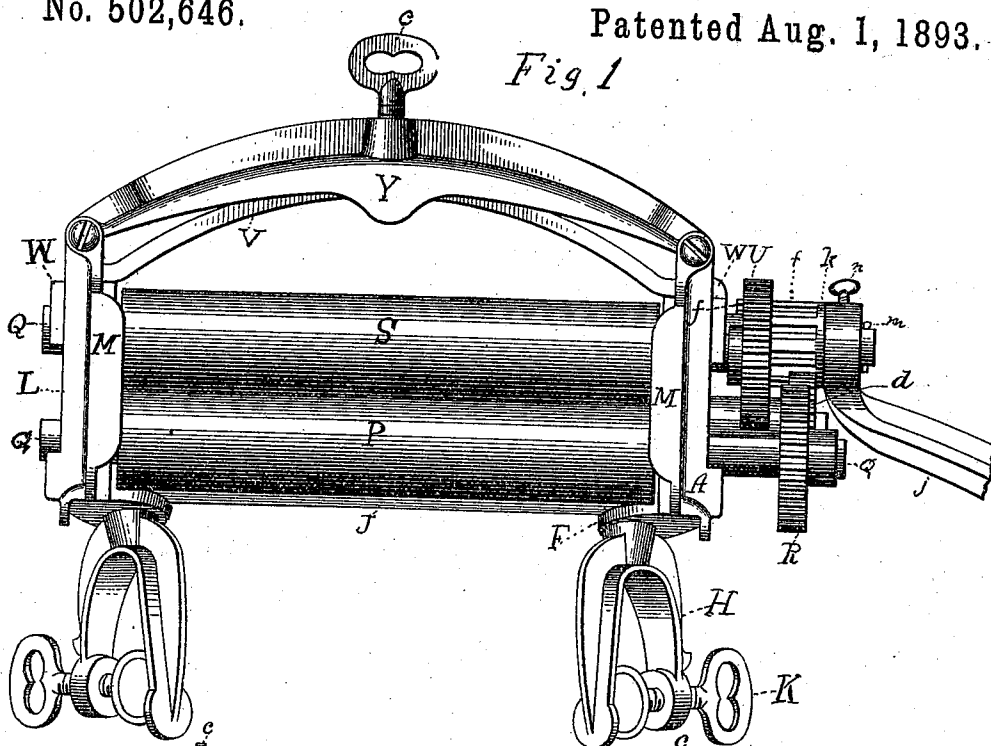


Fig. 2

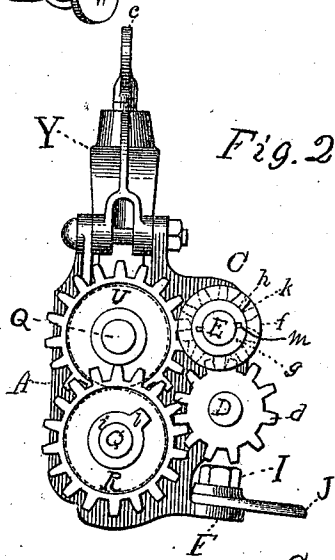


Fig. 3

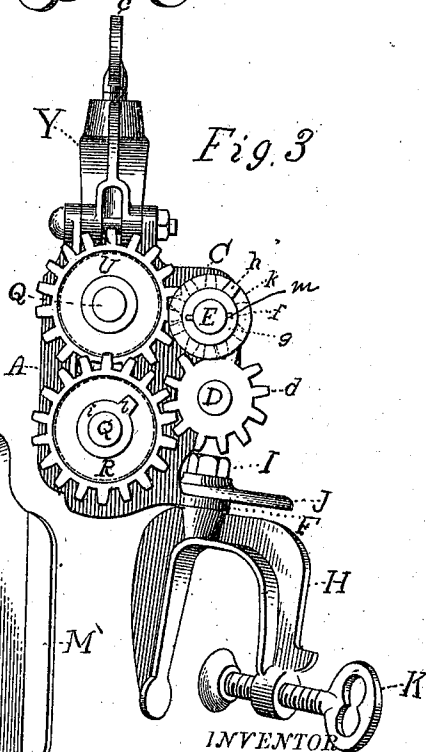
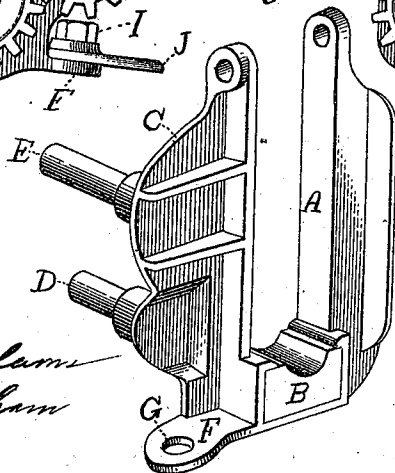


Fig. 4



WITNESSES

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CLOTHES-WRINGER.

SPECIFICATION forming part of Letters Patent No. 502,646, dated August 1, 1893.

Application filed October 9, 1891. Serial No. 408,214. (No model.)

To all whom it may concern:

Be it known that I, CYRENUS WHEELER, JR., of the city of Auburn, in the county of Cayuga and State of New York, have invented new and useful Improvements in Clothes-Wringers, of which the following is a specification.

The improvement consists of a modification of the devices shown in the patent granted to me September 8, 1891, and numbered 459,340.

The object of the invention is to further simplify the machine; and reduce the cost of construction without impairing its effectiveness; and the invention consists in the improvement in the construction of the wringer to be hereinafter pointed out.

Figure 1 is a front view of a wringer embodying my improvement. Figs. 2 and 3 are end views showing the position of the gearing when the upper roller is in its lowermost and uppermost positions respectively. Fig. 4 is a perspective view of one of the end pieces.

The following is a description of the improvement shown in the drawings, in which—

A, represents the slotted end piece provided for the gearing end of the machine. It is constructed of metal, and has a web or flange C, on its back edge, from which two fixed axles D, and E, project outward, parallel to the shafts of the rolls. At the bottom of the end piece is a foot piece F, that projects backward, and is inclined downward, enough to compensate for the ordinary flare of the wash tub, and bring the rolls in a vertical position when clamped to the tub. This foot piece has a hole G, for receiving the spindle of the tub clamp H, which is threaded, and provided with a nut I, for fastening the clamp, the foot piece F, and cross bar J, together. This tub clamp has in one branch of its jaw, a thumb screw K. A slotted end piece L, is provided for the other or left hand end of the machine, and is substantially like the frame piece at the gear end of the machine except that it lacks the flange or web C and the axles D and E. The end frame pieces of the wringer have shields M, M formed on their front edges and these shields project past the ends of the rolls and serve to confine the fabric between them. The rolls P and S are supported upon metal shafts Q the lower one of which is the longer

and carries the gear wheel R which is of larger diameter than the rolls and projects far enough beyond the end frame piece A to afford space for the gear U which is mounted on the upper roll shaft and revolves between the end frame piece and the gear wheel R. The lower roll shaft has bearings in wooden boxes B which are inserted in the chambers at the bottoms of the slots in the end pieces, one of which is shown in Fig. 4. The gear wheels U and R are of the same size and are arranged in separate vertical planes. The upper roll shaft is provided with bearing boxes W on the tops of which rest the ends of the spring V. These boxes are recessed on their edges and are fitted to slide up and down in the slots of the end frame pieces in the usual manner.

Y is the arched bar of usual construction which is arranged above the spring V, and c is the adjusting thumb screw mounted in the said arched bar and bearing upon the spring V.

On the fixed axle D, is placed the lower intermediate gear wheel *d*, which turns freely thereon, the axle being so located as to bring the teeth of the gear wheel R, on the shaft Q, of the lower roll shaft, in proper mesh with gear *d*. On the fixed axle E, is placed the gear pinion *f*, which is made long enough, so that its teeth will mesh with the teeth of the intermediate gear wheel *d*, below it and the gear wheel U on the upper roller shaft in the manner shown in my patent before mentioned. By using a long gear pinion motion can be imparted to gear wheel R, on the shaft of the lower roll, through the intermediate gear wheel *d*, and to the gear wheel U, on the shaft of the upper roll, though the gear wheels R, and U, are arranged in separate vertical planes.

The gears R, and U, have each preferably eighteen teeth, and the long gear pinion *f* nine teeth. Outside of the toothed portion of pinion *f*, is a collar *k*, formed with it, which is of the same diameter as the pinion with its teeth. Outside of this collar, and formed with it and the pinion, is a hub *g*, of less diameter than the collar, and has a rib *h*, formed on it, which locks with a hand-crank when it is applied to it in the manner shown in my patent before mentioned. This pinion *f*, is held in working position, by a pin *m*,

through its fixed axle E, outside of its hub. The collar *k*, of this pinion, serves to hold the intermediate gear *d*, with which it meshes, in proper working position on its axle without the use of another pin. The gear wheel R, on the shaft of the lower roll is also provided with a hub *i*, and a rib *l*, corresponding to those on the pinion *f*. A hand crank *j*, is provided, and so constructed as to fit the hub *i*, or the hub *g*, and is provided with a thumb screw *n*, for holding it in position on the hubs, and permitting a quick change from one to the other without disturbing the means which hold the pinion *f* in position upon its axle, as the pin holding this pinion in place does not project beyond the periphery of the hub *g*.

In Fig. 2, of the drawings, the positions of the gear wheels R, and U, are shown, with the upper roll resting on the lower one, and Fig. 3, shows the position of the same gears, with the upper roll raised above the lower one.

It will be seen, that a line drawn from the center of the fixed axle E, across the slot of the end piece A, at right angles thereto, will cross above the axial center of the upper roller in Fig. 2, and below it in Fig. 3. By this arrangement the movable axle and link shown in the before mentioned patent granted me are dispensed with, without impairing the machine's usefulness. With the hand crank *j*, on the hub *g*, of the pinion *f*, two complete turns, produce one revolution of the rolls. This is adapted to heavy fabrics, and requires but half the expenditure of power. In light work requiring less force the advantages of a faster movement of the rolls can be obtained by changing the crank to the hub *i*, of the gear wheel R, when the revolution of the rolls, will correspond to that of the crank. As this change of the crank can be readily made, all the advantages of geared wringers of two different speeds of rolls, are combined in one machine.

Having described the invention and its operation, what is claimed as new, and for which a patent is asked, is—

1. In a clothes wringer having the frame with slotted end pieces and rollers in bearings in said slots, and gear wheels at their ends, substantially as shown, the two fixed axles on one of said end pieces, upon which are mounted the intermediate gear wheels which mesh with the gear wheels upon the roller shafts and with each other, the smaller intermediate gear wheel together with one of the gears on the roller shafts being adapted to receive a hand crank, as and for the purpose substantially as described.

2. In a clothes wringer having the frame with slotted end pieces and rollers in bearings in said slots and with gear wheels on the roller shafts, substantially as shown, the two fixed axles on one of the said end pieces, upon which are mounted the intermediate gear wheels which mesh with the gear wheels upon the roller shafts and with each other, the smaller, upper intermediate gear wheel and one of the gears upon the roller shafts being adapted to receive a hand crank, the key or pin which holds the upper intermediate gear wheel in place upon its axle bearing against the end of the hub, *g*, upon which the crank handle is adapted to fit, but not projecting beyond the periphery of the hub, whereby the crank handle is adapted to be passed freely over the said pin or key as it is placed on or removed from the hub, and the thumb screw by which the crank handle is secured on the said hub and held thereon independently of the said pin or key, substantially as set forth.

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Witnesses:

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