

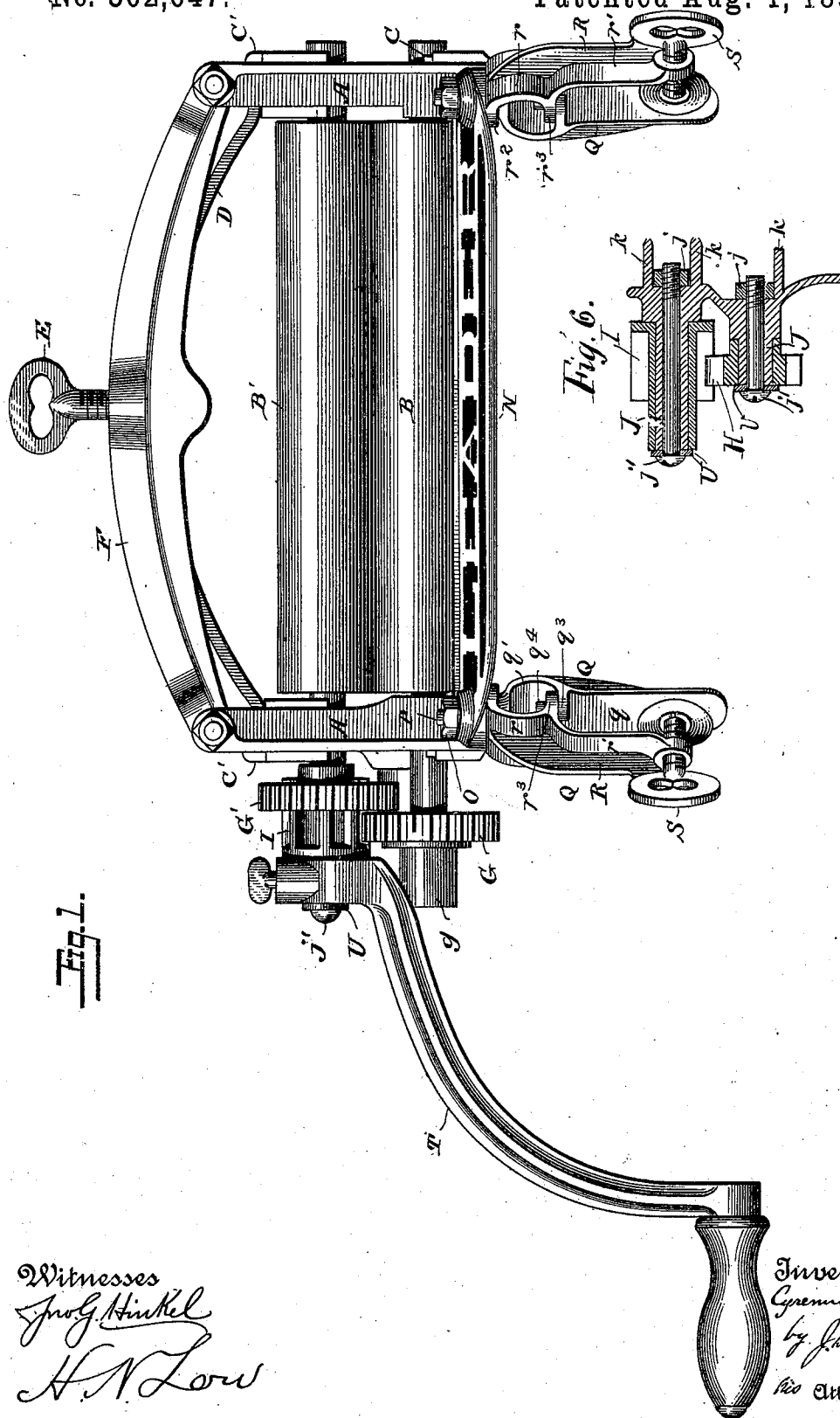
(No Model.)

2 Sheets—Sheet 1.

C. WHEELER, Jr.
CLOTHES WRINGER.

No. 502,647.

Patented Aug. 1, 1893.



Witnesses
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UNITED STATES PATENT OFFICE.

CYRENUS WHEELER, JR., OF AUBURN, NEW YORK.

CLOTHES-WRINGER.

SPECIFICATION forming part of Letters Patent No. 502,647, dated August 1, 1893.

Application filed August 19, 1892. Serial No. 443,540. (No model.)

To all whom it may concern:

Be it known that I, CYRENUS WHEELER, Jr., a citizen of the United States, residing at Auburn, in the county of Cayuga and State of New York, have invented certain new and useful Improvements in Clothes-Wringers, of which the following is a specification.

My invention relates to clothes-wringing machines, particularly to that style of such machines in which the rolls are driven by what is known as "purchase gearing;" and the invention consists in the improvements in the wringer to be hereinafter pointed out and which are set forth in the claim.

In the drawings wherein the various features of my invention are illustrated, Figure 1 is a rear elevation of a clothes wringer embodying my improvements. Fig. 2 is a front elevation of the same. Fig. 3 is a view of the gear end of the machine. Fig. 4 is a vertical section on the line 4—4 of Fig. 2. Fig. 5 is a perspective view, partly in section, illustrating the clamp. Fig. 6 is a sectional view on the line 6—6, Fig. 3.

In the drawings, A A designate the side or end frame pieces of the machine these being by preference constructed of metal, and provided with straight vertical slots *a*, to receive the shafts of the rolls B B'. The lower roll, B, is stationary, by which I mean that it has no vertical movements, and it is mounted in stationary bearings C situated in the bottoms of the slots *a*. The upper roll, B', is vertically movable between the end pieces A, its shaft turning in the bearings C' which are shaped and fitted in the slots *a* so as to move freely up and down therein.

D is the spring resting upon the bearings of the upper roll, and, E is the adjusting screw by which the pressure of the spring upon the bearings C' is regulated, the spring being mounted in the arched cross piece F connecting the upper ends of the frame pieces A.

The parts thus far described may be of any usual or preferred construction.

Upon the projecting ends of the shafts of the rolls at one end of the machine are mounted the gear wheels G G', arranged in different vertical planes so that their edges overlap, as indicated in Fig. 3. The hub *g* of the wheel on the lower roll shaft is adapted to receive the handle T by which the rolls are

turned, the handle being applied thereto when light work is being performed and considerable speed is desired.

H is the intermediate wheel which meshes with the lower gear wheel G, and I is the other intermediate wheel arranged between the wheel H and the wheel G'. The gear wheel I is elongated so that it meshes with both of the wheels H and G', although they lie in different vertical planes. It is the smallest wheel of the driving gear train, and its hub *i* is adapted to receive the handle of the wringer which is applied thereto when heavy work is being done and great power is required.

The wheels H and I are mounted on fixed axles projecting from the end frame piece, and are arranged in front of the rolls, that is, on the side from which the fabric is passed between the rolls.

By the term "fixed axle" I wish to be understood as referring to an axle that is rigidly attached to the frame, which supports it by one end so that it projects from the frame parallel to the wringer rolls, the gear which it carries turning upon instead of with it.

When the intermediate gearing is arranged as shown in the drawings that is to say in front of the squeezing rollers, the action of the wheel I,—on whichever hub the handle T be used,—is to force the upper roll toward or against the lower one, and the fullest squeezing effect of the rolls is therefore obtained, while less pressure of the spring is required. When a heavy and thick fabric is being passed through the wringer,—demanding the fullest squeezing action of the rolls, and at the same time requiring the expenditure of much force to turn the rolls,—the advantages of this feature become the most apparent because the greater the force exerted upon the handle, the more tightly are the rolls forced toward each other, by reason of the force which is transmitted through the gearing from the handle.

The axles upon which the wheels H and I are mounted are designated by J, and are cast or formed with the slotted end piece A, and have holes passing longitudinally through them to receive the screw bolts *j'*. These bolts are held firmly in place by the nuts *j* which rest between and are held from turning by the ribs *k*.

U U are washers arranged between the heads of the screw bolts j' and the ends of the axles J and the wheels thereon. The bolts j' , with the washers U which are larger than the ends of the axles against which they bear, keep the gear wheels in proper working position, the bolts adding to the stiffness of the axles.

In order to prevent the upper roll from being forced so far down, by the action of the spring D and the screw E, as to cause the engaging faces of the rolls to become flattened to an undesirable extent, thus requiring an increased expenditure of power to perform the work, I provide stop lugs or ribs L upon the frame with which the boxes or bearings C' of the upper roll come into engagement when they have been forced down as far as it is desirable they should move. These ribs are arranged on the inside of the grooves α , and are preferably cast with the frame pieces.

The end frame pieces A are extended rearward to form the foot pieces M between which is arranged the cross piece N. This cross piece is secured to the foot pieces of the frame by the spindles P of the tub clamps and the nut O screwed thereon.

The tub clamps consist each of a fixed part or member Q and a swinging part or member R. The stationary or fixed member of the clamp has a flat-faced portion q adapted to bear against the tub or other object to which the wringer is secured, a curved or bowed portion q' above the part q , and a hub q^2 between the bowed portion q' and the spindle P.

q^3 is a horizontal plate arranged immediately above the flat-faced portion q of this

member of the clamp, from the upper face of which projects a pintle q^4 which is axially in line with the hub q^2 . The other, swinging member, R, of the clamp has a bowed portion r at its upper end, and a downward depending arm r' , in the lower end of which is mounted the clamping screw S.

r^2 and r^3 are horizontally projecting plates or arms perforated so as to fit over the hub q^2 and the pintle q^4 respectively of the fixed member of the clamp, and upon which, as supports, the swinging member of the clamp swings.

Without limiting myself to the precise construction and arrangement of parts shown, what I claim is—

In a clothes wringer having the frame with slotted end pieces, the rolls carrying gear wheels on their shafts and having bearing in said slotted end pieces and intermediate gear wheels mounted on fixed axles projecting from one of the end pieces, the frame piece at the gear end of the machine having the fixed axles for the intermediate gear wheels arranged in front of the rolls and made hollow, the screw bolts passing through the hollow axles and securing the gear wheels thereon and the screw nuts upon the bolts arranged between ribs on the end frame piece, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CYRENUS WHEELER, JR.

Witnesses:

G. W. BENHAM,
CICERO J. WARNE.