

UNITED STATES PATENT OFFICE.

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CLOTHES-WRINGER.

SPECIFICATION forming part of Letters Patent No. 703,009, dated June 24, 1902.

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To all whom it may concern:

Be it known that I, CHARLES P. SEARLES, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Clothes-Wringers, of which the following is a specification.

My invention relates to the improvement of clothes-wringers; and the objects of my invention are to provide an improved spring-actuated tub-clamping mechanism, whereby a wringer may be readily and rigidly connected with tubs and other supporting-bodies of varying thicknesses, to provide improved mechanism whereby the operation of clamping the wringer in connection with its support also results in a proper closing of the wringer-rolls and whereby the disconnection of the wringer from the tub results in separating the rolls, to provide improved roll-gear cases of such construction as to facilitate placing the same in position after the gear-wheels have been secured upon the axles of the rolls, to provide improved means for feeding and distributing the goods between the rolls, and to produce other improvements the details of construction and operation of which will be more fully pointed out hereinafter. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of my improved wringer, a portion of one of the springs thereof being broken away for the sake of clearness of illustration. Fig. 2 is an end view, and Fig. 3 is a detail view in perspective of one of the gear-cases.

Similar numerals refer to similar parts throughout the several views.

1 and 2 represent, respectively, the upper and lower wringer-rolls, which are carried on parallel shafts 3 and 4. The lower shaft 4 has its outer or spindle portion beyond each end of the roller 2 journaled at the junction of the arms of an angular clamping-lever 5, these arms being indicated at 5^a and 5^b. The outer ends of the spindle portions of the shaft 3 are loosely mounted in the downturned ends of the parallel side arms of the roll and clamp operating-lever 6. This lever 6, which is in the nature of a yoke, has its side arms extending rearwardly and provided with upturned

end portions 6^a, which are connected by a rod 7. Each of the side arms of the lever 6 is provided near its forward end with an outwardly-projecting stop-pin 8.

Upon the shafts 3 and 4 on the inner sides of the levers 5 and 6 are carried gear-wheels 9 and 10, the teeth of which are adapted to mesh with each other, said teeth being of such length as to form comparatively deep pockets between the same to permit of a desirable outward and inward play of the teeth therein. Each pair of the gear-wheels 9 and 10 are, as indicated in the drawings, contained within a gear-casing 11, each of the latter being in the nature of a boxing having its lower side open and having its inner wall provided with a central vertical recess 12, which imparts a substantially yoke-shaped appearance to the casing-body. The forward side of each of the gear-casings is provided with an outwardly-projecting bracket-arm 13, while the opposite or inner side thereof is provided at its lower end with a lip 14, extending in the opposite direction from the bracket-arm 13. As shown in the drawings, the shafts 3 and 4 project, respectively, through the upper and lower portions of the central recesses 12 of the gear-casings.

15 represents the spring-bars, which are formed of suitable spring metal. The forward end portion of the upper arm of one of these substantially hook-shaped spring-bars is through the medium of a casting 16 pivotally connected with a laterally-projecting pin 17 on each of the side arms of the operating-lever 6 at a point above the shaft 3. The rear and lower end of each of the spring-bars 15 is rigidly connected with the rearwardly-projecting head portion 18 of a downwardly-extending clamping-arm 19. The rear and lower ends of the spring-bars are also connected by a horizontal transverse receiving-apron 20, which is in the nature of a horizontal frame, as shown. The head portion of the clamping-arm 19 is jointedly connected with the upper arm 5^a of the clamping-lever 5 by being fulcrumed on a laterally-projecting pin 20^a of said arm 5^a. As shown at 21, the bracket-arms 13 of the gear-casings are connected by a transverse feed-roller, which, as shown in the drawings, tapers from its central portion

toward its ends, the end portions thereof preferably being rotatably mounted in socket projections 13^a of the bracket-arms 13.

In utilizing my invention the clamping-arms 5 5^b and 19 are made to embrace the upper portion of a tub or other support, such as is shown at 22, this being accomplished, however, when the operating yoke-lever 6 is thrown upward and the spring-bars 15 are therefore not under tension. By now forcing the yoke-lever 6 rearward and downward until the stop-pins 8 thereof are in contact with the upper arms of the spring-bars said springs are placed under tension by the raising of the forward portions of the upper arms thereof, and through the tension thus imparted a clamping action of the arm 5^b and 19 against opposite sides of the supporting-body 22 is attained. Owing to the fact that when the operating-yoke is moved rearwardly and downwardly to its lowest position, the spring pivot-pins 17 are thrown past the center of the upper shaft 3 or in rear of a vertical line intersecting said shaft 3 centrally, and the compression thus imparted to the springs. It will be observed that said operating-yoke is temporarily locked or held against voluntary return, thus insuring a continued clamping action of the opposing arms 5^b and 19. When the yoke is in this position, the upper roll-shaft is pressed downward until the peripheries of the rolls 1 and 2 are in proper frictional contact. It will thus be seen that by the one operation of the operating yoke-lever a clamping engagement of the wringer and tub is attained, as well as an adjustment of the rollers to operative positions. Owing to the taper or inclination of the feed-roll 21, over which the goods to be wrung are passed, it will be seen that the

tendency of the goods to draw or bunch toward the center of the rolls will be obviated, the goods following to some extent the opposite inclined surfaces of the feed-roller. 40

It will be observed that the gear-casings being provided with the central shaft-receiving recesses 12, which are open at the bottom, admits of said casings being placed in position, if desired, after the gear-wheels have been mounted on the roller-shafts, and owing to the lip projections 14 of said gear-casings, which projections are adapted to engage the under side of the apron-frame 20, any tendency of said casings to move upward is obviated. 45 50

It will be seen that my improved wringer is simple of construction, readily operated, and that the same may be produced at a reasonable cost of manufacture. 55

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is— 60

In a wringer, the combination with the upper and lower rolls 1 and 2, roll-shafts 3 and 4 and angular clamping-levers 5 on said shaft 4, of an operating-lever 6 pivoted on the spindle portions of the shaft 3, clamping-arms 19 pivotally connected with the upper arms of the clamping-levers 5 and springs 15 having their upper and forward ends pivoted on said operating-lever at points above the shaft 3 and having their rear and lower ends rigidly connected with said clamping-arm 19, substantially as specified. 65 70

CHARLES P. SEARLES.

In presence of—

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