

G. C. Wright,

Wringer.

No. 103269.

Patented May. 17. 1870.

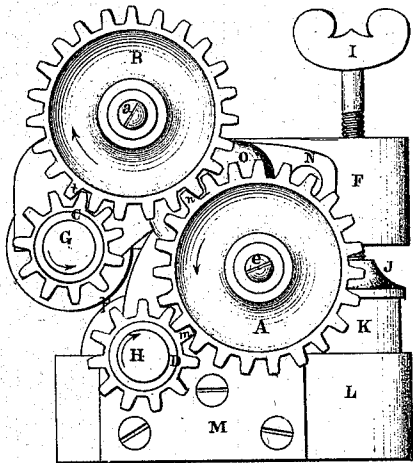


Fig. 1.

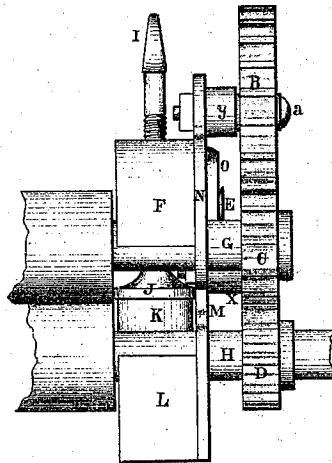


Fig. 2.

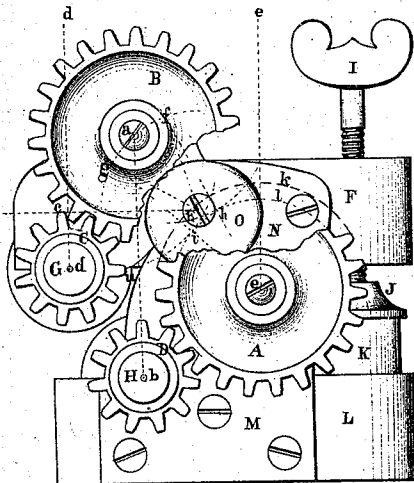


Fig. 3.

W. M. Hulley
D. Hammond } Witnesses.

George C. Wright, Inventor.
by J. S. Abbott, Attorney.

United States Patent Office.

GEORGE C. WRIGHT, OF LEROY, OHIO.

Letters Patent No. 103,269, dated May 17, 1870.

IMPROVED GEARING FOR CLOTHES-WRINGERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, GEORGE C. WRIGHT, of Leroy, Medina county, Ohio, have invented certain new and useful Improvements in Clothes-Wringers; and I do hereby declare that the following is a full, clear, and exact description of my invention, reference being had to the accompanying drawing forming a part of this specification, and to the letters of reference marked thereon, of which drawing—

Figure 1 is a side view of a portion of a wringer, showing my improvements.

Figure 2 is an end view of the same.

Figure 3 is a detail side view of the same.

My invention relates to certain improvements in the arrangement of the several parts of a clothes-wringer, having the upper roll hung on a pivoted lever, through which the pressing power is applied, and provided with gear-wheels on the roll-shafts, and with two intermediate gear-wheels to unite the rotation of the rolls; and

It consists, first, in arranging the pivot of the lever for the upper roll, in or between the planes of the cylindrical surfaces of the points and bases of the teeth of the first intermediate gear, whereby the variations of distance between the rolls, caused by different thicknesses of cloth passing between them, simply causes a rolling of the second upon the first intermediate gear, without affecting the mesh of these gears, or causing them to bind and impede the operation of the machine.

My invention consists, secondly, in arranging the pivot of the second intermediate gear above a line drawn from the pivot of the lever for the upper roll, tangent to the upper surface of the periphery of the gear on said roll, whereby the point of contact between the second intermediate gear and the gear on the upper roll is brought above the axis of the upper roll, so that the tendency of the second intermediate gear to lift the upper roll, instead of acting wholly to produce a rotation of said roll, is materially diminished, and a corresponding economy of power is effected.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In the annexed drawings—

L represents the lower frame piece of wringer, to which is secured the side plate M, through which is passed the shaft H of the lower roll, a semicircular groove being cut in the piece L to let said shaft down into the position shown.

The upper end of the plate M is made in a semicircular form, and fits in between the lever F and the swelled portion O of the side plate N, on the lever

F, where it is secured by a screw, E, which forms the pivot for the said lever.

The forward portion of the plate N is drilled to form a box for the shaft G of the upper roll, which shaft also fits in a semicircular groove in the under side of the lever F, as seen in fig. 2.

The press-screw I is passed through the rear end of the lever F, and has an end bearing on the cap J of the rubber block K, which rests on the frame piece L, from which it is evident that by turning down the screw I the pressure on the rolls may be regulated as desired.

The gears C and D are secured on the shafts G and H of the upper and lower rolls, and the first intermediate gear A is secured on a pivot, e, which is formed on the block X, where it is secured by a bolt extending through the plate M, as shown in fig. 2.

The second intermediate gear B is secured on the pivot a, which is formed on the block y, where it is held by a bolt extending through the plate N, as shown in fig. 2.

The power is applied by a crank, not shown in drawing, secured on the shaft H of the lower roll, which is extended for this purpose, as indicated in fig. 2.

The intermediate gear is most conveniently made of the same size, and of a diameter from one and one-half to two times as great as that of the diameter of the gears C D on the rolls, which gears are also conveniently made of the same size.

The pivot E of the lever F, for the upper roll, is placed between the planes of the cylindrical surfaces k and l of points and bases of the teeth of the first intermediate gear A, as shown in fig. 3, so that, as the distance between the rolls is varied by different thicknesses of cloth passing between them, the pivot a of the second intermediate gear B describes an arc of a circle, f g, having its center at the pivot E, from which it is evident that by placing the second intermediate gear so as to leave a small space between the points of the gear B, and the gullets of the teeth of the gear A, when the rolls are at a medium distance from each other, the gear B can move from the lower point of contact, i, to the upper point h, without injuriously affecting the mesh of these gears, or causing them to bind to any extent.

The pivot a of the second intermediate gear B is arranged at a considerable distance above the line E e, drawn from the pivot E of the lever F, for the upper roll, tangent to the gear C, on said upper roll, at c, from which it is seen that the point of contact, t, between the second intermediate gear B and the upper roll gear C is brought considerably above the axis d of the upper roll, so that the rotation of the gear B in the direction indicated by arrow, has but

little power to raise the gear C and the upper roll, but acts almost wholly in producing the desired rotation of said gear and roll, thus avoiding a serious difficulty existing in other arrangements of this construction of wringers.

By this improved arrangement of parts, I obtain fixed pivots for both intermediate gears; one on the upper, and the other on the lower side plate, and still preserve the proper mesh between said gears without binding or cramping, within all reasonable variations of distance between the rolls, thus dispensing with the use of any swinging and connecting links between any of the gear pivots, or the use of slotted plates for the movement of the pivots of the upper roll and second intermediate gear, whereby I lessen the cost and greatly increase the solidity of construction and the durability of the machine.

This improved arrangement also makes the machine much easier to operate, as the power is transferred and applied through the gears with much less loss of leverage, and with less axle friction than in any previous arrangement.

Having thus fully described my invention, I do not claim hanging the upper roll on a pivoted lever, nor the use of two intermediate gears for gearing to-

gether the upper and lower rolls, as these features have been before shown; but

What I do claim herein as new and of my invention, and desire to secure by Letters Patent, is—

1. The combination of two wringer-rolls with end gear and with two intermediate gears, the upper roll being hung in a pivoted lever, operated by set-screw and spring, and the pivot for said lever being arranged in or between the planes of the cylindrical surfaces of the bases and points of the first intermediate gear, substantially as and for the purpose specified.

2. The combination of two wringer-rolls with end gear and with two intermediate gears, the upper roll being hung in a pivoted lever operated by set-screw and spring, and the pivot of the second intermediate gear being arranged above a line drawn from the pivot of the lever for the upper roll, tangent to the upper surface of the periphery of the gear on said roll, substantially as and for the purpose specified.

As evidence of the foregoing, witness my hand this 25th day of February, A. D. 1870.

GEORGE C. WRIGHT.

Witnesses:

GEO. F. DANIELS, J. P.

S. T. ELLIS.