

No. 614,791.

Patented Nov. 22, 1898.

A. G. CARLING.  
CLOTHES WRINGER.

(Application filed Feb. 21, 1898.)

(No Model.)

Fig. 1,

Fig. 2,

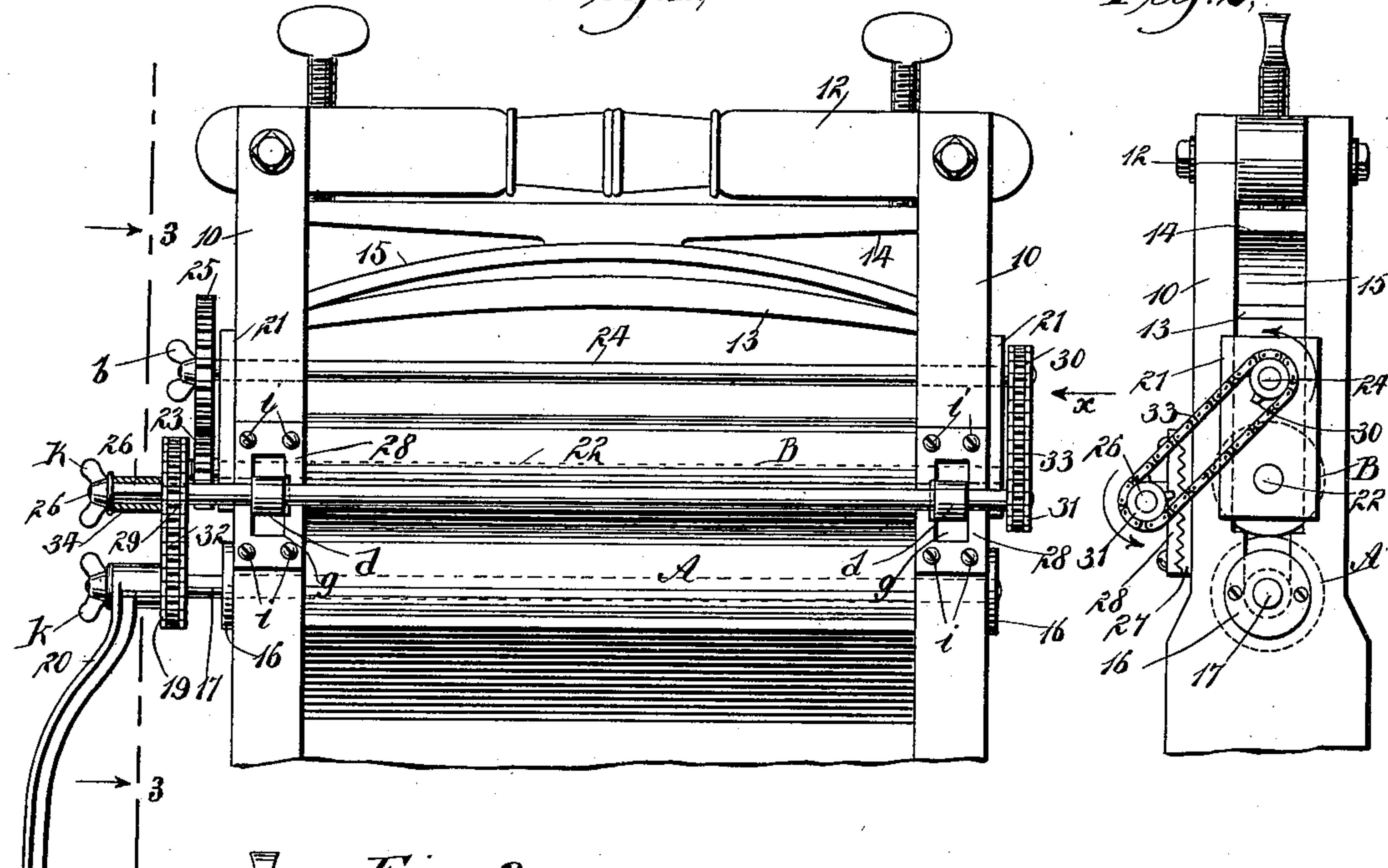


Fig. 3,

Fig. 4,

Fig. 5,

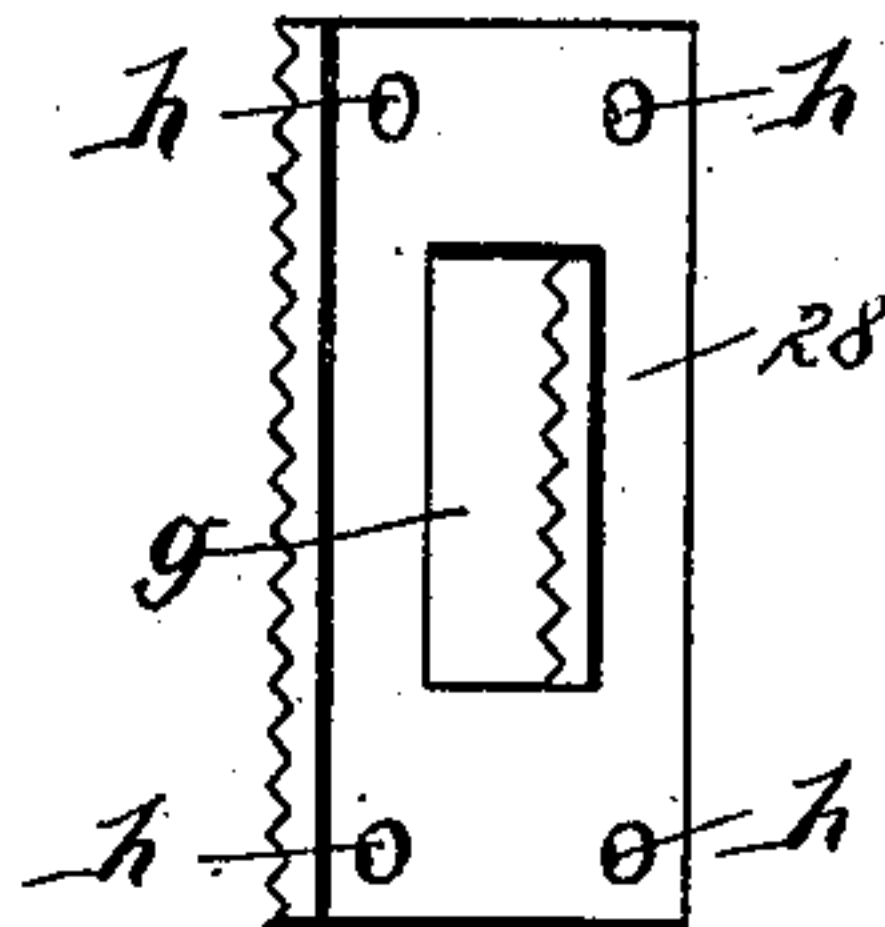
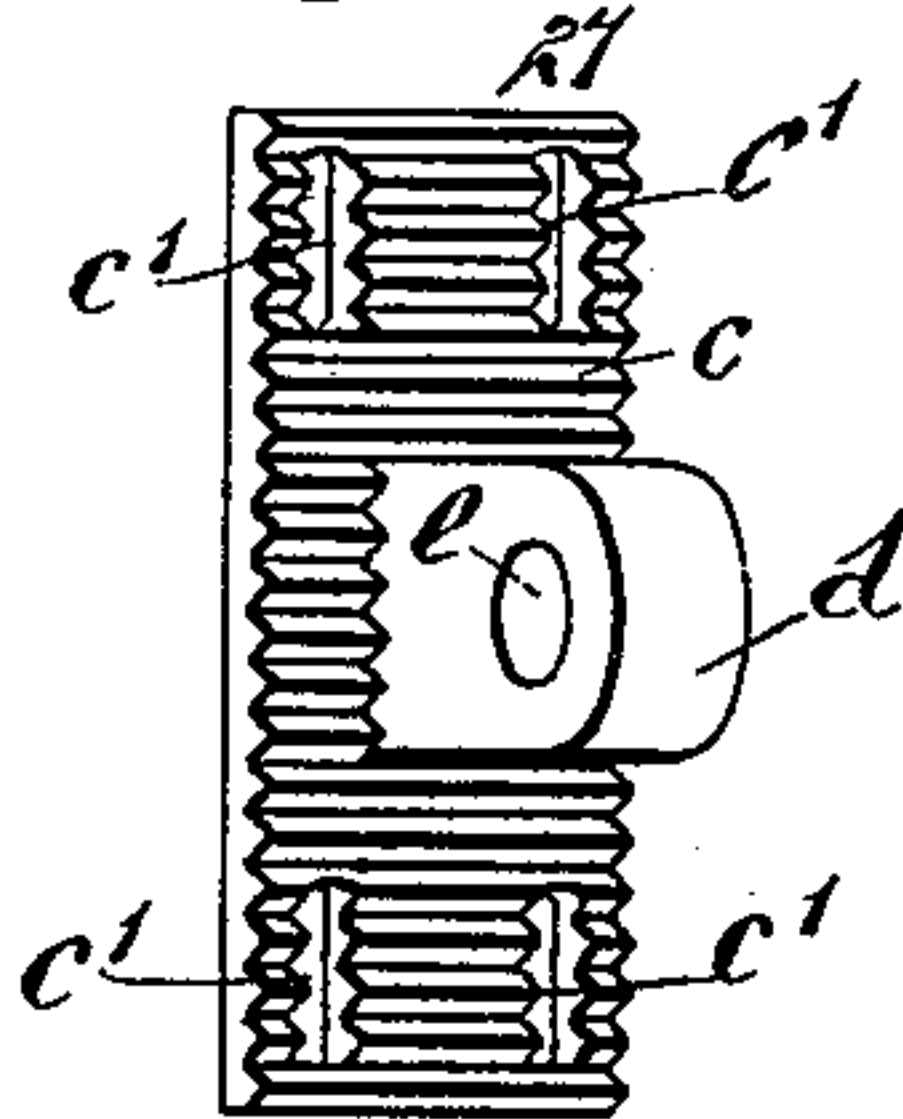
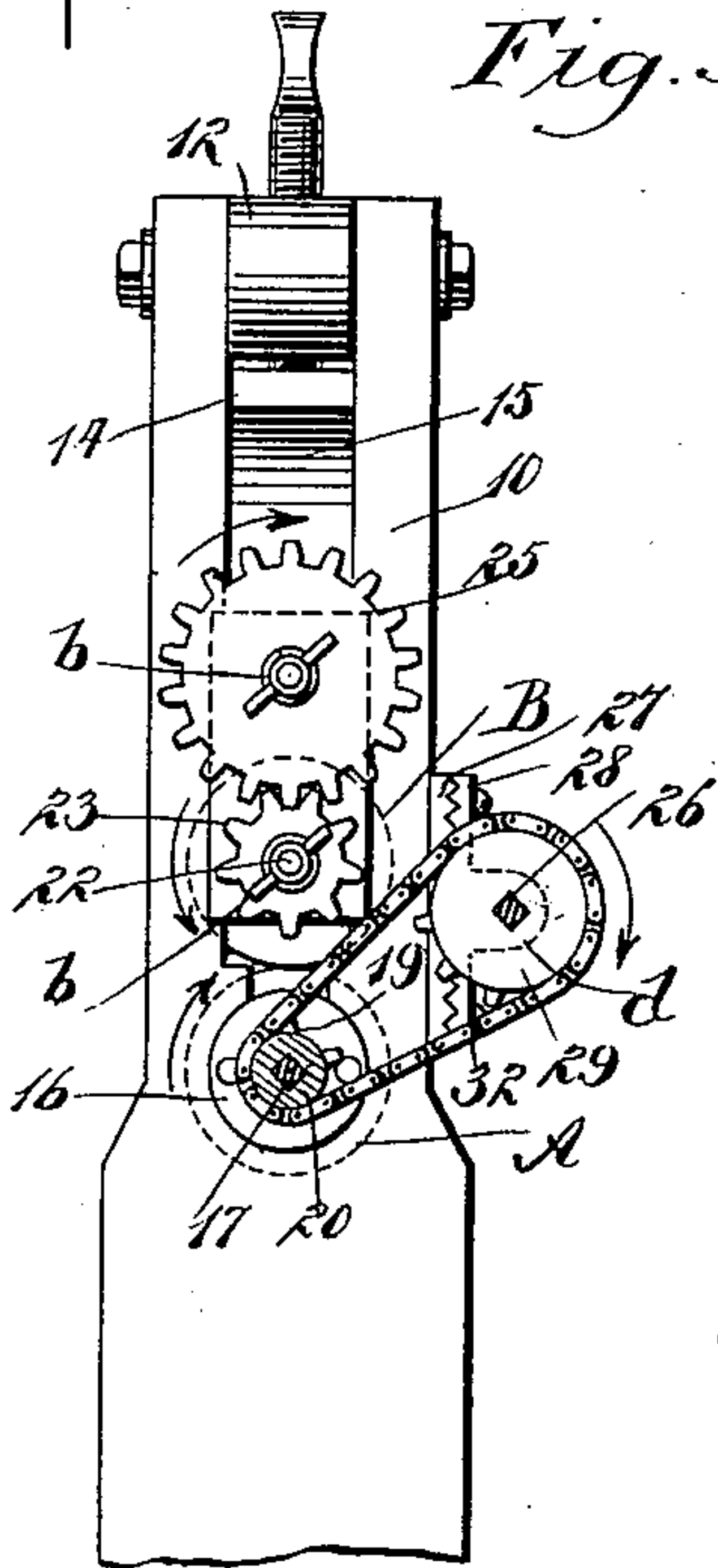
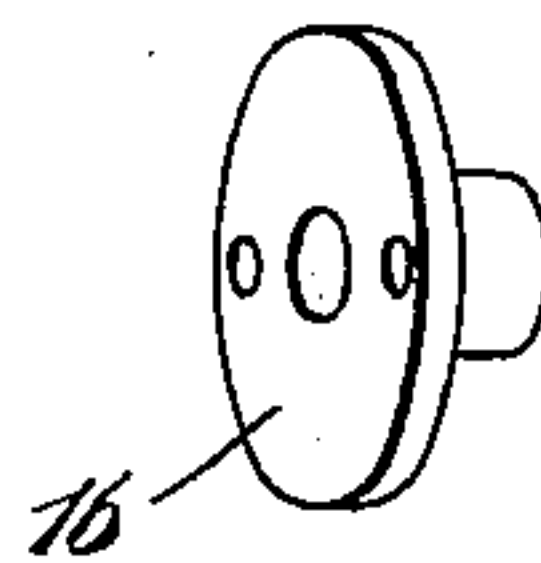
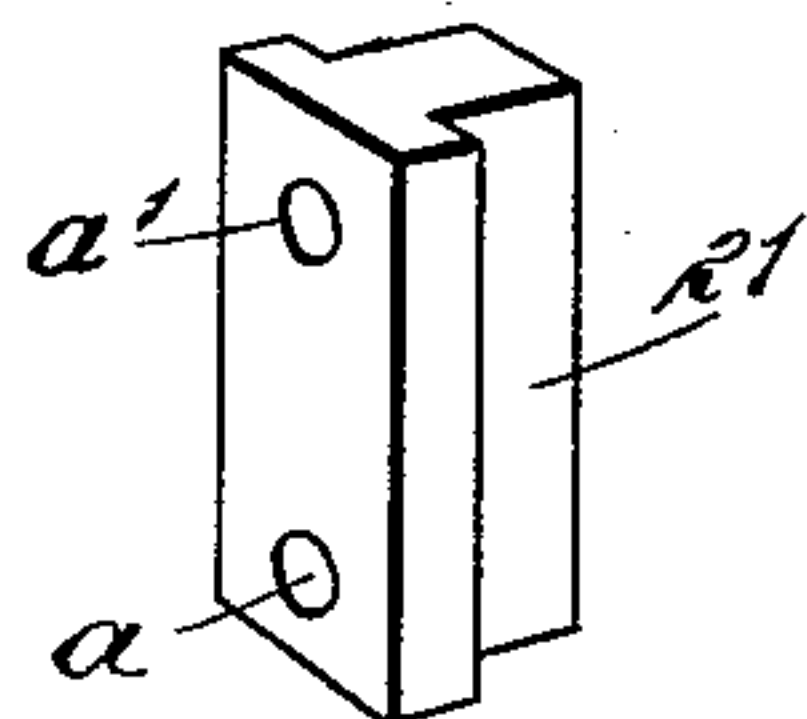


Fig. 6,

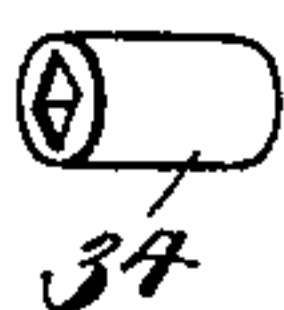
Fig. 7,



WITNESSES:

Edward Thorpe.  
Wm P Patton

Fig. 8.



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# UNITED STATES PATENT OFFICE.

ALBERT G. CARLING, OF HACKENSACK, NEW JERSEY.

## CLOTHES-WRINGER.

SPECIFICATION forming part of Letters Patent No. 614,791, dated November 22, 1898.

Application filed February 21, 1898. Serial No. 671,113. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT G. CARLING, of Hackensack, in the county of Bergen and State of New Jersey, have invented new and useful Improvements in Clothes-Wringers, of which the following is a full, clear, and exact description.

This invention relates to clothes-wringers of the portable type, and has for its object to provide a device of the character indicated with novel simple details of construction which will enable an increase of power to be effected by an easy change of the gears when very heavy work is to be performed and also adapt the machine by another change in geared arrangement to wring light goods rapidly and in an effective manner.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a rear side view of a clothes-wringer embodying features of the invention, lower parts of the wringer-frame being removed. Fig. 2 is a left-hand end elevation of the device shown in Fig. 1, seen in direction of the arrow  $x$  in said figure. Fig. 3 is a right-hand end elevation of the wringer, partly in section, essentially on the line 3-3 in Fig. 1. Figs. 4 and 5 are detached perspective views of two parts of an adjustable bracket-box which in duplicate support a gear-shaft of the wringer. Fig. 6 is a detached perspective view of one of the two similar slide-boxes that carry the upper wringer-roll and a counter gear-shaft. Fig. 7 is a perspective view of one of the pair of journal-boxes provided to support the shaft of the lower wringer-roll in place on the frame of the wringer; and Fig. 8 is a detached perspective view of a changeable spacing-sleeve, which is one of the details of the invention.

The frame of the wringer is of the usual form, comprising the two vertical side bars 10, that are slotted from their upper ends downwardly a suitable distance to adapt said side bars for the reception of the working parts of the wringer. The lower portions of the

side bars 10 are spaced apart in the usual manner by a cross-bar. (Not shown.) At the upper ends of the side bars 10 the ordinary top cross-bar 12 is secured thereon by bolts, and in the slots of the side bars the usual lower spring-bar 13, upper spring-bar 14, and arched springs 15 are loosely held by their ends.

Two similar boxes 16, each having a circumferential flange at the outer end, are provided for the support of the lower-roll shaft 17, said boxes being located oppositely in the same plane within the slots of the side bars 10 and being secured to the side bars by screws or the like passing into the side bars through the perforations in the circumferential flanges. The shaft 17, whereon the lower gum-roll A is affixed, projects, preferably, at the right-hand end of the machine-frame, and on the projecting portion of said shaft a small sprocket-gear 19 is slidably mounted, the shaft-body being preferably squared, as shown in Fig. 3, to adapt it to drive the gear and parts with which it is connected. The end of the shaft 17 extends sufficiently outside of the sprocket-gear 19 to permit the socket end of the crank-handle 20 to be slid thereon, as shown in Fig. 1.

A pair of slidable shaft-boxes 21, the shape of which is clearly shown in Fig. 6, occupy the slots in the side bars 10 directly above the fixed boxes 16, and in each box 21 two apertures  $a$   $a'$  are formed. In the lower apertures  $a$ , that extend through the bodies of the boxes 21, the journals of the shaft 22 for the upper roll B are located, and on the end of said shaft, extending beyond the right side of the machine, a small pinion 23 is removably secured, said pinion being held from rotation on the shaft by any suitable means. In the upper apertures  $a'$  of the boxes 21 the journals of an upper counter-shaft 24 are loosely supported, this counter-shaft being extended sufficiently beyond the pinion to receive the spur-gear 25, preferably made double the diameter of the pinion 23, with which it meshes, as shown in Figs. 1 and 3.

The spur-gear 25 and pinion 23 are held to rotate with the shafts 22 24, upon which they are mounted, the connection of the parts being of such a character as will permit the



ready removal of the gear and pinion and their exchange from one shaft to another, their outward displacement when in position on the shafts being prevented by the wing-nuts 5 *b*, screwed upon the threaded ends of the shafts.

A secondary counter-shaft 26 is adjustably sustained on the two side bars 10 of the wringer-frame, preferably by two bracket-boxes, which are each composed of two parts. One portion 27 of each box is formed, essentially, as represented in Fig. 4, having a flat base-plate *c* transversely grooved to form V-shaped ribs thereon, and also having a boss 15 *d*, extending outward from the center of said base-plate *c* and transversely bored, as at *e*, to provide a bearing for one of the journals of the counter-shaft 26. The base-plate *c* is slotted longitudinally, as at *c'*, near each end 20 of the same, for the free insertion of screw-bolts through the base-plate into the side bar 10, upon which the bracket-box is to be secured. A cap-plate 28 constitutes the outer member of each of said bracket-boxes and 25 consists of a flat plate of metal equal in dimensions to the base-plate *c* and transversely grooved in a like manner, so that the V-shaped ribs on one plate will fit into corresponding grooves in the other plate, as shown 30 in Fig. 3. A suitable aperture *g* is formed in each cap-plate 28 to receive the boss *d* of the plate *c*, whereon the cap-plate is imposed, and in each cap-plate perforations *h* are formed near the corners thereof and afford 35 screw-holes for the insertion of screw-bolts *i*, through the cap-plate 28 and base-plate *c*, into the side bars 10.

It will be seen that if the cap-plates 28 are loosened the slots *c'*, wherein the screws *i* are 40 located, will permit the base-plates *c* to be longitudinally adjusted a limited degree in either direction and that the retightening of the screws will bind the cap-plates on the base-plates and at the same time hold the base-plates 45 *c* from displacement.

On the right-hand end of the secondary counter-shaft 26 a sprocket-gear 29, double the diameter of the sprocket-gear 19, is removably secured, and these sprocket-gears 50 29 and 19 are exchangeable, so that the large sprocket-gear 29 may be placed upon the lower-roll shaft 17 and the small sprocket-gear 19 be mounted upon the secondary counter-shaft 26, as may be desired, thumb-nuts 55 *k* being placed on the threaded ends of these shafts to hold the gears thereon. At the left-hand end of the upper counter-shaft 24 a small sprocket-gear 30 is affixed, and said gear, which is positioned exterior of and near to the left- 60 hand side bar 10 of the machine-frame, is in the same vertical plane with a similar sprocket-gear 31, secured on the projecting end of the secondary counter-shaft 26.

On the sprocket-gears 29 19 at the right- 65 hand side of the machine a sprocket-chain 32 is placed, thus connecting said gears for the transmission of rotary motion from the lower-

roll shaft to the secondary counter-shaft, and another sprocket-chain 33 is mounted upon the two sprocket-gears 30 31 of the same di- 70 ameter at the left-hand side of the machine.

The operation of the device is as follows: When the gearing is relatively arranged, as shown in Figs. 1, 2, and 3, and the crank-handle 20 is on the end of the lower-roll shaft 17, 75 then by the rotation of the crank-handle motion of like speed will be communicated to the rolls A and B in a direction toward each other; or, in other words, to more specifically define the action of the device it will be seen 80 that a revolution of the lower-roll shaft 17 in the direction shown by the curved arrow in Fig. 3 will, through the sprocket-chain 32, transmit rotative motion to the secondary counter-shaft 26, which in turn, through the sprocket- 85 gears 30 31 and chain 33, will actuate the upper counter-shaft 24 and spur-gear 25 in the direction of the curved arrow shown above said gear in Fig. 3, which gear in turn rotates the meshing pinion 23 and the upper wringer- 90 roll B in an opposite direction or toward the lower roll A, the rate of speed being that given the crank-handle 20 on the lower-roll shaft.

In case heavy goods that require more than 95 ordinary power to pass the same between the rolls A B are to be operated upon then the larger sprocket-gear 29 is to be placed on the end of the lower-roll shaft 17 and the small sprocket-gear 19 is located on the secondary 100 counter-shaft 26. The spur-gear 25 and pinion 23 are also changed in position, so as to place the pinion 23 on the upper counter-shaft 24 and the spur-gear 25 on the upper-roll shaft 22, the crank-handle 20 in this case being 105 placed upon said secondary counter-shaft.

It will be obvious that from the relative disposition of the sprocket-gears and cog-gears as mentioned a rotation of the secondary counter-shaft 26 as a prime mover will cause 110 through the intermediate gearing a much slower rotation of the rolls A and B.

In case a quantity of light articles is to be operated upon in a rapid manner for the ex- 115 traction of moisture therefrom the gearing may be positioned as shown in the drawings and the crank-handle 20 be placed upon the end of the secondary counter-shaft 26, which will obviously double the speed of rotation 120 had by the rolls A B as compared with that of the secondary counter-shaft that in this case is the prime mover. A spacing-sleeve 34 is to be placed upon the end of the shaft 17 or 26 not occupied by the crank-handle 20, so as to keep the gear in place on said shafts. 125

If at any time the sprocket-chains become slackened, they may be tightened by sliding the portions 27 of the bracket-boxes that support the secondary counter-shaft 26, so as to stretch the chains, the screw-bolts *i* being 130 loosened and afterward tightened to effect the adjustment mentioned.

Slight changes may be made in minor details of construction within the scope of my



invention. Hence I do not desire to limit myself to the precise form of parts shown and described.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a clothes-wringer, the combination with a frame, and two fixed and two slidable boxes in slots in the frame, of a lower roll, the shaft of which is journaled in the fixed boxes, an upper roll, the shaft of which is journaled in the slidable boxes, an upper counter-shaft also journaled in the slidable boxes, an exchangeable spur-gear and a meshing pinion on like ends of the upper-roll shaft and upper counter-shaft, a secondary counter-shaft adjustably journaled in boxes on the sides of the frame, exchangeable sprocket-gears, and a chain thereon at one end of the lower-roll shaft and secondary counter-shaft, sprocket-gears on the other end of the secondary counter-shaft and a like end of the upper counter-shaft, and a chain connecting said sprocket-gears, substantially as described.

2. In a device of the character described, the combination with a frame, and a rotatable lower-roll shaft thereon, of an upper-roll shaft, a counter-shaft journaled in the same boxes with the upper-roll shaft and above said roll-shaft, a spur-gear and a meshing pinion exchangeable on the ends of the up-

per-roll shaft and upper counter-shaft, a crank-handle adapted to engage the lower-roll shaft, and means for rotatably connecting the lower-roll shaft with the upper counter-shaft, substantially as described.

3. In a device of the character described, the combination with the frame, and two shafts carrying rolls and rotatable in the frame, of two interchangeable meshed cog-gears, two counter-shafts, the cog-gears being located one on a roll-shaft and one on a counter-shaft, sprocket-gears on the lower-roll shaft and both counter-shafts, sprocket-chains connecting pairs of the sprocket-gears, and a crank-handle adapted to engage with an end of the lower-roll shaft or with an end of one of the counter-shafts, substantially as described.

4. In a device of the character described, the combination with the wringer-frame, two supported rolls thereon, and an interchangeable crank-handle, of two counter-shafts, and gearing exchangeable on the roll-shafts and counter-shafts, and adapted by differing adjustments to drive the rolls toward each other slower or faster than the revolutions of the crank-handle, substantially as described.

ALBERT G. CARLING.

Witnesses:

WM. P. PATTON,  
JNO. M. RITTER.