

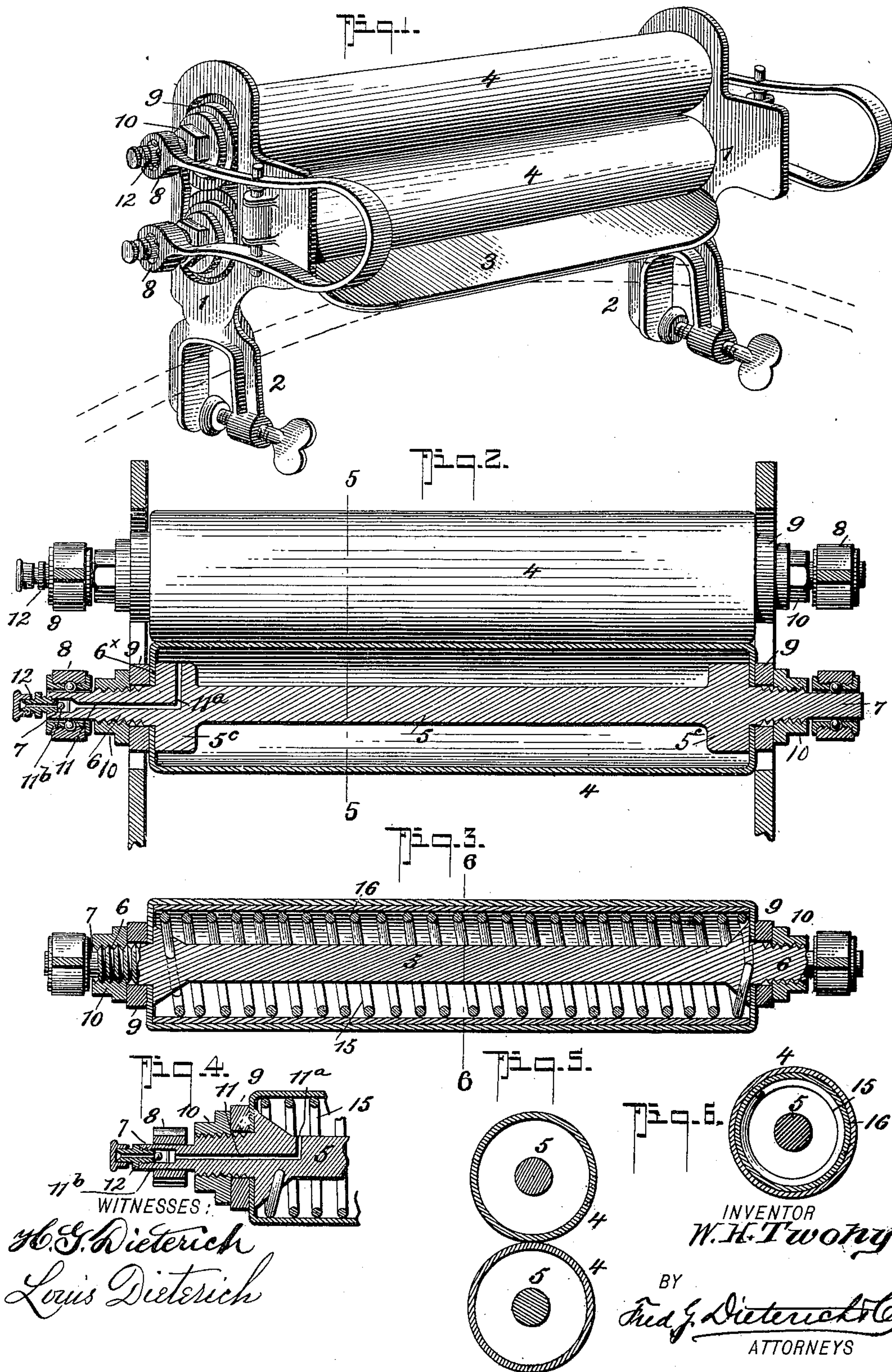
No. 654,194.

Patented July 24, 1900.

W. H. TWOHY.  
WRINGER ROLL.

(Application filed Oct. 31, 1899.)

(No Model.)





# UNITED STATES PATENT OFFICE.

WILLIAM H. TWOHY, OF HELENA, MONTANA.

## WRINGER-ROLL.

SPECIFICATION forming part of Letters Patent No. 654,194, dated July 24, 1900.

Application filed October 31, 1899. Serial No. 735,408. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. TWOHY, residing at Helena, in the county of Lewis and Clarke and State of Montana, have invented  
5 a new and Improved Wringer-Roll, of which the following is a specification.

This invention is in the nature of an improved roll for clothes-wringers or analogous compressing mechanisms; and it com-  
10 prehends a roll embodying certain novel features of construction and peculiar combination of parts, such as will be hereinafter first described and then specifically pointed out in the appended claims, reference being had to  
15 the accompanying drawings, in which—

Figure 1 is a perspective view of a clothes-wringer equipped with my improved wringer-rolls. Fig. 2 is a front elevation of a pair of  
20 my improved wringer-rolls, one of the said rolls being shown in longitudinal section. Fig. 3 is a longitudinal section of a single roll, illustrating a modified construction there-  
of. Fig. 4 is a detail view of one end of the roll, illustrating a further modification. Fig.  
25 5 is a cross-section on the line 5 5 of Fig. 2, and Fig. 6 is a similar view on the line 6 6 of Fig. 3.

Referring now to the accompanying drawings, in which like numerals indicate like  
30 parts in all the figures, 1 indicates the main frame of the wringer, which may have pendent clamp members 2 2 and a drip-board 3, said frame and its drip-board being of any approved construction, as the same *per se*  
35 form no part of my present invention.

The rolls 4 4 in the preferred construction, as shown in Figs. 2 and 5, comprise a core 5, having enlarged hub-like portions 5<sup>c</sup>, pro-  
40 vided with end bearing portions 6<sup>x</sup> for a purpose presently explained, and the said hub portions are formed upon the core at the inner terminal of the threaded portions 6 of the said core, which portions 6 terminate at the re-  
duced smooth extensions or journals 7, which  
45 when the roll is to be applied to the frame having U-shaped spring-bearings is adapted to engage ball-bearing sockets 8, mounted on the ends of the said frame, as shown.

When my improved wringer-rolls are to be  
50 used with a slotted frame, as shown in Fig. 1, the said rolls are each provided with supplemental journals or hubs 9, adapted to be

slipped endwise over the threaded ends of the core and held to bear against the bearing portions 6<sup>x</sup> of the enlarged hub portions of  
55 the said core, said hubs 9 being held tightly clamped by the clamp-nuts 10, that engage with the threaded portions 6 of the core, as clearly shown, the said hubs also serving an-  
other function presently explained. 60

The exterior body of the roll may be of rubber, cloth, or any other tough inflatable material, and the ends of the inflatable portion of the said rolls in practice are fitted air-  
tight against the hub portion 6<sup>x</sup> of the core 65 and held fast to the detachable hub members 9, which are tightly clamped against the ends 6<sup>x</sup> by the screw-nuts, as before stated, it being understood, however, that if desired the inflatable ends may also be further made  
70 tight by cementing them against the hub-bearings 6<sup>x</sup>.

To provide for a quick inflation or contraction of the external body of the roll, the core has one of its end journals formed with  
75 an air-inlet 11, which terminates in a port 11<sup>a</sup>, that discharges inside of the roll, and the said inlet 11 is adapted to be controlled by an automatically-operating back-pressure valve 11<sup>b</sup>.

12 indicates a cap removably held over the  
80 entrant end of the inlet 11 and which when removed permits air being quickly pumped into the roll to expand it, it being obvious that when it is desired to collapse the roll a suitable tool can be inserted into the inlet 11 to  
85 push the valve 11<sup>b</sup> to its open position.

By forming the roll with surfaces, as described, the said surfaces can be readily ad-  
justed to have a greater or a less elasticity  
90 and at the same time maintain an equalized pressure throughout, whereby in operation they will thoroughly dry clothes or other articles that may be fed between them without danger of breaking buttons, &c.

Instead of giving elasticity to the roll by  
95 pneumatic means the elasticity thereof may be governed by means of a stout coiled-wire spring 15, (see Fig. 3,) the opposite ends of which are arranged to engage with the fixed  
100 hubs on the core of the roll, said spring-coils being of sufficient tension and diameter to snugly hold the roll-covering expanded, which covering in the present form is preferably of rubber cloth made fast to the core, as before



stated, and a supplemental internal flexible covering 16, such as leather, whereby to hold the impact face of the rolls smooth and from ridging.

- 5 If desired, both the spring and pneumatic means for imparting a proper elasticity to the rolls may be provided, as shown in Fig. 4. In this form the supplemental covering 16 may be dispensed with, as the pneumatic  
10 pressure within the roll will serve to properly expand the external rubber-cloth covering and keep it from ridging.

From the foregoing description, taken in connection with the accompanying drawings,  
15 it is thought the operation and advantages of my invention will be readily understood.

It will be noticed that by forming the rolls as shown and described I have provided means whereby the elasticity of the roll can  
20 be readily governed, so as to make the rolls to bear hard or soft against the goods to pass therebetween, as the character of the goods may make necessary. For instance, the rolls constructed in the manner described may  
25 be conveniently and effectively employed for wringing out the dampening-cloths such as are commonly employed in letter-press copying.

Having thus described my invention, what  
30 I claim, and desire to secure by Letters Patent, is—

1. A wringer-roll, comprising in combination; a core having annular enlargements that form end bearings, the ends of the core terminating in extensions; a flexible covering,  
35 the ends of which lap over the end bearings of the core; supplemental hub members loosely fitting over the extensions of the core and adapted to press the ends of the flexible  
40 covering against the aforesaid end bearings;

means for clamping the said hub members tightly against the said end bearings, and means for expanding the flexible covering and holding it taut, as specified.

2. A wringer-roll, comprising a core having 45 end bearing-hubs; threaded portions and smooth end journals, one of the ends of the core having an inflating-inlet discharging through the core into the interior of the roll; a flexible covering having its ends arranged 50 to be clamped over tightly against the aforesaid bearing-hubs of the core; supplemental hub members for holding the said covering ends against the aforesaid hubs; clamp-nuts engaging the threaded portions of the core and 55 hub members; and a coil-spring surrounding the core, said spring forming a fixed bearing for the flexible covering as specified.

3. A wringer-roll, comprising in combination; a central core having enlarged end bearings, and screw-threaded portions extending 60 outwardly from said bearings; the supplemental hubs 9 loosely fitted over each screw-threaded portion of the core and held to bear against the outer face of the end bearings of 65 the core, said supplemental hubs forming journals for the hub; the external body formed of a flexible material, the ends of which are held clamped against the end bearings of the core by the supplemental hub members 9; 70 the clamp-nuts 10, for holding the hubs 9 against the end bearings of the core, and means for expanding the flexible body and holding it taut, all being arranged substantially as shown and described.

W. H. TWOHY.

Witnesses:

J. K. BRAMBLE,  
JOHN FREY.