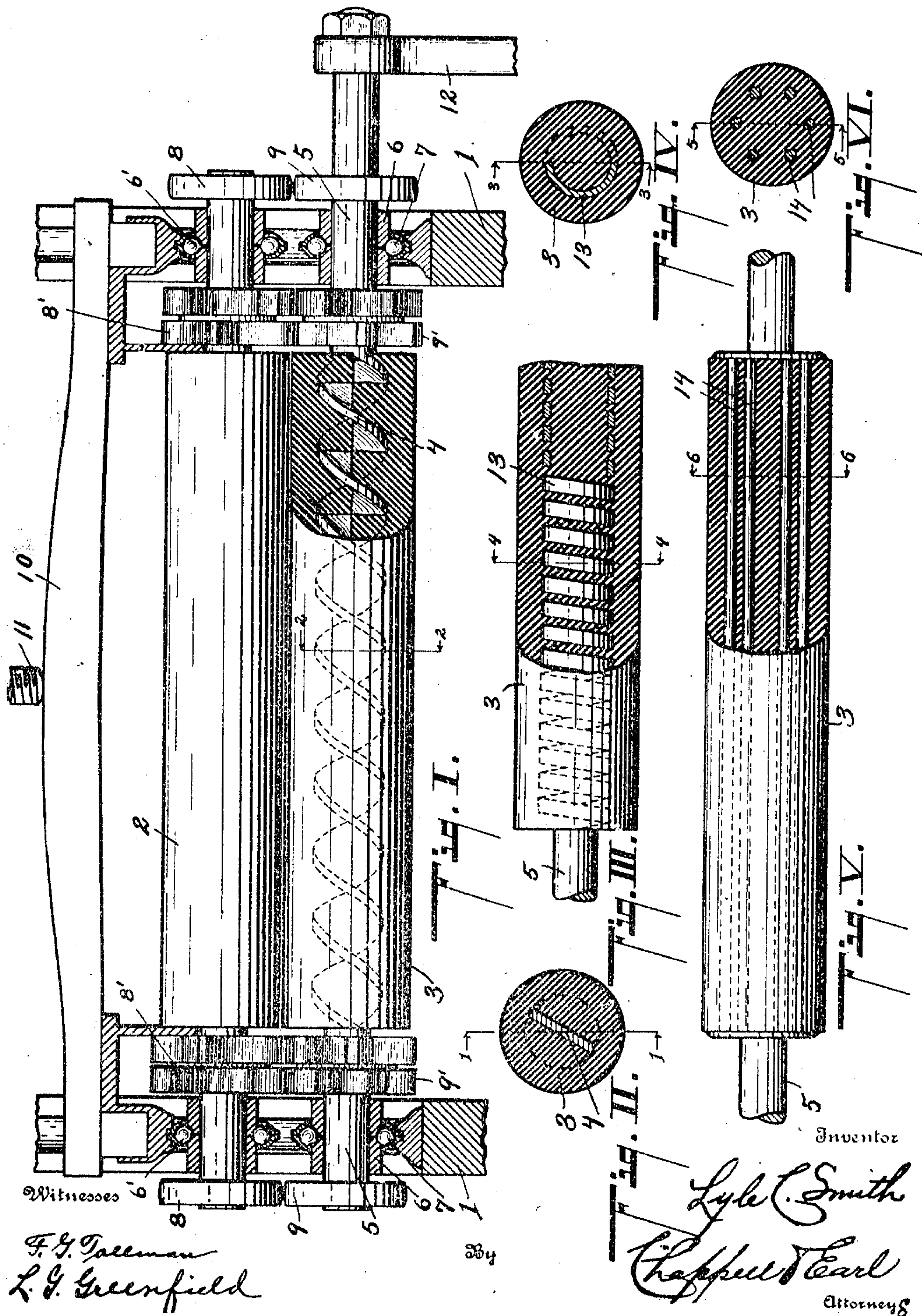


L. C. SMITH.
CLOTHES WRINGER.
APPLICATION FILED AUG. 1, 1910.

992,076.

Patented May 9, 1911.



UNITED STATES PATENT OFFICE.

LYLE C. SMITH, OF GRAND RAPIDS, MICHIGAN.

CLOTHES-WRINGER.

992,076.

Specification of Letters Patent.

Patented May 9, 1911.

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To all whom it may concern:

Be it known that I, LYLE C. SMITH, a citizen of the United States, residing at the city of Grand Rapids, county of Kent, and State of Michigan, have invented certain new and useful Improvements in Clothes-Wringers, of which the following is a specification.

This invention relates to improvements in laundry wringers.

The object of the invention is to provide an improved structure cooperating with improved elastic rollers whereby a spring core is provided for the rubber roller which increases the efficiency of its action.

Objects relating to details will appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined and pointed out in the claims.

Structures embodying in preferred forms the features of my invention are clearly illustrated in the accompanying drawing, forming a part of this specification, in which:—

Figure 1 is a detail elevation view of a wringer embodying the features of my invention, a portion being cut away to show details, the wringer roll and other parts being sectioned on a line corresponding to line 1—1 of Fig. 2. Fig. 2 is a detail transverse sectional view on line 2—2 of Fig. 1, showing the structural details of the roller. Fig. 3 is a detail of a modification of the roller, taken on a line corresponding to line 3—3 of Fig. 4, the modification being in the feature of the core, which is here a spiral coil. Fig. 4 is a transverse detail sectional view on line 4—4 of Fig. 3 showing the structural details of this modification. Fig. 5 is a detail view of another modification, in which longitudinal elastic rods are made use of in place of the spiral, the same being partially in section on line 5—5 of Fig. 6. Fig. 6 is a detail transverse sectional view taken on a line corresponding to line 6—6 of Fig. 5 showing the structural details of this modification.

In the drawing, the sectional views are taken looking in the direction of the little arrows at the ends of the section lines, and similar numerals of reference refer to similar parts throughout the several views.

Considering the numerals of reference, the posts 1—1 are of the usual form, and between them are supported and disposed the

wringer rolls 2, 3. These are extended into shafts 5, 5 at each end, which are embraced by suitable ball bearing members 6—6 cooperating with suitable balls in ball races 6' in the usual form. The outer ends of the shafts 5 are provided with disks 8, 9, which coact together much like friction gears, their outer faces being somewhat rounded to permit of slight movement. At the ends of the rolls are the usual construction of the intermeshing gears 8', 9', commonly used in wringers. A spring cross-bar 10 is across the top of the wringer between the posts and is urged down by means of a screw 11 or any other suitable means to put adjustable yielding pressure upon the upper roll and urge it toward the lower one, whereby the degree of pressure between the rolls is effectively adjusted. Through the center of the roll is a spring core 4 of spiral form, which is connected to the end shafts by electric welding, usually. This core is preferably in the form of a flat blade, twisted like the body of an auger or bit. However, this core can be considerably modified, as shown in Fig. 3, in which the core is made simply in the form of a spiral coil 13. In Fig. 5 I show a core consisting of a plurality of separated steel rods 14, which accomplish the same purpose to reinforce the action of the rubber roller by providing an effective elastic core of spring metal. The core in the form I have illustrated in Fig. 1 lends itself very readily to receiving the rubber roller.

In use, my improved wringer will be found to be very effective and while I have found the upper roll adjustable, for all ordinary work, it need not be adjustable. This adjustment increases the capacity slightly. Because the rolls are provided with flexible cores, they will yield readily and consequently permit any appropriate article to pass readily between the same. Because the core is elastic, the center of each roll will be deflected, the lower one downwardly and the upper one upwardly, and because of their flexibility, they will closely embrace anything passing between them. This does not throw the structure out of commission, because the disks 8, 9, coact and cooperate with the gears and with the bearings to preserve the shafts in parallel relations. And, because the cores are of spring metal, as soon as any article has passed, the rolls immediately straighten themselves and assume the proper relation and proper condition for

wringing thinner articles that may then be offered. By this means the adjustment of the upper roll is very largely avoided.

I have not shown any means for securing my improved wringer to the tub, and do not deem this to be necessary.

The invention is adapted to tub wringers, and also to bench wringers in which the parts are secured to the bench in place of to the tub.

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

1. In a wringer, the combination of the posts; suitable bearings in the posts; wringer rollers between the said bearings, having spiral blade flexible elastic cores of metal and having end shafts in said bearings; intermeshing gears on said shafts at the ends of said rollers; and disks outside of the said bearings at the outer ends of the shafts of both rollers of such dimension as to contact with each other and run in contact with each other, whereby the parallel relation of the roller shafts is maintained, all coacting substantially as described and for the purpose specified.

2. In a wringer, the combination of the

posts; suitable bearings in the posts; wringer rollers between the said bearings, having flexible elastic cores of metal and having end shafts in said bearings; intermeshing gears on said shafts at the ends of said rollers; and disks outside of the said bearings on the outer ends of the shafts of both rollers of such dimension as to contact with each other and run in contact with each other, whereby the parallel relation of the roller shafts is maintained, all coacting substantially as described and for the purpose specified.

3. In a wringer, the combination of the posts; suitable bearings in the posts; and wringer rollers between the said bearings, having spiral blade auger-shaped flexible elastic cores of metal and having end shafts in said bearings, all coacting substantially as described and for the purpose specified.

In witness whereof, I have hereunto set my hand and seal in the presence of two witnesses.

LYLE C. SMITH. [L. S.]

Witnesses:

GEORGE W. DILLENBACK,
ROSE L. DILLENBACK.