

No. 693,853.

Patented Feb. 25, 1902.

J. FROSSARD.
CALENDER ROLL CLEANSER.

(Application filed Oct. 25, 1901.)

(No Model.)

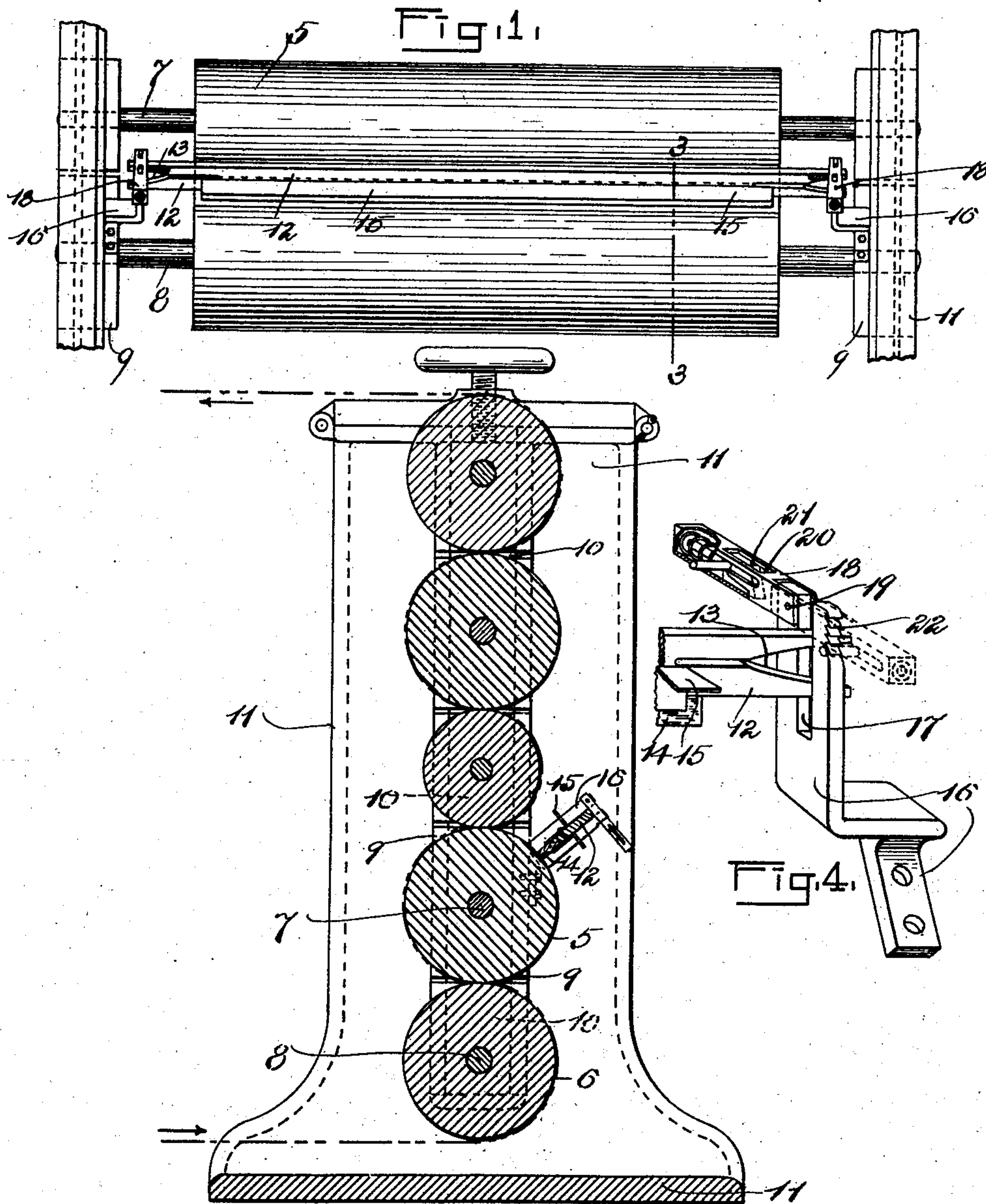


Fig. 2.

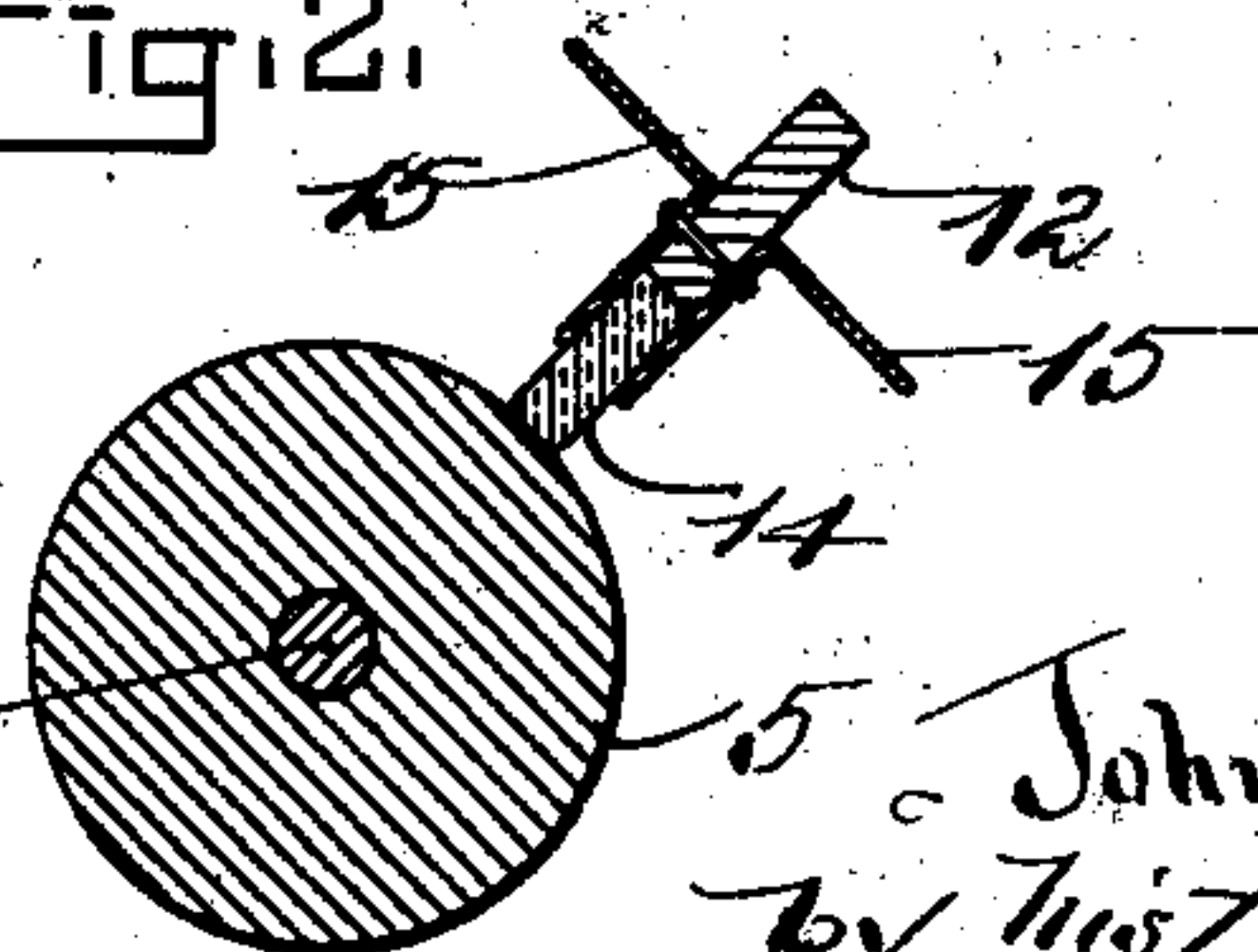
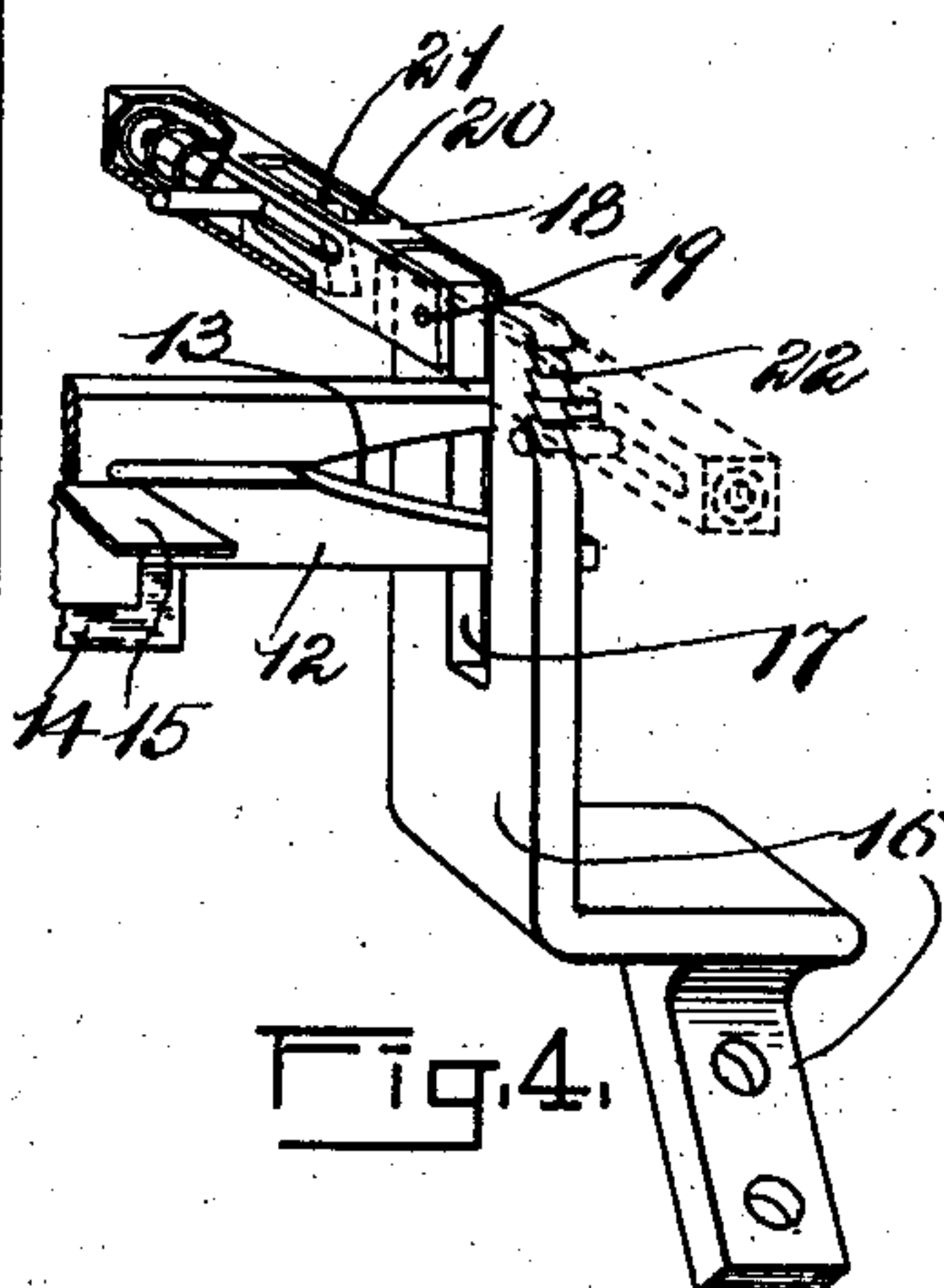


Fig. 3.

Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN FROSSARD, OF EAST PEPPERELL, MASSACHUSETTS.

CALENDER-ROLL CLEANSER.

SPECIFICATION forming part of Letters Patent No. 693,853, dated February 25, 1902.

Application filed October 25, 1901. Serial No. 79,904. (No model.)

To all whom it may concern:

Be it known that I, JOHN FROSSARD, a citizen of the United States, residing at East Pepperell, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Calender-Roll Cleansers, of which the following is a specification.

The object of this invention is to provide a cheap, durable, and practical device for cleansing calender-rolls.

While my device is particularly adapted to cleansing the surface of calender-rolls in the manufacture of paper, the same may be used for cleansing rolls used in different classes of machinery.

It is very essential that the rolls used in calendering paper should have a smooth clean surface in order that the surface of the paper may be correspondingly smooth and well finished; and it is the object of the invention to provide a device which while constantly cleansing the calender-roll yet will be of such construction and operation that the surface of the roll will not be injured or worn thereby, while all dirt or pieces of paper or any foreign material will be removed from the periphery of the roll before it arrives at the surface of the paper in its rotation.

The invention consists of a calender-roll cleanser comprising a supporting-bar, a clamp fast to said supporting-bar, a strip of cleansing material detachably fastened to said bar by said clamp, and means for forcing said bar toward the calender-roll with a spring-pressure.

The invention further consists in the combination of a roll, a supporting-bar, a strip of cleansing material fast to said supporting-bar, a pair of standards each provided with a slot to receive one end of said supporting-bar, and means attached to each of said standards to engage said supporting-bar and force the same toward said roll.

The invention still further consists in the combination and arrangement of parts set forth in the following specification, and particularly pointed out in the claims thereof.

Referring to the drawings, Figure 1 is a front elevation of a pair of calender-rolls with a portion of the standards upon which said calender-rolls are supported, showing my

improved calender-roll cleanser attached thereto. Fig. 2 is a vertical sectional elevation of one of the standards shown in Fig. 1 looking toward the right in said figure, showing several calender-rolls and their respective shafts in section, with my improved cleanser attached to the sliding box in which the shaft of one of said rolls has a bearing, the clamping-lever being shown pressed down upon the end of the supporting-bar and locked in position. Fig. 3 is a detail transverse section taken on the line 3 3 of Fig. 1. Fig. 4 is a perspective view of the right-hand end portion of the supporting-bar, showing the same in connection with the bracket by which the ends of said supporting-bar are held in position and the clamping-lever, said clamping-lever being shown thrown back in full lines and pressed down upon the end of the supporting-bar and locked to the bracket in dotted lines and being partly broken away to show the spring in the interior thereof.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, 5 6 are two calender-rolls fast to shafts 7 8, respectively, and arranged to rotate in bearings in the sliding boxes 9, said sliding boxes being arranged to slide in slots 10 in the frame-standards 11, all in a manner well known to those skilled in the art.

In Fig. 2 the paper to be calendered is indicated by a broken and dotted line entering the machine at the bottom and leaving the same at the top in the direction of the arrows. My improved cleanser is shown in connection with one of the calender-rolls 5; but the same may be attached to any or all of said calender-rolls and in each case is placed upon the side of the roll opposite to that in contact with the paper.

The cleanser consists of a supporting-bar 12, provided at each end with a slot 13 and having a strip of cleansing material 14, preferably felt, attached or fastened thereto by means of thin spring-metal clamping-plates 15, one fast to each side of said supporting-bar 12 by means of screws or rivets.

To the inner side of each of the sliding boxes 9 is rigidly fastened a bracket 16, provided with a vertical slot 17, extending from the top thereof downwardly through a por-

tion of its length, each of said slots 17 being adapted to receive and guide one end of the supporting-bar 12. A clamping-lever 18 is pivoted at 19 to the bracket 16 and serves to provide means for forcing the supporting-bar 12 downwardly toward the calender-roll 5. Each of said levers 18 is slotted at 20 and is provided with a spring-pawl 21, which when the lever 18 is brought to bear against the supporting-bar 12, as shown in full lines in Fig. 2 and in dotted lines, Fig. 4, engages teeth 22, formed upon one side of the bracket 16, and thus locks said lever 18 in the position shown in dotted lines, Fig. 4, and when in that position said lever engages one end of the supporting-bar 12 and forces the same downwardly toward the calender-roll 5, the slots 13 supplying a yielding construction to said supporting-bar, so that when the levers 18 are turned downwardly and pressed against each end of the supporting-bar 12 said supporting-bar will be forced toward the calender-roll 5 and will bring the strip 14 against the periphery of said calender-roll with a yielding pressure. It is evident that this yielding pressure may be supplied in a variety of ways, either in the material of which the strip 14 is composed or by means of the springs interposed between the supporting-bar 12 and the clamping-lever 18.

The cleansing-strip 14 may be readily removed from between the clamp-plates 15 and a new strip inserted whenever it becomes necessary on account of wear. It will be seen that by throwing the lever 18 upwardly and toward the right, Fig. 2, from the position shown in dotted lines to that shown in full lines the supporting-bar, together with the cleansing-strip, can be readily removed from the machine by raising the same out of the slots 17 in the bracket 16 upon the standards 11. It will also be seen that the strip of felt 14, while forming a perfect cleansing means for the calender-roll 5, is of soft material and does not injure the polished surface of said calender-roll, and also that the yielding pressure supplied by the slotted supporting-bar 12 and levers 18 holds the strip 14 in perfect contact with said calender-roll 5 without injuring the surface thereof.

Having thus described my invention, what

I claim, and desire by Letters Patent to secure, is—

1. In a calender-roll cleanser, a supporting-bar, a clamp fast to said supporting-bar, a strip of cleansing material detachably fastened to said bar by said clamp, and means to force said supporting-bar against the periphery of a roll with a spring-pressure.

2. In a calender-roll cleanser, a supporting-bar provided with a slot at each end extending longitudinally thereof, a clamp fast to said bar, and a strip of cleansing material detachably fastened to said bar by said clamp.

3. In a calender-roll cleanser, a supporting-bar provided with a slot at each end extending longitudinally thereof, a strip of cleansing material fast to said bar, and means to engage said supporting-bar above said slots and force the said bar toward a roll with a spring-pressure.

4. In combination, a roll, a supporting-bar, a strip of cleansing material fast to said supporting-bar, a pair of standards each provided with a slot to receive one end of said supporting-bar, and means attached to each of said standards to engage said supporting-bar and force the same toward said roll.

5. In combination, a roll, a supporting-bar, a strip of cleansing material fast to said supporting-bar, a pair of standards each provided with a slot to receive one end of said supporting-bar, and means attached to each of said standards to engage said supporting-bar and force the same toward said roll with a spring-pressure.

6. In combination, a roll, a supporting-bar, a strip of cleansing material fast to said supporting-bar, a pair of standards each provided with a slot to receive one end of said supporting-bar, a lever pivoted to one of said standards adapted to engage one end of said supporting-bar and force the same toward said roll, and means for locking said lever to said standards.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN FROSSARD.

Witnesses:

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