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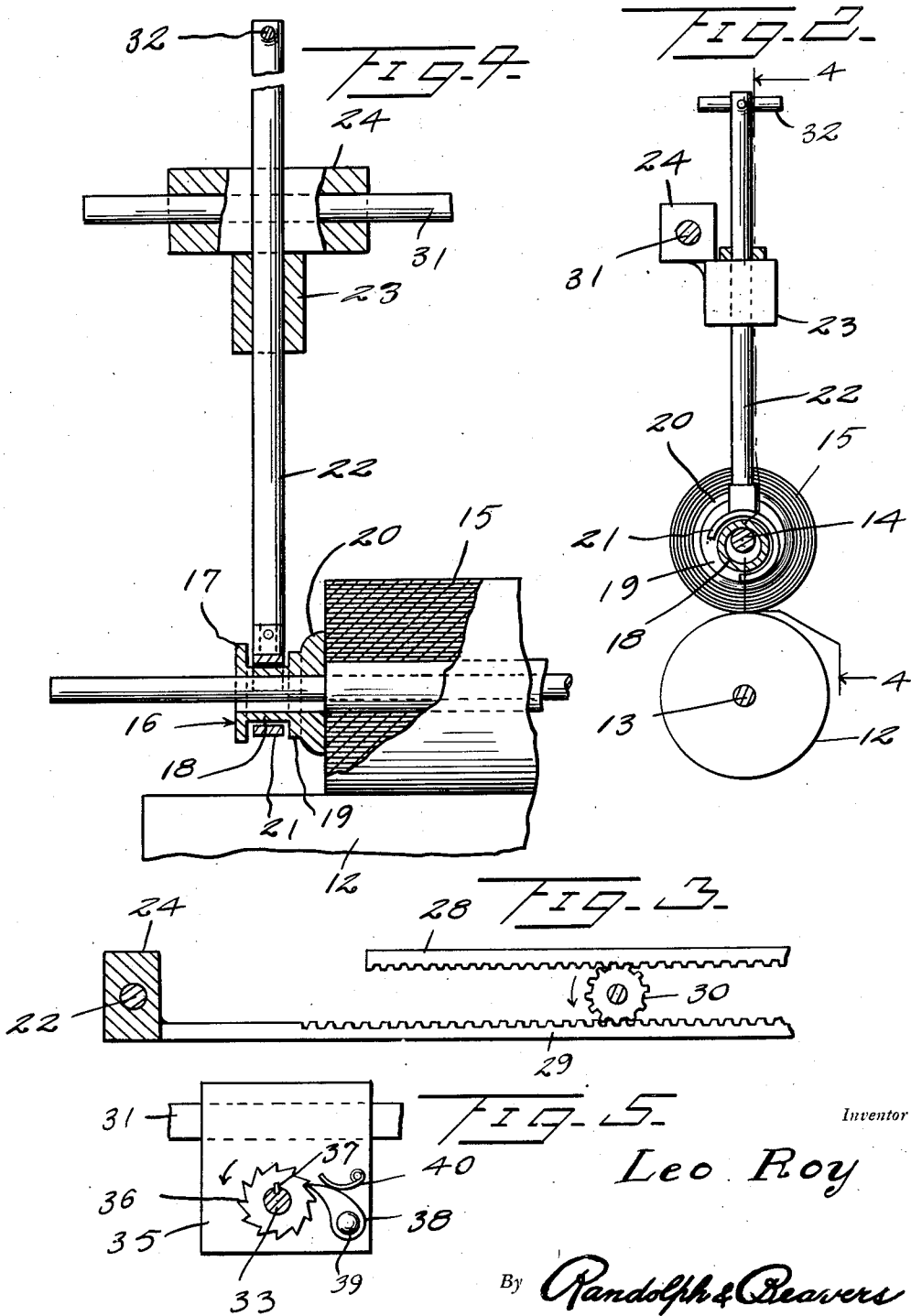
L. ROY

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GUIDE FOR PAPER ROLLING MACHINES

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2 Sheets-Sheet 2



Inventor

Leo Roy

By *Randolph & Creavers*
Attorneys

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GUIDE FOR PAPER ROLLING MACHINES

Leo Roy, Troy, N. Y.

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2 Claims. (Cl. 242-65)

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This invention relates to improvements in guides used during the rolling of paper.

When winding paper upon a revolving shaft there is generally a tendency of the paper to wind in an uneven manner, which action will produce a roll having one end concaved and the other end convexed, in other words, the ends will be inwardly and outwardly coned, instead of being flat, the result of which causes the machine in which the roll is to be used, to become inaccurate and at times even unmanageable.

The primary object of this invention is to produce a roll whose ends are even from the core to the outer circumference of the roll.

Another object is to provide such a machine that is of simple construction and very easy of operation.

Another object is to provide a machine of this type that is accurate and definite in its operation.

And another object is to provide a machine of this character that is economical in maintenance and of comparatively small cost in construction.

And a further and also an important object is the provision of such a machine that offers a maximum of safety to the operator.

The manner in which the above and other objects is effectuated will become apparent from a reading of the specification taken in connection with the accompanying drawings, in which—

Figure 1 is a front elevation of the machine.

Figure 2 is a view, partly in section, taken on the line 2-2 of Figure 1.

Figure 3 is a bottom plan view of the lateral adjusting rack, taken on the line 3-3 of Figure 1.

Figure 4 is a top plan view, partly in section, of the left hand portion of the machine, and

Figure 5 is a detail view of the retaining means taken on the line 5-5 of Figure 1.

Similar numerals refer to similar parts throughout the several views.

A roller drum 12 which is mounted on a revolvable shaft 13 is laterally stationary but, due to the adjustability of the paper roll core 14 will cause the roll of paper 15 to be constantly kept in contact therewith.

As the right and left hand elements of the machine are identical in construction, it is believed that a description of one will suffice for a clear understanding of this part.

A hub 16 has an outer flange 17 and, inwardly thereof a bearing surface 18 with an inner flange 19 adjacent a paper retainer 20.

Around the bearing portion 18 of the hub 16 is arranged the lower end 21 of a shaft 22 and the

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shaft 22 extends through the block 23, which is attached to a laterally movable collar 24.

The upper and lower racks 28 and 29, respectively, Figure 3, with the cog wheel 30, form a lateral adjustment for the blocks 23, as one end of each is connected to these blocks.

The collars 24 are slidably mounted on a shaft 31 and as the collar 24 is offset, vertically from the block 23, see Figure 2, there will be no interference with the shaft 22.

The pins 32 prevent the shafts 22 from going all the way through the collar 24.

Intermediate the shafts 22 is an adjusting means comprising a shaft 33 with a handle 34 arranged at its outer end and the inner end of which has mounted thereon the rack gear 30.

The shaft 33 extends through a block 35, see Figure 5, and has thereon, and positioned against said block, a ratchet 36, keyed by the key 37 thereto, and a cooperating pawl 38, pivoted at 39, the latter of which is spring-pressed for engagement with the teeth of the ratchet 36 by the spring 40.

With respect to the operation of the apparatus, when the paper starts winding on the shaft 14, the paper is wound loosely, then as the friction is applied, it starts to become firmer. When this firmness starts to take place, the center that was wound loosely on the shaft is forced out of line and the roll starts coning and unless this is stopped, the roll is lost.

In carrying out the present invention, the flanges 20 are drawn to each end of the roll of the paper as soon as there is enough clearance over the drum 12 to admit them. Up until that time, there is not enough friction on the paper to cause a coning. Flanges 20 hold in place the loosely wound center of the roll until the roll becomes firm. After the roll becomes firm, there is no more danger of the paper coning, therefore the flanges do not need to be in the same diameter as the roll of paper. The roll can be made any size, it being only the loosely wound center that causes the coning and if the flanges 20 are applied to stop that, the roll can be made as large as required without any trouble. Some rolls are made as large as fifty inches in diameter.

While I have illustrated and described the preferred embodiment of my invention, it should be understood that various changes may be made while keeping within the scope of the appended claims.

What I claim is:

1. A guide mechanism for rolling paper comprising a reel drum, an elongated winding shaft

having its axis parallel to the axis of said drum, a pair of hubs revolubly mounted on said shaft and between which paper is wound upon said winding shaft and said hubs having a circumferential groove in their outer peripheries, a circular retainer member loosely mounted on the shaft between each of the hubs and the roll of paper, a horizontal stationary member mounted above the winding shaft, a pair of slide blocks horizontally slidable on said stationary member, a laterally offset guide block integrally formed with each of the slide blocks and each having a vertical opening therethrough, a pair of vertical guide rods extending through the guide blocks, a yoke at the lower end of each rod for embracing a hub within its groove, a control block slidably mounted upon the horizontal stationary member, a control shaft extending vertically through the control block, a rack extending horizontally inwardly from each of the slide blocks, a gear affixed to the lower end of the control shaft and enmeshed with both of said racks and an operating handle at the upper end of the control shaft.

2. A guide mechanism for rolling paper comprising a reel drum, an elongated winding shaft having its axis parallel to the axis of said drum, a pair of hubs revolubly mounted on said shaft and between which paper is wound upon said winding shaft and said hubs having a circumferential groove in each of their outer peripheries, a circular retainer member loosely mounted on the shaft between each of the hubs and the roll of paper, a horizontal stationary member mounted above the winding shaft in parallel relation there-

to, a pair of slide blocks horizontally slidable on said stationary member, a laterally offset guide block integrally formed with each of said slide blocks and each having a vertical opening there-through, a pair of vertical guide rods extending through the guide blocks, a yoke at the lower end of each rod for embracing a hub within its groove, a control block slidably mounted upon the horizontal stationary member, a control shaft extending vertically through the control block, a rack extending horizontally inwardly from each of the slide blocks, a gear affixed to the lower end of the control shaft and enmeshed with both of said racks, an operating handle at the upper end of the control shaft, a ratchet affixed to the control shaft adjacent the upper side of the control block and a spring-pressed pawl for the ratchet carried by the control block.

LEO ROY.

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