

No. 801,389.

PATENTED OCT. 10, 1905.

O. E. LINDFORS.
PAPER TRIMMING MACHINE.

APPLICATION FILED MAR. 3, 1905.

2 SHEETS—SHEET 1.

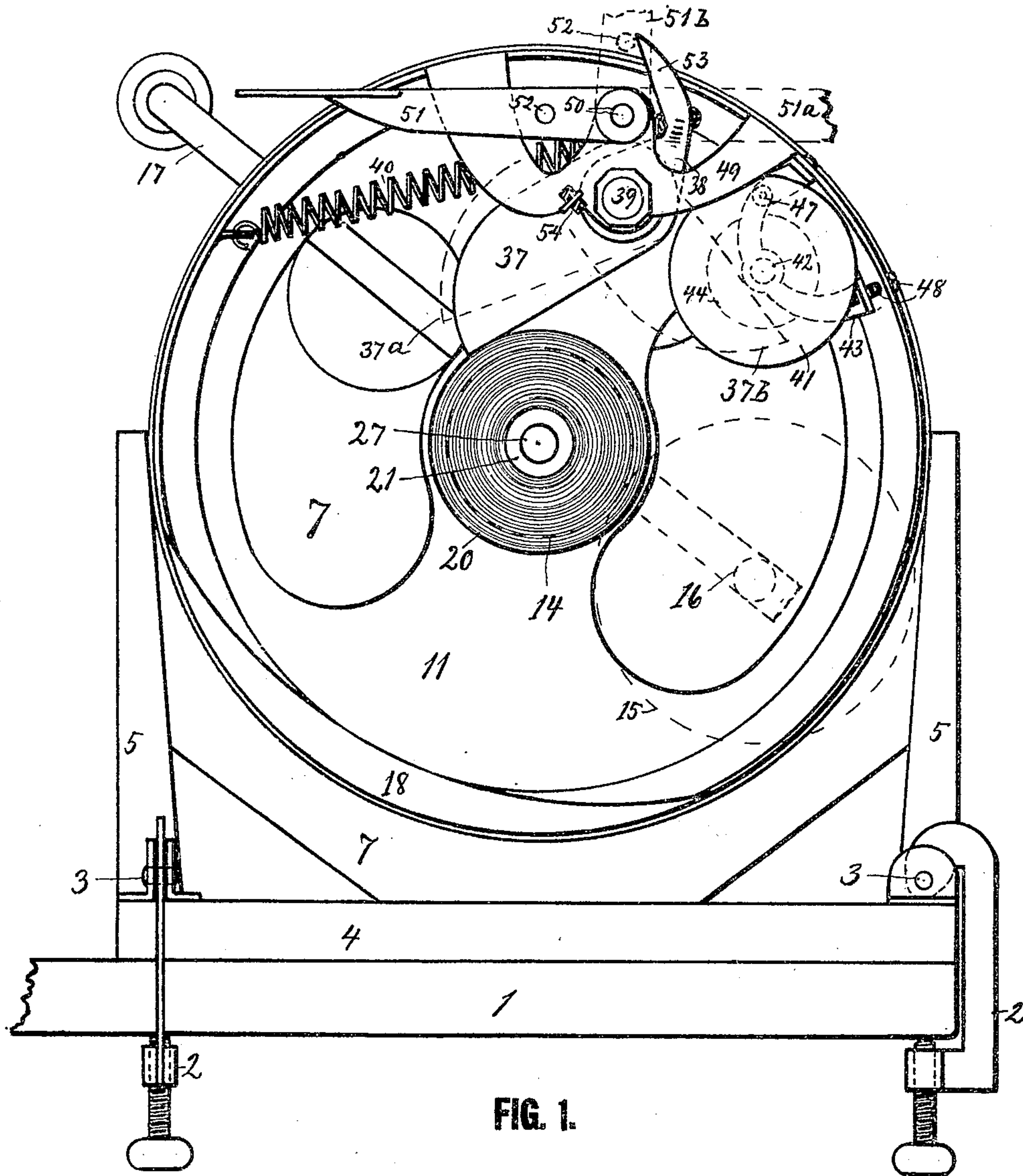


FIG. 1.

WITNESSES:

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E. C. Carlson.

INVENTOR.

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BY his ATTORNEY:
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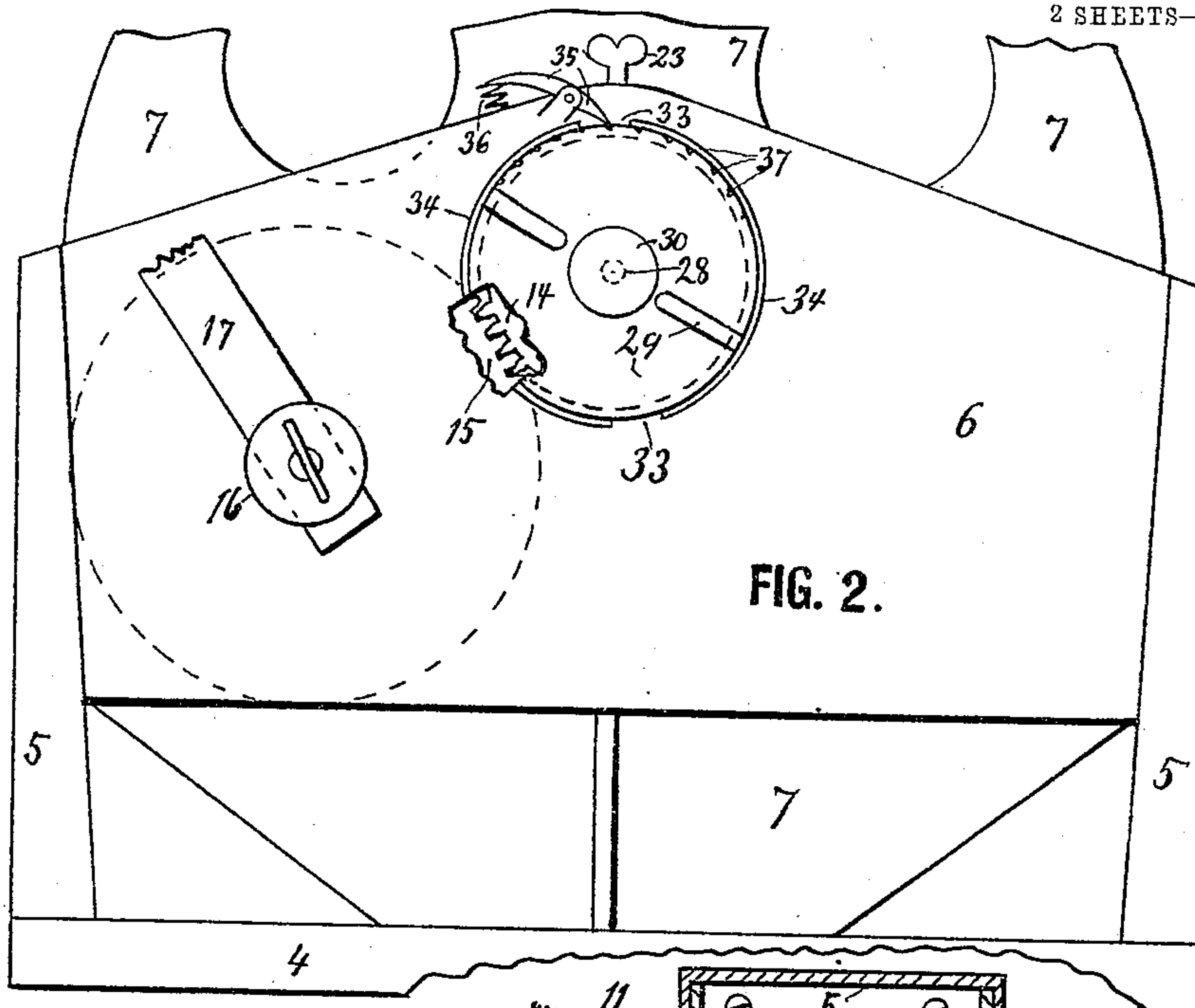


FIG. 2.

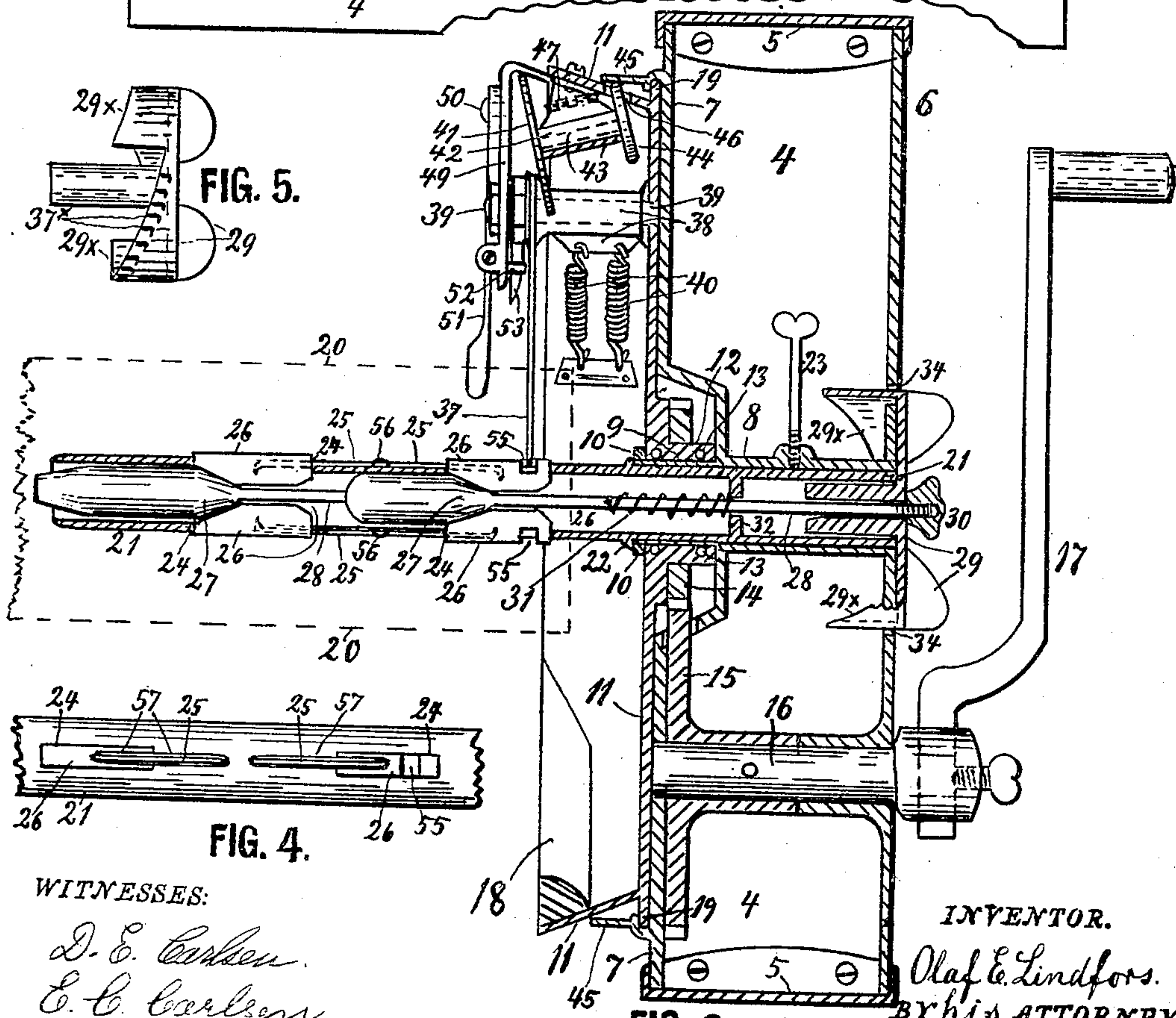


FIG. 3.

WITNESSES:

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UNITED STATES PATENT OFFICE.

OLAF E. LINDFORS, OF FRUITA, COLORADO.

PAPER-TRIMMING MACHINE.

No. 801,389.

Specification of Letters Patent.

Patented Oct. 10, 1905.

Application filed March 3, 1905. Serial No. 248,212.

To all whom it may concern:

Be it known that I, OLAF E. LINDFORS, a subject of the King of Sweden and Norway, (but having declared my intention to become a citizen of the United States,) residing at Fruta, in the county of Mesa and State of Colorado, have invented certain new and useful Improvements in Paper-Trimming Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to devices for trimming wall-paper; and the main object is to provide a handy and efficient device or machine by which wall-paper may be trimmed without unrolling it. This and other objects I attain by the novel construction and arrangement of parts illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of my trimming-machine or trimmer secured upon the corner of a table. Fig. 2 is a rear elevation of a portion of Fig. 1. Fig. 3 is a substantially central horizontal section through the machine with working parts turned in the best positions for showing them clearly. Fig. 4 is a side view of a portion of the central supporting-bar projecting to the left in Fig. 3. Fig. 5 is a detail side view of the central cam shown to the right in Fig. 3.

Referring to the drawings by reference-numerals, the frame of the machine is securable to a table or bench 1 by screw-clamps 2, pivoted at 3, so that they may be folded upward to the sides of the frame, and thus allow the machine to be set upon any table or other place and to occupy but little space in a casing, (not shown,) in which it is kept and transported in a protected manner. Said frame consists of the base-piece 4, upright sides 5, rear plate 6, and front plate 7, all suitably secured together.

In the middle of the frame is formed a horizontal sleeve 8, having a forward projection 9, upon which is retained by a collar 10 a revoluble pan-shaped wheel 11, whose hub 12 may have ball-bearings 13. Upon said hub 12 is secured a spur-pinion 14, which is driven by the spur-gear 15, secured on the shaft 16, turned by the hand-crank 17.

18 is a weight provided at one side of the wheel 11 to counterbalance the paper-cutting

mechanism mounted upon the diametrically opposite part of the wheel and which will presently be fully described. The wheel 11, being made quite thin, so as to be light, is steadied by having a peripheral edge 19 revolving in a groove in the frame-plate 7.

The paper-roll to be operated on is placed, like 20, upon a tubular supporting-bar 21, which is inserted up to its collar 22 into the frame-sleeve 8 and there secured by a thumb-screw 23. In slotted holes 24 in the sides of the bar 21 are mounted on spring-arms 25 blocks 26, which are normally held about flush with the outer face of the bar, so as to let the paper-roll slip upon them. The blocks 26 are then forced outward against the inner sides of the roll by the cone-shaped enlargements 27 on the rod 28, which is held in the cam 29 by the thumb-nut 30, having its bottom screwed tightly against the end of the rod.

31 is a coil-spring secured to the rod 28 with one end and pressing against the bottom or collar 32, so as to hold the rod 28 normally inactive as to the blocks 26. To force the blocks outward, the rod 28 is pulled rearwardly by turning the thumb-cam 29, so that the cams 29^x, turning on the margins 33 (see Fig. 2) between the ends of the segmental slots 34 in the rear frame-plate, bring the cam and bar rearwardly. When the blocks 26 have thus got a firm hold in the paper-roll, the dog 35, pressed by the spring 36, engages the notches 37^x in the periphery of the cam and holds it until the dog is disengaged and the cam turned in the opposite direction, when spring 31 will move the rod to the left and release the paper-roll after it is trimmed.

The trimming is done by cutting the proper length off of the end of the paper-roll by a spring-pressed knife 37 revolving about the roll. This knife is secured with one end to a small frame 38, oscillating on a stud 39, projecting from the wheel 11 and actuated by the springs 40, with its free end against the side of the paper-roll, so that when the wheel revolves the knife cuts rapidly into the paper until its point has cut the last or smallest coil of the paper, when the blade is pulled by the springs up to the side of a small emery-wheel or steel wheel 41 and sharpened by a few extra turns of the crank 17. The said emery-wheel is secured at one end of a shaft 42, journaled in a frame 43, and having at its rear end a rubber-faced wheel 44, revolved by rolling along the inner face of a cylindrical rim 45 of the frame-

plate 7, a hole 46 being cut in the rim of the wheel 11 for said rubber wheel to reach the rim 45. The rubber wheel is adjustable against its track 45 by having the frame 43 pivoted with one end at 47 (see Figs. 1 and 2) and its other end adjustable by a screw 48 toward the rim of the main wheel 11.

Turning again to the cutting mechanism it will be seen that the front end of the stud 39 is supported in a frame brace or bar 49, upon which is pivoted with a friction-joint 50 a lever 51, which by said joint is held in any position it is turned to. On said lever is a pin or projection 52, which engages the arm 53 of the knife-holding frame 38, so that when the lever is turned in the position 51^a in Fig. 1 the knife stands like 37^a or higher to allow free motion of the paper-roll being placed in position. When the lever is then brought to position 51^b, the knife is forced by the springs against the paper. The lever is, however, not left in that position, but is closed down against the point of the screw 54, which so regulates the closing of the lever that when the springs 40 have forced the knife through the paper-roll and throws it against the grinding-wheel 41, as at 37^b, it will touch the wheel only with sufficient pressure for grinding. The arm 53 being curved cannot force the lever back from the position 51^a, but is locked by it, so that, if necessary, both hands may be used in adjusting the paper-roll.

In Figs. 3 and 4, 55 are notches in the blocks 26 for the knife to pass through, so that it may cut close to the bar 21. 56 represents means for fastening the spring-arms 25 at the middle when one wire is used with a block 26 at each end; but in Fig. 4 single arms are used, and they are sunk down into grooves 57 and secured with one end in the block and the other in the bar.

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

1. A paper-trimming machine having a supporting-bar adapted to be inserted into a roll of paper to hold it and a cutting mechanism adapted to be revolved about the roll and cut away a portion of its end, said mechanism comprising a spring-pressed knife for cutting the paper and means for holding the knife out of engagement when so desired and means adjacent the knife for sharpening it, substantially as set forth.

2. A paper-trimming machine comprising a suitable frame, a hollow paper-supporting

bar held by one end in the frame and having radial apertures in its sides, spring-held blocks moving radially in the apertures, the sliding bar 28 with enlargements to press the blocks outward, a spring holding said rod normally disengaged from the blocks, and means for operating the rod 28 and for holding it in operative engagement with the blocks, a spring-pressed cutter or knife, and a wheel mounted centrally to the supporting-bar and carrying the knife around the bar, and means for turning said wheel.

3. A paper-trimming machine, comprising a suitable frame, a paper-supporting bar projecting therefrom so as to go into a roll of paper and hold it, the main wheel 11 revolving concentrically about the supporting-bar, the adjustable frame 43 carried by the main wheel, a shaft journaled therein and a grinding-wheel 41 at one end of the shaft and a driving-wheel 44 at the other end, and a rim upon the main frame to engage the wheel 44 and cause it to revolve, a spring-pressed blade pivotally mounted on the main wheel in a position to swing its end closely to and across the side of the supporting-bar and then bring its edge into proper contact with the grinding-wheel to be sharpened by it, and suitable means for turning the main wheel.

4. A paper-trimming machine comprising a suitable frame, a paper-supporting bar projecting therefrom so as to go into a roll of paper and hold it, the main wheel 11 revolving concentrically about the supporting-bar, the adjustable frame 43 carried by the main wheel, a shaft journaled therein and a grinding-wheel 41 at one end of the shaft and a driving-wheel 44 at the other end, and a rim upon the main frame to engage the wheel 44 and cause it to revolve, a spring-pressed blade pivotally mounted on the main wheel in a position to swing its end closely to and across the side of the supporting-bar and then bring its edge into proper contact with the grinding-wheel to be sharpened by it, and suitable means for turning the main wheel, and means for regulating the pressure of the knife against the grinding-wheel, and means for holding the paper-roll firmly on the supporting-bar.

In testimony whereof I affix my signature in presence of two witnesses.

OLAF E. LINDFORS.

Witnesses:

J. G. GIVANS,

O. J. BOLINGER.