

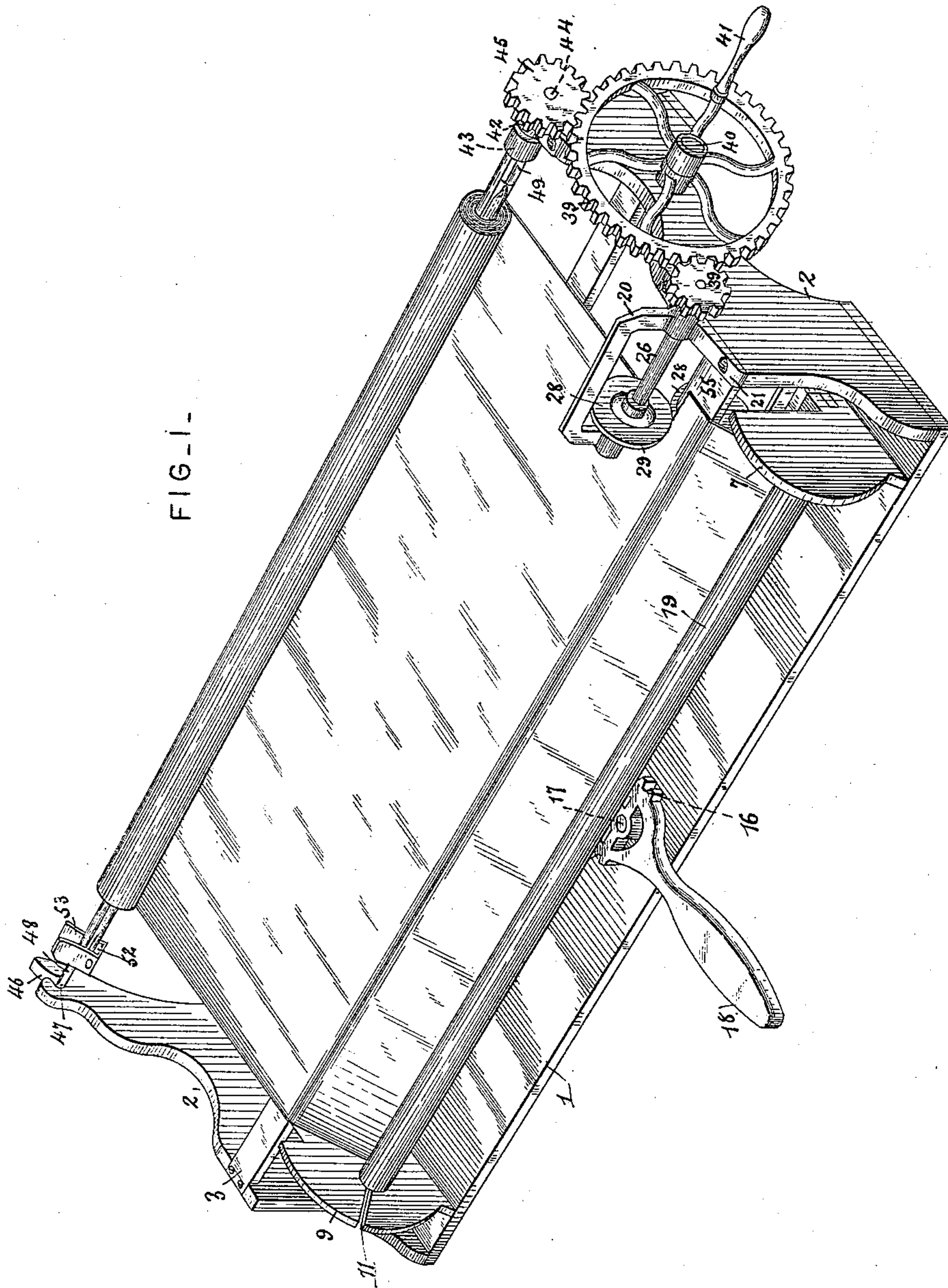
(No Model.)

3 Sheets—Sheet 1.

F. H. SHEPHERD & J. W. MEYER.
MACHINE FOR UNWINDING AND TRIMMING WALL PAPER.

No. 441,335.

Patented Nov. 25, 1890.



Witnesses:

Jas. H. McElathran

M. F. Duval

By their Attorneys.

Inventors

Francis H. Shepherd
John W. Meyer

C. A. Snow & Co.

(No Model.)

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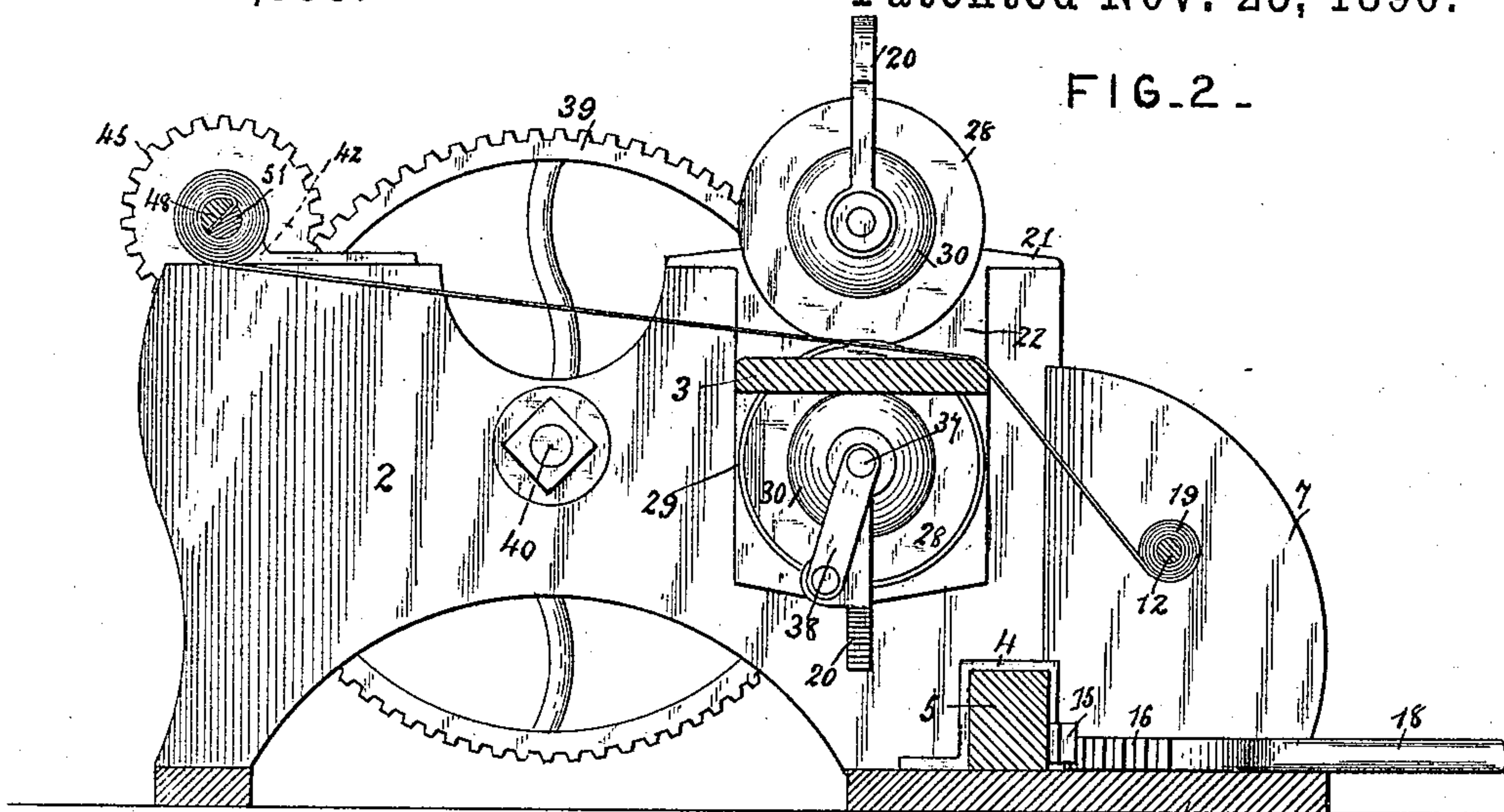
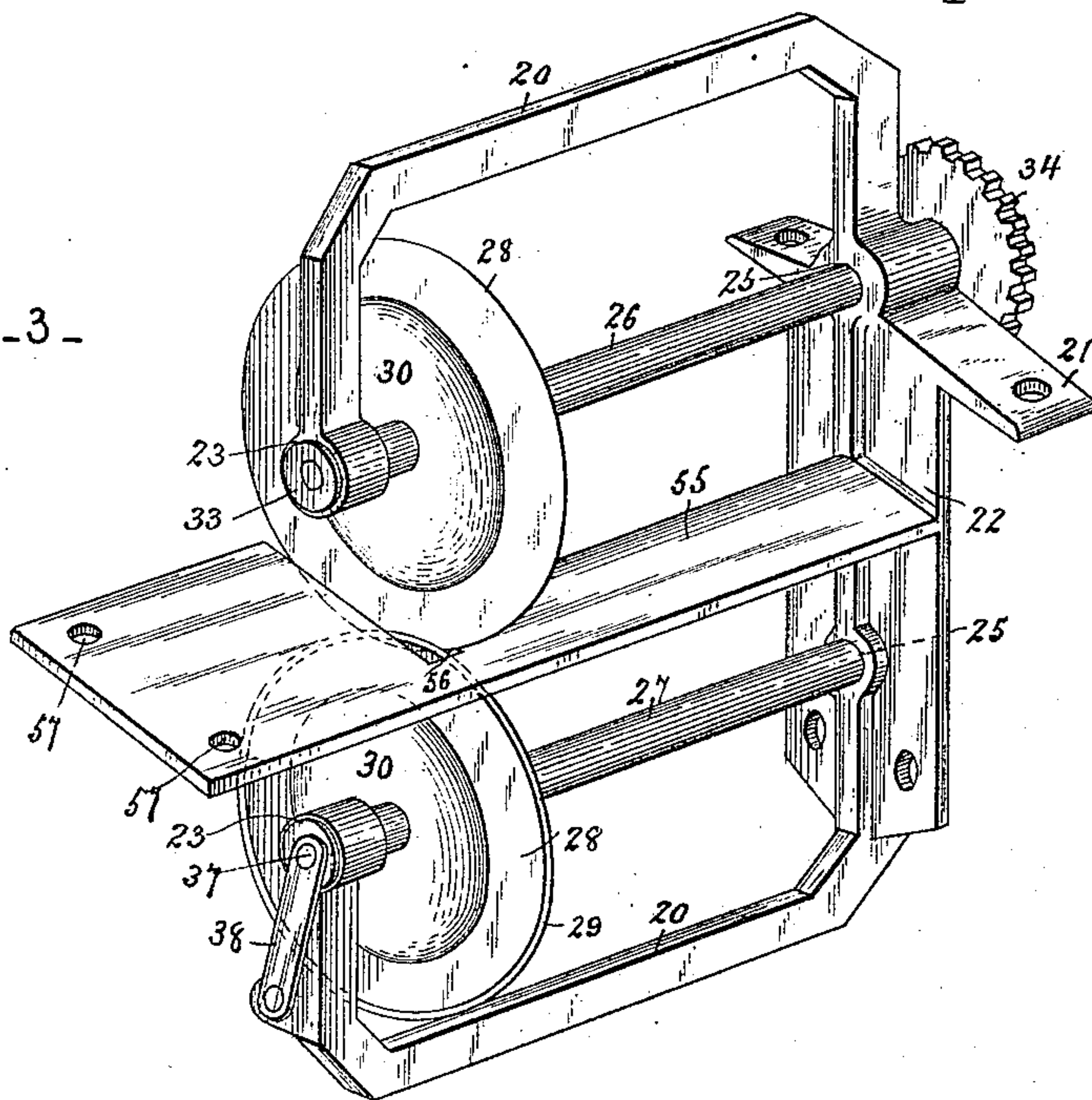


FIG. 3.



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FIG. 4 -

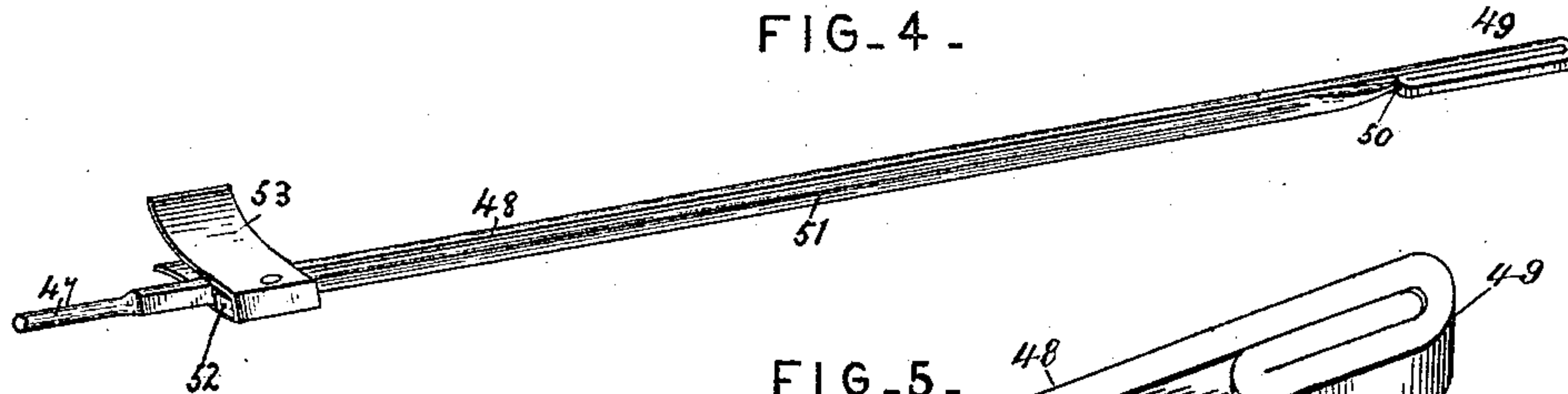


FIG. 5 -

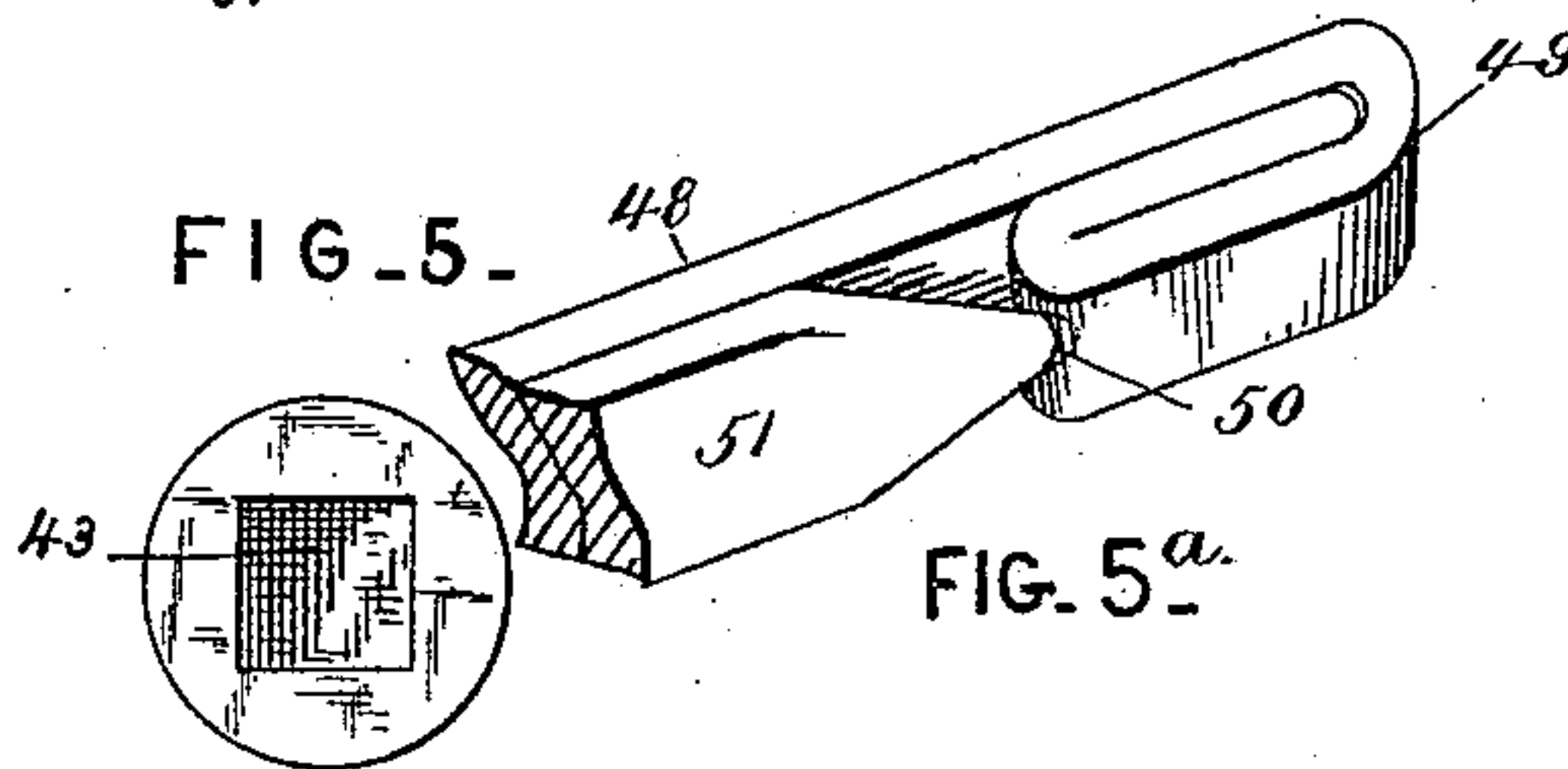


FIG. 5a -

FIG. 6 -

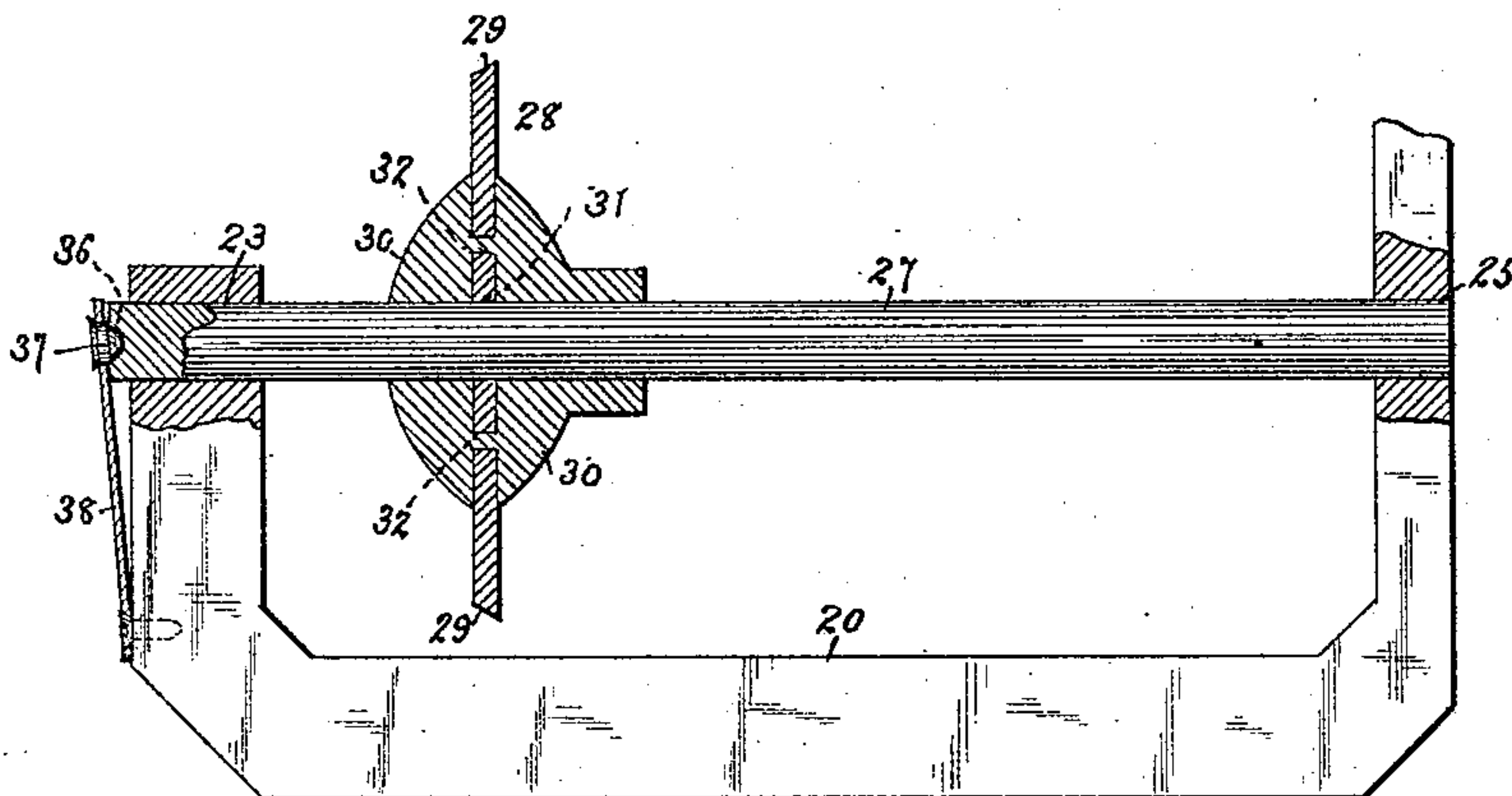
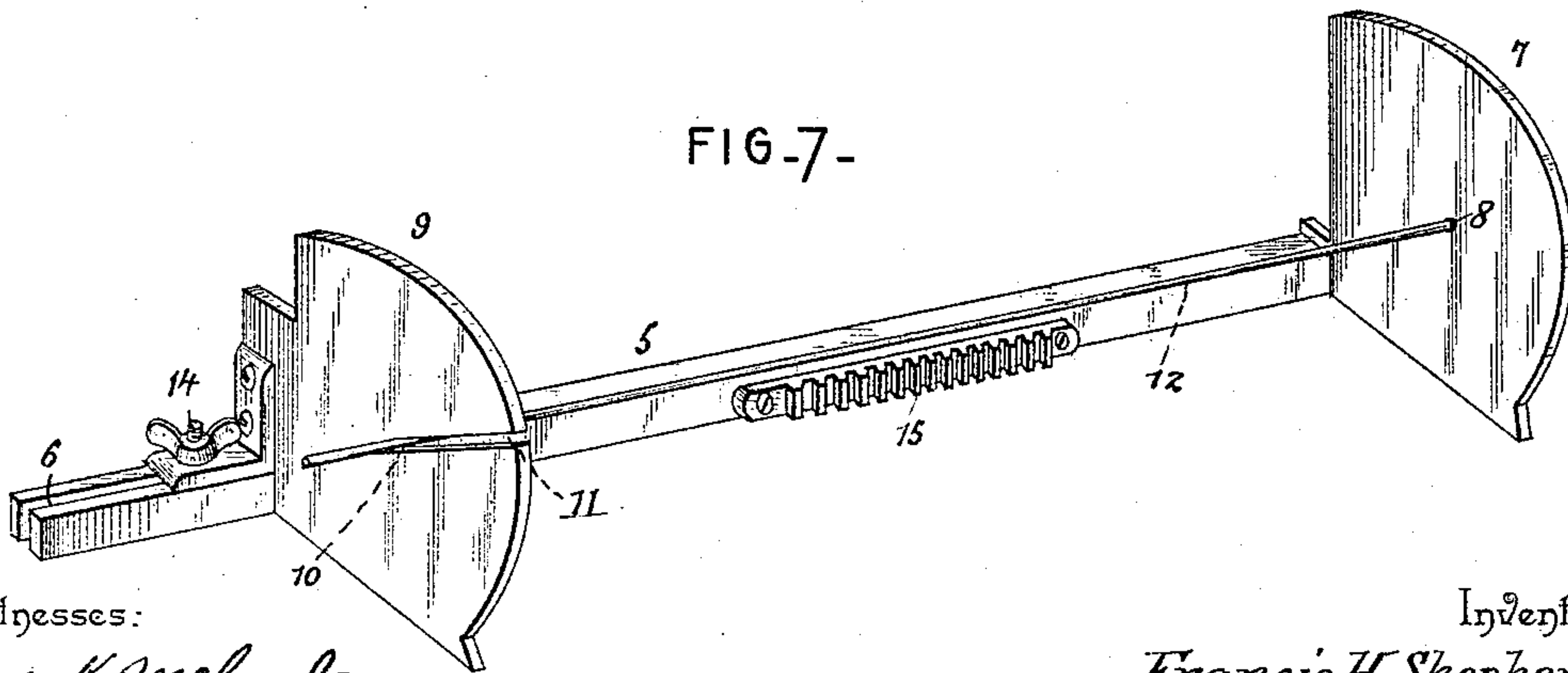


FIG. 7 -



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UNITED STATES PATENT OFFICE.

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MACHINE FOR UNWINDING AND TRIMMING WALL-PAPER.

SPECIFICATION forming part of Letters Patent No. 441,335, dated November 25, 1890.

Application filed April 12, 1890. Serial No. 347,738. (No model.)

To all whom it may concern:

Be it known that we, FRANCIS H. SHEPHERD, of Davenport, Scott county, Iowa, and JOHN W. MEYER, of Rock Island, Rock Island
5 county, Illinois, citizens of the United States, have invented a new and useful Machine for Unwinding and Trimming Wall-Paper, of which the following is a specification.

This invention has relation to a machine
10 for unwinding and trimming the edges of wall-paper and subsequently rewinding the same.

The objects of the invention are to simplify the construction and improve the details of
15 the invention, as will hereinafter appear in the following description, and be particularly pointed out in the appended claims.

Referring to the drawings, Figure 1 is a perspective of a machine constructed in accordance with our invention. Fig. 2 is a transverse section of the same. Fig. 3 is a perspective in detail of the cutting-head and its support. Fig. 4 is a perspective of the winding-rod and its removable clamping-bar.
25 Fig. 5 is an end elevation of the socket for receiving the end of the bar. Fig. 5^a is an enlarged detail of the locking end of the rod 48. Fig. 6 is a detail in transverse section of one of the cutting-disks, its supporting-shaft, and connections. Fig. 7 is a detail in perspective of the unwinding-roll and its adjustable head, together with the reciprocating bar.

Like numerals of reference indicate like
35 parts in all the figures of the drawings.

The base 1 of the machine is provided at opposite ends with standards 2, rising vertically therefrom and connected near their upper ends by a guide-bar 3.

40 Longitudinally opposite each other and secured to the base under the guide-bar 3 are a pair of U-shaped clips 4, in which is mounted for longitudinal movement a reciprocating bar 5, one extremity of which is vertically slotted for a portion of the length of the bar, as shown at 6. The opposite end of the bar is provided with a fixed standard 7, provided with a central bearing or opening 8. The slotted end of the bar 5 is provided with
50 a movable standard 9, the center of which is provided with a perforation 10, agreeing with

that of the opposite standard, and from the same there radiates an inclined slot 11, extending to the edge of the standard. A roll-receiving rod 12 is mounted in the opening 55 in the fixed standard in such a manner as to be capable of a universal movement, the opposite end of the rod being inserted through the radial slot 11 into the perforation 10, where it rests. From the above it is apparent 60 that the free end of the rod may be withdrawn from the slot and swung outward sufficiently to receive the axial opening of an ordinary paper-roll.

An L-shaped bracket is secured to the outside face of the movable standard 9, the lower L-head of the bracket resting upon the reciprocating bar 5 and provided with a perforation through which is inserted a binding-bolt 14, the body of which passes through the 70 slot 6 of the rod, and thus it is apparent that the movable standard may be slid along upon the reciprocating rod toward or from the fixed standard, so that rolls of paper of varying widths may be accommodated upon the 75 rod 12.

The front face of the reciprocating rod 5 is provided with a centrally-located rack-bar 15, and meshing with the rack-bar is a toothed sector 16, the hub of which is pivoted, as at 80 17, to the base 1, the sector being extended to the opposite side of its pivot to form a handle 18, by which said sector may be oscillated, and, meshing with the toothed rack-bar, will serve to oscillate the reciprocating bar 5, 85 which carries with it the two standards 7 and 9 and the roll 19 of paper mounted thereon. By this construction, as will be hereinafter apparent, the paper is fed to or from the cutting-point of the machine, so that a greater 90 or less area of the same is thrown to the opposite side of the cutting medium, and hence a greater or less width of margin removed from the paper.

The cutting mediums are supported upon 95 shafts or arbors journaled in a G-shaped casting 20, which at its rear side is provided with horizontal and vertical securing-plates 21 and 22, respectively, which embrace the upper and inner surface of one of the side 100 standards and are secured thereto by screws passed through perforations in the plates and

terminating in the standard. The two terminals of the **G**-shaped casting are each provided with a transverse bearing-opening 23, and registering with the same in the same horizontal planes are similar openings 25, formed in the rear of the casting. In these upper and lower openings are mounted the two shafts or arbors 26 and 27, in which said shafts are adapted to freely rotate. Each of the shafts is provided with a cutting disk or wheel 28, the peripheries of which are upon their outer sides slightly beveled, as at 29, so that, the two plane faces of the disks being in constant contact and yielding, as herein- after described, it will be apparent that each acts to sharpen the other. The opposite sides of the disks are each provided with a hemispherical or convex plate 30, made solid with the shaft and with their respective disks in the following manner: Two concaved molds are employed and the wheel or disk placed between the same, said wheel or disk being provided with a central shaft-receiving opening 31, which registers with similar openings formed at the centers of the molds. The shaft is then passed through the three registering openings, and into the molds the hot metal is poured and permitted to cool. The disk is also provided with one or more minute perforations 32, so that the metal when poured into one mold will flow into the opposite mold and a portion of said metal will remain in the perforations, and thus connect the two opposite cast plates rigidly together and rigid with the disk.

The upper shaft 26 is provided at its inner end with a disk 33 and at its opposite end, which passes through its supporting-bearing, with a small pinion 34. The lower shaft 27 has its outer end seated in the socket-bearing, while its inner end passes through and slightly beyond the companion bearing formed in the lower terminal of the **G**-shaped casting, and at its end is provided with a countersunk recess or concavity 36, into which rests a detent 37, upon the inner side and at the free end of a flat spring 38, secured to the terminal of the casting just below its bearing-opening. In this manner the lower disk is maintained in yielding contact with the upper disk, so that not only is a cut insured, but one disk will grind upon the other, so that they serve to sharpen each other, and need not be removed for resharpening their cutting-peripheries.

39 represents the master-gear, which is mounted upon a stub-shaft 40, secured to that standard 2 supporting the **G**-shaped casting, said master-gear meshing with the small pinion on the outer end of the shaft 26 and being provided with a crank 41 for operating the same. The rear end of the gear-supporting standard 2 is upon its upper surface provided with a cylindrical bearing 42. A stub-shaft 44 is mounted in the bearing and is provided at its outer end with a pinion 45, which meshes with and is driven by the master-gear,

and at its opposite end with a square socket 43. The opposite standard 2 is provided with an inclined slot 46, the lower end of which terminates in a bearing 47.

48 represents a rod, one end of which is cylindrical and rests in the bearing 47, and the opposite end is bent upon itself to form a square head 49, adapted to be inserted in the square socket, the inner end of the bent portion being provided with a small aperture 50. This rod is of convex-plano shape in cross-section, and of a similar shape is the clamping-bar 51, the two plane faces of the rods or bars being arranged adjacent to each other, and the rod or bar 51 being provided with a reduced end 52, adapted to enter the perforation in the bent end of the opposite rod. The opposite end of the rod 51 is provided with a **U**-shaped spring-clamp 53, the terminals of which are adapted to be sprung over the companion rod, and also enable one rod to be separated from the other.

This being the construction of our invention, the operation is as follows: A roll of paper the edges of which are to be trimmed is mounted upon the unwinding-rod, as shown, and the leading end of the paper introduced over the winding-rod, the clamping-bar having been removed previous to such introduction. When thus in position, the reduced end of the clamping-bar is inserted in the socket or opening formed in the head of the unwinding-bar and the said clamping-bar lowered into parallelism with the unwinding-bar and the spring clip or clamp sprung over the latter bar. It will now be seen that the two bars have snugly clamped the paper at its leading end and are rigidly connected with each other. The machine is now started and will operate in a manner apparent to those skilled in machines of this class, the knives moving in unison and the winding-rod revolved, so as to draw the paper to the cutting-point and subsequently rewind the same upon said winding-rod. By operating the sector the reciprocating bar 5, together with the mechanism which it carries, will be moved, so as to take the roll of paper nearer to or farther from the cutting-disks, and thus remove from said roll a narrower or wider margin, as required. After the paper has been trimmed upon one edge the winding-rod is removed from its bearings and slid from the roll, the clamping-rod being first removed from position. The paper may now be reversed, so that the opposite edge will be trimmed, the operation of accomplishing the same being exactly similar to that just described, and therefore requiring no specific description. The lower terminal of the **G**-shaped casting and the rear portion of the said casting is connected by a transverse feed-plate 55, slotted, as at 56, to permit of the passage of the cutting-edges of the wheels, which have frictional contact just above said plate. The inner end of the plate is connected to the guide-

bar 3 by screws passed through openings 57, and thus the guide-bar forms a continuation of the plate.

Having thus described our invention, what we claim is—

1. In a cutter of the class described, the combination, with the base and the superimposed cutting mediums, of a pair of inverted-U-shaped clips secured to the base longitudinally opposite each other, a reciprocating bar mounted in the clips and having one of its ends provided with a vertical longitudinal recess, a fixed standard secured to the bar at the opposite end, a standard secured to the recessed end of the bar, an L-shaped plate secured to the last-mentioned standard, a binding-bolt passing through the lower L end of the bolt through the slot or recess and having a head taking under the bar, a rod loosely connected to the fixed standard and having its free end mounted in the lower end of a slot in the movable standard, a rack-bar secured to the face of the reciprocating bar, and a toothed sector pivoted on the base and meshing with the rack-bar and at its opposite side provided with a handle or extension, substantially as specified.

2. In a machine of the class described, the combination, with the opposite standards, one of which is provided with an inclined slot terminating in a bearing, of a bearing mounted upon the opposite standard, a shaft mounted on the bearing and provided at its outer end with a pinion and at its inner end with a recessed socket and a means for operating the pinion, a rod reduced at one end to loosely fit upon the inclined bearing and at its opposite end bent upon itself to form a head and fitting the socket, and a bar having one end reduced to enter the head and its opposite end provided with a U-shaped spring-clamp, the two bars having opposite convex surfaces and inner adjacent plane surfaces, so

that when combined they form a cylindrical rod, substantially as specified.

3. In a machine of the class described, the combination, with a standard, of a G-shaped casting having a horizontal and vertical securing-plate secured to the upper and inner face of the standard, the terminals of the G-shaped casting being provided with transverse bearings, the upper one of which registers with a similar bearing in the rear portion of the casting and the lower one of which with a socket bearing in the lower portion of the casting, shafts mounted in the upper and lower pairs of bearings, disks mounted upon the shafts, the upper one of which is provided at its outer end with a pinion meshing with the gearing of the machine and the inner end of the lower shaft being provided with a cavity and extended beyond its inner bearing, and a flat spring having a detent resting in the cavity and its other end secured to the casting, substantially as specified.

4. In a machine of the class described, the combination, with the two standards, of the G-shaped casting having its rear connected thereto and a horizontal guide-plate extending from the rear portion of the casting beyond the terminals and provided with a slot, shafts mounted in bearings above and below the plate and carrying cutting-disks, which latter take into the slot, and a guide-bar connected at one end to the opposite standard and at its other end to the metal plate of the casting and forming a continuation thereof, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

FRANCIS H. SHEPHERD.

JOHN W. MEYER.

Witnesses:

GEORGE A. HEISEL,
PARKER GALE.