

No. 771,196.

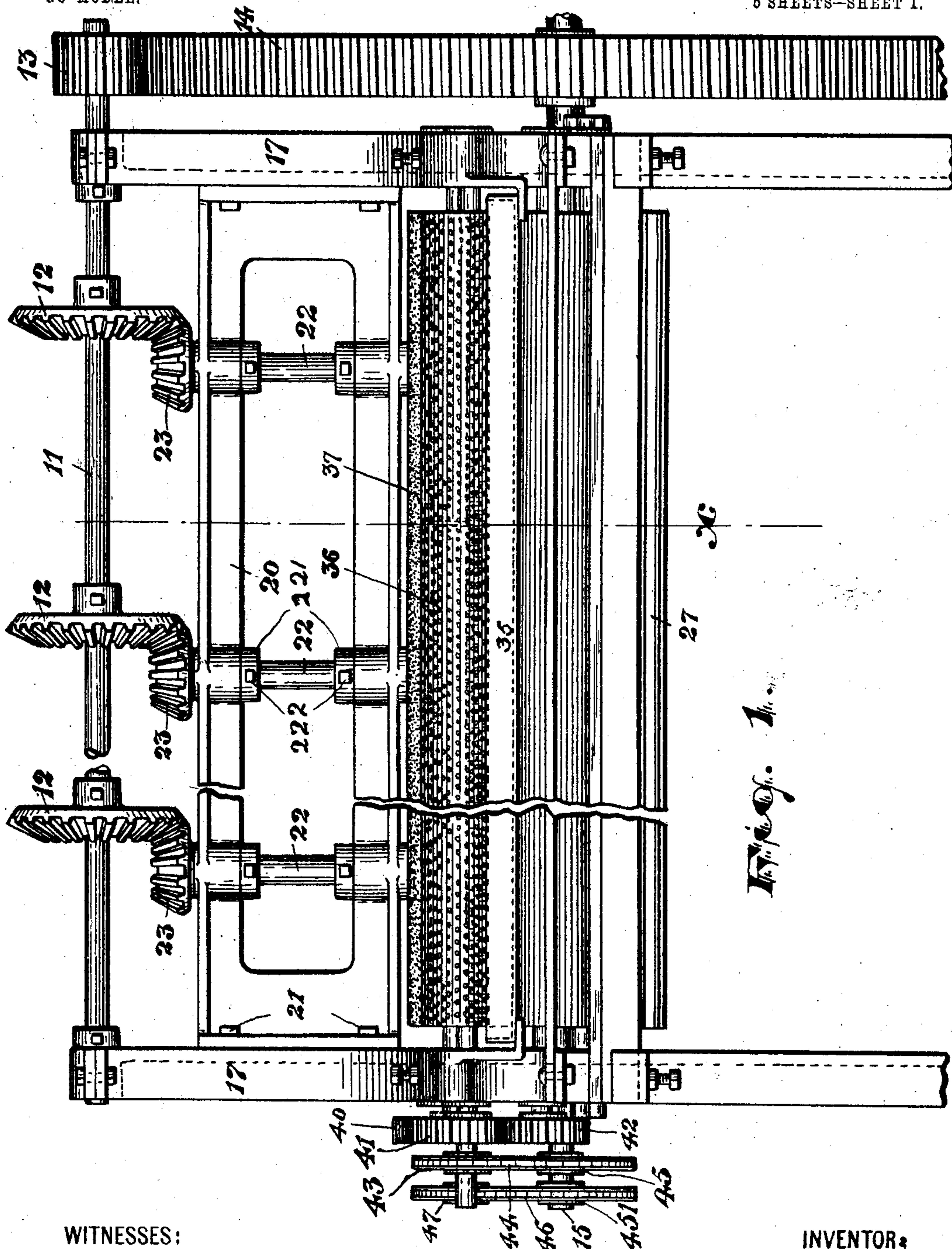
PATENTED SEPT. 27, 1904.

L. WIMMER.  
BLACKING MACHINE.

APPLICATION FILED OCT. 14, 1903.

NO MODEL.

5 SHEETS—SHEET 1.



WITNESSES:

*Ralph Lancaster.*

*Russell M. Everett*

INVENTOR:

**Louis Wimmer,**

BY

*Charles H. Bell*

ATTORNEY.

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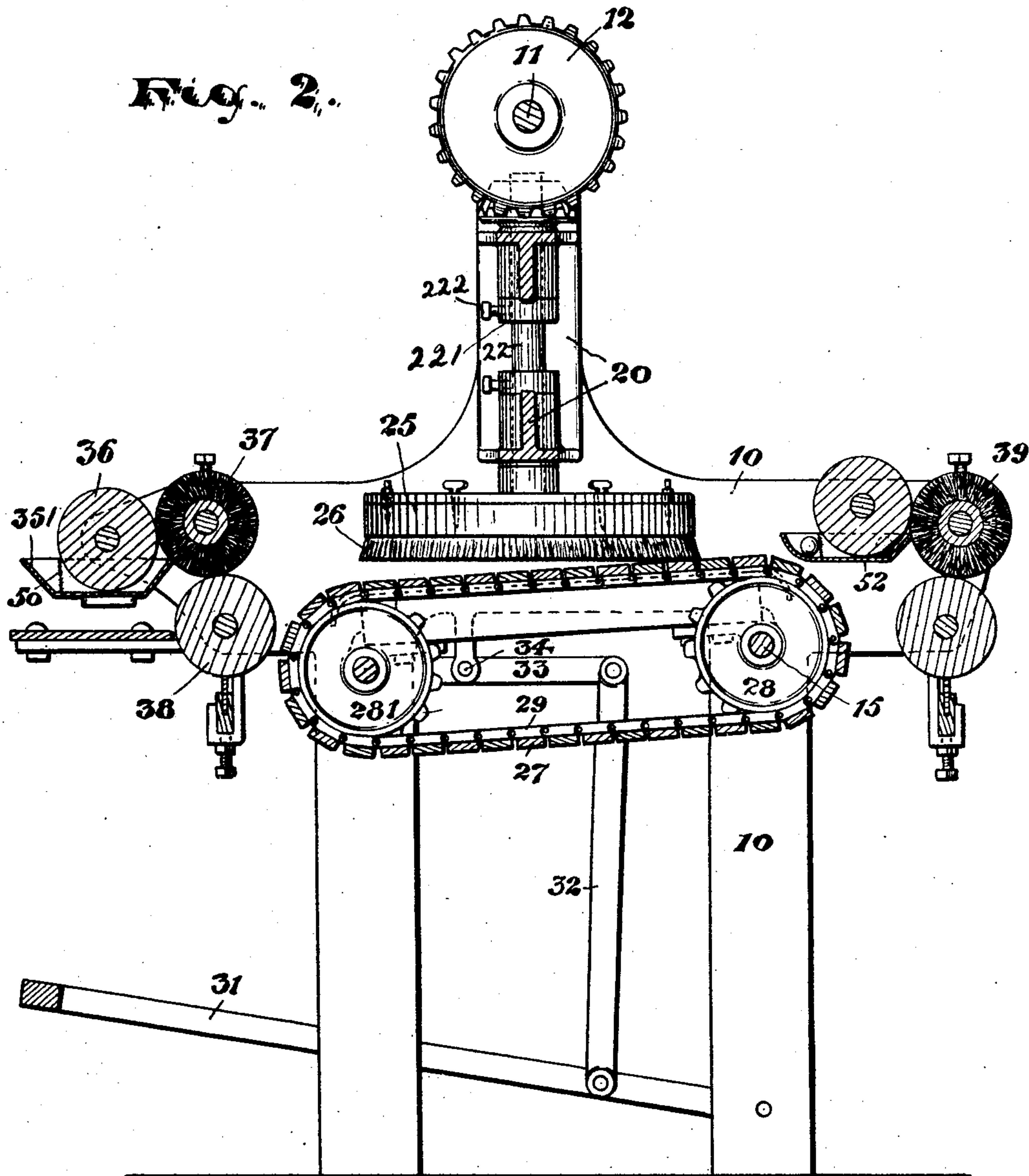
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5 SHEETS—SHEET 2.

**Fig. 2.**



**WITNESSES:**

Ralph Lancaster

Russell M. Everett

INVENTOR:

**Louis Wimmer,**

BY

BY  
*Charles H. Bell*  
ATTORNEY.

ATTORNEY.

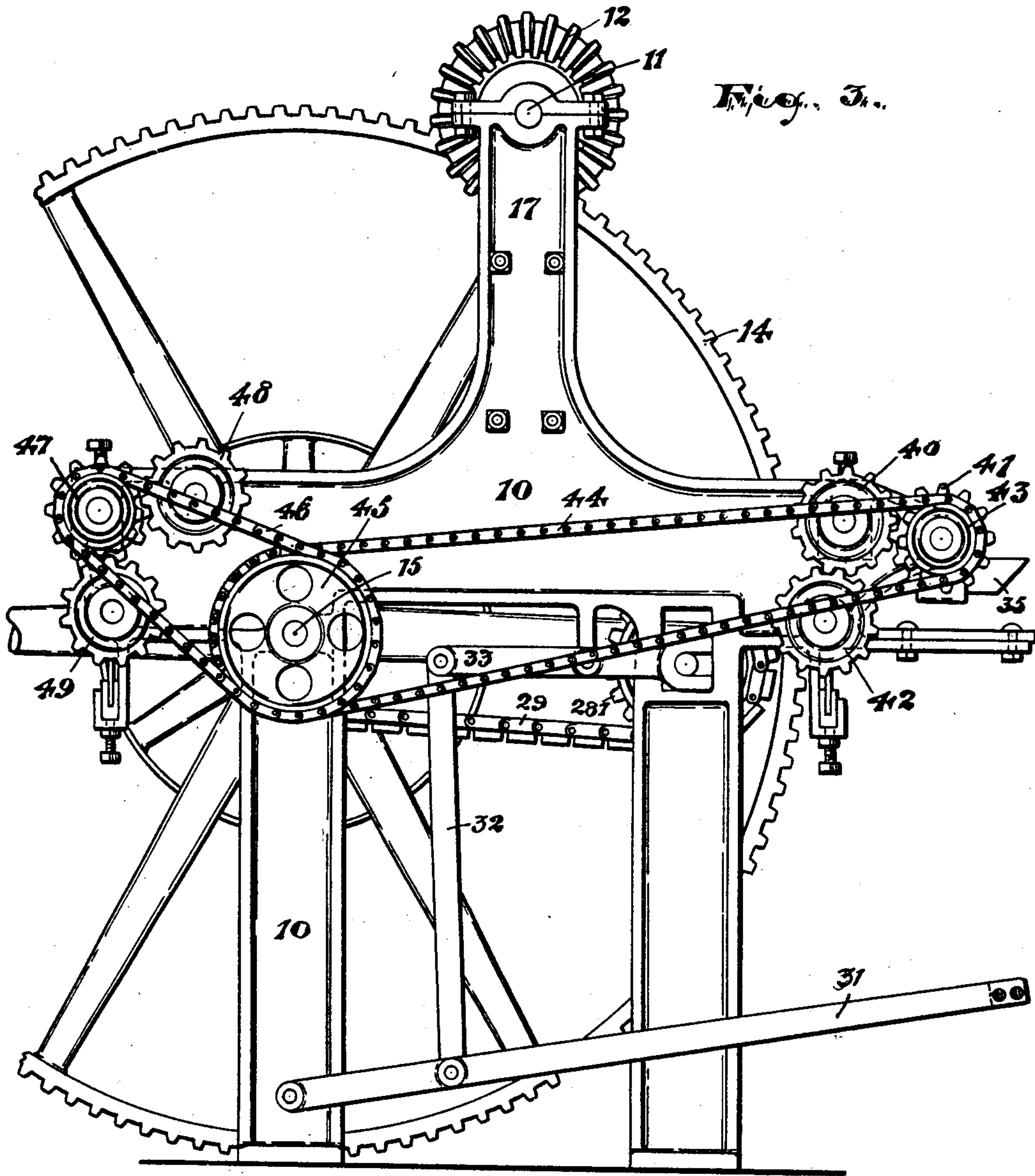
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5 SHEETS—SHEET 3.



WITNESSES:

*Ralph Lancaster.*

*Russell M. Everett*

INVENTOR

*Louis Wimmer.*

BY

*Charles H. Pell,*

ATTORNEY.



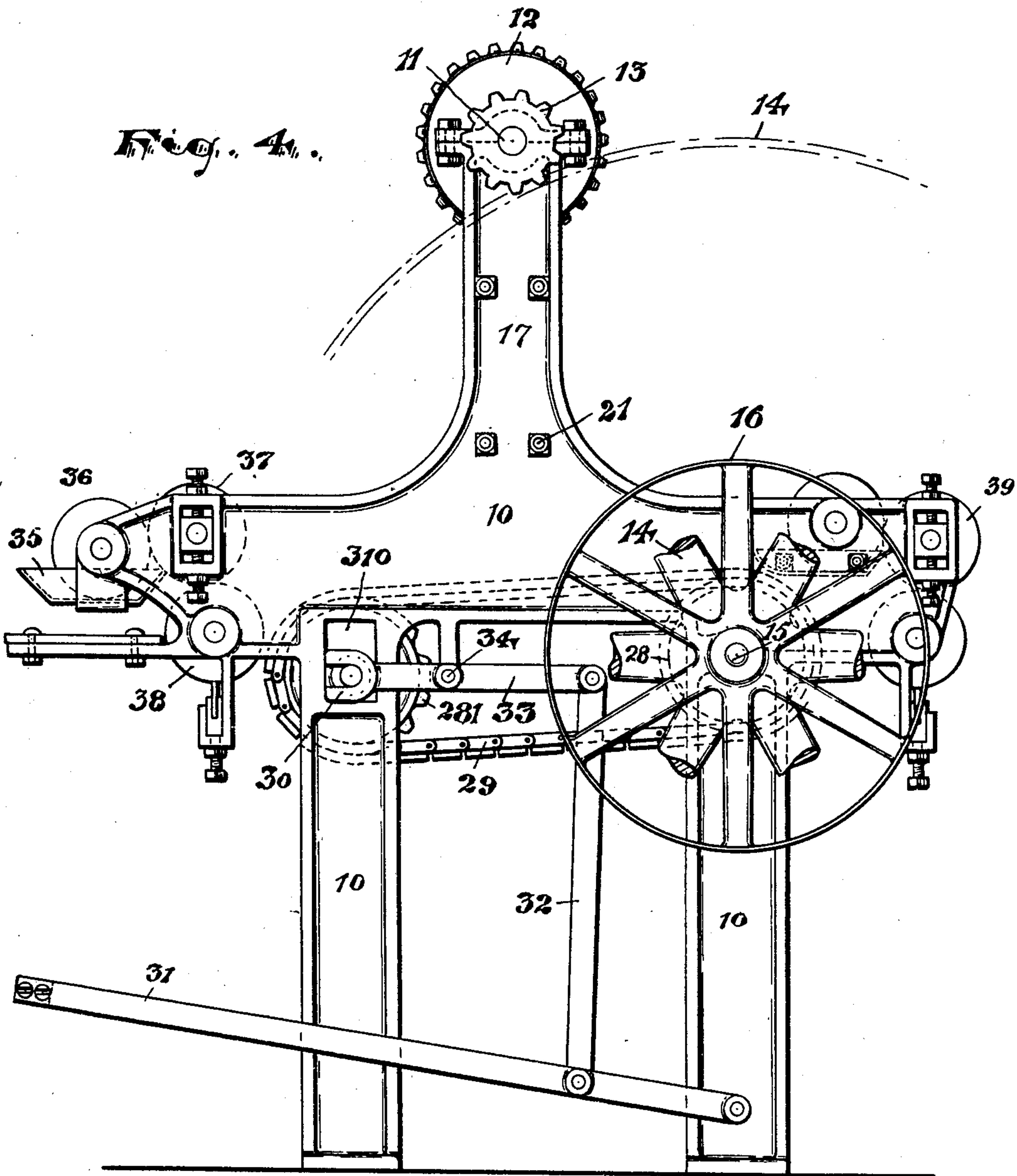
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5 SHEETS—SHEET 4.



WITNESSES:

*Ralph Lancaster*

*Russell M. Everett*

INVENTOR:

*Louis Wimmer,*

BY

*Charles H. Lee*  
ATTORNEY.

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5 SHEETS—SHEET 5.

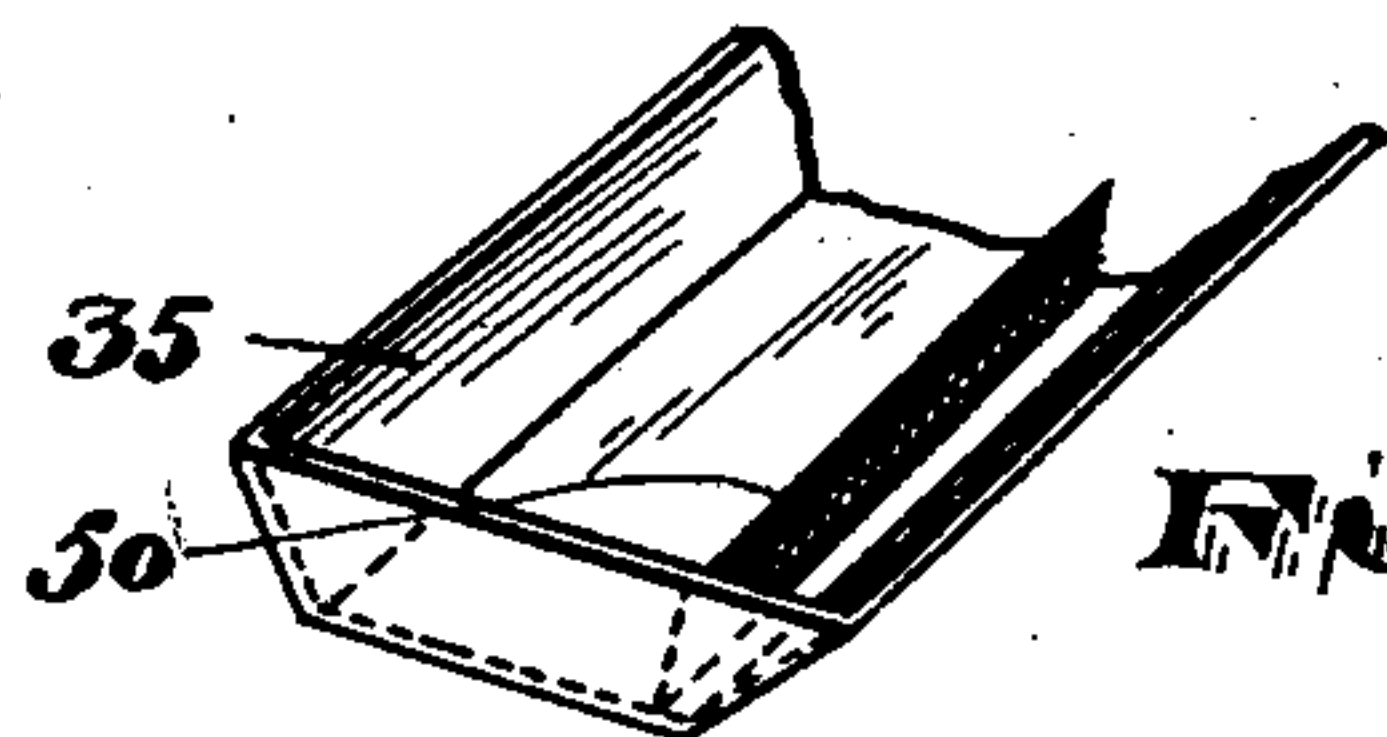


Fig. 5.

Fig. 6.

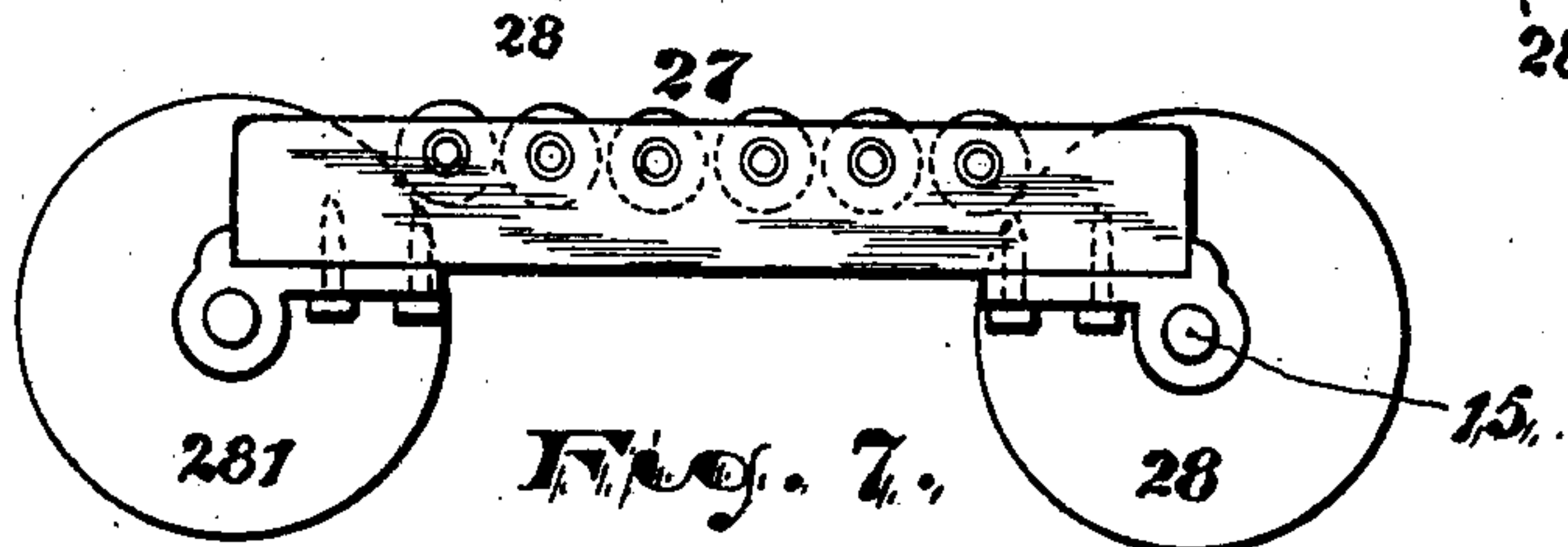
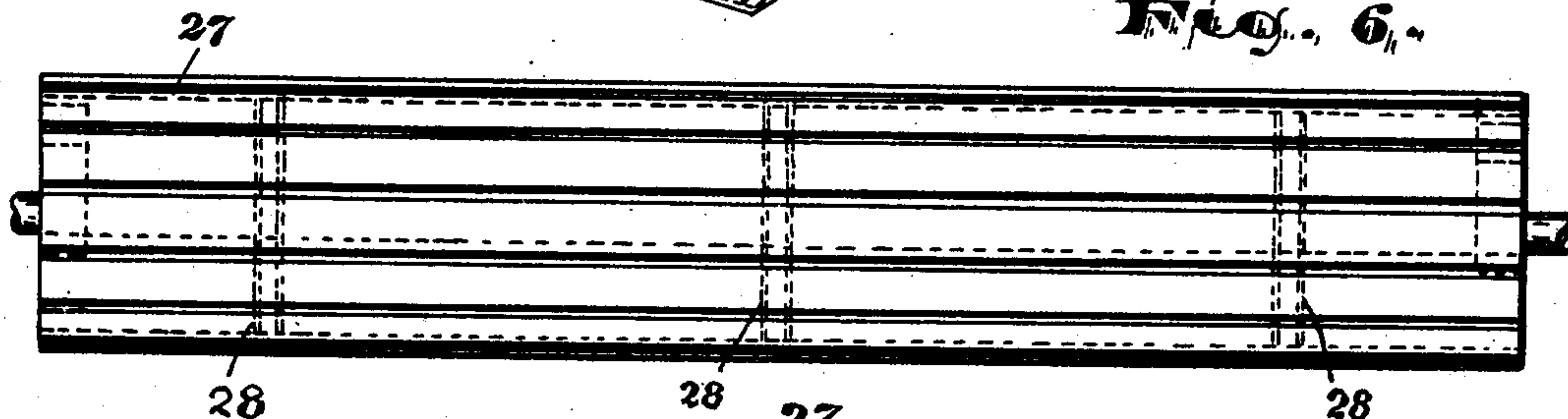
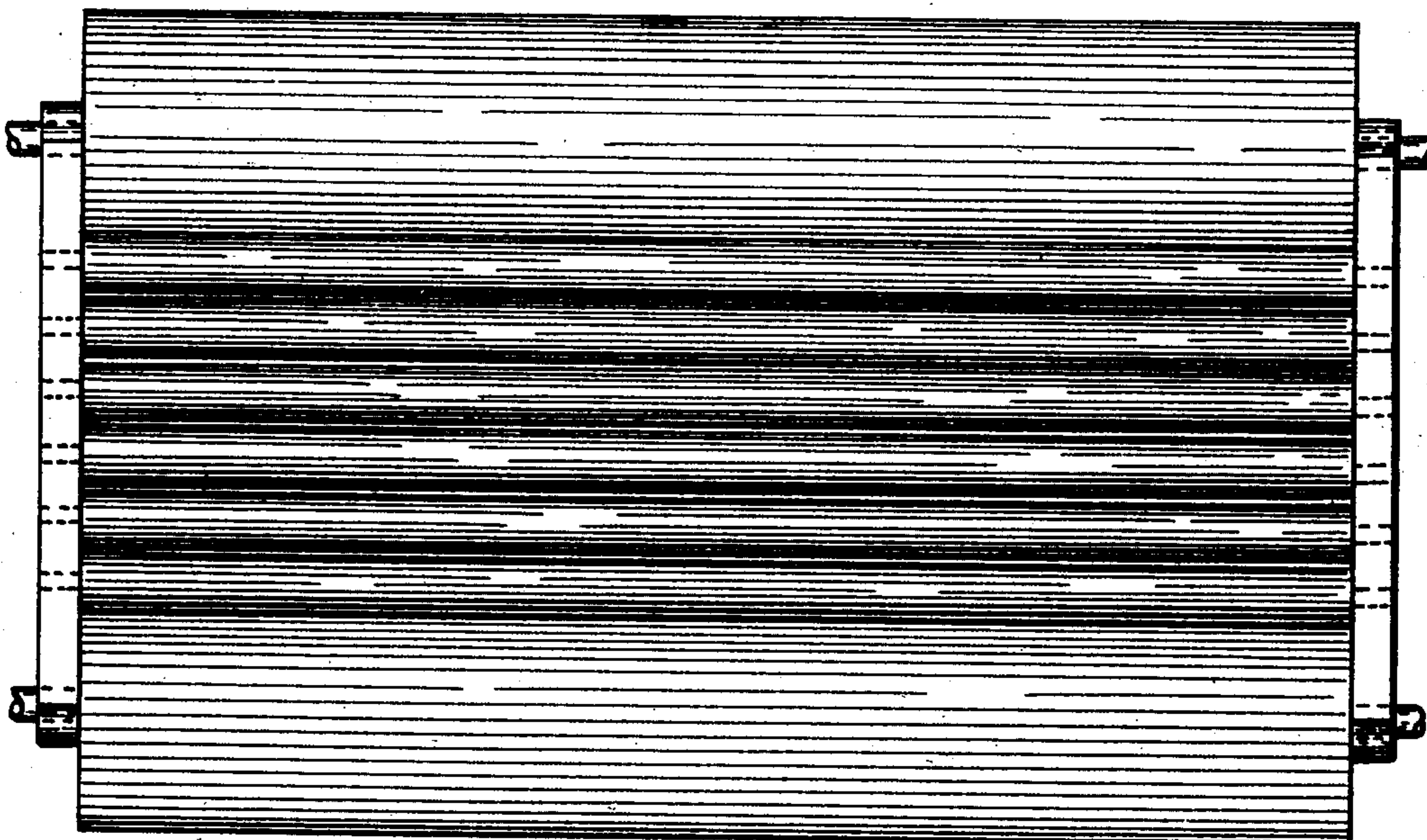


Fig. 7.



27

Fig. 8.

WITNESSES:

*Ralph Lancaster*

*Russell M. Everett*

INVENTOR=

*Louis Wimmer,*

BY

*Charles H. Fee*

ATTORNEY.



# UNITED STATES PATENT OFFICE.

LOUIS WIMMER, OF ELIZABETH, NEW JERSEY, ASSIGNOR OF ONE-HALF  
TO SAMUEL LEVENSON, OF ELIZABETH, NEW JERSEY.

## BLACKING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 771,196, dated September 27, 1904.

Application filed October 14, 1903. Serial No. 176,956. (No model.)

*To all whom it may concern:*

Be it known that I, LOUIS WIMMER, a citizen of the United States, residing at Elizabeth, in the county of Union and State of New Jersey, have invented and produced a new and original Improvement in Blacking-Machines; and I do hereby 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 numerals of reference marked thereon, which form a part of this specification.

The objects of this invention are to facilitate the work of cleaning, "sigging," and blacking leather; to secure a more perfect finish to the leather and to avoid the defects due to grain-marks appearing through the blackening; to reduce the number of parts heretofore necessary in performing the work, and to secure other advantages and results, some of which may be referred to hereinafter in connection with the description of the working parts.

The invention consists in the improved blackening-machine and in the arrangements and combinations of parts of the same, all substantially as will be hereinafter set forth, and finally embraced in the clauses of the claim.

Referring to the accompanying drawings, in which like numerals of reference indicate corresponding parts in each of the several figures, Figure 1 is a front elevation of the upper part of the improved device. Fig. 2 is a section of the same, taken at line *x*. Fig. 3 is a side elevation of the device. Fig. 4 is another side elevation of the machine from the opposite side. Fig. 5 illustrates in perspective view a portion of a "sig-pan," showing the location of a certain screen therein. Fig. 6 is an end view of a certain adjustable traveling table over and on which the leather passes when being treated. Fig. 7 illustrates a modification of construction of said table, and Fig. 8 is a plan of the same.

In said drawings, 10 indicates a suitable frame on which the several operating parts

have their bearings or by which they are supported. Said frame 10 at opposite sides thereof is furnished with studs 17, which provide boxes or bearings for a driving-shaft 11, on which latter a series of beveled gear-wheels 12 are arranged, the said driving-shaft 11 being driven by a pinion 13 and a large gear-wheel 14 on the main driving-shaft 15, the said main driving-shaft 15 being driven by a pulley 16, Fig. 4, in any suitable manner. Between the said studs 17 the frame is provided with a supplemental frame 20, (shown more clearly in Figs. 1 and 2,) which is held in position by bolts 21 or other suitable means and provides boxes or bearings for a series of vertical brush-shafts 22, the said brush-shafts 22 at their upper ends being provided with beveled gear-wheels 23, preferably adjustable on said shafts, so that as the brushes wear said shafts may be lowered in said beveled wheels, the said beveled gear-wheels 23 meshing with the gear-wheels 12 on the driving-shaft 11, so that rotary motion is transmitted to the said vertical shafts 22. When the shafts 22 are adjustable in their relations to the beveled gear-wheels 23, the said wheels may be keyed upon the shafts by any ordinary keys or splines, (not shown,) permitting the shafts to move vertically within the wheels, but preventing independent rotation and the shaft being held at any desired adjustment in the frame of the machine by collars 221 and set-screws 222, Figs. 1 and 2. By loosening said screws 222 said shafts may drop down to bring the brushes 26 into the desired engagement with the leather, as will be clearly evident.

At the lower ends of the shafts 22 below the frame 20, as shown in Fig. 2, the said shafts 22 are provided with horizontal brushes 25, the said brushes being arranged so that they meet or nearly meet at their peripheries, and thus form a continuous bed of bristles 26 from near one side of the machine to near the other. Beneath the said horizontal bed of bristles 26 of said brushes is arranged a traveling table adapted to be raised and lowered toward and from the said horizontal bed of bristles. Said table preferably comprises an endless slatted



belt 27, driven by sprocket-wheels 28 and 281 and chain connections 29, one of said sprocket-wheels being arranged on the main driving-shaft 15 and the other on a shaft arranged in sliding boxes 30, Fig. 4, the said boxes being operated vertically in slots 310 of the frame by means of a pedal 31, connecting-rods 32, and levers 33, the last being fulcrumed, as at 34, upon the bed of the machine and the said parts last described being arranged to raise the free end of the traveling table and the upper face thereof to a horizontal position against the bed of bristles when the foot of the operator is applied to the pedal 31. The traveling table turning on the main driving-shaft 15, where it has its center of oscillating movement, is raised to engage flatwise the under side of the horizontal bed of bristles, so that any leather lying on said table will be forced up against the said brushes, whereby said leather will be thoroughly rubbed or brushed. Thus the horizontal brushes presented to the leather rub in the blackening material thoroughly, so that all "grain-spots" are obliterated. The traveling table moves with comparative slowness, while the rotary polishing-brushes move at a comparatively high speed, as will be evident. In the front of the traveling table is arranged a "sig" or blackening supply roller 36, arranged in a black holder or pan 351, the said roller 36 at its periphery being peripherally countersunk, so as to supply an ample quantity of liquid black to the supply-brush 37, the leather passing beneath the black-holding pan 35 and over a roller 38, where the sig or blackening is applied to the leather by the applying-brush 37. From the applying-brush 37 the said leather travels over the traveling table 27 beneath the horizontal rubbing-in brush 25, after which the said leather passes from the machine, or under some circumstances it may pass beneath a second applying-brush 39, by means of which a second coat of finished material, varnish, black, or the like is applied, whereby a more perfect finish is obtained.

In lieu of the traveling slatted table I may employ a series of rollers suitably geared together, as indicated in Figs. 7 and 8.

Power may be transmitted to the rotating parts 36 37 38 by a train of gear-wheels 40 41 42, sprocket-wheel 43, belt or chain 44, and sprocket-wheel 45 on the main shaft 15. Likewise the supply-rollers on the opposite end of the machine may be operated from the main shaft by a similar train of gearing, belts, or the like, as at 451 46 47 48 49.

The sigging or black first applied may be strained to remove any dirt therefrom before it is applied to the leather, and to this end I insert in the black or sig carrying pan 351 a strainer or sieve 50, through which the fluid has to pass before coming in contact with the roller 36. A similar screen is pro-

vided in the pan 52 for the black-applying brush 34.

Having thus described the invention, what I claim as new is—

1. The improved leather-blackening machine, comprising a series of rotating brushes, arranged in a horizontal plane, the bristles at the periphery of one brush engaging the peripheral bristles of the brushes lying next in the series to form a continuous horizontal body of bristles in a plane common to all the brushes from one side of the machine to the other, and means for operating the same, of a traveling table adapted to be raised and lowered to and from said brushes and means for operating said table and means for applying the black substantially as set forth.

2. The improved leather-blackening machine, comprising a series of rotating rubbing-in brushes, an oscillating and traveling table, means for applying the blackening to the leather, preliminary to forwarding it to the rubbing-in brushes and operating means, the rubbing-in brushes being arranged close beside one another in a horizontal plane parallel with the plane surface of the table to form a continuous body of rubbing-in bristles operating to spread the black applied to the leather prior to the arrival of the leather at said rubbing-in bristles, substantially as set forth.

3. The improved leather-blackening machine, comprising a series of rotating rubbing-in brushes, an oscillating and traveling table, means for applying the blackening to the leather, preliminary to forwarding it to the rubbing-in brushes, an applying-brush arranged back of said rubbing-in brushes to make a second application after the rubbing-in operation, and operating means, substantially as set forth.

4. The improved blackening-machine comprising a frame, a series of vertically-adjustable brushes rotating in a horizontal plane, an oscillating, traveling table, a pedal and connections for raising said table to and from the horizontal plane of the rotating brushes, the traveling table being movable at the points of contact with the brushes in a straight course parallel with the plane of said brushes, means for rotating the brushes and means for moving the table, substantially as set forth.

5. The improved blackening-machine, comprising a frame a series of brushes arranged in a horizontal plane, and close together to form a continuous body of bristles all rotating in a given horizontal plane close to and parallel with the straight course of the leather, an oscillating table and a pedal and connections in connection with the free end of the table to move the same to a position parallel with the plane of the brushes, substantially as set forth.

6. The combination with the frame of a blackening-machine and a series of rubbing-in brushes, in engagement with one another

rotating in a given plane on shafts perpendicular to the plane of the table, said shafts being held to the frame by collars and setting means permitting a limited vertical adjustment of the said shafts, of a traveling table  
5 movable in a plane parallel with the plane of the brushes, means for operating said brushes, means for moving the table in a straight course in a direction parallel with the plane  
10 of the brushes, and means for spreading the

black on the leather prior to its passage to the rubbing-in brushes, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 6th day of October, 1903.

LOUIS WIMMER.

Witnesses:

CHARLES H. PELL,  
M. V. DOYLE.