

(No Model.)

2 Sheets—Sheet 1.

G. A. WILSON.

INKING APPARATUS FOR PRINTING MACHINES.

No. 330,278.

Patented Nov. 10, 1885.

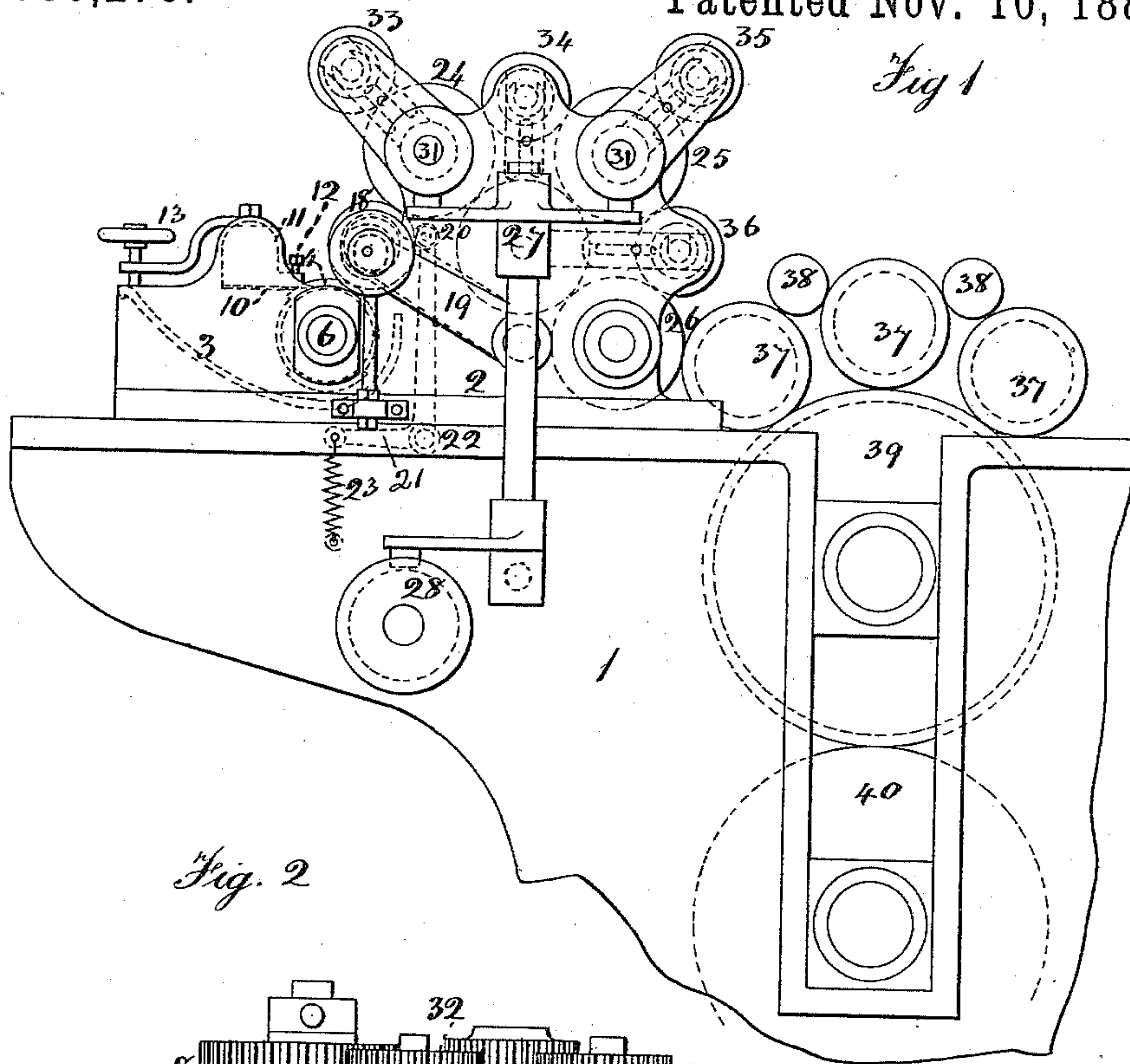
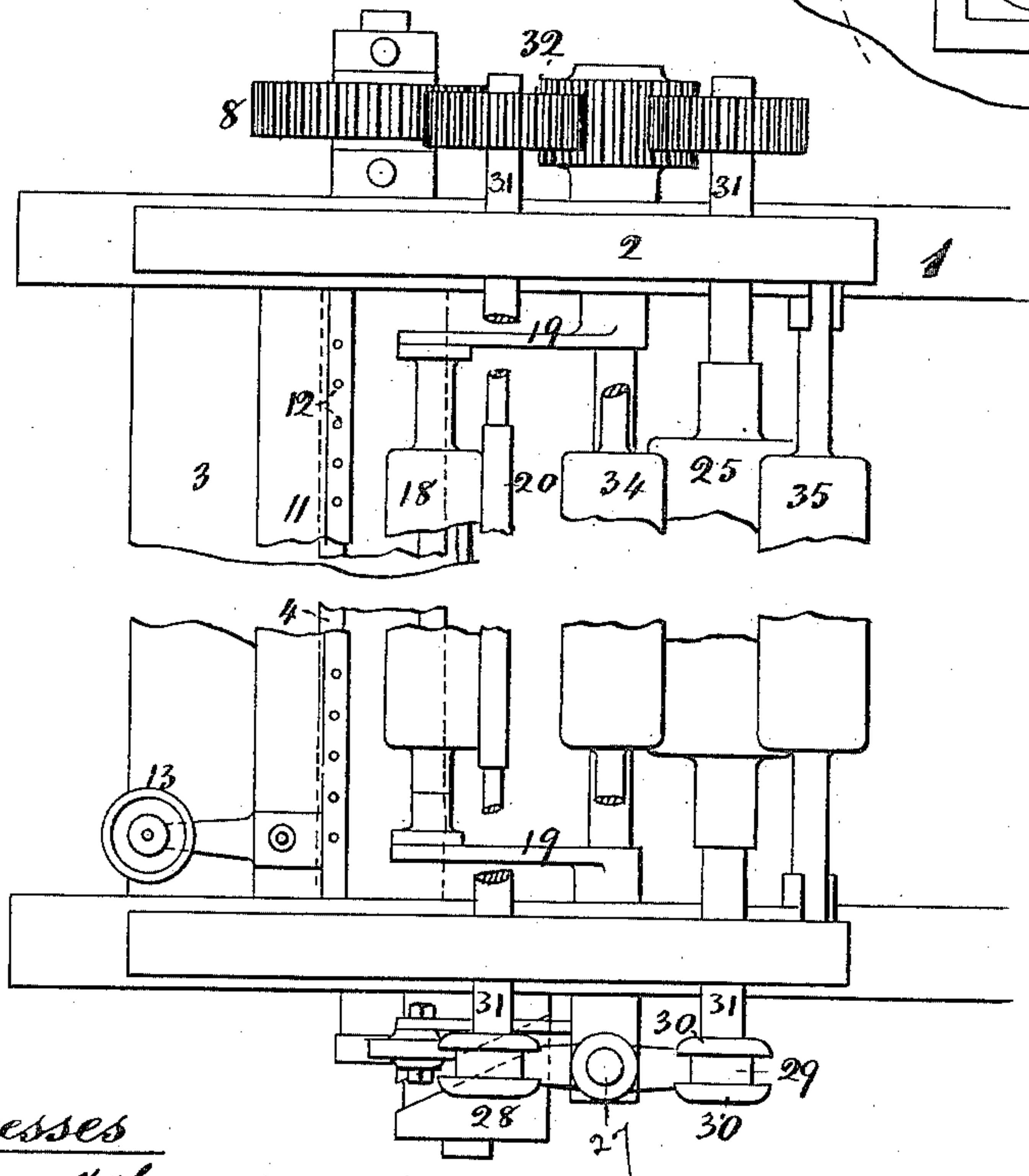


Fig. 2



Witnesses

James Johnson  
M. Johnson

Inventor

George A. Lee Wilson

(No Model.)

2 Sheets—Sheet 2.

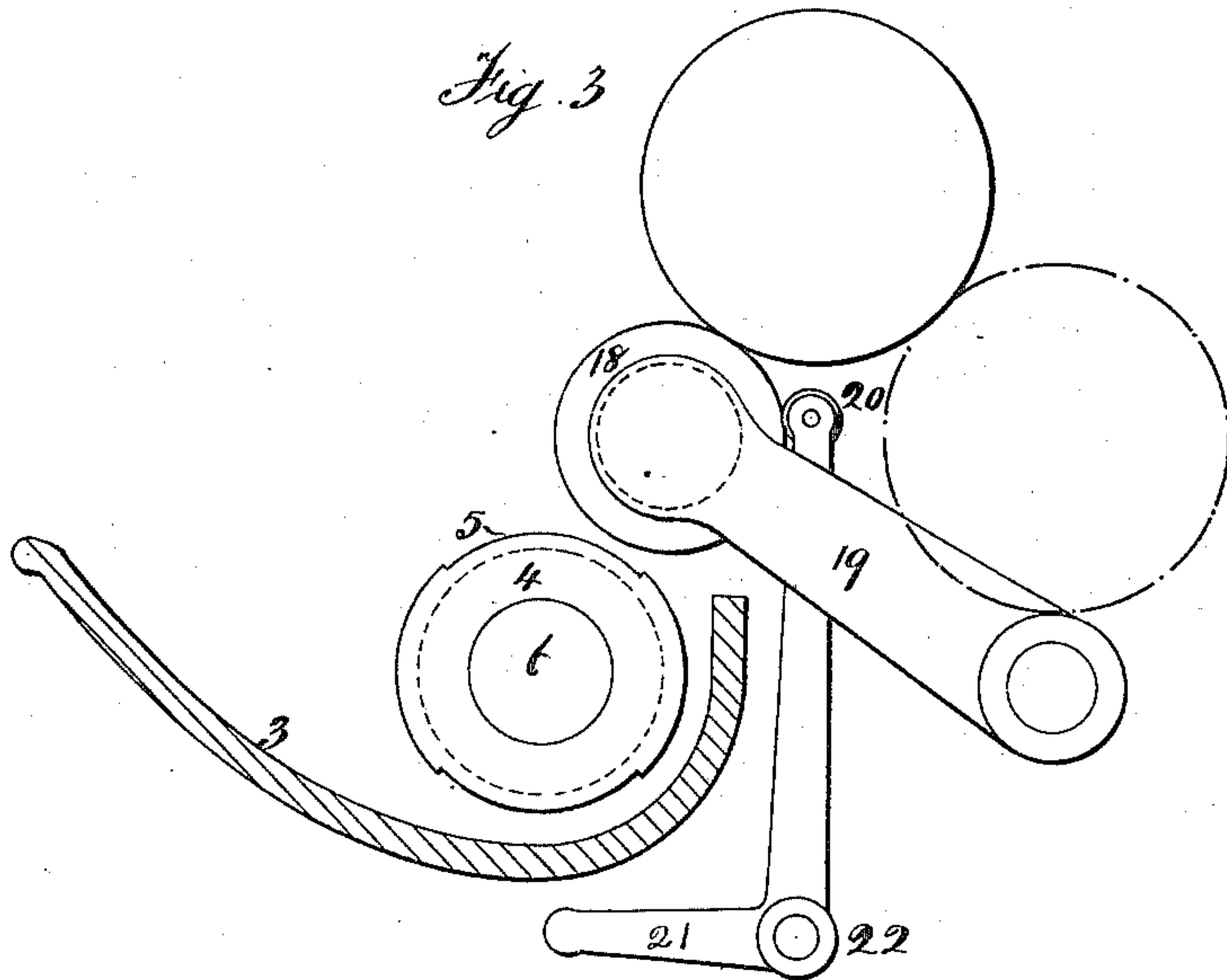
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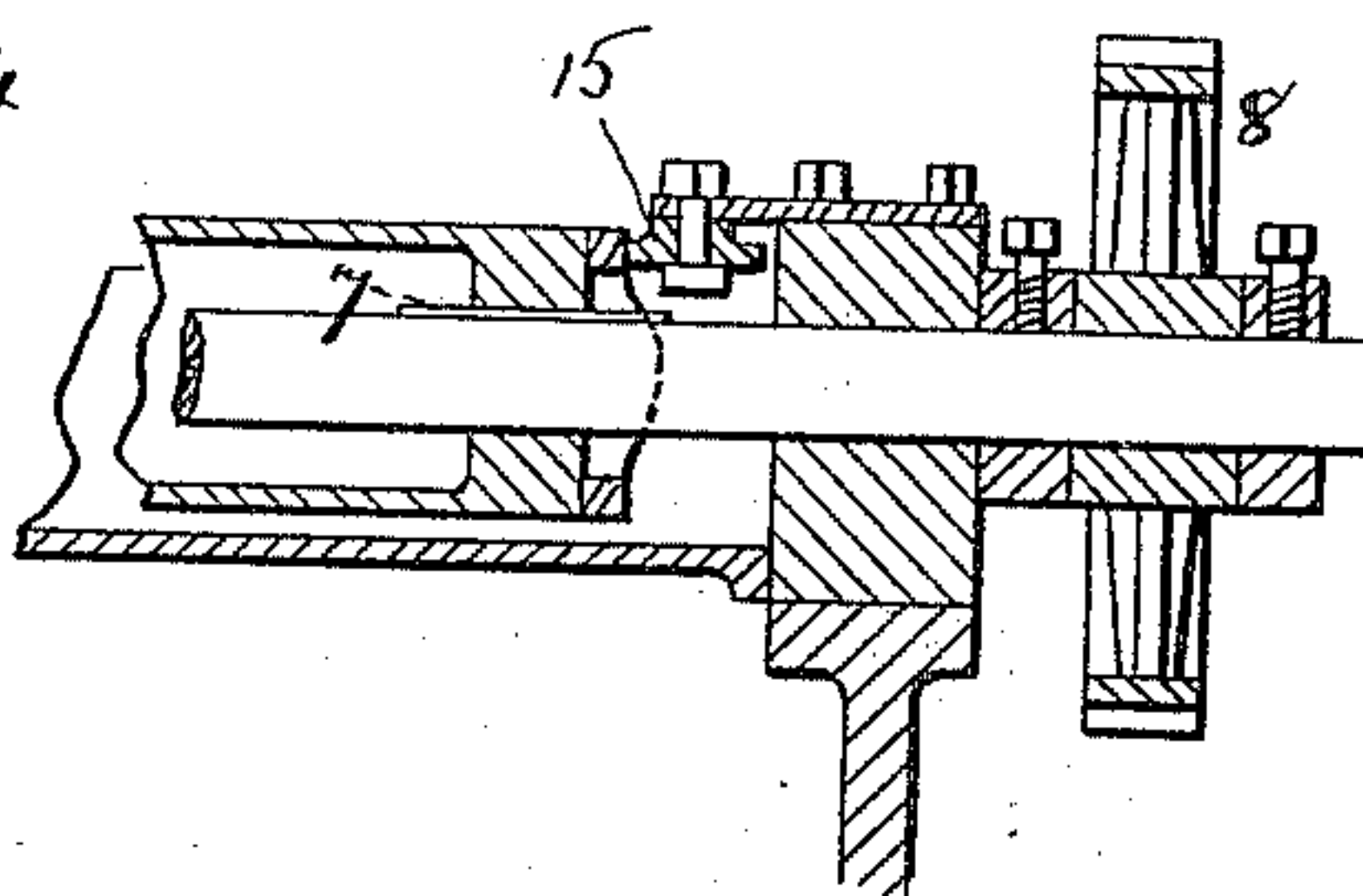
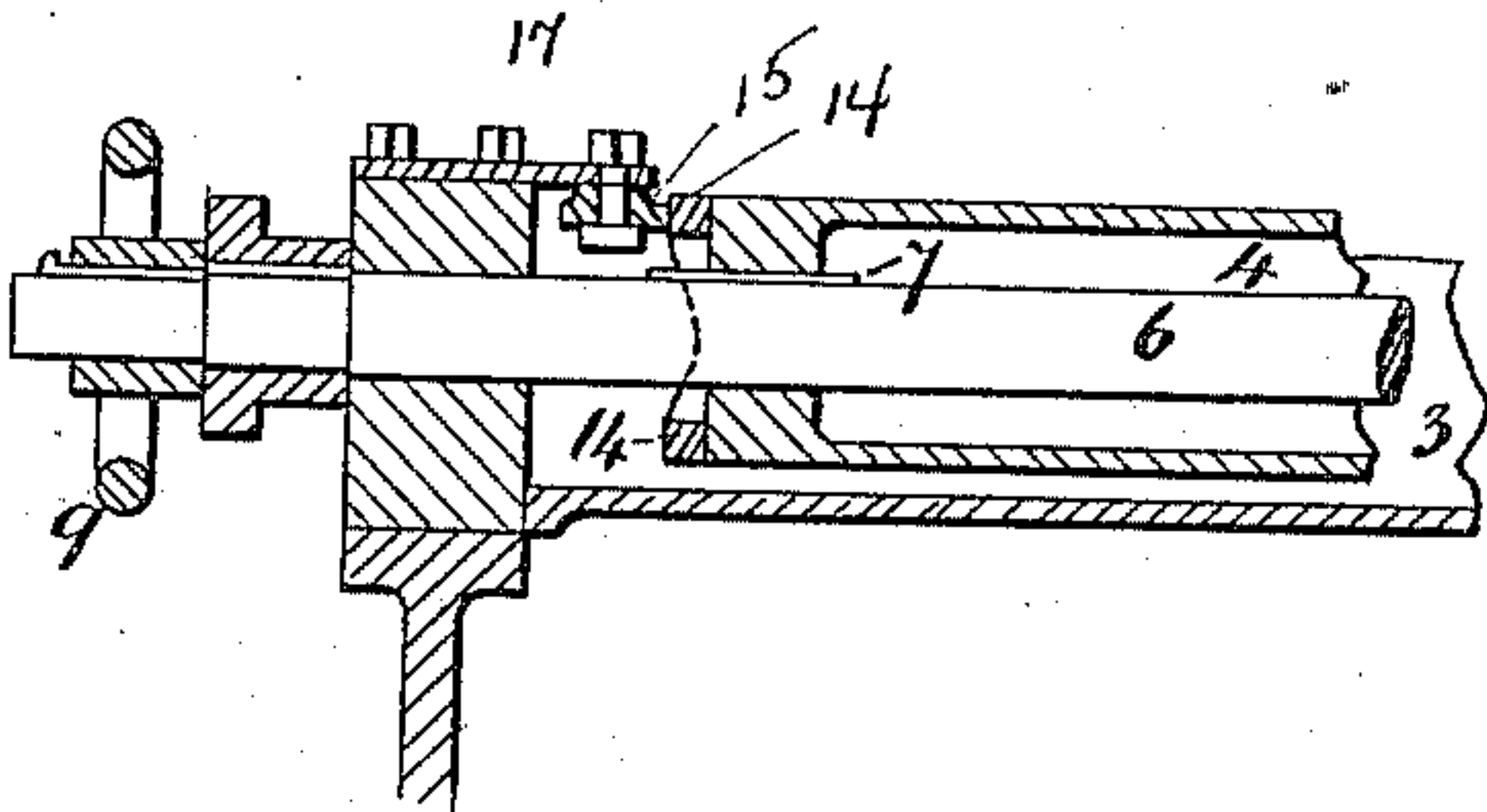
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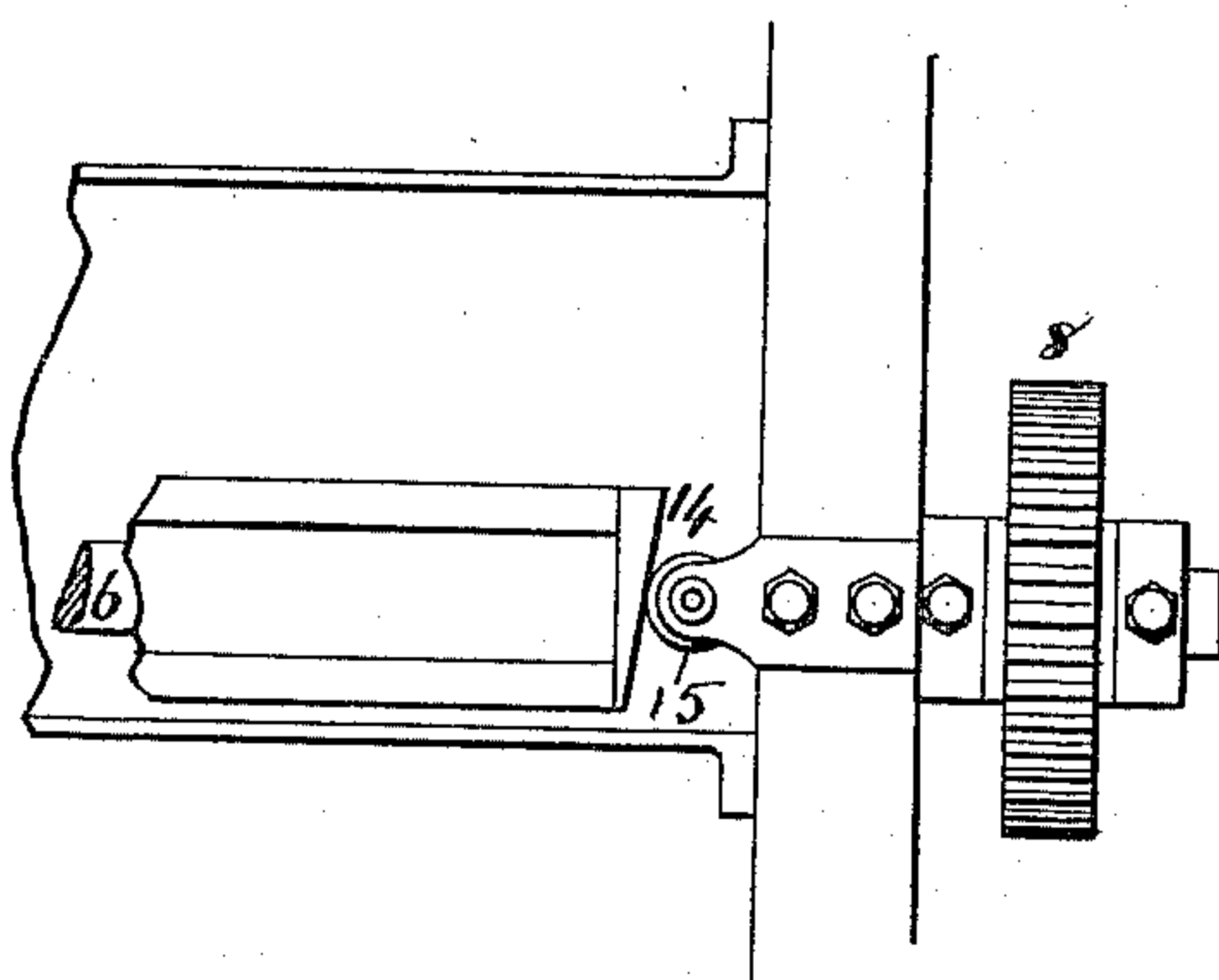
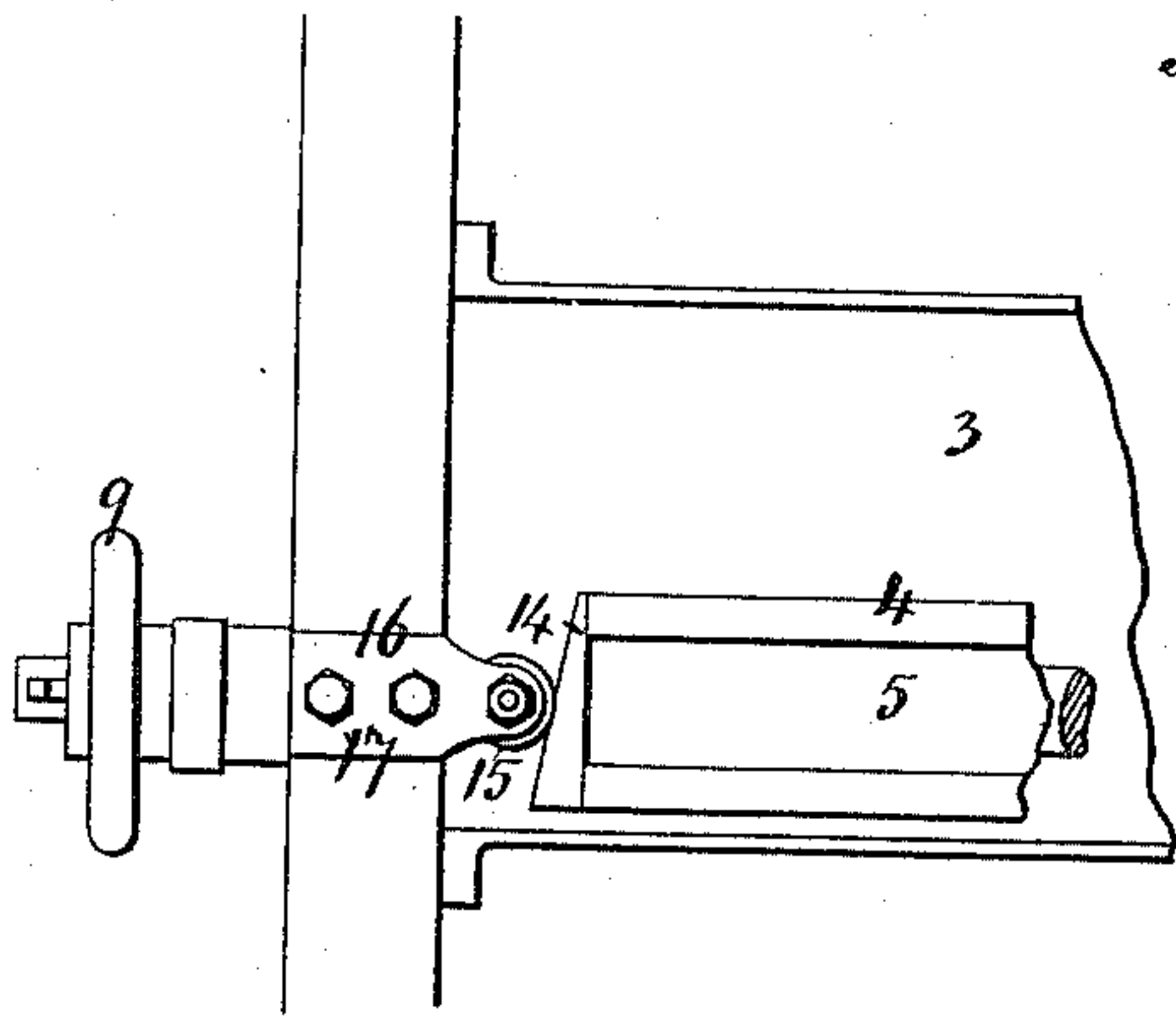
*Fig. 3*



*Fig. 4*



*Fig. 5*



Witnesses

*James Johnson*  
*W. Johnson*

Inventor

*George Ashley Meon*



# UNITED STATES PATENT OFFICE.

GEORGE ASHLEY WILSON, OF BROAD GREEN, NEAR LIVERPOOL, COUNTY  
OF LANCASTER, ENGLAND.

## INKING APPARATUS FOR PRINTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 330,278, dated November 10, 1885.

Application filed January 8, 1885. Serial No. 152,289. (No model.) Patented in England February 22, 1884, No. 3,749.

*To all whom it may concern:*

Be it known that I, GEORGE ASHLEY WILSON, the above-named petitioner, a subject of the Queen of Great Britain, residing at Broad Green, near Liverpool, in the county of Lancaster, England, have invented a new and useful Inking Apparatus for Printing-Machines, (for which I have obtained a patent in Great Britain, No. 3,749, bearing date February 22, 1884, and nowhere else,) of which the following is a specification.

The invention relates to printing-machines in which type or stereotype and impression cylinders are used; and the object of my invention is so to construct inking apparatus that the type or stereotype shall be evenly and uniformly coated with ink in such manner that the high-class printing required for illustrated papers and books may be more perfectly effected on rotary-cylinder printing-machines.

In the accompanying two sheets of drawings, Figure 1 is a side elevation, and Fig. 2 a plan, of the whole of the inking apparatus. Fig. 3 is a diagram showing the ductor-cylinder, oscillating take-off or feed-roller, dividing-roller, and distributing-roller. Fig. 4 is a longitudinal section, and Fig. 5 a plan, of the fountain-cylinder and driving-gear.

In the drawings, 1 denotes the frame of printing-press; 2, frame secured to 1 and carrying the inking apparatus; 3, ink-trough; 4, fountain-cylinder made with depressions 5. The said fountain-cylinder is carried by and is free to slide endwise on the shaft 6, but is prevented from turning thereon by the keys 7. The shaft 6 is carried in bearings in frame 2, and receives motion through the toothed wheel 8. 9 is a hand-wheel attached to shaft 6; 10, ductor-blade secured to the rocking bar 11 and adjusted in position by the set-screws 12; 13, lever hand-wheel and screw for giving motion to the rocking bar 11, so as to move the ductor-blade to and from the fountain-cylinder in the usual manner; 14, cams attached to the ends of the fountain-cylinder; 15, rollers carried by bearing pieces 16, connected to the frame 2 by adjusting-screws 17; 18, take-off or feed roller carried in eccentric bearings on the adjustable arms 19, attached to the frame 2; 20, small

roller carried by the bell-crank pivoted to the frame 2 at 22; 23, springs attached to one end of the bell-crank arms 21 and to the frame 2 for the purpose of keeping the roller 20 in contact with the take-off roller 18; 24 25 26, 55 metal rollers, two of which, 24 and 25, have endwise reciprocating motion imparted to them by the rocking shaft 27, which is actuated by the cam 28 and takes into the grooves 29 between the collars 30 on the shafts 31 of the rollers 24 and 25; 32, toothed wheels which give rotary motion to the rollers 24 25 26 and the cylinder 4. 33, 34, 35, and 36 are composition rollers running in contact with the rollers 24, 25, and 26; 37, inking-rollers; 38, riders; 65 39, type or stereotype cylinder; 40, impression or blanket cylinder.

The operation of the apparatus is as follows: The cylinder 4 takes ink from the trough 3 and carries it forward to the take-off or feed roller 18, any excess of or thick portions of ink being removed by the ductor-blade 10 and allowed to fall into the depressions 5 on the fountain-cylinder and thence into the ink-trough 3. By means of the toothed wheel and cam above described the fountain-cylinder receives both a rotating and endwise motion, which causes the ink, which would otherwise be delivered to the take-off or feed roller in parallel streaks, owing to the blade being closer 80 to the fountain-cylinder where the set-screws 12 bear on it, to be delivered thereto in diamond pattern. At the same time the small roller 20 spreads the diamond longitudinal patches of ink on the take-off roller 18 twice 85 or oftener, according to its size, before they reach the first distributing-roller, 24. From 24 the ink passes by aid of the composition rollers to the second distributing-roller, 25, and thence to the final roller, 26. From roller 26 90 the ink is delivered to the composition inking-rollers 37, riders 38, and type or stereotype cylinder 39.

I am aware that a fountain-roller grooved with small shallow grooves is not new, and I do not desire to claim the same.

I claim—

1. In inking apparatus for rotary web-printing machines, the combination, with a fountain-cylinder, of toothed wheel and cam 100

to impart rotary and reciprocating motion thereto.

2. In the inking apparatus of rotary web-printing machines, the fountain cylinder having recesses formed in the face thereof, substantially as and for the purpose specified.

3. In the inking apparatus of rotary web-printing machines, the combination of a fountain-cylinder, a take-off roller, a small spread-

ing-roller bearing on the take-off roller, and a pivoted spring-lever for retaining the spreading-roller in contact with the take-off roller, substantially as and for the purposes described.

GEORGE ASHLEY WILSON.

Witnesses:

JAMES JOHNSON,  
W. B. JOHNSON.