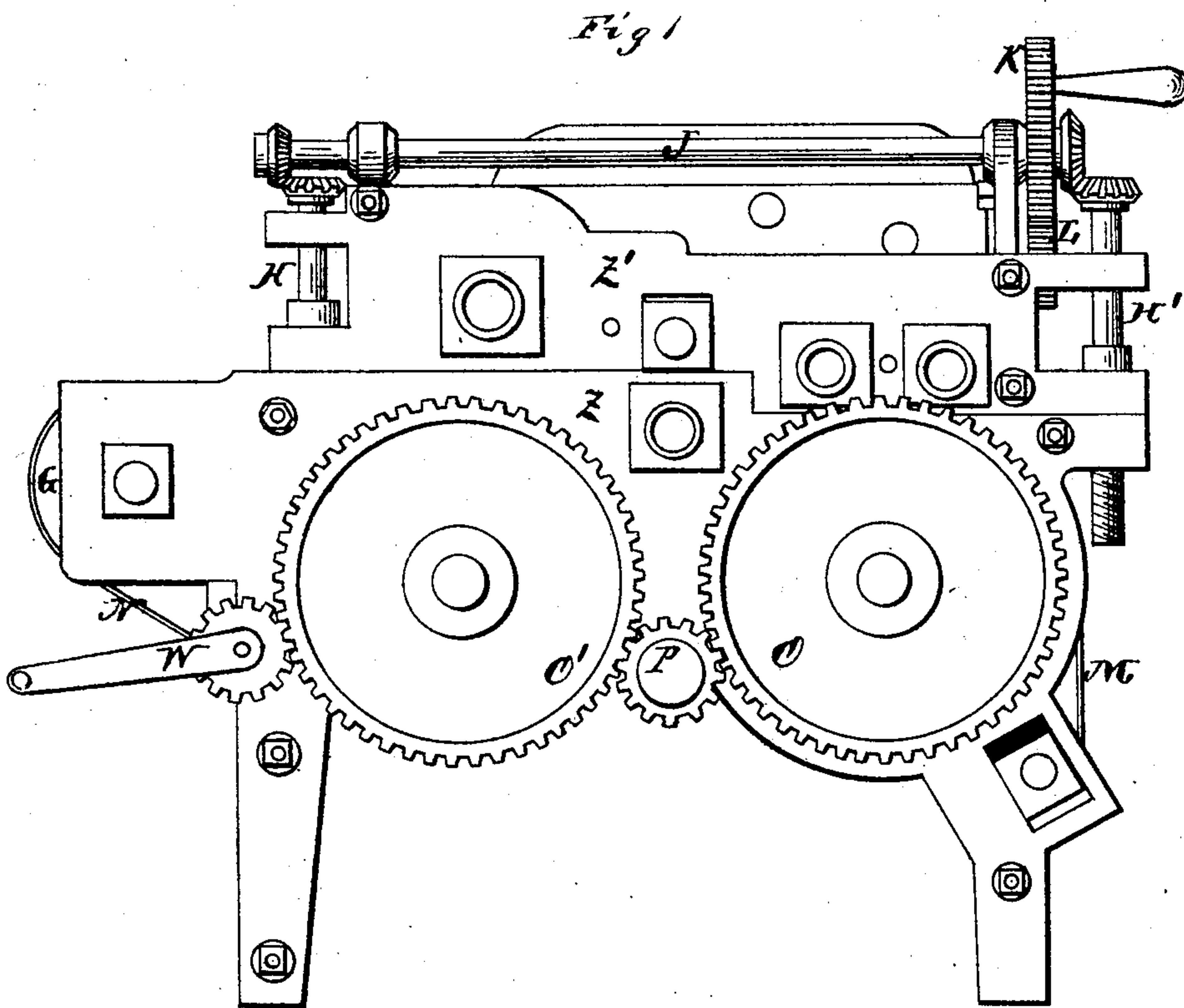


3 Sheets--Sheet 1.

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Patented Nov. 25, 1873.



WITNESSES.
Frank L. Curand
C. L. Ewert,

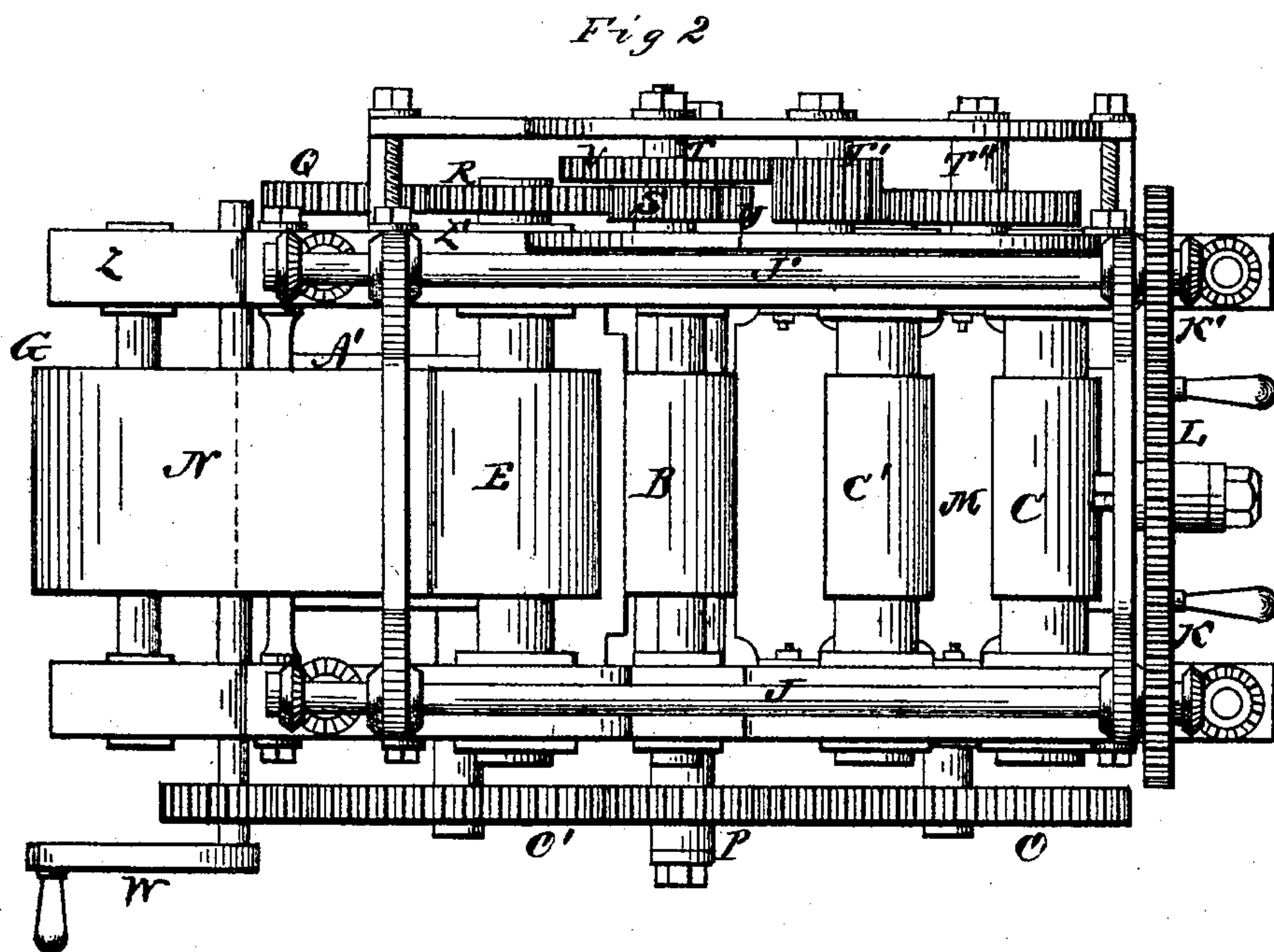
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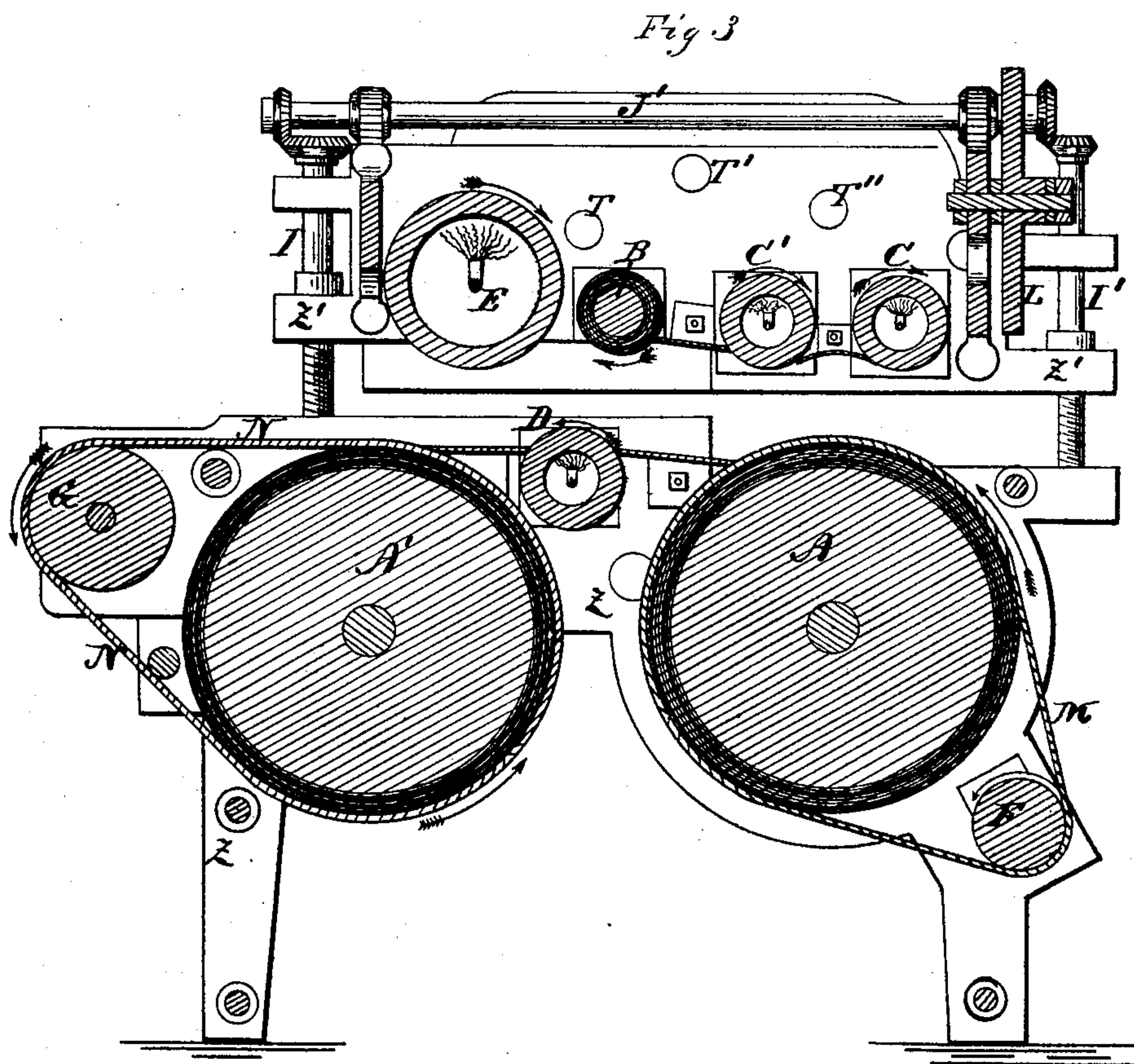
Handwritten signature of the attorney, likely "Handa Mason".

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UNITED STATES PATENT OFFICE.

JAMES T. WALKER, OF ALBANY, NEW YORK.

IMPROVEMENT IN IRONING-MACHINES.

Specification forming part of Letters Patent No. **145,034**, dated November 25, 1873; application filed October 16, 1873.

To all whom it may concern:

Be it known that I, JAMES T. WALKER, of Albany, in the county of Albany and in the State of New York, have invented certain new and useful Improvements in Ironing-Machine; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of an ironing-machine, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a side elevation, Fig. 2 a plan view, and Fig. 3 a longitudinal vertical section, of my machine.

The working or operating parts of my machine consist of two large drums, A and A', one small drum, B, three small rolls, C, C', and D, one large roll, E, and two idle-pulleys, F and G. The rolls C, C', D, and E are hollow, and have, each, one of its journals hollow, for the insertion of gas-pipe with burners, to heat the rollers by gas. The drums A, A', and B are covered with an elastic substance, such as felt, woolen cloth, or other suitable material. The pulleys F and G are plain. The frame of the machine is divided, so as to form an upper frame, Z', and a lower frame, Z. The lower frame Z contains the drums A A', roll D, and idle-pulleys F and G. The upper frame Z' contains the rolls C, C', and E, and the drum B. The frames are connected by means of vertical screws, H, H', I, and I', and to the upper ends of these screws are fastened bevel-gears, which gear with similar bevel-gears upon two shafts, J and J'. These shafts have also fastened to them two spur-wheels, K and K', which are geared together by means of the intermediate spur-wheel L. Attached to the spur-wheel L are suitable handles for turning the same. By turning the spur-wheel L the screws H, H', I, and I' will be caused to revolve, and by their action the upper frame Z' be raised or lowered at pleasure. Around the drum A and pulley

F is an endless belt or apron, M, of muslin or other suitable material. Around the drum A' and pulley G there is also an endless belt, N, of muslin or other suitable material. The drums A and A' are geared together by means of the spur-wheels O and O' and the intermediate spur-wheel P. Upon the other end of the shaft of the drum A' is a spur-wheel, Q, which gears into a spur-wheel, R, upon the shaft of the large roll E. The spur-wheel R also gears into the spur-wheel S upon the stud T. This spur-wheel S gears into a spur-wheel, U, upon the shaft of the drum B. Upon the shaft of the roll E is also a spur-wheel, V, that, through spur-wheels which revolve upon the studs T T' T'', give motion to the rolls C and C'.

The machine is driven by power applied to the crank or band wheel W.

The gearing thus described is so arranged that the circumference of the drums A, A', and B travel at the same rate of speed, the circumference of the rolls C, C', and D at twice the speed of the drums, and the circumference of the roll E at the same rate as the drums. By means of set-screws the drums can be made to press against the rolls with the proper degree of pressure.

The object of the belt or apron M is twofold: First, it makes a smooth surface of the drum A; and, second, by being carried around the pulley F, it has time to cool, and prevents the burning of the surface of the drum. The belt N not only answers the same purpose for the drum A', but also carries the collars, cuffs, or other articles in a straight line as they come out from under the roll E, until they have time to cool enough to prevent their being bent out of shape.

The object in dividing the frame is that when the machine is stopped the rolls and drums can be separated, so as to prevent the burning of the covering of the drums.

The manner of working the machine is as follows: The upper frame Z' being raised, as shown in Fig. 3, the rods C, C', D, and E are heated by means above described. The upper frame is then lowered, so that the rolls C and C' shall be in contact with the drum A, the drum B in contact with the roll D, and the roll E in contact with the drum A'. The machine then being put in motion, the drums and rolls

will revolve in the direction shown by the arrows, and a collar or cuff, being entered between the drum A and roll C, will be carried under the rolls C and C', and their surfaces, moving faster than the drum, will smooth and polish the upper surface of the collar or cuff. Thence it passes between the drum B and roll D, the roll D polishing and smoothing the under side of the collar or cuff; thence between the roll E and drum A', where the drying of the goods will be completed; thence, by means of the belt N, they will be discharged from the machine.

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

1. The combination, with a stationary and a movable frame, in an ironing-machine, of the drums A and B and one or more heated rollers, C C', and one or more heated rollers, D, for ironing goods on both sides, substantially as herein set forth.

2. The combination, with a stationary and a movable frame, in an ironing-machine, of the drums A and B, one or more heated rollers, C

C', one or more heated rollers, D, and one or more drying-rollers, E, all substantially as and for the purposes set forth.

3. The combination, in an ironing-machine, of a stationary frame, Z, provided with a drum, A, endless belt M, and one or more ironing-rolls, D, and an adjustable frame, Z', provided with a drum, B, and one or more ironing-rolls, C, substantially as and for the purposes herein set forth.

4. The combination, in an ironing-machine, of a stationary frame, Z, provided with drums A A', endless belts M N, and one or more ironing-rolls, D, and an adjustable frame, Z', provided with a drum, B, one or more ironing-rolls, C, and one or more drying-rolls, E, all substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 11th day of March, 1873.

JAMES T. WALKER. [L. S.]

Witnesses:

L. HOTALING,
T. SAYRE.