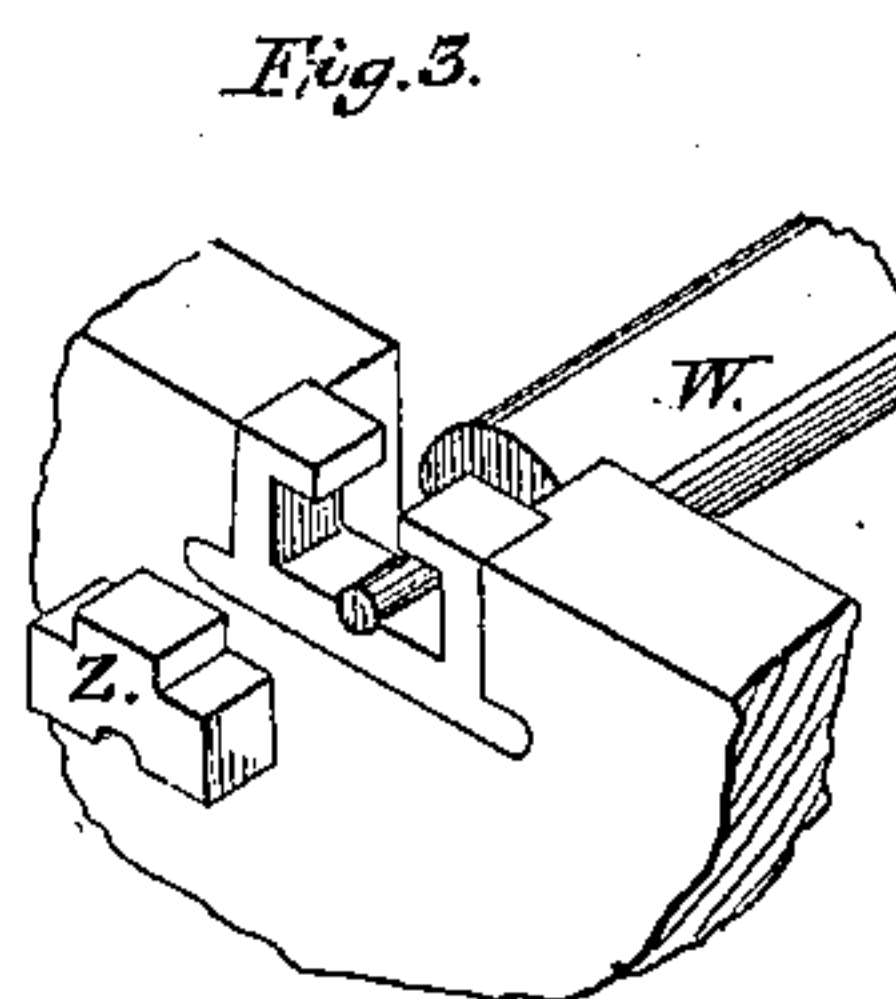
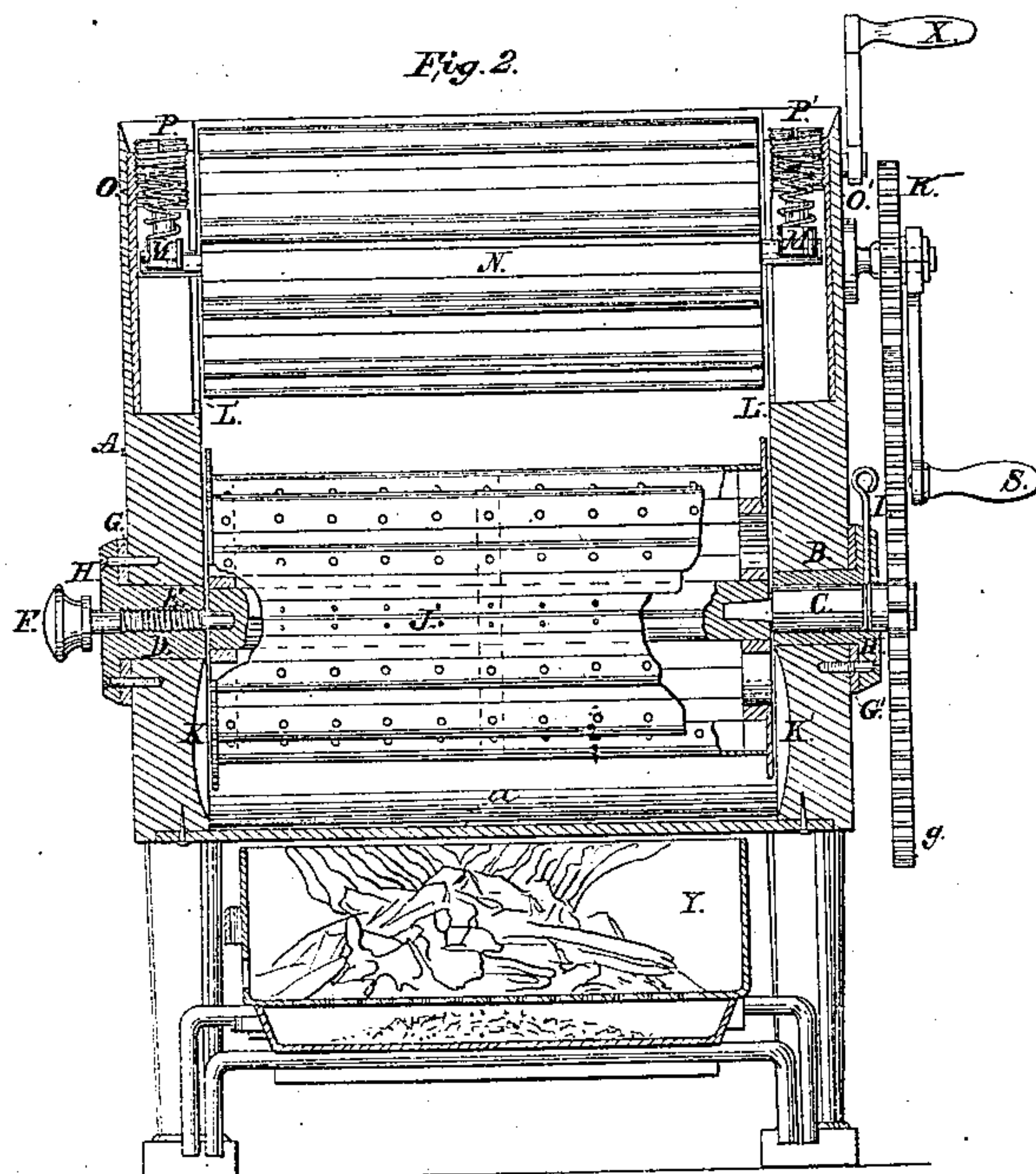
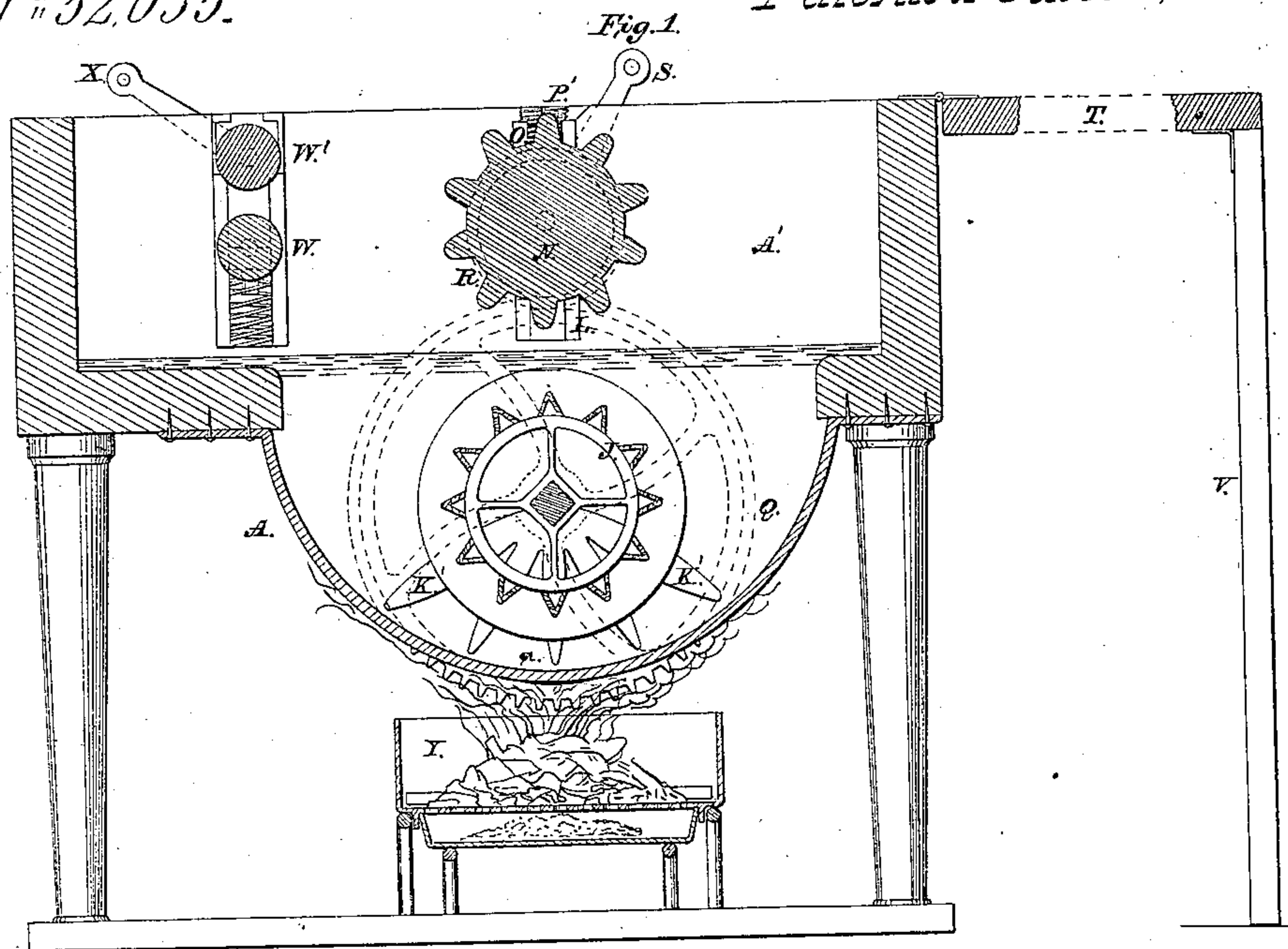


*H. Doolittle,*

*Washing Machine,*

*Patented Jan. 16, 1866.*

*N<sup>o</sup> 52,035.*



*Attest:*

*P. H. Layman*  
*W. H. Ellwand*

*Inventor:*

*H. Doolittle*  
*W. H. Ellwand*



# UNITED STATES PATENT OFFICE.

HARRISON DOOLITTLE, OF EAST CLEVELAND, OHIO.

## WASHING-MACHINE.

Specification forming part of Letters Patent No. 52,035, dated January 16, 1866.

*To all whom it may concern:*

Be it known that I, HARRISON DOOLITTLE, of East Cleveland, Cuyahoga county, Ohio, have invented a new and useful Improvement in Washing-Machines; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

My improvements relate to the class of washing-machines having one or more ribbed and slotted and yielding cylinders, under or between which the clothes are passed.

Figure 1 is a transverse section of a machine embodying my invention. Fig. 2 is a longitudinal section. Fig. 3 is a detached representation of the upper bearing of the wringer.

My tub or receptacle has a semi-cylindrical lower portion, A, whose floor or bottom *a* is of zinc or other sheet or cast metal, and a rectangular upper portion, A', which, together with the ends of the lower portion, may be of wood.

The bottom *a* of the tub may be made of cast-iron, galvanized on the inside, and attached to the wooden portion A in any suitable manner.

One end of the tub contains a box, B, which forms the bearing for a removable driving-arbor, C. The opposite end of the tub contains a nut, D, to receive a screw-threaded stud-shaft, E, which terminates in a knob, F, by which it may be adjusted in or out of, or wholly withdrawn from the tub.

G G' are india-rubber gaskets, which are made to tightly inclose the said arbor and shaft by the pressure of cheeks H H', which are screwed fast to the ends of the tub.

The arbor C is scored circumferentially to receive the point of a pin or key, I, which is inserted through the cheek H.

J is a cylinder or reel composed of longitudinal bars with interstices between them. This reel is perforated at its ends to receive the points of the arbor and shaft aforesaid.

K K' are grooves or channels in the ends of

the tub to facilitate a free circulation of the water and suds.

L L' are grooves in the ends of the tub, which restrict to a vertical play the journal-boxes M M' of a yielding and gravitating roller, N, armed with longitudinal ribs.

O O' are spiral springs, which press upon the tops of the boxes M M' and co-operate with the weight of the roller N to press the latter down upon whatever articles are interposed between the reel J and the said roller N.

P P' are screw-threaded followers, which, pressing upon the upper ends of the springs O O', afford adjustable abutments thereto, by means of which their tension may be both maintained and varied at the discretion of the operator.

The arbor C is furnished at its outer extremity with a spur-wheel, Q, into which there meshes a pinion, R, provided with a crank, S, to which the power is applied.

The cover T has hinged to it a prop, V, which, supporting the cover at the position indicated, affords a ledge or bench on which the clothes may be rested, both before and after washing.

W W' are a pair of wringers operated by a crank, X.

Y is a charcoal-furnace arranged underneath the sheet-metal bottom of the tub.

The sliding journal-cap Z being withdrawn, as in Fig. 3, enables the ready removal and replacement of the wringers.

I claim herein as new and of my invention—

1. The arrangement of the open removable reel J, removable arbor C, adjustable stud-shaft E, and removable and adjustable pressure-roller N.

2. The arrangement of cheeks H H' and gaskets G G' for the prevention of leakage around the arbor and stud-shaft E.

In testimony of which invention I hereunto set my hand.

HARRISON DOOLITTLE.

Witnesses:

JAS. BROKENSIRE,  
THOS. WHITEHEAD.