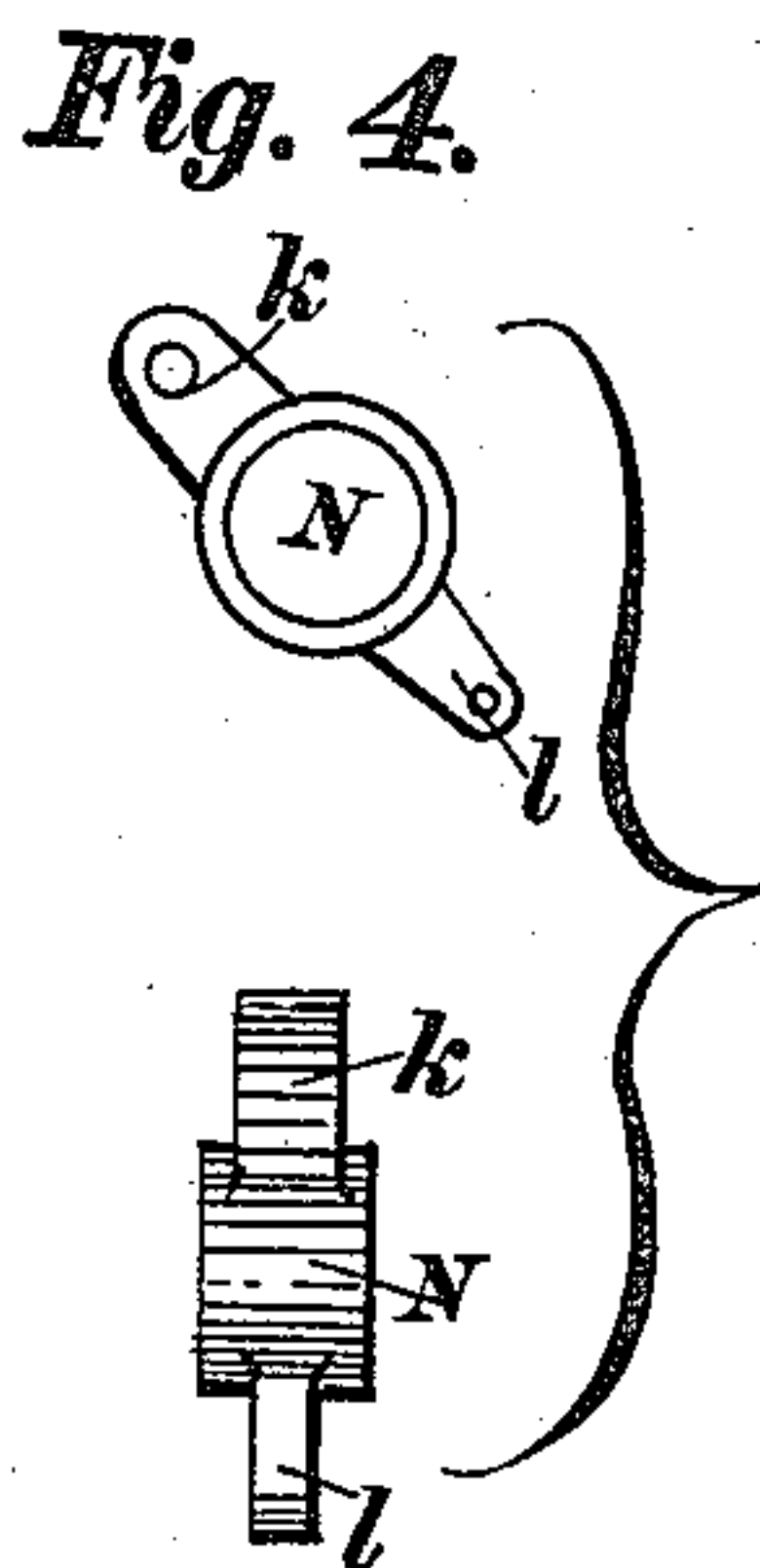
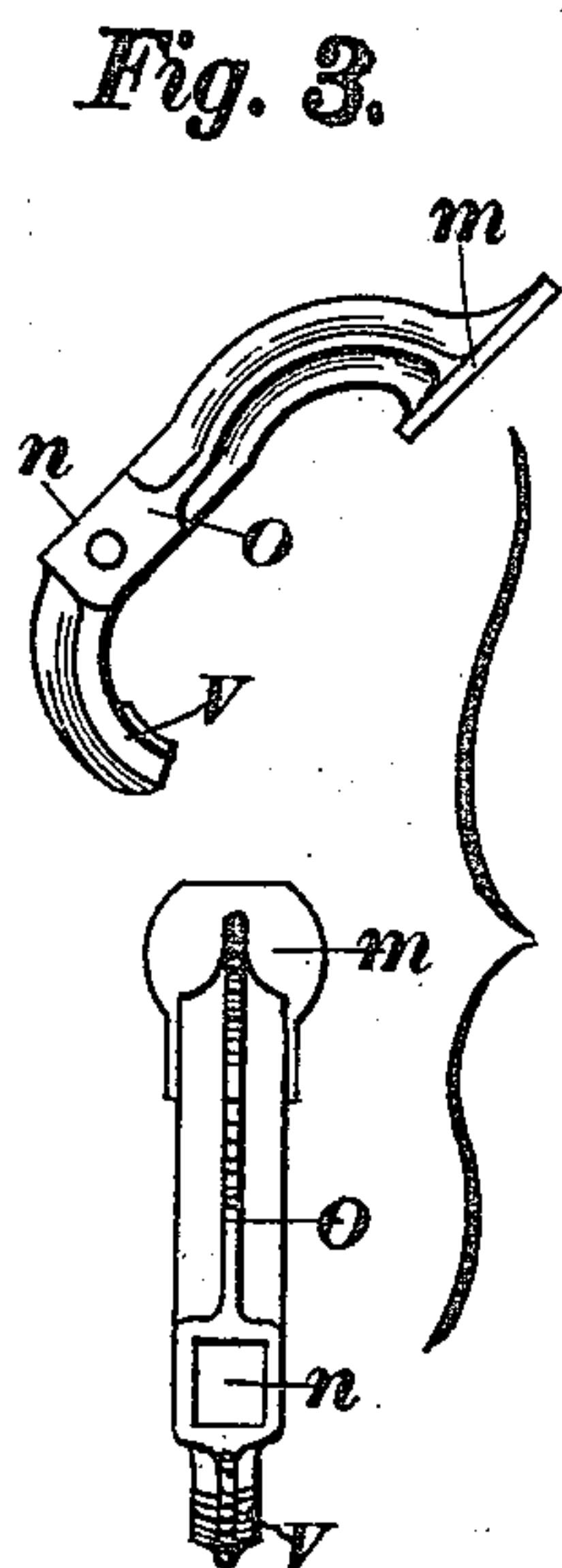
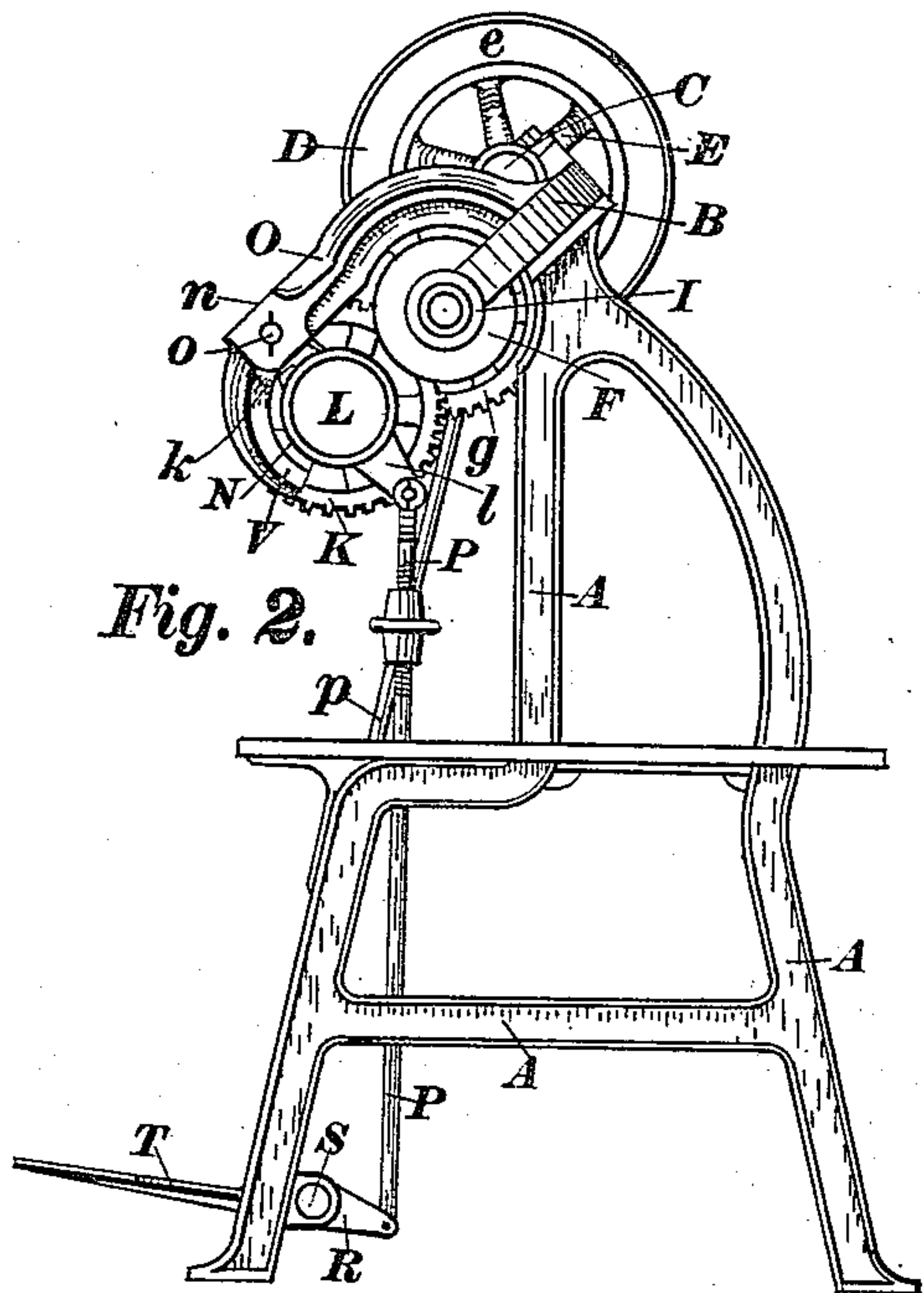
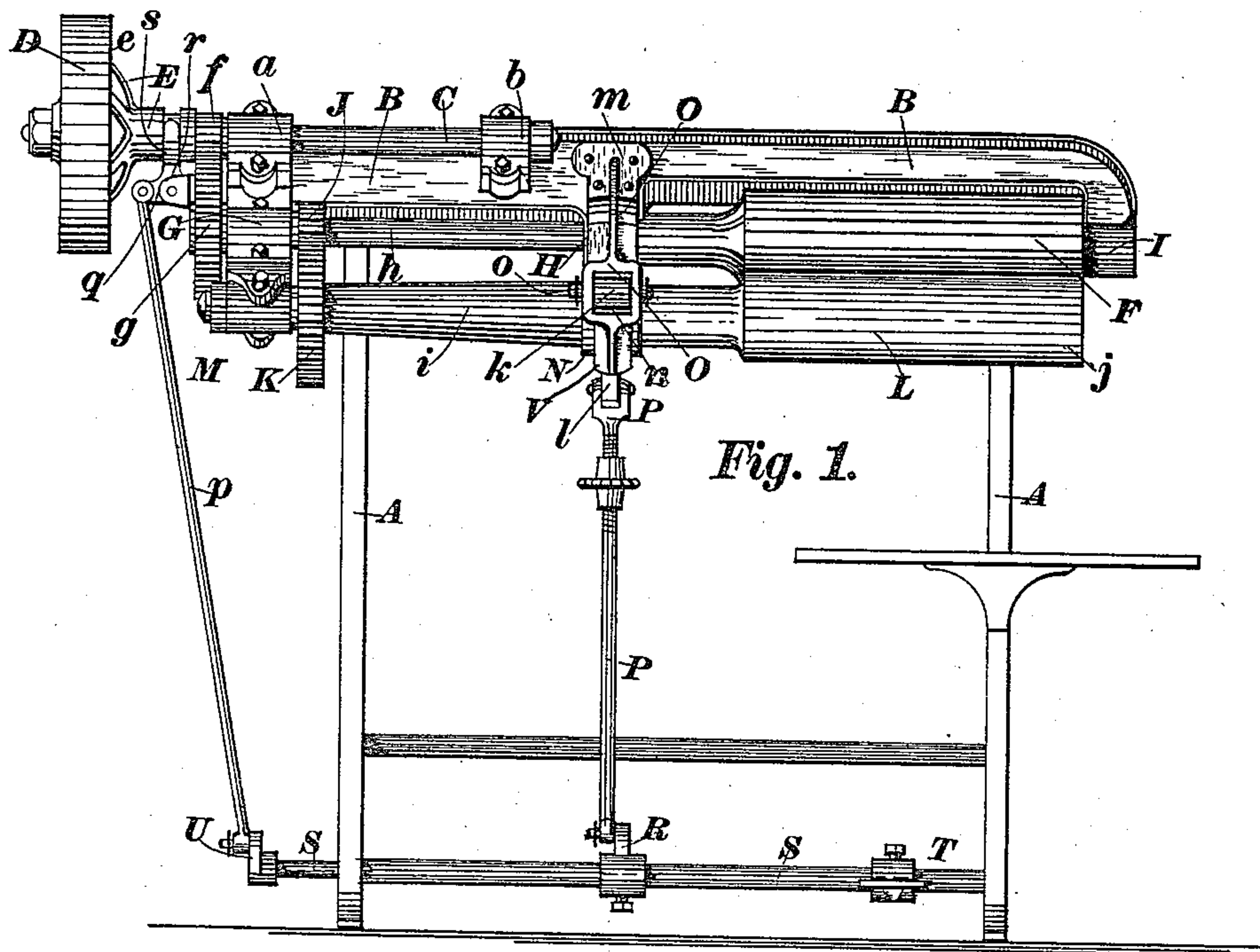


(No Model.)

R. S. NELSON & A. KREUTER.
IRONING MACHINE.

No. 441,373.

Patented Nov. 25, 1890.



Witnesses:
Hans Jacobson.
H. L. Brown.

Inventors:
Robert S. Nelson,
Adam Kreuter.
By Their Attorney Oscar Snell.

UNITED STATES PATENT OFFICE.

ROBERT S. NELSON AND ADAM KREUTER, OF CHICAGO, ILLINOIS.

IRONING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 441,373, dated November 25, 1890.

Application filed September 27, 1890. Serial No. 366,310. (No model.)

To all whom it may concern:

Be it known that we, ROBERT S. NELSON and ADAM KREUTER, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Ironing-Machines, of which the following is a specification.

Our invention relates to improvements in that class of ironing-machines which have two horizontal rollers, one roller stationary and heated while the other roller is movable, so that the distance of the surfaces of the rollers apart can be varied to suit the requirements of practice.

The object of our invention is to so construct an ironing-machine that the least number of parts can be used, thus reducing both the weight and cost, and at the same time provide means by which the machine can be quickly operated and easily managed without accident even by persons of comparatively little skill. These objects are attained by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of the entire machine. Fig. 2 is a view of the right-hand end of the machine shown in Fig. 1. Fig. 3 shows views, respectively, of the side and top of the bracket which supports the lower roller. Fig. 4 shows views, respectively, of the end and side of the supporting-box, in which the lower roller is journaled near the center of its length.

Similar letters refer to like parts throughout the several views.

A designates a ribbed metal frame the top part B of which is inclined to the front at an angle of about forty-five degrees. At the upper left-hand end of this top part of the frame is journaled, in boxes *a* and *b*, a shaft C, which is provided with a pulley D at its outer end. This pulley D revolves freely on the shaft C, except when caused to revolve with shaft C, by means of a friction-clutch E, which operates against its side at *e*, Fig. 2. Firmly secured to shaft C is a small cog-wheel *f*, which gears to a large cog-wheel *g*, which is firmly secured to the left-hand end of the extension *h* of upper roller F. It will be seen that upper roller F and its extension *h* are journaled in three boxes G H I. At the inside of box G

is firmly secured to the extension *h* of roller F a small cog-wheel J, which gears with a large cog-wheel K, which is firmly attached to the left-hand extension *i* of lower roller L. The left-hand extension *i* of lower roller L is journaled in a swivel-box M, so as to allow for a movement of the end *j* of roller L when said roller is moved to and from upper roller F. Near the center of length of roller L is a box N, having a projection *k* on one side, Fig. 4, and a projection *l* on the opposite side. Fig. 3 shows the bracket O for supporting the vibrating box N. This bracket is attached to the upper face of the top of the frame by means of the flange *m*, Fig. 1. The bracket then projects downward, but above both rollers F and L. A slot passes downward through bracket O at *n* to receive the upper projection *k* of box N, which projection is pivoted in the slot *n* by means of the pin *o*, which passes transversely through the sides of bracket O and through projection *k*, Figs. 1 and 2.

The lower projection *l* of vibrating box N is pivoted to the upper end of a rod P, and the lower end of this rod is pivoted to a short lever or arm R, which is attached to the treadle-shaft S.

T is the foot-treadle for operating shaft S, Figs. 1 and 2. At the extreme end of shaft S is a short arm U, to the end of which is pivoted the lower end of rod *p*, the upper end of this rod being connected to the arm *q* of elbow-lever *r*. Elbow-lever *r* has its upper arm engaged in a groove of sleeve *s* of the friction-clutch E. In operation, power being applied by means of a belt to pulley D and a piece of cloth being inserted between rollers F and L, pressure is applied with the foot to the outer end of treadle T, causing the shaft S to turn and force rod P upward, and its upper end, being attached to arm *l* of vibrating box N, will cause the box to turn on its pivot-pin *o*, carrying the end *j*, Fig. 1, of roller L against roller F. At the same time that this action has taken place the arm U at the extreme left-hand end of shaft S, being turned almost opposite to arm R, causes the rod *p* to descend, which downward motion of rod *p* causes elbow-lever *r* to force the sleeve *s* of friction-clutch E from right to left, Fig. 1, against the side of pulley D, the sleeve

s being attached to shaft C by means of a feather-key, which permits it to easily slip longitudinally on the shaft, but prevents it revolving on the shaft, its frictional contact with the side of pulley D causing the shaft C to revolve, and through the cog-gearing *f g* and J K the rollers F and L will also revolve and carry the piece of cloth from the operator "through the rollers."

10 Roller L is covered with cloth and revolves much slower than roller F, so that, as usual, roller F, being hot and its surface sliding upon the cloth, will polish the surface thereof. The lower end of bracket O is bent downward in

15 a curve, so that its lower end at V forms a stop to limit the downward drop of lower roller L when pressure is removed from the foot-treadle T, the weight of roller L being always sufficient to operate treadle-shaft S

20 through rod P, and thus liberate friction-clutch E the same instant that the pressure is removed from the foot-treadle.

What we claim as our invention, and desire to secure by Letters Patent, is—

In an ironing-machine, a lower movable 25 roller L, mounted in a pivoted bearing at one end and near the center of length journaled in a swinging box N, bracket O, having one end attached to the top of the frame and the other end projecting forward and downward 30 above and in front of said box N; said box N supported under and by said bracket O by means of a pivot, the whole operating in combination with stationary upper roller F, said upper roller F being mounted in journal- 35 boxes to the frame of the machine and operating as hereinbefore shown and described.

ROBERT S. NELSON.
ADAM KREUTER.

In presence of—

ISAAC J. FRANKLIN,
PATRICK J. MCNAMARA.