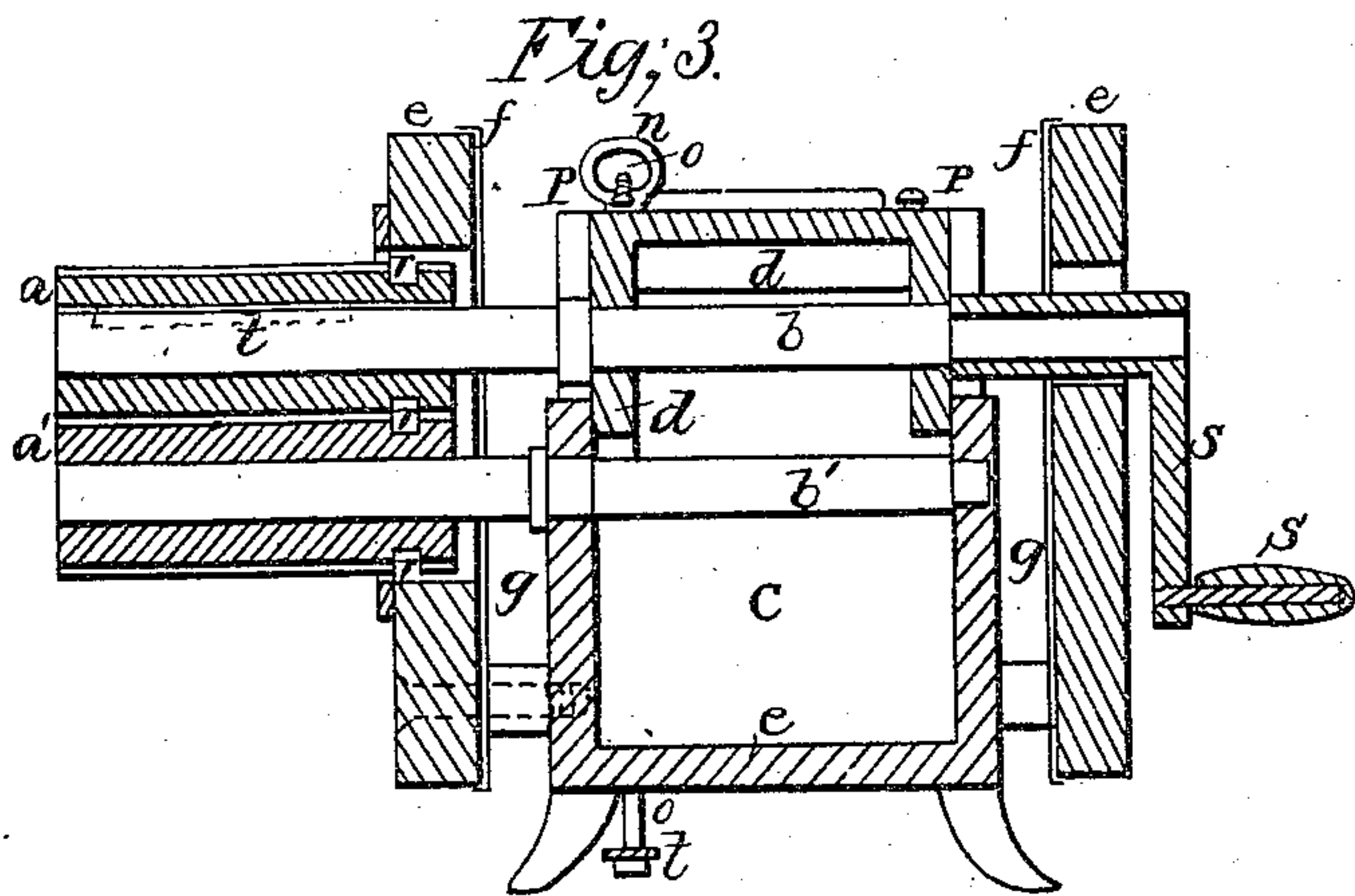
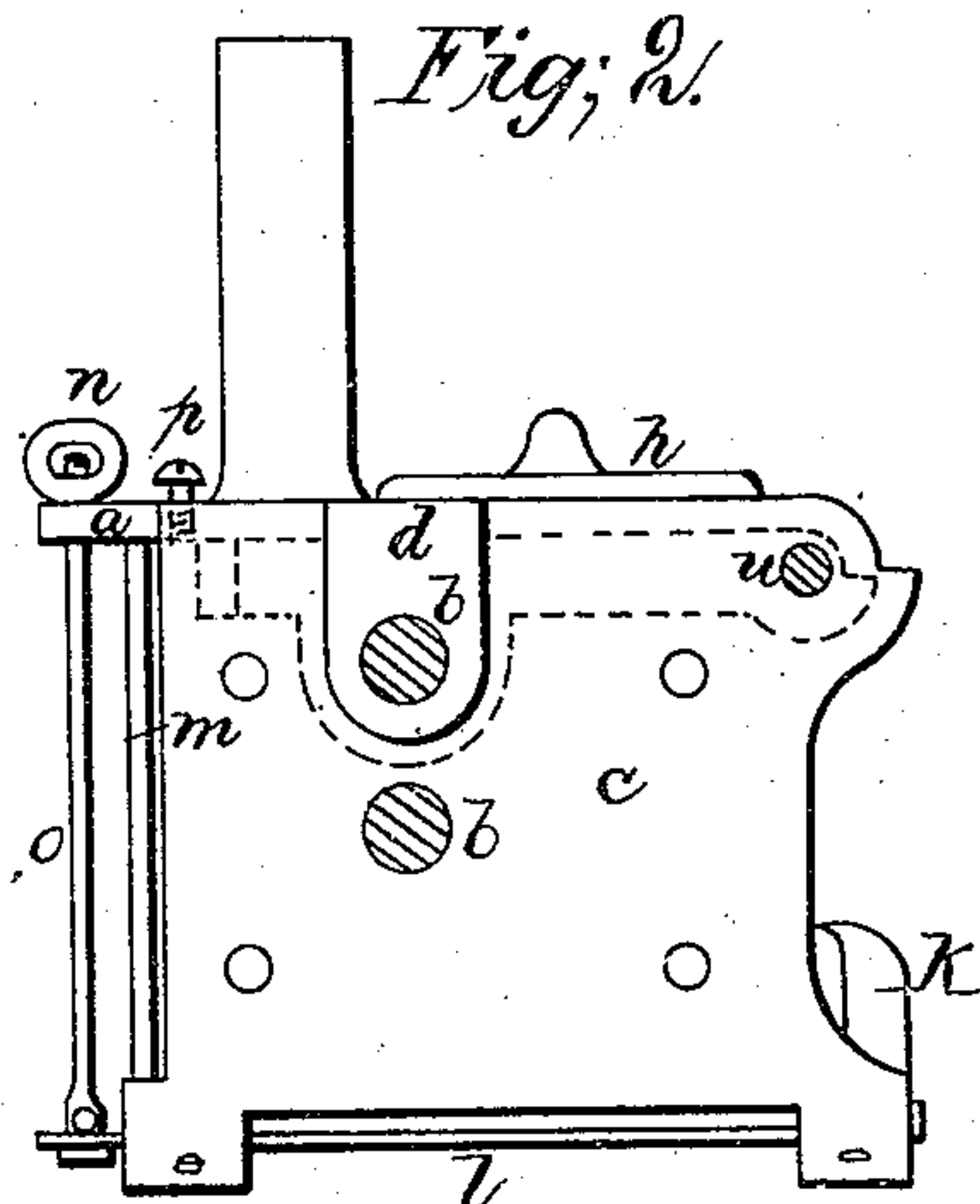
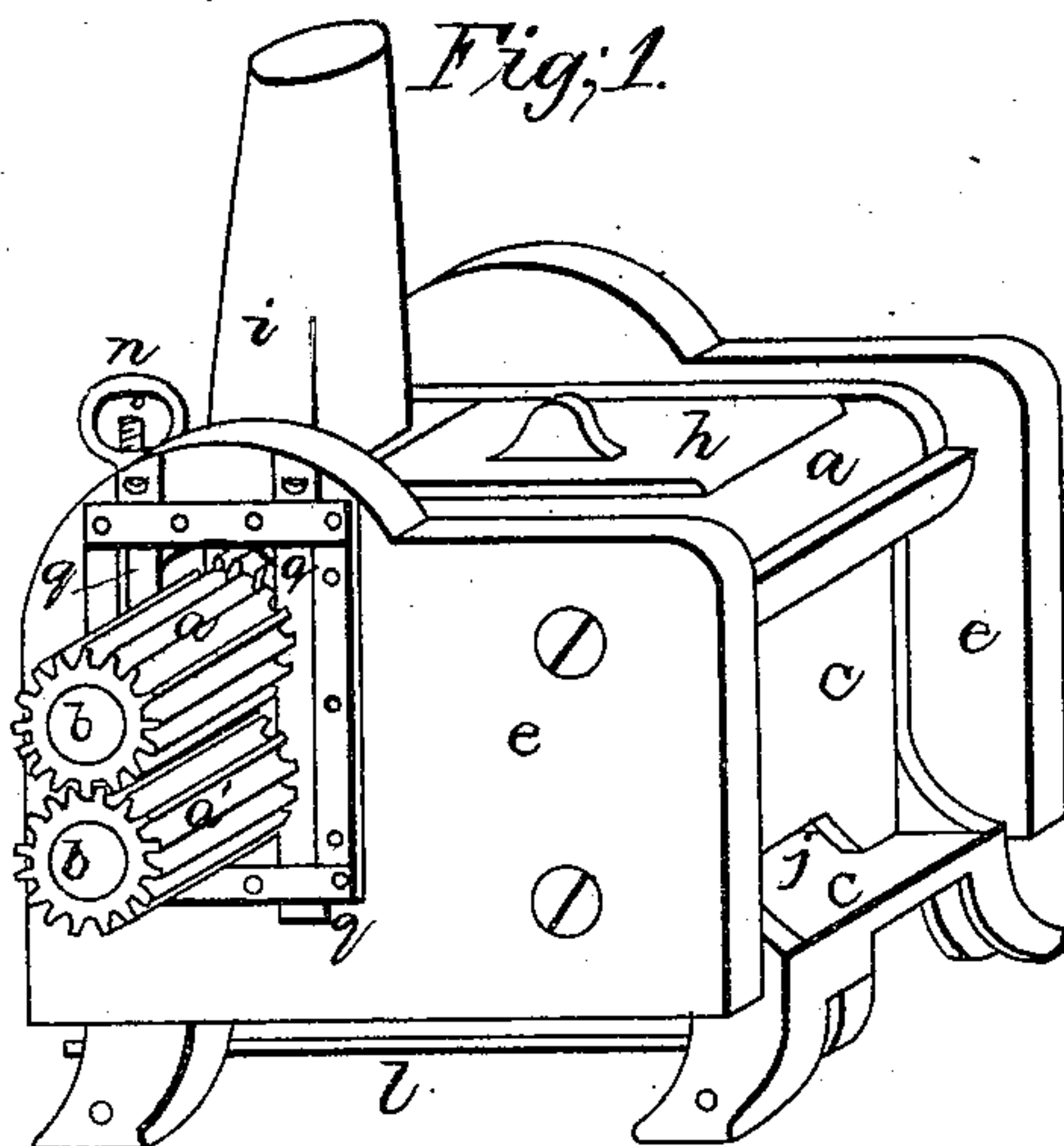


M. P. Carpenter.

Fluting Mach.

N^o 104,825.

Patented Jun. 28, 1870.



Witnesses:

David R. Smith

E. McQuesten

Inventor;

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By her Atty C. W. Smith

United States Patent Office.

MARY P. CARPENTER, OF SAN FRANCISCO, CALIFORNIA.

Letters Patent No. 104,825, dated June 28, 1870.

IMPROVEMENT IN FLUTING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, MARY P. CARPENTER, of the city and county of San Francisco, and State of California, have invented an Improvement in "Fluting-Machines;" and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing and to the letters marked thereon.

My invention refers to certain improvements in that class of fluting-machines in which the cloth or fabric operated upon is passed between hot cylindrical toothed rollers; and consists of certain details of construction, hereinafter described, and has for its object economy in labor and fuel, and cleanliness in heating the toothed cylinder, and, also to provide a machine that can be made to perform different kinds of work by changing the cylinders.

In the drawing that forms a part of this specification—

Figure 1 represents a perspective view of the complete machine.

Figure 2 is a side elevation, with certain parts removed and other parts in section.

Figure 3 is a vertical longitudinal section.

Like letters refer to like parts.

a a' are hollow toothed cylinders.

b b' are cylindrical shafts, to which the cylinders are loosely fitted.

c is the furnace.

d, the furnace-top.

e e, shields or screens, made of wood, or other non-conductors of heat, and lined with sheets of tin, *f f*, fig. 1, or other incombustible material, and separated from the furnace by the air-spaces *g g*.

h is a lid, covering an opening in the furnace-top *d*, through which opening the fire can be fed or examined.

i is the chimney, and

j an opening for admitting air to the furnace, which opening may be closed by the damper *k*.

l is a spring for holding the furnace-top down.

m is a spring for forcing the furnace-top *d* up where the strain on the spring *l* is relaxed, by unscrewing the nut *n* of the adjustable rod *o*.

p p are adjustable screws.

The cylinders *a a'* are retained in their positions on the shafts *b b'* by the sliding plates *q q*, fitting loosely to grooves, *r r*, in the cylinders. By removing the plates *q q*, the cylinders *a a'* can be readily taken off, and replaced by others, as required.

The shaft *b'* does not revolve, but passes through, and is riveted fast to the furnace *c*.

The shaft *b* is caused to revolve by turning the crank *s*, which has its bearings in the furnace-top *d*, and, by means of the feather and groove *t*, causes the cylinder *a* to revolve, which communicates motion to the cylinder *a'*.

The furnace-top *d* is hinged to the furnace by means of a rod, *u*, parallel with the shafts *b b'*. The alignment of this shaft is still further secured by means

of the adjustable screws *p p*, rod *o*, nut *n*, and spring *l*. The shafts *b b'* are made of copper or other good conductors of heat, and the heat of the furnace is conveyed through them, by conduction, to the cylinders *a a'*, but one or both of these shafts may be made hollow, with the outer end closed, and arranged in such a manner as to cause a draught of flame and hot gases to pass through them.

The furnace *c* may be heated by charcoal, a gas-jet or lamp, or in any other convenient manner. The cylinders *a a'* may have any desired number of teeth, for large or small fluting, or not any teeth, in which case they become smooth cylinders, and may be used in ironing articles that do not require fluting.

After the cylinders *a a'* have become sufficiently hot, the fabric to be operated on is placed between them, and then, by turning the crank *s*, the cylinders are caused to revolve, and the fabric, by passing between them, is caused to assume a shape corresponding to the teeth of the cylinders used.

In fluting-machines of this class not having my improvements, the toothed cylinders being made in one piece with and forming a part of their respective shafts, and the removal or exchange of these shafts being attended with great difficulty and inconvenience, it has always been impracticable to do more than one kind of fluting with each machine, and it has been necessary to have as many complete machines as there are different kinds of fluting to do; it is evident that my invention obviates this difficulty.

In machines, hereinbefore mentioned, not having my improvements, the heat is obtained by placing hot irons, rods, or bolts in the shafts, made hollow for that purpose, and the heating and changing of these rods or bolts is a source of much annoyance and inconvenience.

In other machines, also, both the upper and lower shafts revolve, manifestly making their alignment and adjustment much more difficult than in my improved machine, where the shaft *b'* is fixed.

It will also be seen that, notwithstanding my invention combines so many improvements, it is exceedingly simple in its construction, and not liable to get out of repair.

Having thus described my invention,

What I claim, and desire to secure by Letters Patent, is—

1. The adjustable rod *o*, nut *n*, the springs *l m*, and the adjustable screws *p p*, when combined with the lid, and arranged and operated as described.

2. The cylinders *a a'*, the shafts *b b'*, the feather and groove *t*, the furnace *c* and furnace-top *d*, the shields *e e* and linings *f f*, the sliding plates *q q* and the grooves *r r*, rod *o*, nut *n*, springs *l m*, and screws *p p*, combined, substantially as described.

In testimony whereof I have hereunto set my hand and seal.

Witnesses: MARY P. CARPENTER. [L. S.]

O. W. M. SMITH,

DAVID R. SMITH.