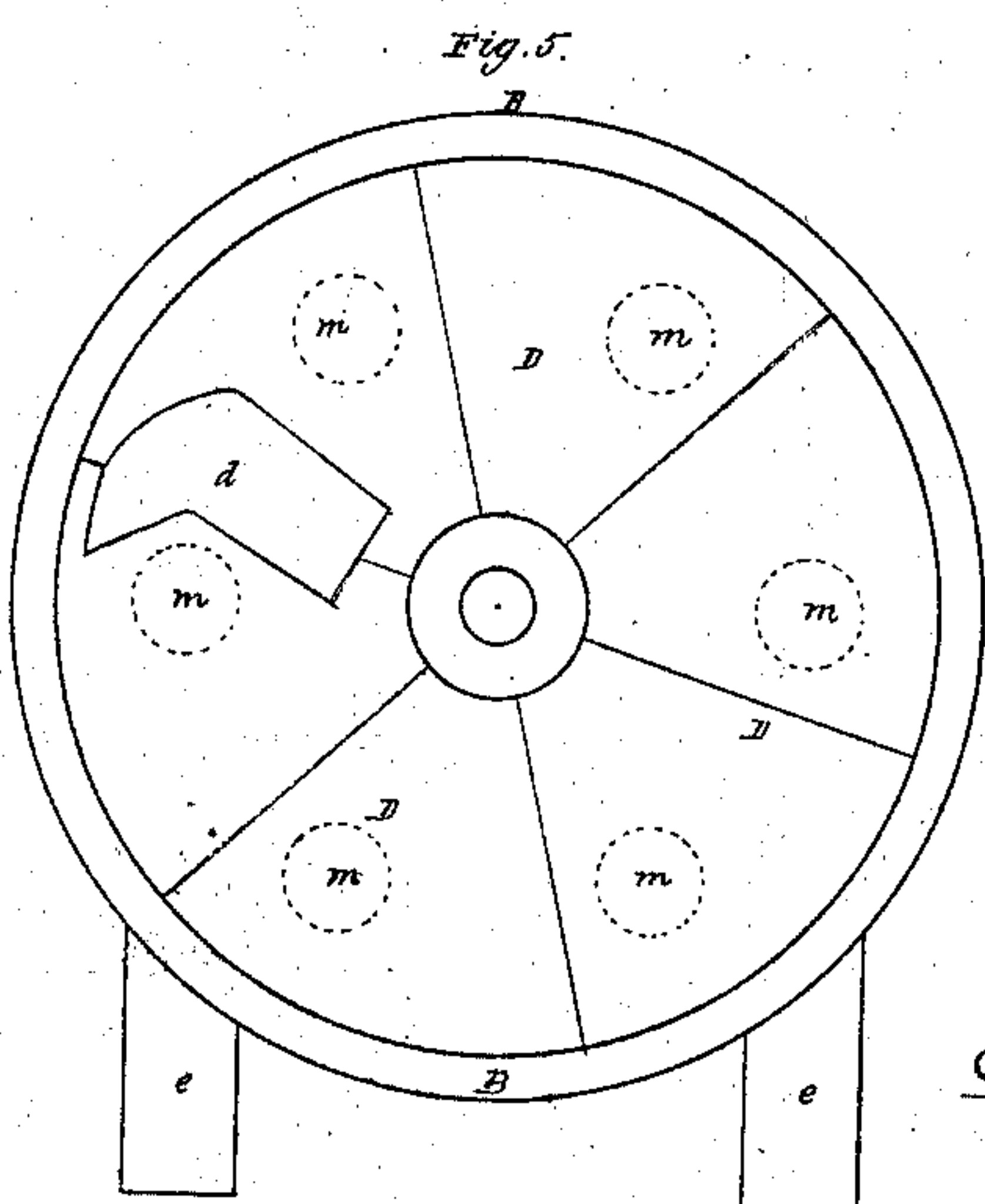
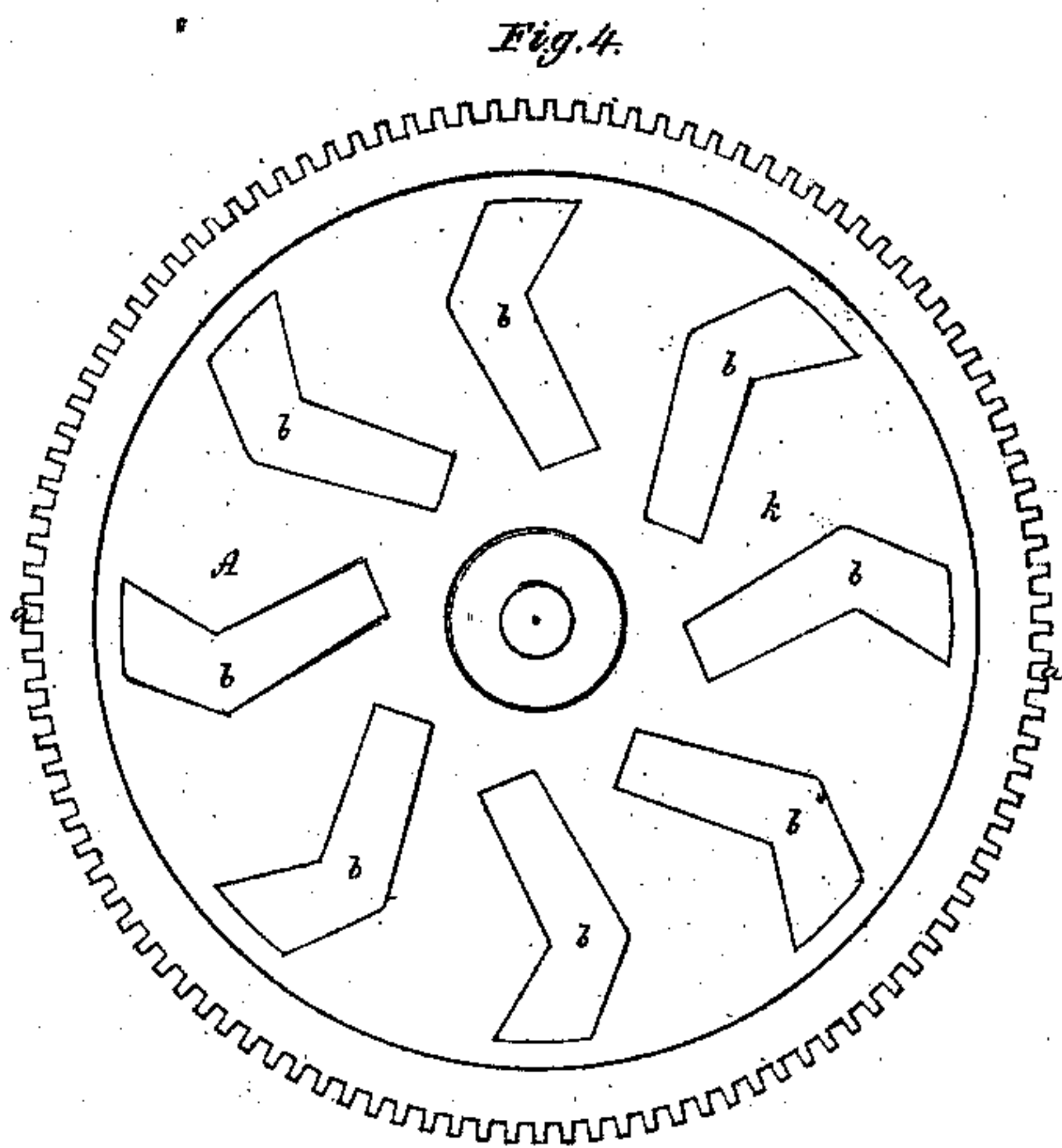
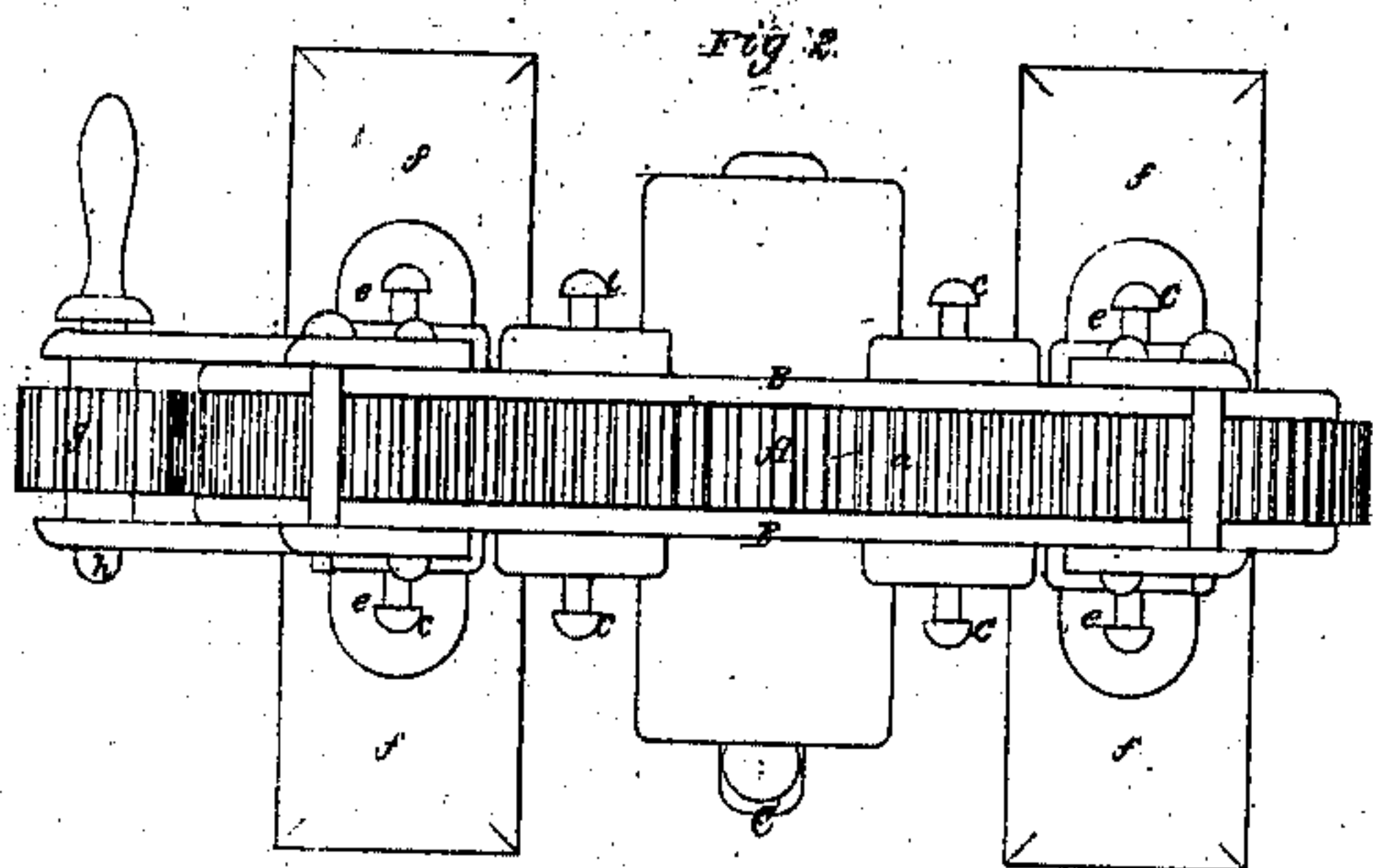
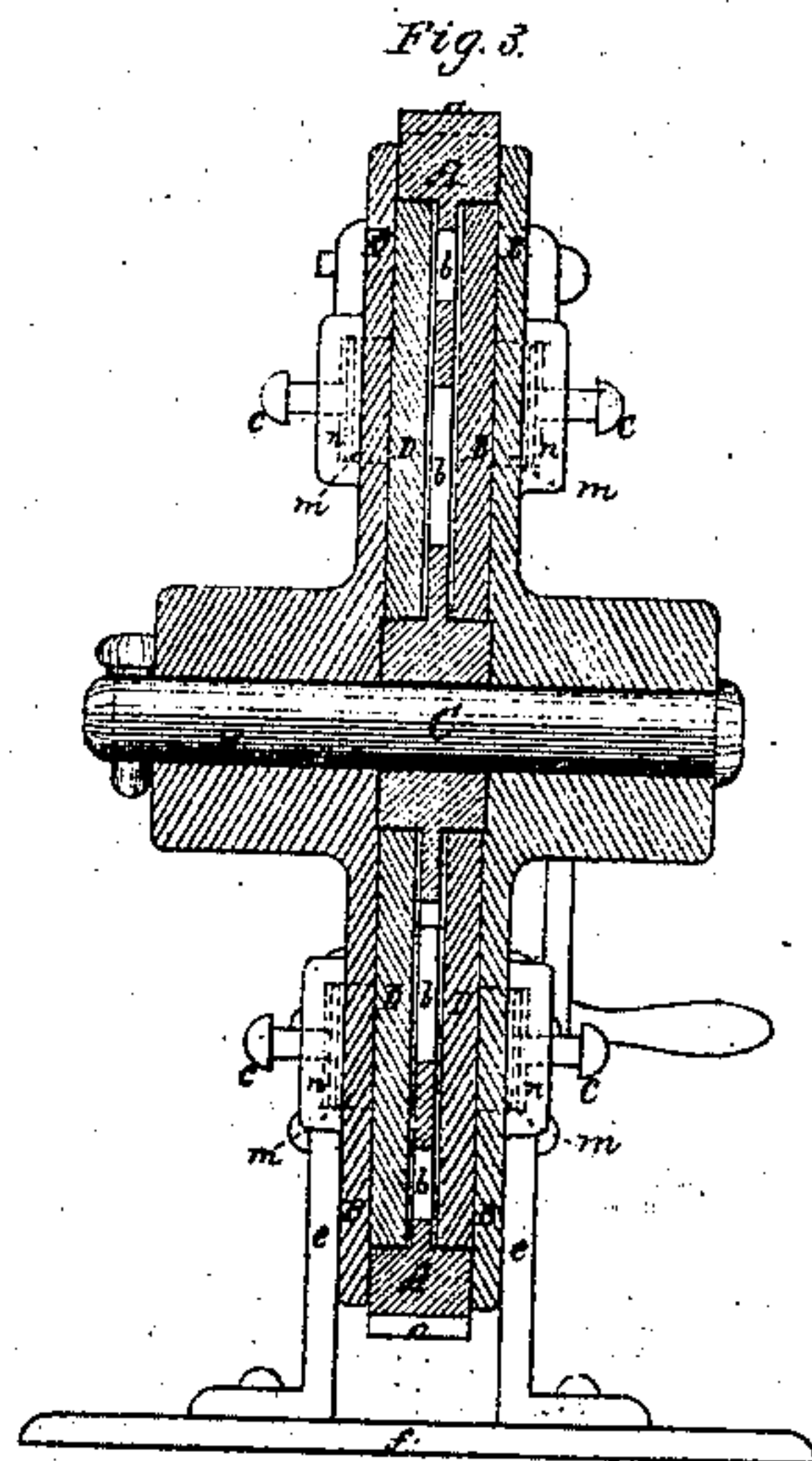
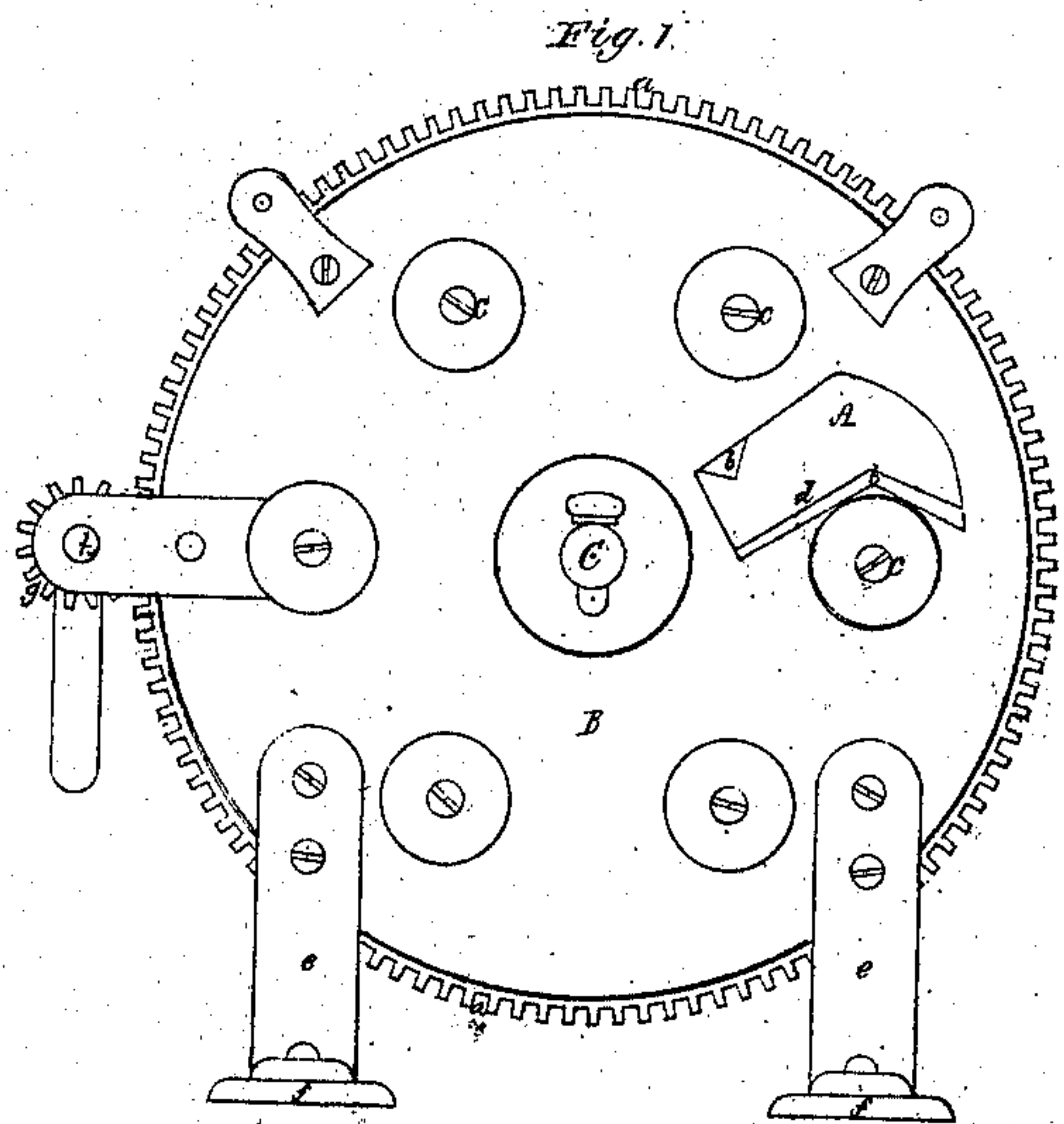


*W. Butterfield,*  
*Crimping Machine.*  
*No. 100498.                      Patented Mar. 8. 1870.*



*Witnesses.*  
*S. A. Piper.*  
*J. R. Snow.*

*Wm. Butterfield*  
*by his attorney.*  
*H. W. May*



# United States Patent Office.

WILLIAM BUTTERFIELD, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND THOMAS ELWOOD ROBERTS, OF SAME PLACE.

Letters Patent No. 100,498, dated March 8, 1870.

## IMPROVED CRIMPING-MACHINE.

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

To all persons to whom these presents may come:

Be it known that I, WILLIAM BUTTERFIELD, of Boston, of the county of Suffolk, and State of Massachusetts, have made a new and useful invention having reference to Machinery for Crimping Leather for the Upper of Boots or Shoes, or for other purposes; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a side elevation.

Figure 2, a top view.

Figure 3, a transverse section of a crimping-machine, embodying my invention, the said transverse section being taken diametrically through its jaws on opposite sides of the axis of the machine.

Figure 4 is a side elevation of the rotary crimping-wheel or crimper.

Figure 5 is an inner side view of one of the side plates and its series of jaws.

In the machine hereafter explained there are employed a rotary wheel or crimper, and two or more sets of crimping-jaws, the latter being arranged around the common axis of the crimper and the side plates used for supporting the jaws, the same being so that the piece of leather or article while being crimped may be passed in succession through the sets of jaws.

In the drawings—

A denotes the crimping-wheel or crimper, it consisting, as represented, of a circular disk, *k*, provided with gear-teeth *a* on and around its periphery.

It also has one or more angular slots, *b*, formed through it transversely.

This crimper is to revolve between two stationary frames or circular plates, *B B*, which serve to support the journal or shaft *C* of the crimper, and also two or more sets of crimping-jaws, *D D*, arranged in a circular path about the axis of the shaft *C*.

The jaws of each set are disposed on opposite sides of the crimper, that is, one is on one side and the other on the other side of it, and each jaw is to be forced toward the crimper by a spring, *m*, arranged in a socket, *n*, and provided with a contractile screw, *c*, the whole being substantially as represented in the drawings.

The several jaws of each series disposed in a circle are made as sectors of circles, with their edges resting in contact, as shown in the drawings. This construction and arrangement of them cause each of them to be supported by all the rest when it is subjected to the great strain to which it is liable while a piece of leather is being forced across the jaw by the crimping-wheel.

The jaws of the series on each side of the crimping-wheel, though insulated from each other so as to act

independently in lateral directions, that is, so as to move either toward or away from the crimping-wheel, yet contribute to support one another, as set forth. Besides allowing to each of the jaws greater freedom of movement to accommodate itself to the leather, the arrangement requires but few fastenings to the jaws to hold them in their proper positions between the side plates.

The side plates *B B* close the machine on the sides so as to exclude dust and dirt from collecting on the jaws, and they also operate to afford a strong support to the jaws and the wheel and the springs of the jaws.

There is also an angular slot or opening, *d*, made through each of the side plates *B B*, such slot being formed and arranged in manner as shown in fig. 1.

The two slots *d* are to be in conjunction, so as to constitute a common passage through the two plates, the same being to enable an attendant to pass a piece of leather laterally through the two slots and that of the crimper, and arrange it so that the crimper, while in revolution, may strike the piece of leather at or near its middle, in order to force it between the jaws of the first pair, and thence in succession between those of the other sets of jaws.

The side plates are supported in position by standards *e e* erected on bed-plates *f f*.

Furthermore, a pinion, *g*, fixed upon a shaft, *h*, engages with the teeth of the crimper, and when revolved serves to put the crimper in revolution.

The crimper may be without the gear-teeth and driving-pinion applied, as set forth, and may be revolved by power applied directly to its shaft when fixed to the crimper, but it is believed that it can be worked to much better advantage by the gear-teeth and pinion arranged as set forth.

In operating with this rotary crimping-machine, an attendant, when the slots of the crimper and side plates come into or may be in conjunction, has only to pass a boot-upper into them so that its middle may be in the slot of the crimper. This having been done, the crimper is to be put in revolution so as to crowd the leather between the jaws of the first, and in succession between those of every other pair of the series of sets, until finally the leather may have been carried into the passage through the machine so as to enable it to be removed from the crimper.

Just preparatory to or after such removal another or fresh piece of leather may be introduced into the machine for the purpose of being crimped.

The machine may have more than one lateral passage through its side plates and crimper, or there may be a series of the slots or openings through the crimper to operate with one common passage through the two side plates, and with a series of sets of jaws arranged as hereinbefore described.



I make no claim to the leather crimping-machine as patented by John E. Tucker, August 22, 1848.

What I claim is—

My improved rotary crimping-machine, constructed with the jaws D of each series formed and arranged relatively to each other in manner and to operate with the slotted crimping-wheel and the side plates or disks, (provided with springs,) as set forth, the several jaws, under such arrangement, serving to sustain

one another, and being so insulated from each other as to be capable of moving or being moved toward or away from the wheel, as circumstances may require, during the process of crimping a piece of leather between such jaw and wheel.

WILLIAM BUTTERFIELD.

Witnesses:

R. H. EDDY,  
S. N. PIPER.