

T. B. Butler.

Forming Bats.

Patented Aug. 10, 1858.

N^o 21164

Fig. 3.

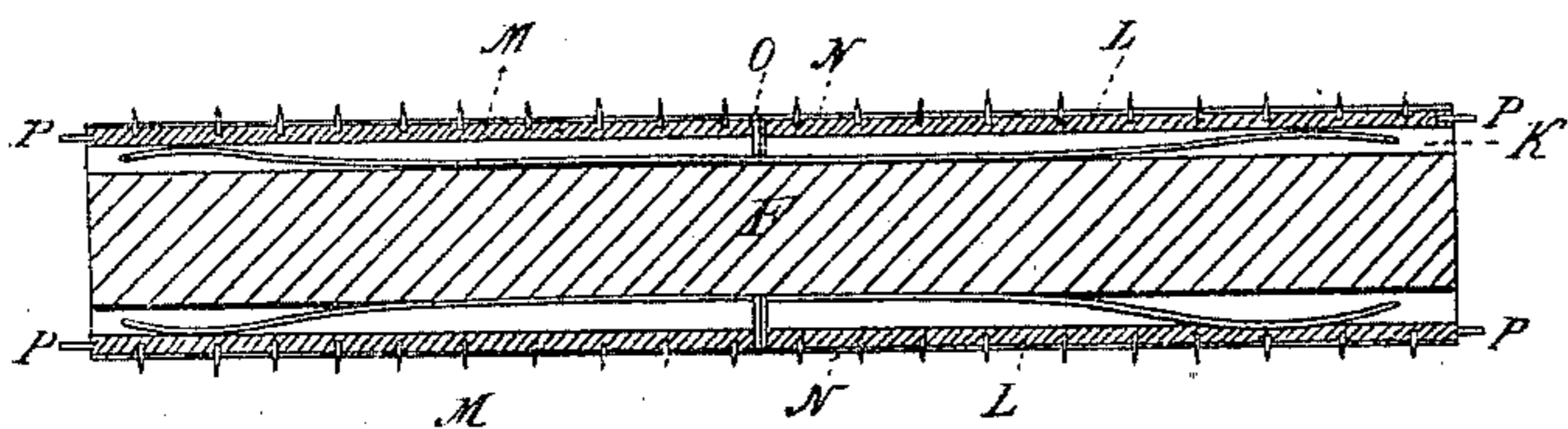


Fig. 1.

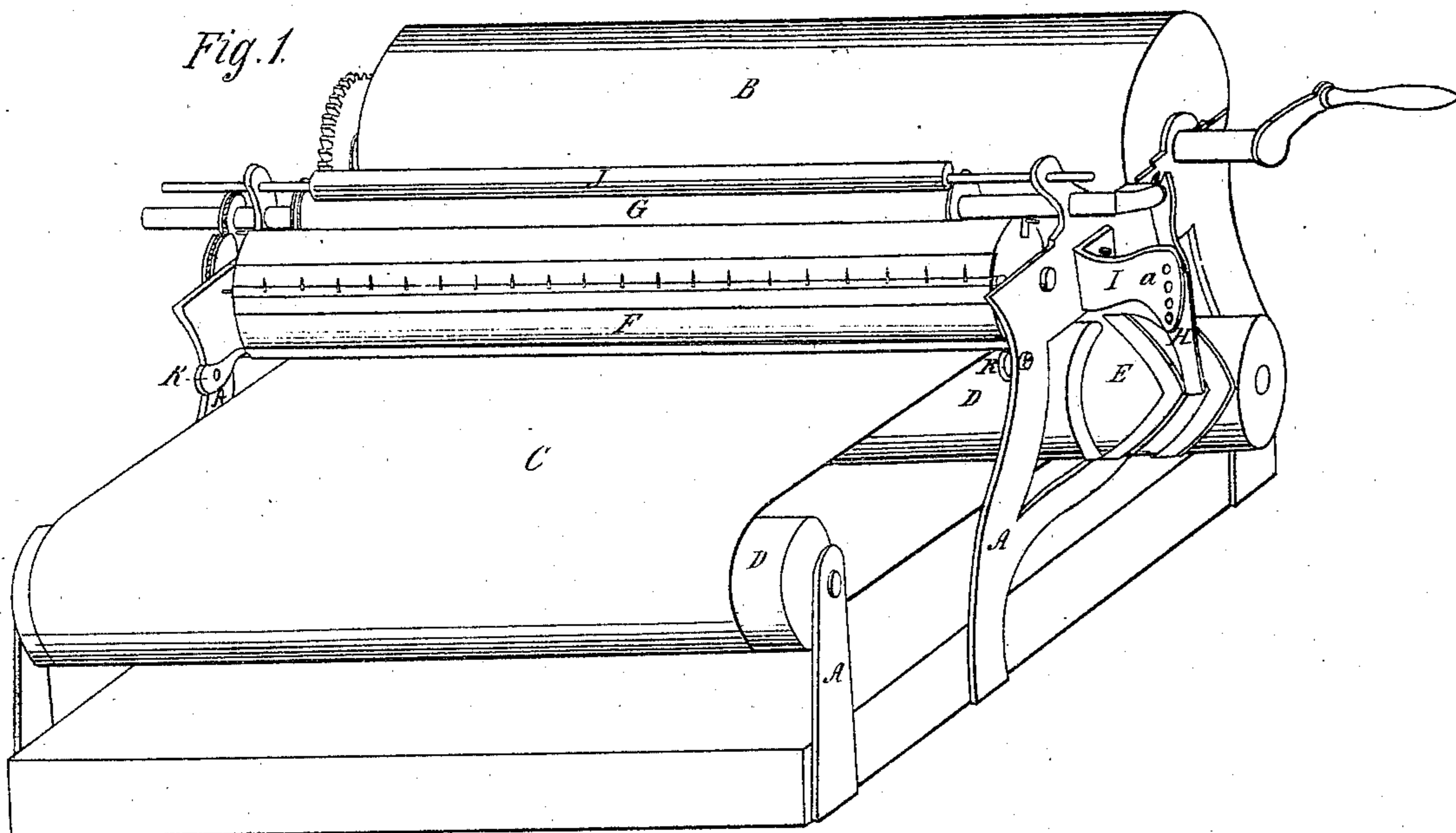
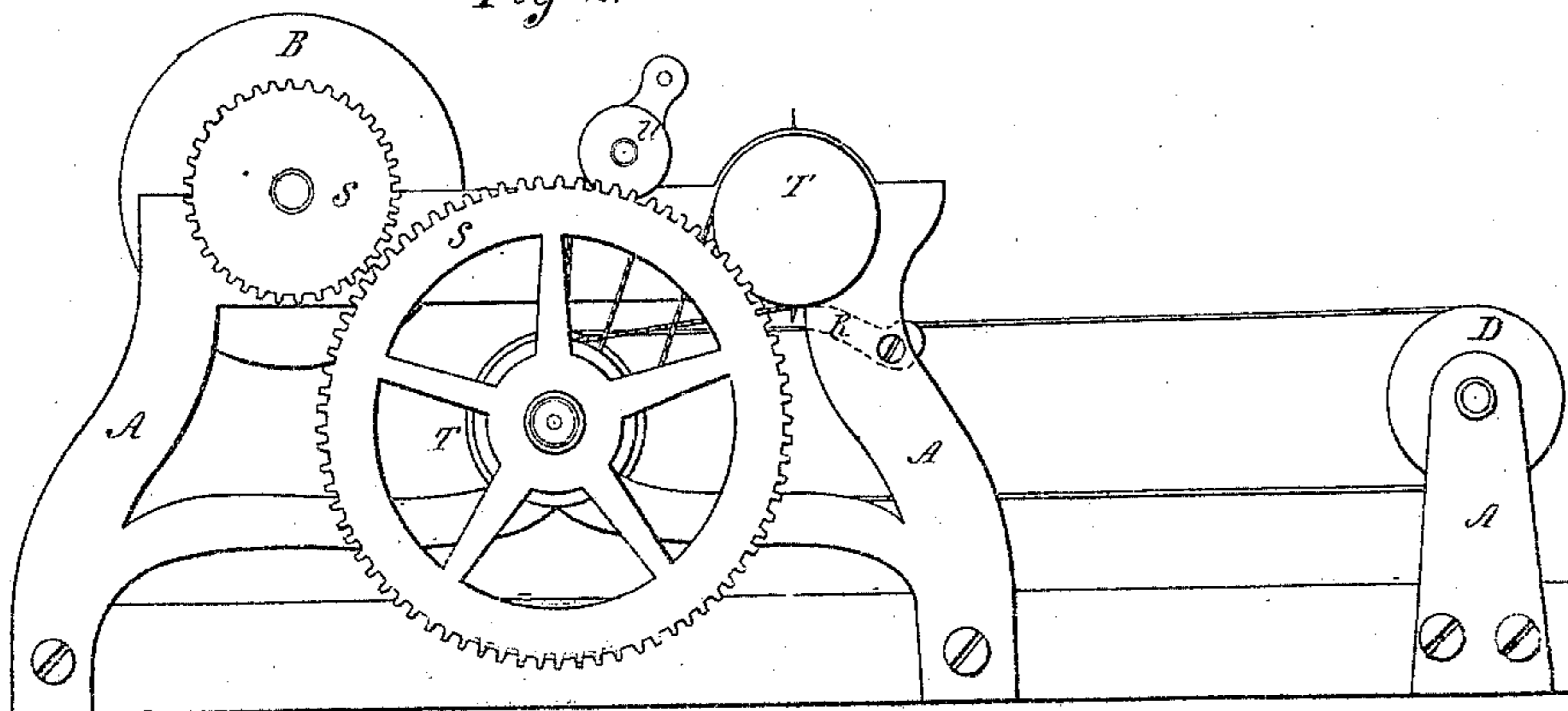


Fig. 2.



UNITED STATES PATENT OFFICE.

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MACHINE FOR FORMING BATS FOR FELTING.

Specification of Letters Patent No. 21,164, dated August 10, 1858.

To all whom it may concern:

Be it known that I, THOMAS B. BUTLER, of Norwalk, county of Fairfield, and State of Connecticut, have invented certain new and useful Improvements in Machinery for Forming Bats in the Manufacture of Felted Fabrics; and I do hereby declare that the same is described and represented in the following specification and drawings, and to enable others skilled in the art to make and use the same I will proceed to describe the construction and operation, referring to the drawings, in which the same letters indicate like parts in each of the figures.

The nature of my invention consists in arranging in the ordinary calender roll now in use, to felt the sliver upon the apron as it comes from the card or the vibrating roll, movable rods, in which teeth are placed, which teeth hold the sliver in place while the vibration of the traversing roll, is changed, whereby an arcuate or any desired angle may always be formed, and by means of cams and the movable character of the rods in which the teeth are fixed the teeth may be withdrawn from the sliver when it is brought in contact with the apron.

In the accompanying drawings Figure 1 is an isometrical view. A is the frame work of the machine. B, represents the doffer cylinder of a carding machine. C, is the apron; D, the apron-roll. E, is a cam secured on the end of the roller; D', shaft. F, is a toothed rod cylinder or calender roll for taking the sliver of wool or material and laying it upon the apron C. G is a traversing-roll having a swivel-link or groove in the end of its shaft and is caused to vibrate back and forth by means of the cam E and lever H. The traverse of the roll may be increased or diminished by changing the bolt or pin *a* which secures the lever to the stud I, up or down, thereby changing the leverage. J, is a roller which holds the stock or material on the roller G and moves with and revolves by the action thereof.

Fig. 2 is a section side view. S are gears which give the required motion from the doffer cylinder to the apron-roll. T are pulleys which give motion from the roller,

D' shaft to the cylinder F. U is a splined-pulley which drives the traversing-roll, and allows the shaft to slide back and forth through it.

In Fig. 3, F is a toothed rod cylinder for taking the sliver and laying it upon the apron C. The cylinder is constructed with four lateral grooves K. L, are rods having pointed teeth. M, are springs which press the rods up against the plates N, which are made and secured into and flush with the circumference of the cylinder and at such distance apart as to just allow the pins to work freely back and forth between them. A pin O, is placed through the rods into the cylinder to prevent any lateral motion thereof. P, are pins in the end of the rods, so that as they come around to deposit the sliver upon the apron the pins strike the cams R and lift the rods drawing the teeth from the sliver upon the apron. Thus it will be seen that as the material passes from the doffer it is taken between the rolls J, G and caught by the teeth rods, and while they carry it forward to the apron, the rolls carry the stock laterally while it is held by the teeth in such a manner as to lay it at a greater or less angle as may be desired, and always at an acute angle upon the apron.

The extent of the angle may be varied by changing the fulcrum pin *a* to a different hole in the stud I and lever H. The teeth may be inserted directly and immovably upon the surface of the roll, but will not operate as well as when placed upon the movable rods, so that they can be withdrawn from the sliver when it is brought in contact with the apron.

The distinguishing feature of my invention consists in the arrangement of rows of teeth upon the calender or fitting roll to hold the sliver while the vibration is changed, when by an acute angle, and a greater, and any desired angle, can be formed; and also in arranging the teeth upon movable rods so that they may be thrown in by the cams R, and disengaged from the sliver as it is deposited upon the apron.

I do not claim the rolls J, G, or F nor any combination of them, nor the vibration

of J, and G, nor the process of depositing the sliver diagonally upon the roll or apron. But

1. I claim the arrangement of rows of
5 teeth upon the calender or felting roll, to hold the sliver while the vibrating of the roll G, is changed and the angle formed, substantially as described.

2. I also claim the rods L, springs M, pins P, and cams R, or their equivalents, 10 arranged and operating as described, and for the purposes set forth.

THOS. B. BUTLER. [L. s.]

Witnesses:

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JERIMY W. BLISS.