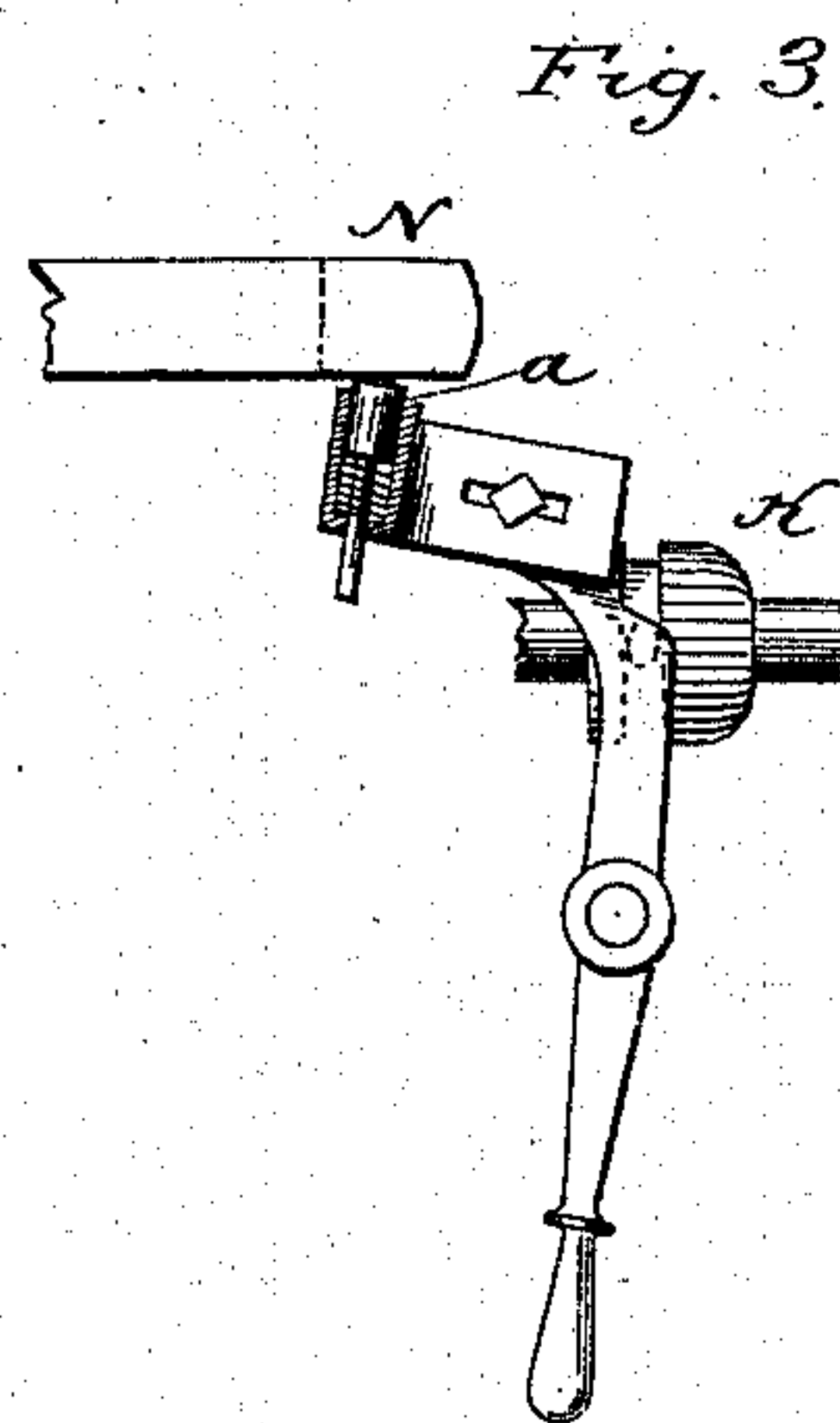
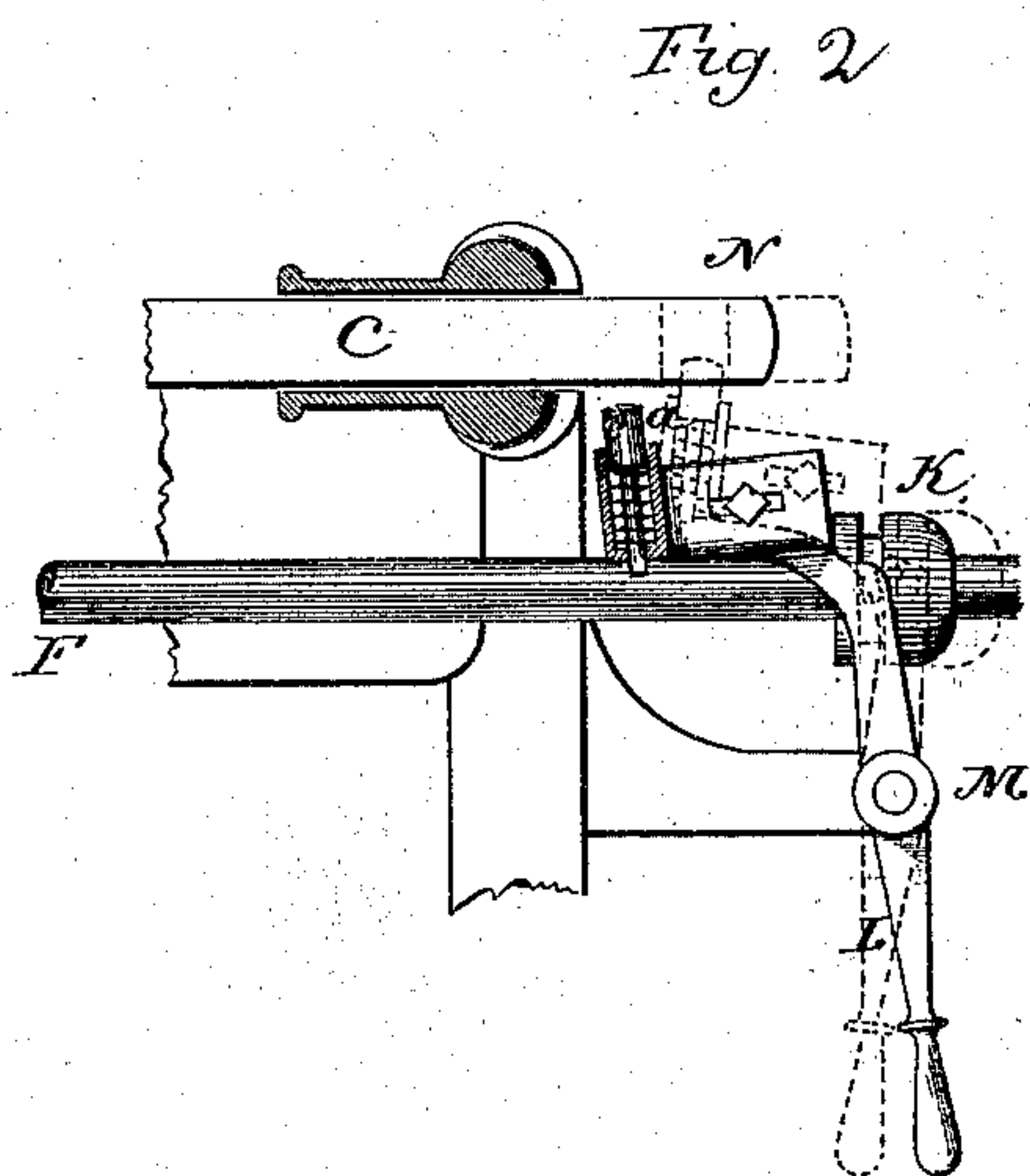
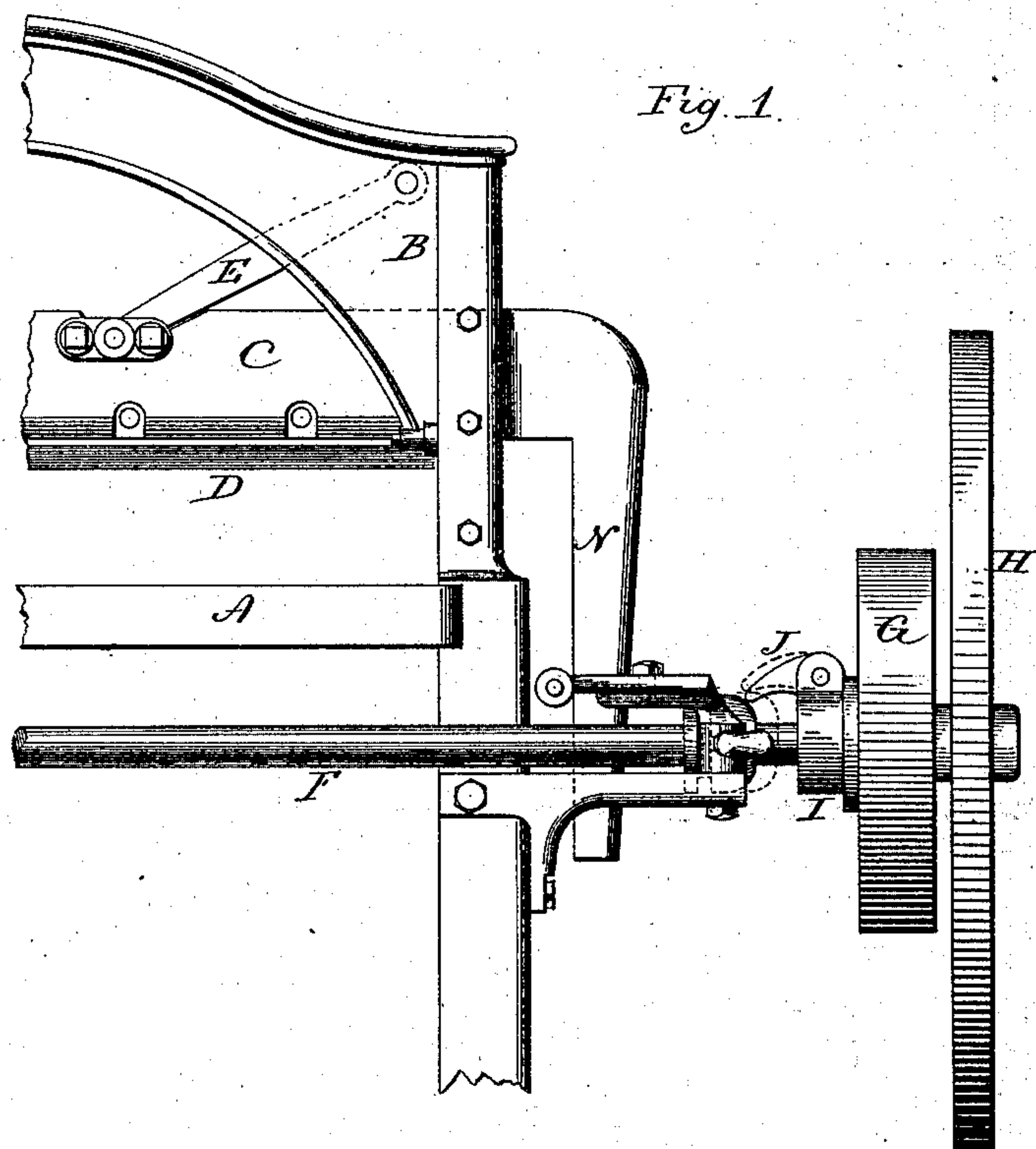


(No Model.)

S. WHITLOCK.
PAPER CUTTING MACHINE.

No. 326,002.

Patented Sept. 8, 1885.



Witnesses,
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UNITED STATES PATENT OFFICE.

STURGIS WHITLOCK, OF BIRMINGHAM, CONNECTICUT.

PAPER-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 326,002, dated September 8, 1885.

Application filed June 15, 1885. (No model.)

To all whom it may concern:

Be it known that I, STURGIS WHITLOCK, of Birmingham, in the county of New Haven and State of Connecticut, have invented new

5 Improvements in Paper-Cutting Machines; and I do hereby declare the following, when taken in connection with accompanying drawings, and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

15 Figure 1, a front view of the right-hand end portion of the machine, showing the cutter-bar, table, driving-shaft, and clutching mechanism with my improvement applied; Fig. 2, a horizontal section through the frame over the cutter-bar, looking downward, and showing a horizontal section through the tubular recess in the lever in which the follower is arranged; 20 Fig. 3, the same as Fig. 2, showing the lever as turned to produce the clutching action between the pulley and shaft, and before the cutter-bar commences its movement.

25 This invention relates to an improvement in that class of paper-cutting machines in which the cutter consists of a blade adapted to work up and down, or from and toward the table on which the material to be cut is placed, the said cutter hung to the frame, so that in its descent a longitudinal movement is imparted to it, whereby a drawing cut is produced—a well-known style of machine. These machines are constructed to be driven by 30 power or by hand, and in either case it is desirable that the cutter shall stop always at its up position, and at the termination of every stroke, so that the material beneath the cutter may be readjusted between each stroke for a new cut.

35 The object of my invention is the construction of a stop-motion which will positively arrest the cutter when it has arrived at its up position on the return of the cutter, and whether or not the driving pulley or wheel shall cease or continue its movement; and the invention consists in the construction of the stop-motion in connection with the clutching device of the machine, as more fully hereinafter described, and particularly recited in the 40 claims.

The general construction of the machine is

too well known to require full illustration or detailed description, and I show only a sufficient portion of the machine to properly 55 illustrate the invention and its mode of operation.

A represents the table on which the material is placed to be cut; B, a portion of the frame; C, the cutter-bar carrying the cutter 60 D; E, one of the links by which the cutter-bar is hung to the frame above, and so that as the cutter-bar descends the links will cause the bar and cutter to move longitudinally across the table, and thereby impart a drawing cut. 65

F is the driving-shaft to which power is applied to impart the down-and-up movement to the cutter-bar. On the shaft is a loose pulley, G, to which the power is applied. This pulley also carries the fly-wheel H, which may be 70 used as a hand or crank wheel should occasion require.

On the shaft upon the inside of the pulley is a clutch, I, actuated by a lever, J, hung to the clutch and projecting inwardly therefrom, 75 a common and well-known clutch, not necessary to be particularly described further than to say that the lever turned from the shaft will cause the clutch to grasp the shaft, so that the shaft will turn with the pulley, or if the lever J be turned 80 inward the pulley will be left free to revolve, while the shaft will remain stationary. On the shaft and near the lever J is a conical-shaped sleeve, K, adapted to slide longitudinally toward and from the lever J, and so that forced 85 under the lever J, as indicated in broken lines, Fig. 1, it will throw that lever outward to engage the shaft, or, moved in the opposite direction, will permit the lever to turn inward and release the shaft. The sleeve K is moved back 90 and forth toward and from the lever J by a hand-lever, L, hung upon a fulcrum, M, and so that the hand of the operator applied thereto will enable him to engage power with the driving-shaft, or release it therefrom, as occasion 95 may require.

The inner arm of the lever L is turned toward the machine at substantially right angles and in a horizontal plane, and upon this turned-in portion of the arm a spring-follower, a, is arranged, adapted to move in a line substantially 100 parallel with the line of the lever L, but at one side of the said line through the lever L, and so that as the lever is turned to throw the sleeve K

to engage the clutch the follower, turning upon the fulcrum M of the lever, will not only move longitudinally with the sleeve, but will also be forced inward, as indicated in broken lines, Fig. 2.

5 The cutter-bar C is constructed with a downwardly-projecting arm, N, outside the frame, the said arm extending down in rear of the right-
10 angular portion of the lever M, and so that when the cutter is in its up position, as shown, the movement of the lever to throw the sleeve to engage the clutch will cause the follower a to swing around, strike the front of the arm N, and force the bolt inward, as indicated in Fig. 3.
15 In this condition, the power being applied, the cutter-bar will descend, and at the same time will move to the right until the arm N shall pass from the follower a, as indicated in broken lines, Fig. 2. Then the follower, being free, will be
20 thrown outward and stand in the path of the arm N, and as indicated in broken lines, Fig. 2, and so that when the cutter-bar returns, taking with it the arm N, the arm N will strike the follower, and thereby impart the movement of the
25 cutter-bar to the lever, so as to withdraw the sleeve K from its engagement with the clutch and thereby release the driving-shaft from the power, and this action occurs as the cutter-bar reaches its extreme up position. Then when
30 the work is arranged for another cut the lever L is turned as before, the cut made, and on the return of the cutter the arm N again returns the lever L and disengages the power, and so on.

35 As represented, the follower a is arranged in a tubular portion of the lever, and with a spring surrounding it adapted to impart a forward movement to the follower, yet yield under the pressure applied to the follower;
40 but any suitable spring arrangement may be applied which will so yield as the lever is turned to engage the clutch, and react to bring the projection from the lever into the path of the returning arm.

45 The portion of the lever carrying the follower is best made separate from the lever itself, and so as to be adjusted thereon by means of a bolt and slot, as indicated in the drawings; but it may be made as a fixed or inad-
50 justable part of the lever.

I claim—

1. In a cutting-machine in which the cutter-bar in its movement toward and from the

table also receives a longitudinal movement, the combination therewith of a driving-pulley 55 loose on the driving-shaft, a clutch between said pulley and driving-shaft, a sleeve upon said shaft adapted to engage or disengage said clutch, a hand-lever arranged to impart longitudinal movement to said sleeve, a cutter- 60 bar constructed with a downwardly-projecting arm, N, in rear of said shaft and lever, and a spring-follower on said lever arranged to move into the path of said arm under the swinging movement of said lever, substantially as de- 65 scribed.

2. In a cutting-machine in which the cutter-bar in its movement toward and from the table also receives a longitudinal movement, the combination therewith of a driving-pul- 70 ley loose on the driving-shaft, a clutch between said pulley and driving-shaft, a sleeve, K, upon said shaft, adapted to engage or disengage said clutch between the shaft and pulley, a hand-lever, L, arranged to swing in a 75 horizontal plane, and in engagement with said sleeve K, whereby under the swinging movement of the lever a corresponding longitudinal movement will be imparted to said sleeve K, the inner arm of said lever turned to one 80 side at substantially right angles, and in substantially the same horizontal plane as the body of the lever, a spring-follower arranged upon the inner end of the said turned portion of the arm, and adapted to move on said arm 85 in a line at one side of but parallel with the line through the fulcrum of the lever, the cutter-bar constructed with an arm, N, extending downward in rear of said follower, the said follower adapted to be moved into 90 the path of the said arm under the movement of the lever, substantially as described, and whereby, in the movement of the said sleeve to produce the said clutching action between the said pulley and the shaft, the said spring- 95 follower will be brought into contact with the adjacent surface of the said arm and thereby forced forward, and so as to escape from the said arm as it moves under the action of the cutter-bar, and so escaping the follower will 100 spring into the path of the arm on its return, substantially as described.

STURGIS WHITLOCK.

Witnesses:

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