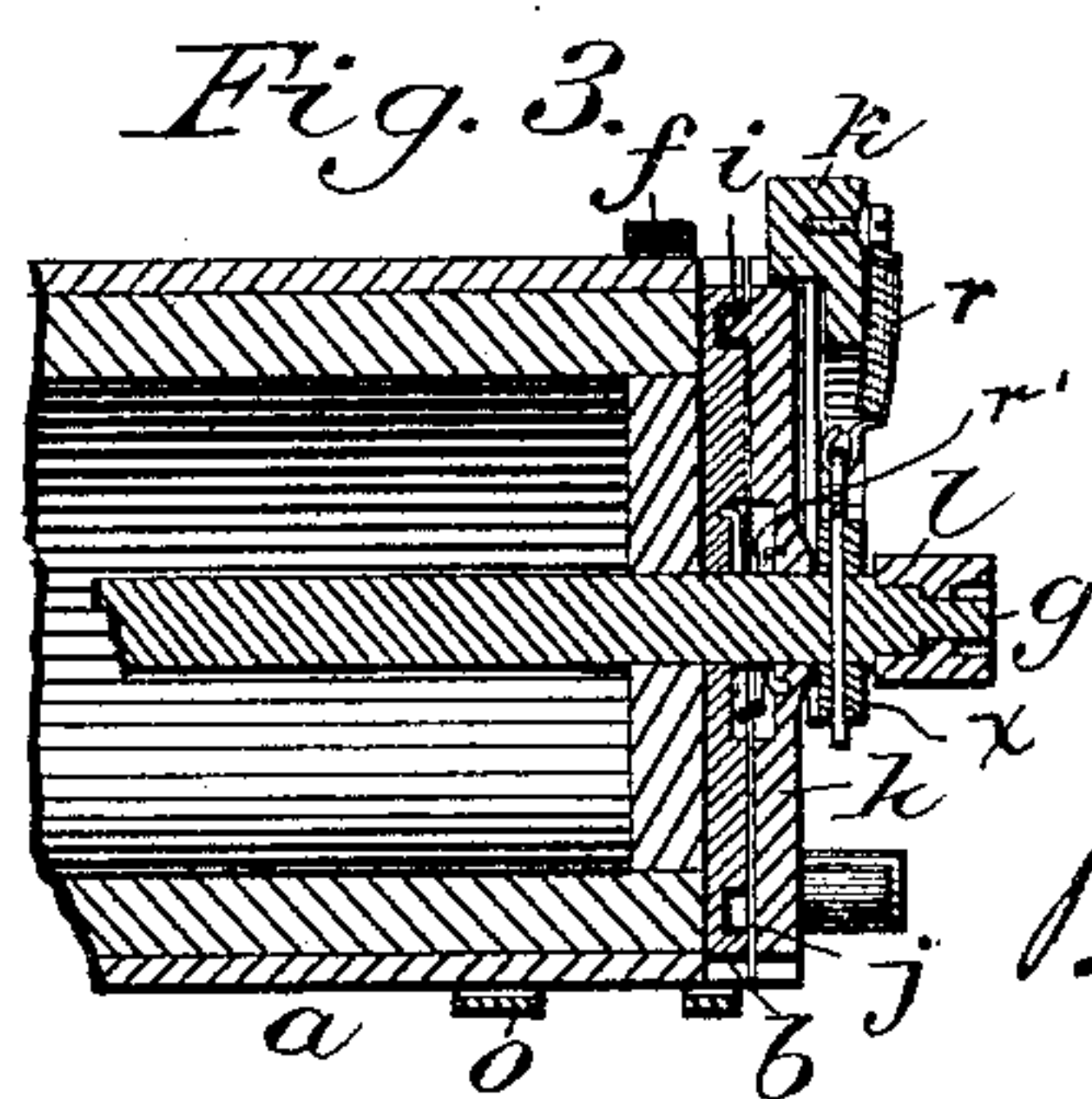
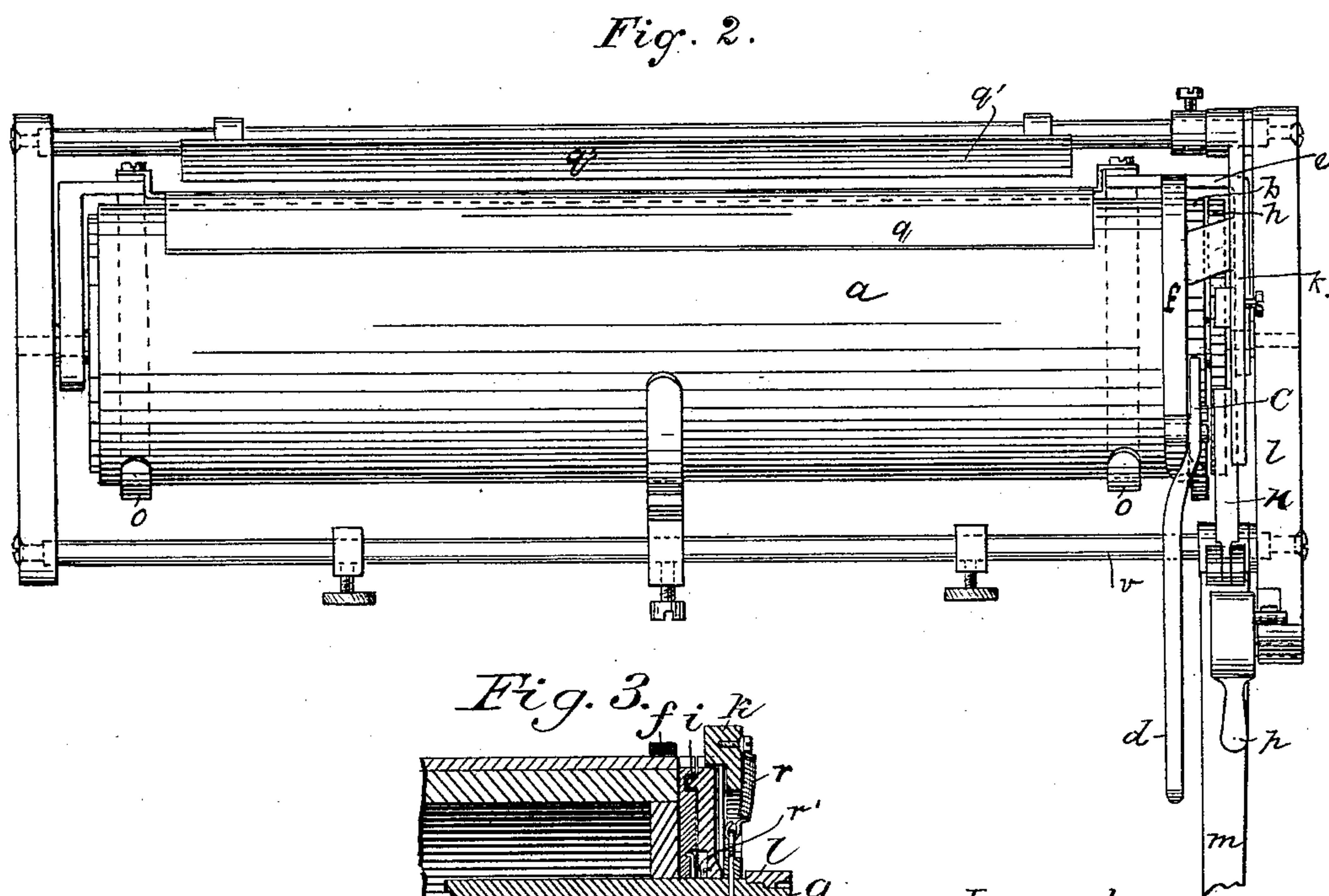
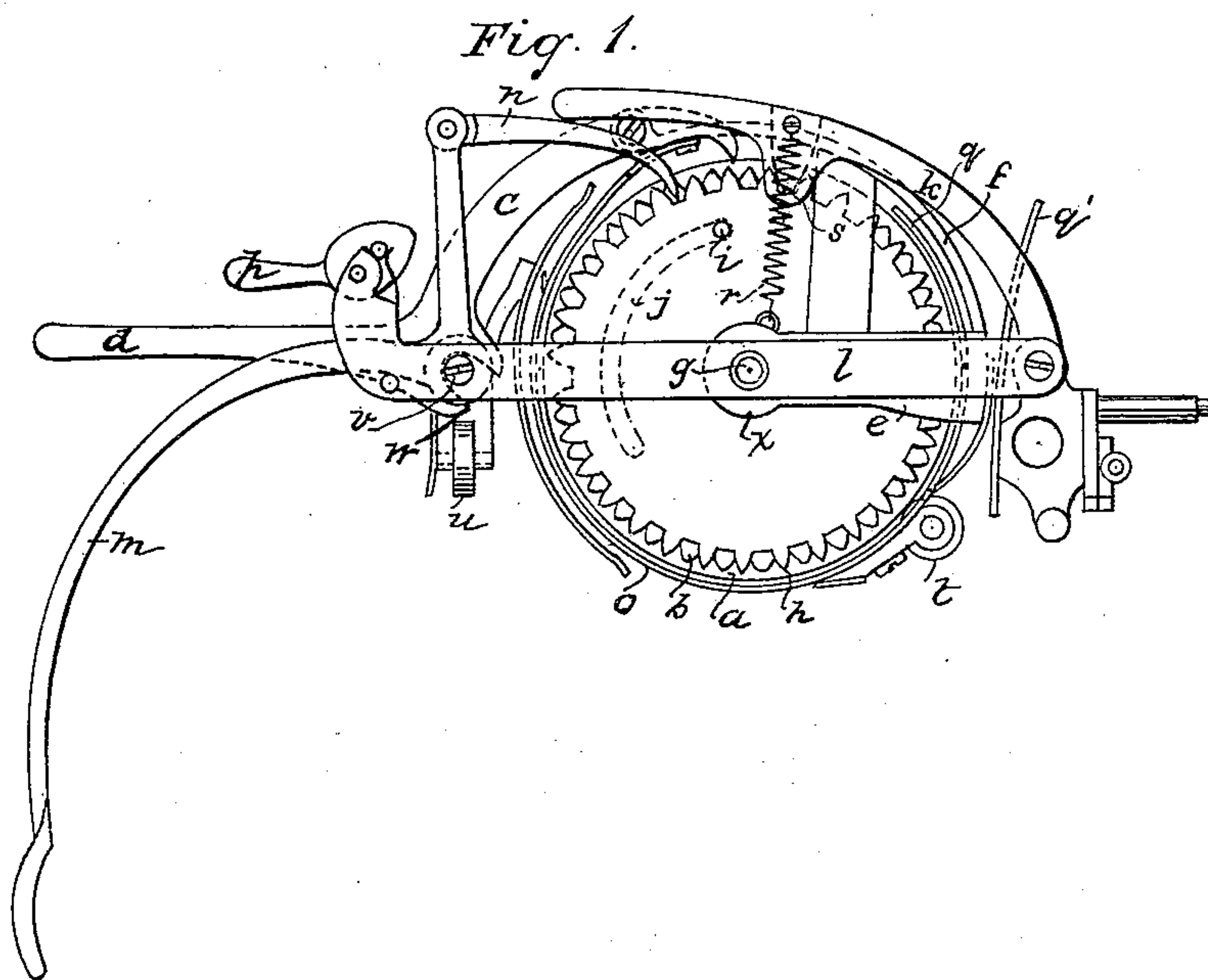


(No Model.)

B. A. BROOKS.
TYPE WRITING MACHINE.

No. 482,781.

Patented Sept. 20, 1892.



Witnesses.
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TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 482,781, dated September 20, 1892.

Application filed October 2, 1886. Serial No. 215,134. (No model.)

To all whom it may concern:

Be it known that I, BYRON A. BROOKS, a citizen of the United States, residing in the city of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a description in such full, clear, concise, and exact terms as will enable any one skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawings, making part of this specification, and to the letters marked thereon.

In that class of type-writers of which the "Remington" and "Caligraph" are well-known examples, in which the printing is done on the under side of the platen and out of sight of the operator, it has been found necessary to provide the platen or platen-carriage with some form of mechanism or device by means of which the printing-point on the paper can be exposed to the view of the operator at will without removing the paper from the platen. In the Remington and Caligraph and all similar machines with which I am acquainted the printing-point is exposed by the following means, substantially: The platen is supported on a frame which is pivoted or hinged in such a way that it can be thrown back, carrying the platen with it and exposing its under or printing side to view.

My present invention consists of an improvement in the construction of said platen, its frame or carriage, and the means of operating it without lifting the frame, as hereinafter described.

In the annexed figures of drawings similar letters indicate corresponding or similar parts.

Figure 1 of the annexed drawings illustrates an end view of a platen-carriage and platen provided with my improved means of operating the same. Fig. 2 is a top view of the same; and Fig. 3, a cross-section of one end of the same, parts being broken away.

Referring to Figs. 1 and 2, *a* is a platen of a type-writing machine. On the end of said platen a toothed wheel *b* is fastened. A pawl *c*, operated by a handle *d*, meshes in the

teeth of said toothed wheel *b*, which pawl is pivoted to and carried by an arm *f*, springing from an arm *e*, which is attached to a sleeve *x*, which is keyed to the axis *g* of said platen. The platen *a*, wheel *b*, and arm *e* are all connected to each other.

h is a toothed wheel revolving loosely upon said axis *g*. It is provided on its inner side with a pin *i*, which engages in a slot *j*, cut in the wheel *b*. The pin-and-slot connection between the wheels *b* and *h* are so arranged that the wheel *b* and the platen thereto attached may be moved independently and without moving the wheel *h* when said wheel *b* is turned with a right-hand revolution, (see Fig. 1,) and so the wheel *h*, when revolved in the same direction, will carry with it the said wheel *b* and the platen *a*.

k is an arm pivoted to the frame-piece *l* of the platen-carriage, said arm being connected to the oscillating arm *e* by means of a spring *r*. This arm *k* is provided with a spur *s*, which acts as an anchor for the wheel *h*, falling between the teeth on said wheel and preventing the wheel from turning with a right-hand or left-hand revolution except when considerable pressure is applied to cause said revolution.

t is a friction-roller carried by a projection from the arm *f* and revolving with said arm.

p is an ordinary device for adjusting the line-space of the machine, and *u* a friction-roller on the platen-carriage, which runs upon a track provided upon the machine, as in ordinary type-writers.

Other common devices shown in the drawings will not be described here, as their construction, operations, and functions are well understood by all skilled in the art. Neither has it been deemed necessary to illustrate the other parts of the machine to which the illustrated parts connect and with which they co-act for the same reason. It may be remarked, however, that the platen illustrated will be found to contain the general features of the well-known Caligraph machine, and is made to fit said machine without any alterations in detail or proportions. The improvements herein described apply, nevertheless, to all machines in which the printing is done on the

under side of the platen or out of sight of the operator, or in which it is desirable to expose for any purpose whatever different parts of the platen to the operator's view.

5 The following is a description of the operation of the devices described and illustrated: When it is desired to turn the platen, the operator throws the handle *d* up and back. In so doing the pawl *c* falls in the teeth of the
10 wheel *b* and the platen, which is attached to the wheel *b*, is turned with a right-hand revolution upon its own axis, exposing to view its under side. When the handle *d* is thrown back, it carries with it the arm *f*, to which it
15 is attached, and the arm *e* and friction-roller *t*, which remains during the operation stationary upon the paper. As the arm *e* turns with a right-hand revolution it increases the tension upon the spring *r* and therefore the
20 strength of the anchor *s*, which holds the wheel *h* stationary, the pin *i* and slot *j* permitting the wheel *b* to move in this direction without carrying with it the wheel *h*. As soon as the pawl is released from its connection with the teeth of the wheel *b* the spring
25 *r* raises the arm *e*, thereby turning the platen with a left-hand revolution until it reaches its normal position, when the notch *w* in the arm *d* fits on the front rail of the platen-carriage.
30 For the purpose of aiding the spring *r* to revolve the platen in the left-hand direction when the pawl *c* is disengaged, as before described, I employ a spring *r'*, (see Fig. 3,) which is attached at one end to the outer face
35 of the wheel *b* and at the other to the inner face of the wheel *h* at the centers. This spring tends to constantly keep the pin *i* at the top of the slot *j*, which is the position it occupies in Fig. 1, and it therefore acts to re-
40 solve the platen with a left-hand revolution when the pawl *c* is disengaged, as already described.

When it is desired to make a line-space, the operator grasps the handle *m* and draws it
45 forward in the usual manner. This throws the pawl *n* back, revolves the wheel *h* toward the right, and by means of the pin *i* causes the platen to revolve the same distance, giving the required line-space. When the handle
50 *m* is released, the pawl *n* slips back over the teeth of the wheel *h*, while the wheel *h* is held stationary by the anchor *s*.

Besides the ordinary paper-guides with which platens have heretofore been provided
55 I prefer to add to the platen another guide *q'*. The object of this guide is to catch and turn the edge of the paper in toward the platen when the platen is revolved to show its under side, as hereinbefore described, and as it is
60 returned to its normal position. It will be observed that when the printing-point on the paper is turned up and exposed to view, if the printing is being done near the bottom of the sheet, the bottom edge of the paper will
65 project out horizontally behind the friction-roller *t*, unless some guide placed at the rear

end of the machine prevents its so doing, and when the platen returns to its normal position the paper without said guide will be carried out away from said platen and will not
70 lie close against its surface, as it should. The guide *q'* entirely obviates this difficulty.

It will be understood that my invention is not limited to the precise elements or combination of elements described and illustrated
75 herein, since any equivalent elements may be employed without departing from either the spirit or scope of my invention.

I do not claim in a type-writing machine the combination of the carriage, a platen free
80 to turn on its axis, and a paper-guide adapted to be stationary and also to turn on the same axis, whereby the guide may turn with the platen when the same is turned to expose to view its printing-point.
85

Having thus described my invention, I claim and desire to secure by Letters Patent the following:

1. In a type-writing machine, a platen and friction feed-roll, combined with a pawl and
90 ratchet for spacing between lines and a pawl and ratchet for revolving said platen on its axis to expose to view its printing-point, and also for simultaneously revolving said roll about the axis of said platen.
95

2. In a type-writing machine, the combination of a platen and friction feed-roll adapted to revolve around its own axis while it remains stationary in space and means for revolving said platen on its axis to expose to
100 view its printing-point and for simultaneously revolving said friction feed-roll about the axis of said platen without revolving it about its own axis.

3. In combination with the platen of a type-
105 writing machine, a pawl and ratchet for spacing between lines and a pawl and ratchet for revolving the platen in one direction to expose to view the printing-point and a spring for returning the platen to its initial position.
110

4. In combination with the platen of a type-
writing machine, a pawl and ratchet for revolving the platen in one direction to expose to view its printing-point, a spring for return-
115 ing the platen to its initial position when released from the control of said pawl, and an arm having a notch for retaining it at its initial position.

5. In a type-writing machine, the combina-
120 tion, with a pawl and ratchet for revolving the platen about its own axis to expose the printing-point, of a pawl and ratchet for revolving said platen to space between lines of print, a detent meshing with the teeth of said
125 ratchet-wheel, and a spring attached to said detent and to an arm moving with said platen when revolved to expose its printing-point.

6. In a type-writing machine, a platen combined with fast and loose ratchet-wheels free
130 to move independent of each other, one of said wheels being controlled by ratchet and

spring to expose to view the printing-point
on the platen and subsequently to return to
its initial position and the other being con-
trolled by a pawl, by means of which spacing
5 between lines is accomplished.

7. In a type-writing machine, a platen fric-
tion-roll and an apron-guide for keeping the
paper smooth on the surface of said platen,

combined with a pawl and ratchet for spacing
between lines and a pawl and ratchet for re- 10
volving said platen, friction-roll, and apron-
guide about the axis of said platen.

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Witnesses:

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