

918,354.

Fig. 1.

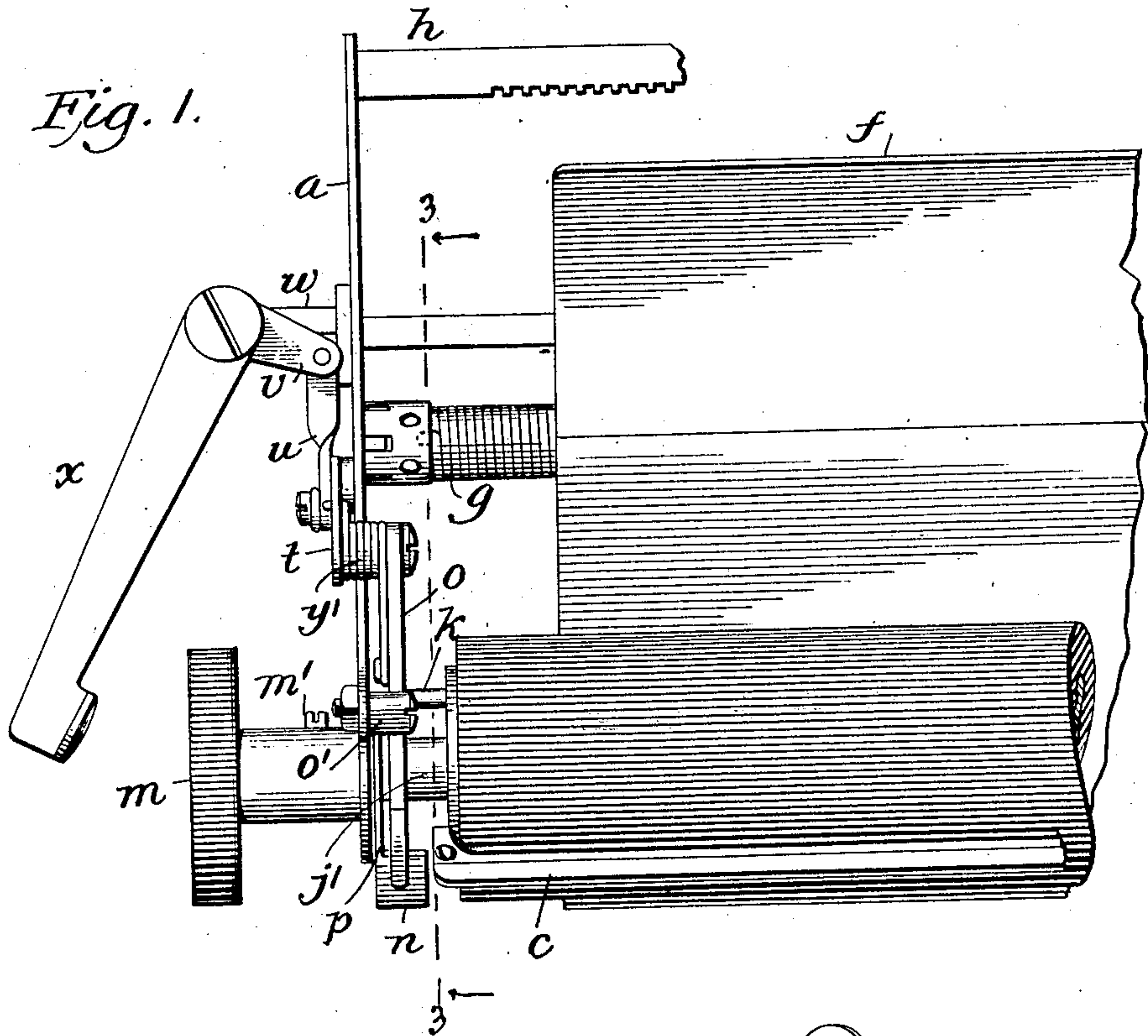
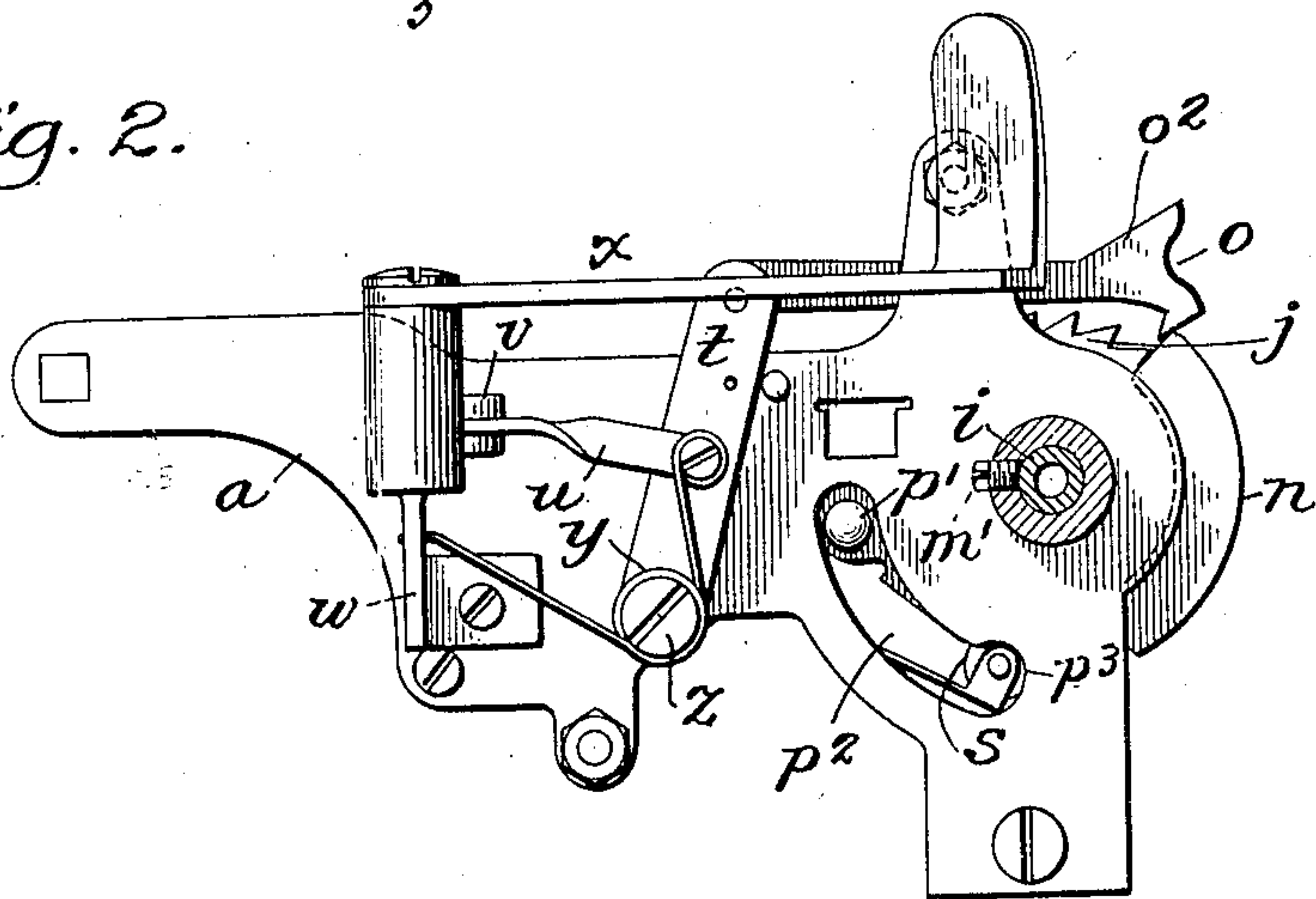


Fig. 2.

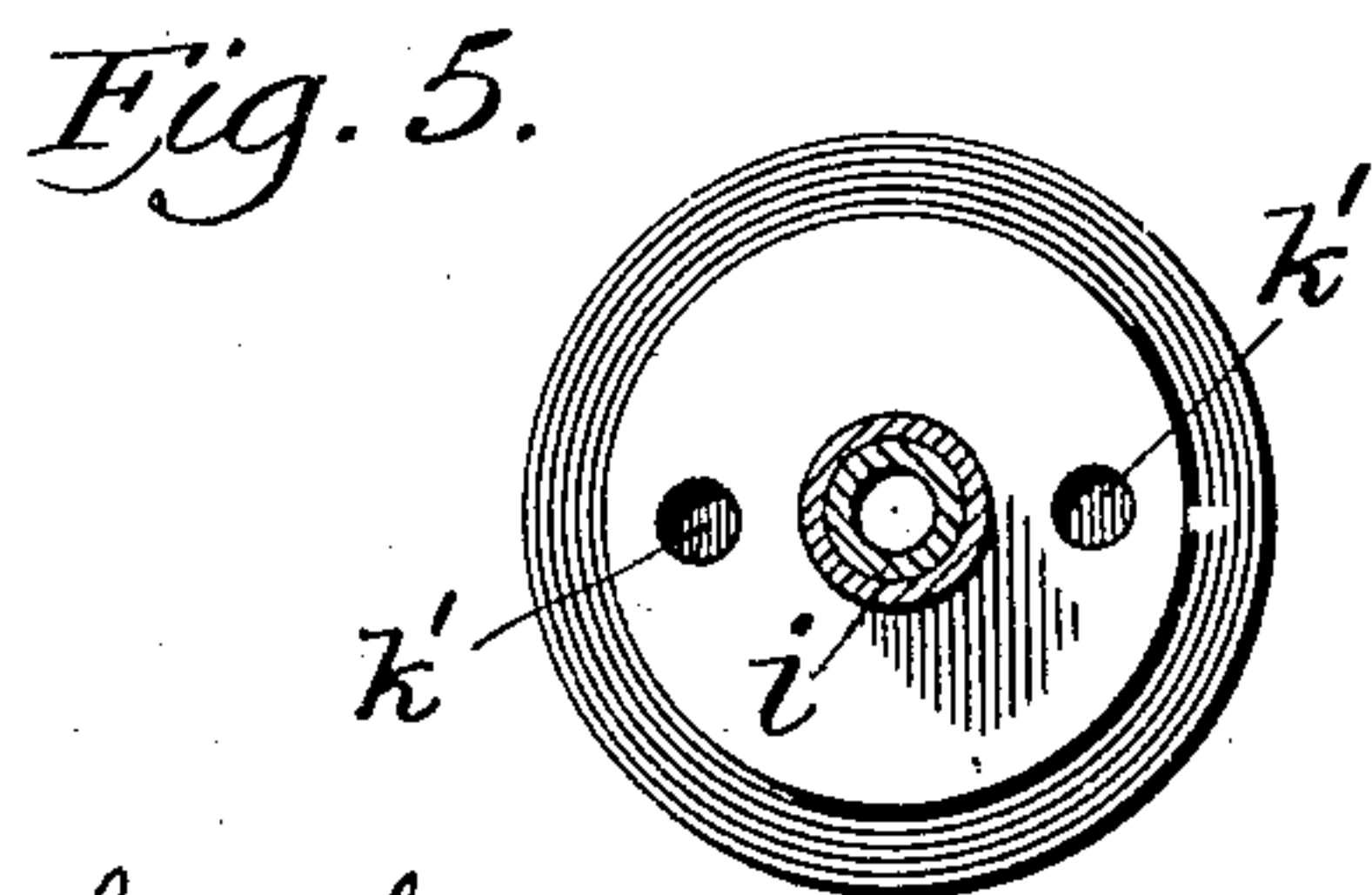
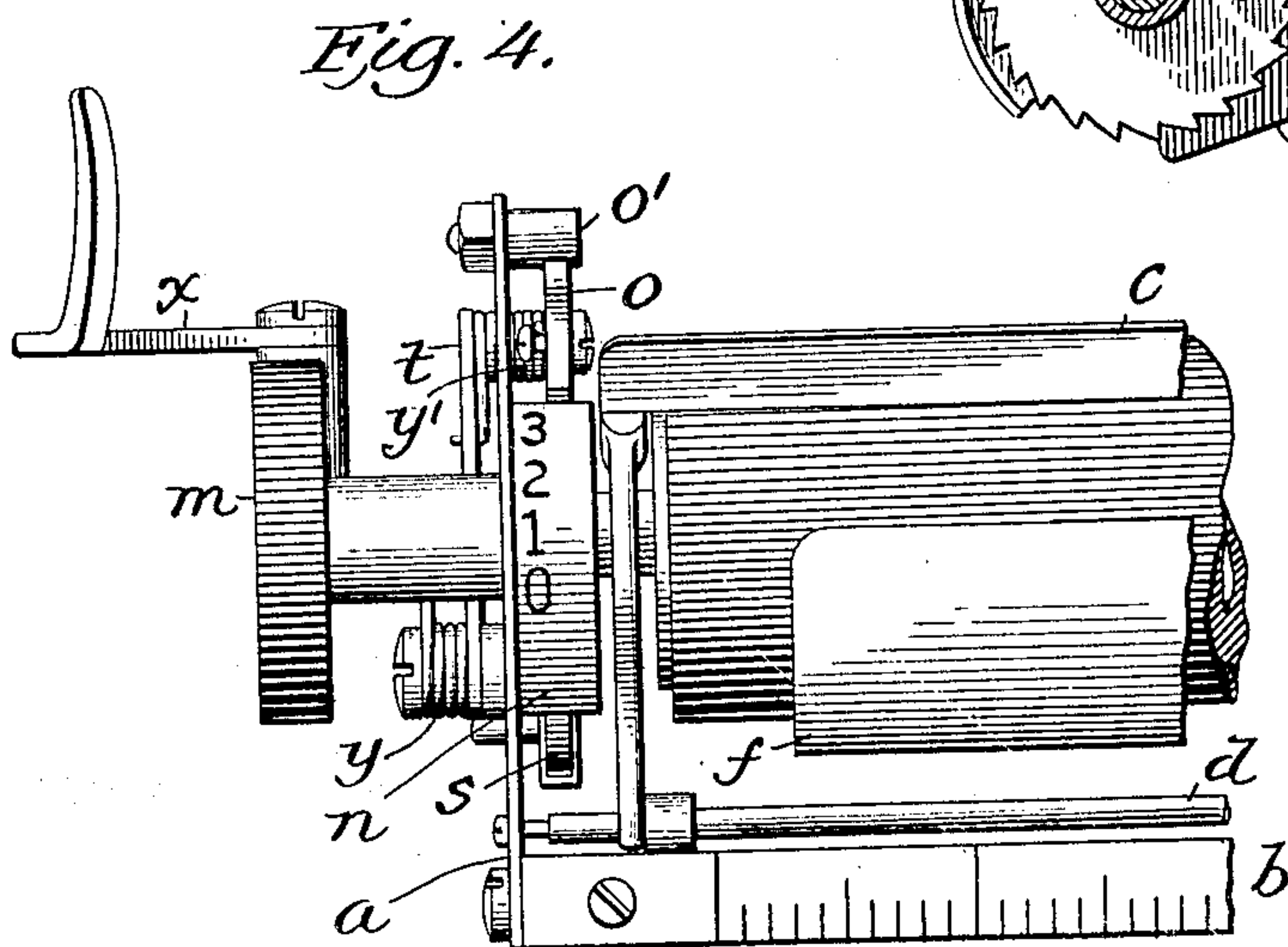
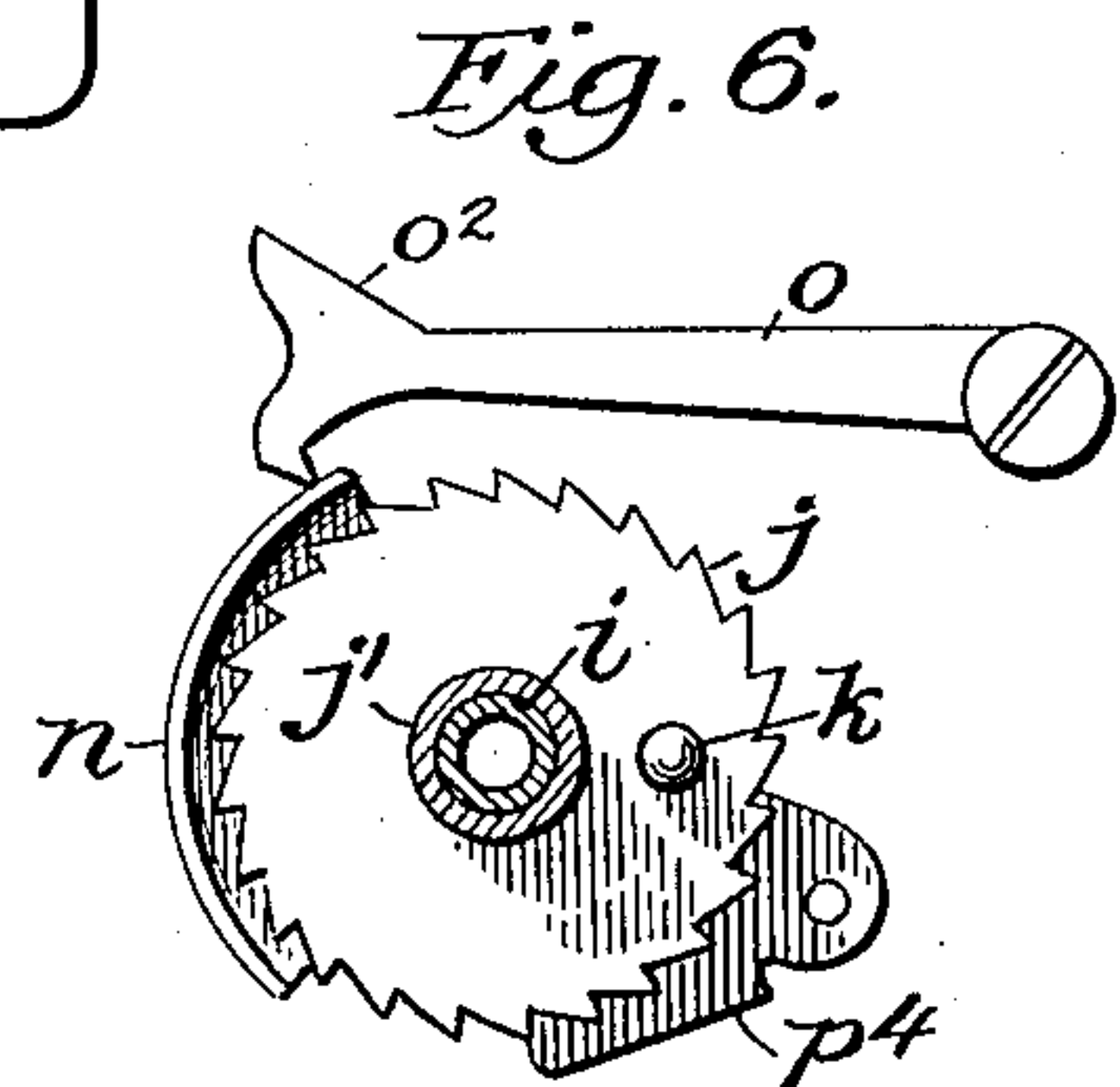
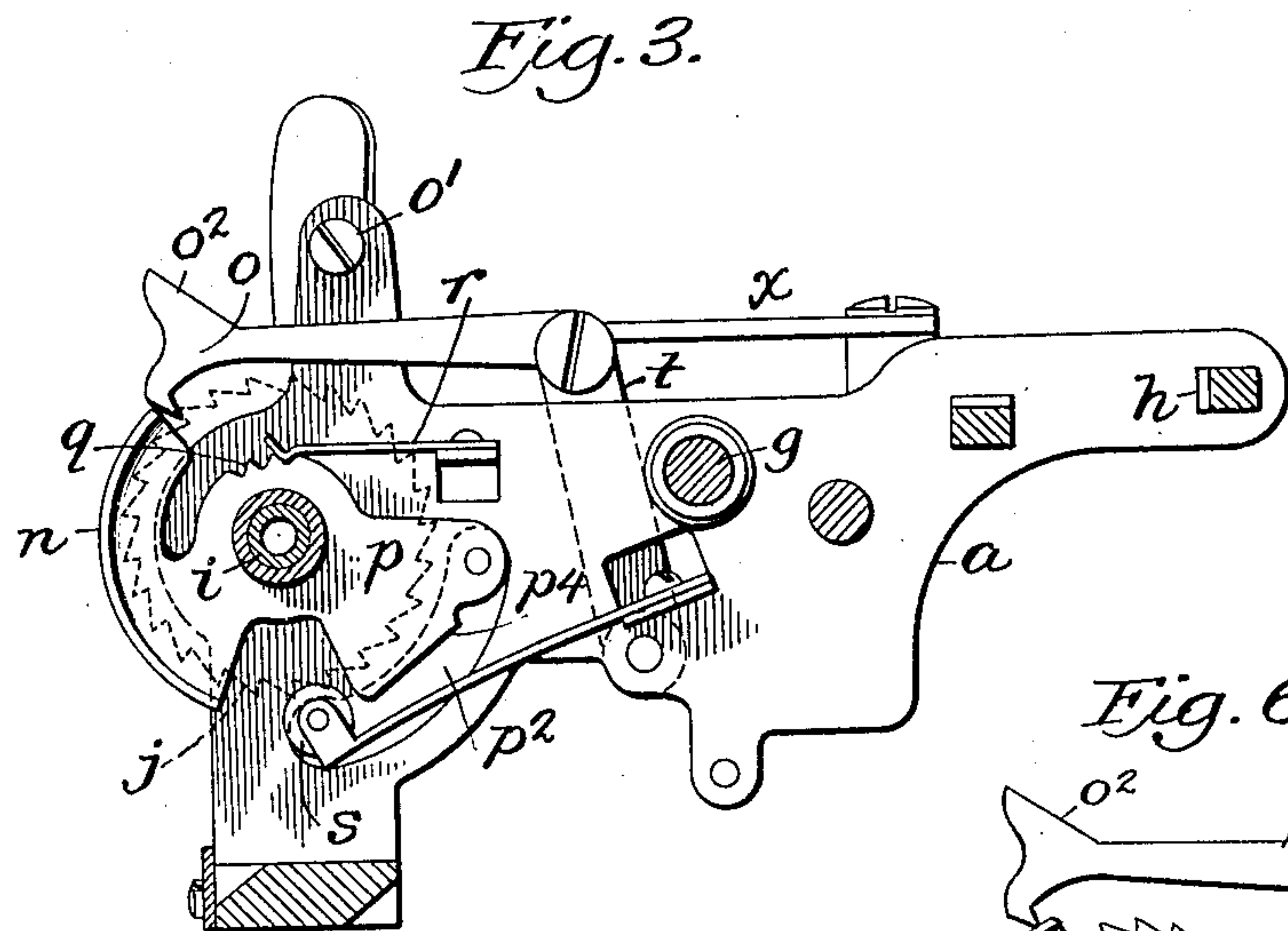


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L. C. MYERS.
 WRITING MACHINE.
 APPLICATION FILED JAN. 30, 1905.

Patented Apr. 13, 1909.
 2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

LEWIS C. MYERS, OF NEW YORK, N. Y., ASSIGNOR TO ROYAL TYPEWRITER COMPANY, OF HOBOKEN, NEW JERSEY, A CORPORATION OF NEW JERSEY.

WRITING-MACHINE.

No. 918,354.

Specification of Letters Patent.

Patented April 13, 1909.

Application filed January 30, 1905. Serial No. 243,442.

To all whom it may concern:

Be it known that I, LEWIS C. MYERS, a citizen of the United States, residing in the borough of Brooklyn, city and State of New York, have invented certain new and useful Improvements in Writing-Machines, of which the following is a specification.

This invention relates to the mounting and manipulation of a cylindrical platen of a writing machine and comprises several features of novelty hereinafter set forth in detail.

In the accompanying drawing: Figure 1 is a plan of the left hand end of so much of a typewriter carriage and platen as appears to be desirable for illustration of this invention: Fig. 2, an elevation of the same end of the carriage but in section through the sleeve that attaches the knob or turning handle to the platen shaft: Fig. 3, a section on the line 3, 3, of Fig. 1, the platen ratchet wheel being shown in dotted lines in order not to obscure illustration of parts which in this view are behind it: Fig. 4, a front elevation of the end of the platen and carriage indicated in Fig. 1: Fig. 5, an end elevation of the platen with the platen shaft and ratchet wheel collar in section: Fig. 6, a detailed side elevation showing the platen ratchet wheel and some associated parts.

The carriage, which may be of any usual or appropriate construction, is mounted to travel in any desired way and is composed of end plates *a*, one only of which is shown, connected by the shafts extending between them.

b is a scale; *c*, a paper retaining bar extending across the front of the platen and supported by arms extending from a rock shaft *d*; *f*, indicates a sheet metal paper guide; *g*, devices for adjusting the tension of feed rollers, not shown; and *h*, a tabulator rack. None of these form any part of the invention herein claimed, and are of usual construction and operation, or of special construction and operation claimed by me in other applications.

The platen shaft *i* extending through and rotating with the platen, but detachably connected therewith, as by a set screw at the right hand side of the carriage, has its bearings in the end plates *a*. Inside the end plate *a* is a ratchet wheel *j* carried by a sleeve *j'* loosely enveloping the platen shaft, the wheel and platen being coupled to turn

together by a pin *k* in the wheel fitting in either of multiple recesses *k'*, *k'*, in the end of the platen,—two being shown. The ordinary turning knob *m* is applied to the platen shaft outside of the end plate by means of a set screw *m'*. The ratchet wheel is formed with an uneven number of teeth and the recesses *k'* in the end of the platen are diametrically opposite each other. When, therefore, the surface of the platen becomes worn by continued impact of the type, the unused part of the platen between such lines of wear may be brought into the printing line by shifting the lateral pin *k* to the other recess *k'*. This change may be conveniently accomplished by disengaging the platen shaft from the platen, withdrawing the latter from engagement with pin *k*, and then partially turning the platen. This loose interlocking connection between the ratchet wheel and platen permits ready removal and replacement of the latter.

To effect at will different line spaces, the ratchet wheel has applied to it an adjustable circumferential guard *n* that serves to control engagement with the wheel of its actuating pawl *o*. The guard covers part of the periphery of the ratchet wheel and is shown as a flange carried by a plate or flat lever arm *p*, the bearing sleeve of which turns loosely upon the platen shaft between the ratchet wheel sleeve *j'* and end plate *a*. It is adjusted by means of a knob *p'* projecting from it into a slot *p²*, in the end plate, formed at its lower end with a recess *p³* into which the knob passes when in its lowermost position and in which it is frictionally held. A yielding roller *s* carried by a spring arm, bears upon the periphery of the ratchet wheel, and acts to prevent over-throw of the ratchet, and also by pressure against the inclined faces of the ratchet teeth serves to justify the platen by forcing it into exact position for the printing operation, thereby insuring regular line spacing.

When the knob *p'* is at the upper end of the slot, the rocking guard-carrying plate is held by a spring stop *r* resting in the first one of three notches *q* in the curved upper edge of the plate. In this position, the reciprocable pawl *o* is permitted to engage every third tooth of the ratchet and a maximum line space is afforded. When the knob is moved down in its slot until the stop *r* engaged the second notch *q*, the pawl is per-

mitted to engage alternate teeth of the ratchet, and when r is in the third notch every tooth is engaged by the pawl. When the knob is at the bottom of its slot, the guard prevents engagement of the pawl with the wheel. In this position, a cam edge p^4 , on the rocking plate p , working against the projecting end of the axle of the stop roller s , holds the roller out of engagement with the ratchet wheel which may then be set in any position.

In the construction illustrated, the pawl o is arranged and operated as follows: It is loosely pivoted in the upper end of an upright lever t pivoted on the end plate and connected by a link u with one arm v of a bell crank lever rocking about a vertical bearing in a bracket w on the end plate and having an elongated arm x provided with a thumb piece by which it may be vibrated. A coiled spring y applied around the pivot bolt or pin z upon which the upright lever t turns has one end applied to the bracket w and the other end to the upright lever, the reaction of the spring serving normally to hold the dog o in its advanced position. The pawl o is pressed into engagement with the ratchet by a coiled spring y' applied around its pivot, and overthrow of the ratchet is prevented by a laterally projecting bolt o' against which the inclined upper edge o^2 of the pawl works. A close adjustment is afforded by mounting the bolt eccentrically and applying a check nut to its end.

I claim as my invention:

1. A writing machine comprising the combination of a platen shaft with a turning knob, a ratchet wheel mounted loosely on

the shaft, a platen mounted on the shaft, a positive interlocking separable connection between the platen and the ratchet wheel by which either may drive the other in either direction, and means for securing and loosening the platen on the shaft, whereby the platen may be loosened and moved endwise for fixed positive adjustment with respect to the ratchet.

2. A writing machine comprising the combination of a platen shaft with a turning knob, a ratchet wheel with an unequal number of teeth loosely mounted on the shaft, a pin on the side of the wheel adapted to engage either one of multiple recesses in the end of the platen to afford a connection by which either the wheel or platen may drive the other in either direction, and means for securing and loosening the platen on the shaft, whereby the platen may be loosened and moved endwise to vary the pin and recess connection between it and the ratchet wheel.

3. In a writing machine, the combination of a rotatable platen, its ratchet wheel and reciprocable actuating pawl, means for normally acting upon the ratchet wheel to justify its position and that of the platen, and means for preventing engagement of the pawl with the ratchet wheel and throwing said justifying means out of operation, whereby the platen may be turned to and remain in any desired position.

In testimony whereof, I have hereunto subscribed my name.

LEWIS C. MYERS.

Witnesses:

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KATHARINE MACMAHON.