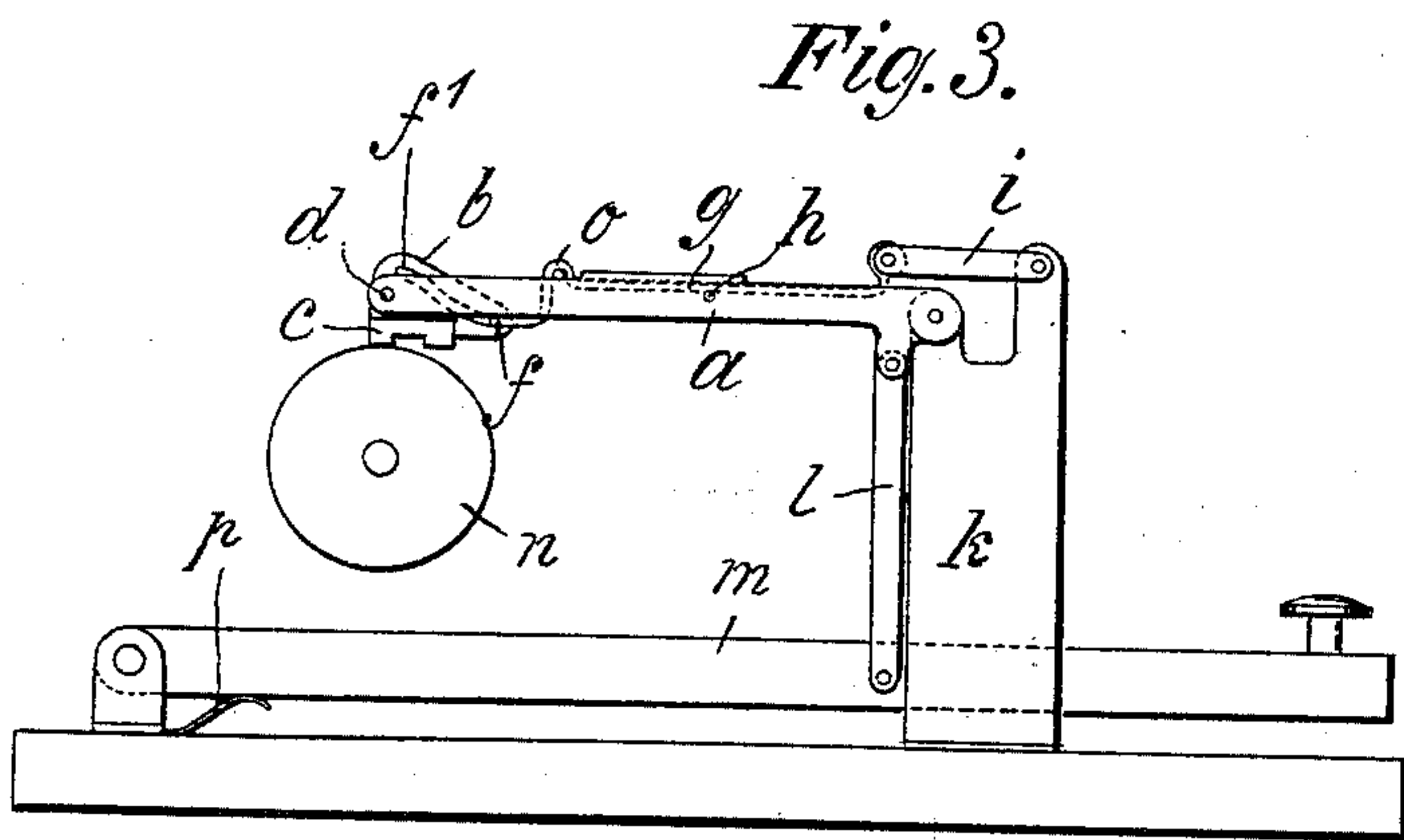
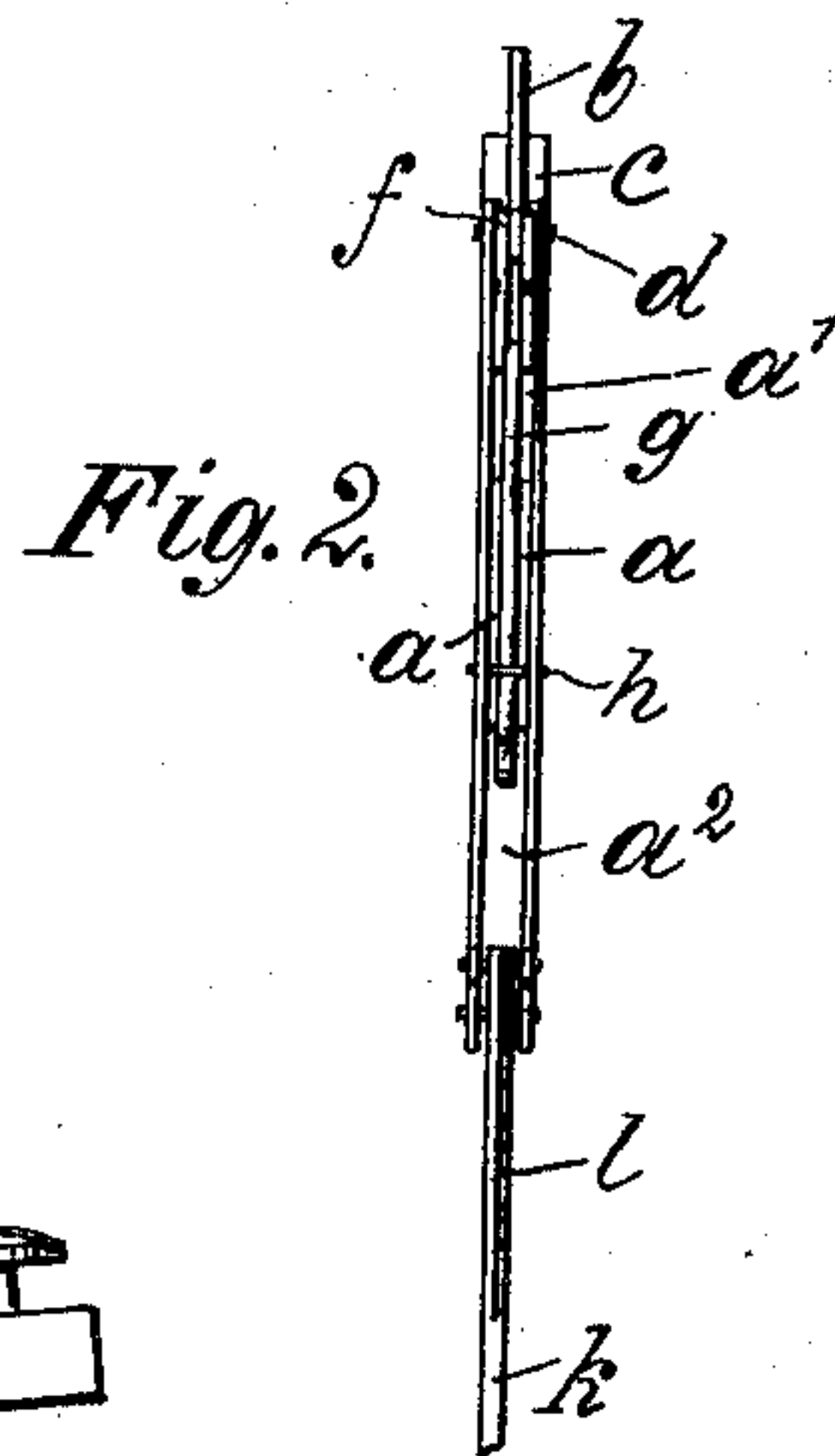
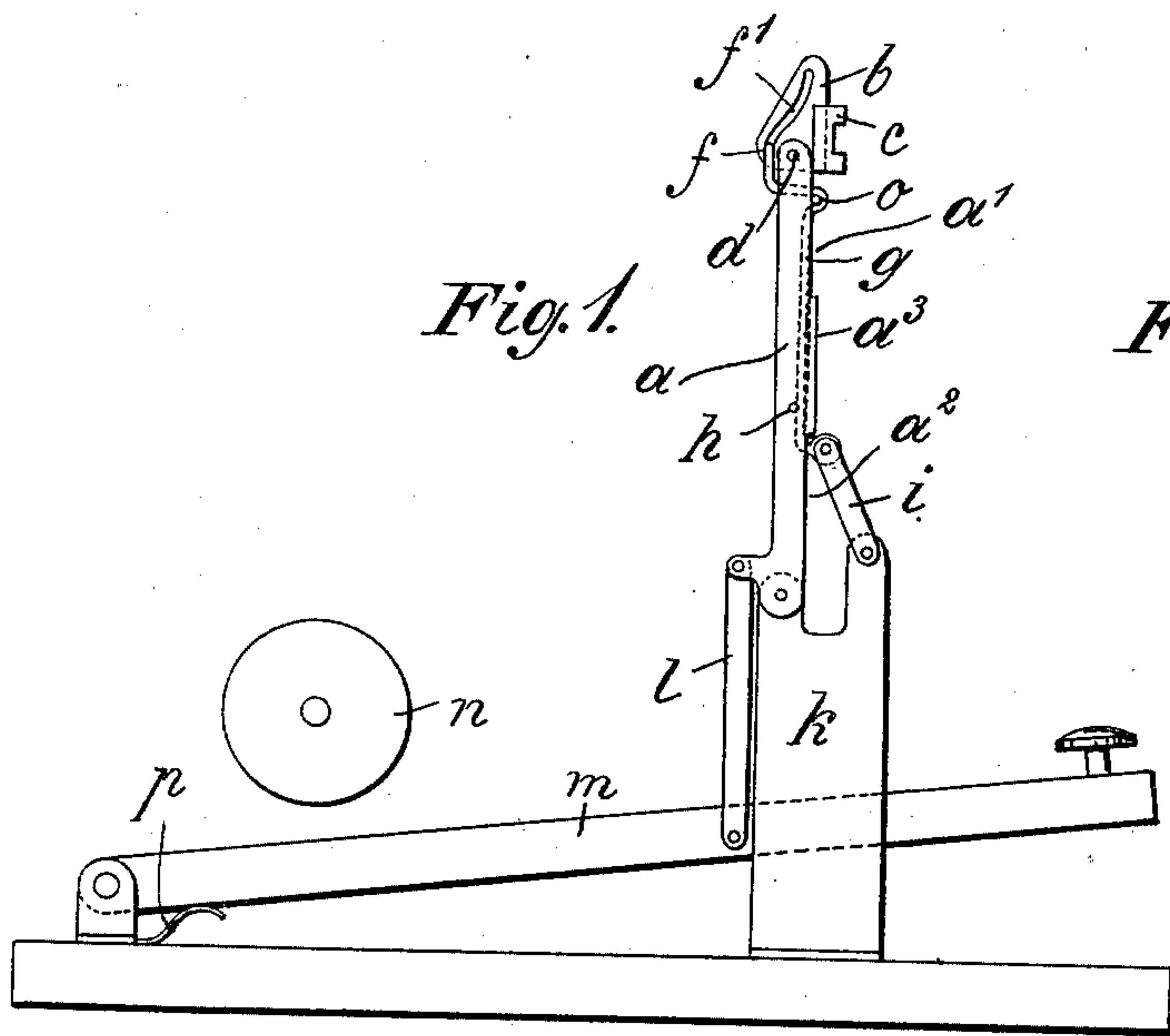


No. 707,882.

Patented Aug. 26, 1902.

J. H. VINK.  
TYPE WRITING MACHINE.  
(Application filed Apr. 10, 1902.)

(No Model.)



Witness:  
P. F. Linnick  
W. P. Hammond

Inventor:  
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by *Freight Bros.*  
attys

# UNITED STATES PATENT OFFICE.

JOHANNES HENDRIKUS VINK, OF DEVENTER, NETHERLANDS.

## TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 707,882, dated August 26, 1902.

Application filed April 10, 1902. Serial No. 102,256. (No model.)

*To all whom it may concern:*

Be it known that I, JOHANNES HENDRIKUS VINK, a subject of the Queen of the Netherlands, residing at Kleine Overstraat 45, Deventer, Netherlands, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

The present invention relates to a type-lever for type-writing machines, in which the types in their position of rest lie against an inking-cushion and on striking the key-lever are turned in such a way that they apply the ink directly to the paper. This invention differs from known constructions of this class in that the type-bar is pivoted to a lever so as to oscillate on an axis normal to the longitudinal direction of the lever, and that this oscillating motion is produced by the motion of the key-lever through the agency of a sliding rod connected at one end to the frame and engaging at the other end in a guiding-slot in the type-bar carrier.

In the accompanying drawings, which illustrate the invention, Figure 1 is a side elevation showing the type-lever in its position of rest. Fig. 2 is a front view of the same, omitting the bed, key-lever, and platen. Fig. 3 is a side elevation showing the type-lever in printing position.

The type-lever *a* is produced from a sheet-metal blank of suitable form by bending the two sides together on longitudinal lines, so as to bring them in parallel position at right angles to the connecting back *a*<sup>3</sup>. This connecting back is limited to the central part of the lever, leaving open spaces between the sides at *a*<sup>1</sup> and *a*<sup>2</sup> to permit the movement of the parts, as hereinafter described. At the upper part of the lever is a special type-bar carrier *b*, pivoted to oscillate on the pin *d*. On this type-bar carrier is mounted a type-bar *c* of suitable form, having one or more types. The type-bar-carrier *b* is adapted to turn in the fork-like upper end of the type-lever *a* and is provided with a curved guiding-slot *f*<sup>1</sup>, which receives a slide *f* on the upper end of a rod *g*, extending downward and guided between the two sides of the lever *a* and pivoted at its lower end to a link *i*, which is pivotally connected to a standard *k* on the frame. The upper end of the rod *g* is guided

by its connection with the type-bar carrier *b* through the slide *f* and also by a pin *o*, fixed in an outward bend of the rod *g* and sliding against the back of the type-lever *a*, for which purpose the opening *a*<sup>1</sup> in the lever is provided. The lower end of the rod projects through the opening *a*<sup>2</sup> and is guided between the back *a*<sup>3</sup> and a fixed transverse pin *h* in the lever.

The type-lever *a* is fulcrumed at its lower end on the bearing-block or standard *k*, a special projection on which also serves for pivotal attachment of the link *i*. A rod *l*, pivoted to a bifurcated lug on the lower end of the type-lever *a*, communicates motion thereto from the key-lever *m*, which is pivotally fulcrumed on the bed of the machine and is pressed upwardly by a spring *p*.

The operation of the device is as follows: The parts being at rest, as shown in Fig. 1, upon moving down the key-lever *m* the rod *l* is drawn down, and thereby the type-lever *a* brought to the horizontal position. (Shown in Fig. 3.) In this movement the rod *i* draws down the bar *g*, which through the medium of the slide *f* produces rotation of the type-bar carrier *b* on the pivot *d*, and the slide *f*, traversing from one end of the slot *f*<sup>1</sup> to the other, turns the type-bar carrier *b* and with it the type *c* through an angle of one hundred and eighty degrees on the lever *a*. The device thus takes the position shown in Fig. 3. When the key-lever *m* is released, the latter rises under the influence of the spring *P*, the type-lever *a* is restored to vertical position, and the pressure exercised by the bar *i* on the bar *g* slides the latter upward and by the pressure of the guided bar *g* and the slide *f*, acting in the specially-formed slot *f*<sup>1</sup>, the type-bar is returned through an angle of one hundred and eighty degrees to its first position. In the position shown in Fig. 3 the types are turned downward and can print upon paper passed over a roller or platen, whereas in the position of rest (shown in Fig. 1) they may lie against a suitably-arranged ink-pad. If the type-bar is provided with a plurality of types, as is shown in the drawings, then by adjustment of the platen-roller *n* one type or another is used for printing in customary manner. As the mechanism for turning the type-bar carrier *b* can be so formed that the oscillating



type-bar assumes its printing position on the lever *a* before striking, a clean impression of the type will be obtained.

It is manifest that the described device can  
5 be used for type-levers striking in horizontal as well as in vertical plane.

The following is what I claim and desire to secure by Letters Patent of the United States:

- 10 1. The combination of the key-lever *m*; standard *k*; type-lever *a*, formed with two parallel sides providing a longitudinal cavity between them and fulcrumed on the standard; connecting-rod *l* imparting movement from  
15 the key-lever *m* to the type-lever *a*; type-bar carrier *b* pivoted to the end of the lever *a*; and the guided bar *g* sliding in the cavity of the type-lever *a*, connected at one end by the rod *i* to the standard *k* and at the other end  
20 to the type-carrier *b* and imparting oscillatory

motion to said type-carrier by the movement of the lever *a*, as explained.

2. The combination of the standard *k*; key-lever *m*; type-lever *a*, and connecting-rod *l* pivoted to the standard *k*; oscillating type- 25 bar carrier *b*, having a curved slot *f'* and pivoted on the free end of the lever *a*; type-bar *c* mounted on the carrier *b*; sliding bar *g* connected at one end to rod *i* and guided in the lever *a* by pins *o* and *h* and the slide *f* working 30 in the slot *f'* and communicating oscillatory motion to the type-bar carrier by the movement of the lever *a* on standard *k*, substantially as described.

In testimony whereof I have hereunto set 35 my hand in the presence of two witnesses.

JOHANNES HENDRIKUS VINK.

Witnesses:

S. LISTOE,

JOHANNES D. GÜHRING.