

No. 868,335.

PATENTED OCT. 15, 1907.

J. F. FORKARTH.
TYPE WRITING MACHINE.
APPLICATION FILED SEPT. 26, 1906.

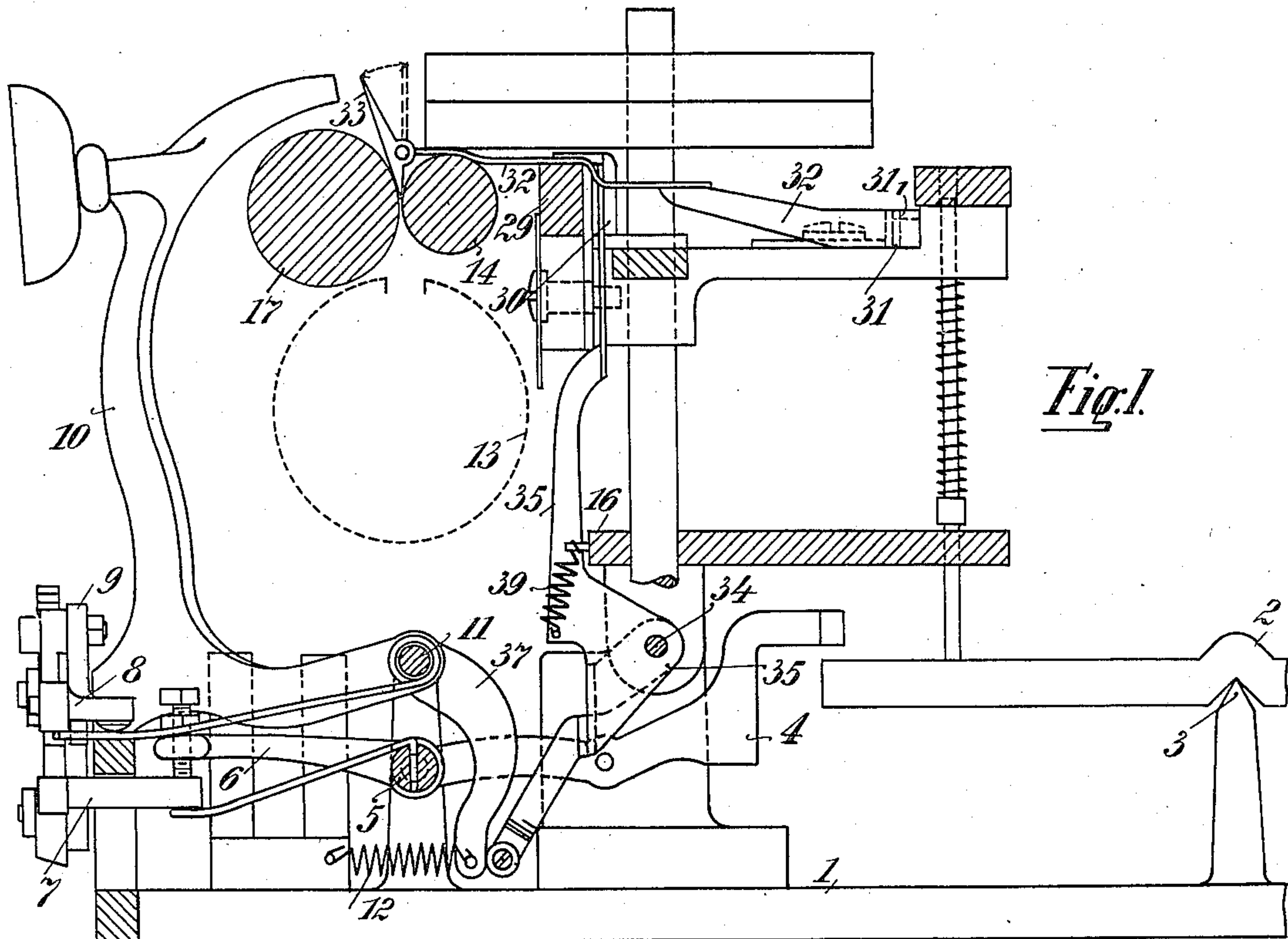


Fig. 1.

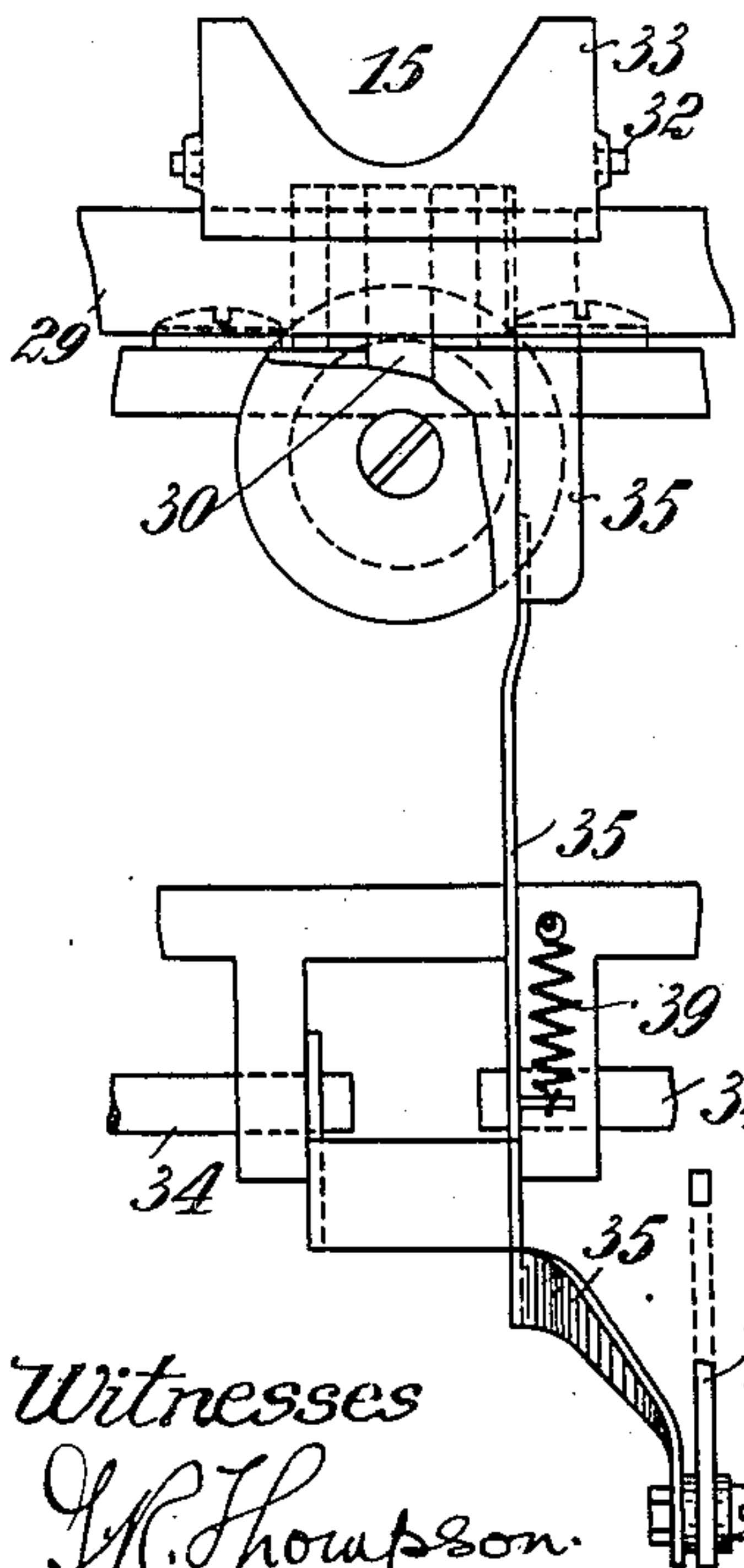


Fig. 2.

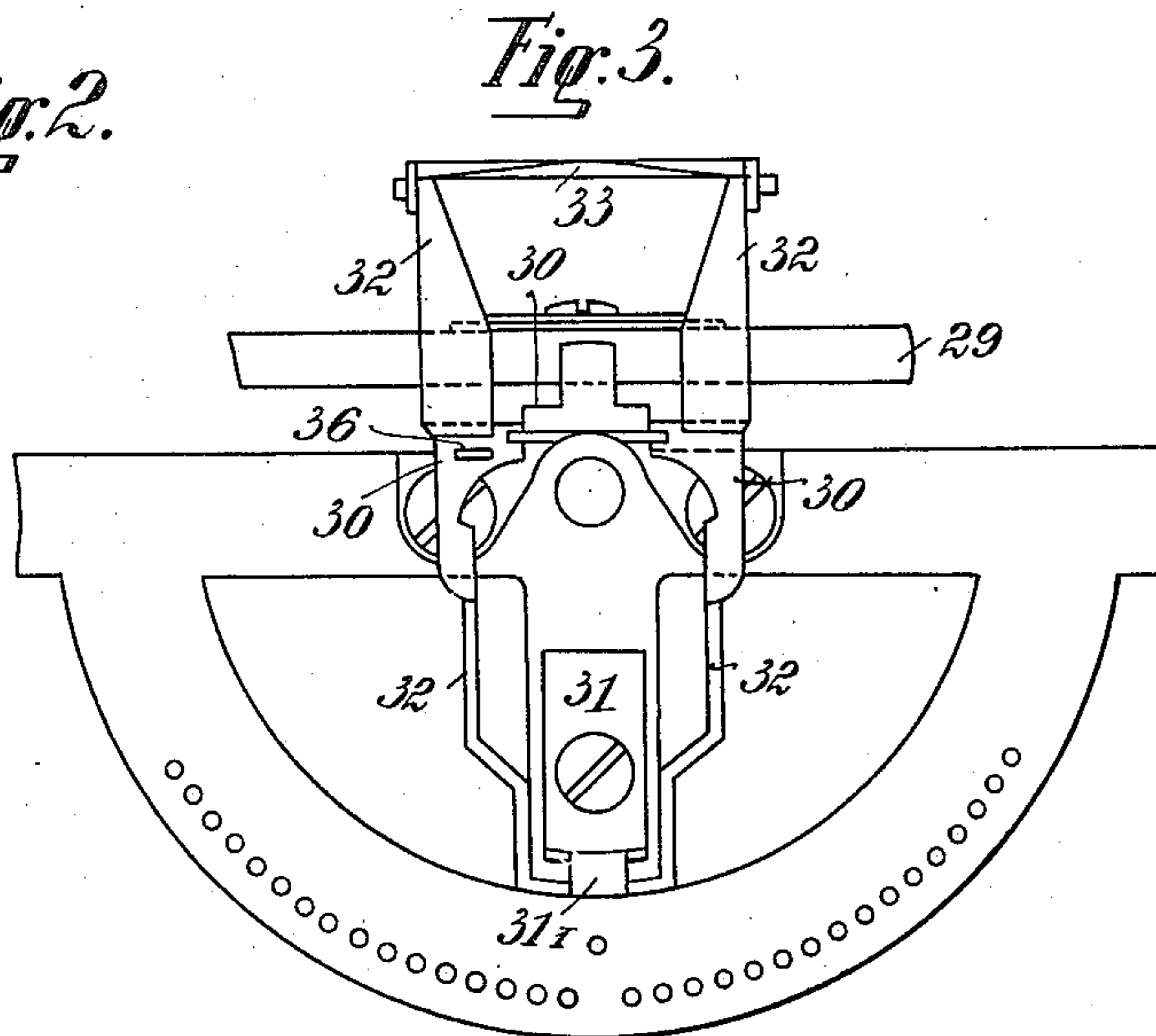


Fig. 3.

Witnesses

J. R. Thompson

Arch C. Fitzhugh

Inventor

By Josef Franz Forkarth

Mauro, Cameron, Lewis & Massie

Attorneys.

UNITED STATES PATENT OFFICE.

JOSEF FRANZ FORKARTH, OF INNSBRUCK, AUSTRIA-HUNGARY, ASSIGNOR TO FERDINAND SCHREY, OF BERLIN, GERMANY.

TYPE-WRITING MACHINE.

No. 868,335.

Specification of Letters Patent.

Patented Oct. 15, 1907.

Application filed September 26, 1906. Serial No. 336,342.

To all whom it may concern:

Be it known that I. JOSEF FRANZ FORKARTH, a citizen of the Empire of Austria-Hungary, and a resident of Innsbruck, in the Empire of Austria-Hungary, have
5 invented a certain new and useful Improvement in Type-Writing Machines, of which the following is a specification.

My invention relates to type-writing machines, more especially to machines of the Hammond system,
10 and its object is to provide improved means for rendering the operator's work visible to him immediately as he proceeds with writing. In other mechanism heretofore devised for the same purpose the power used
15 for actuating the operative parts of the said mechanism was obtained either from the pressure exerted by the operator upon the keys when writing or from the blow of the hammer which causes the impression to be made. According to my present invention the mechanism employed for rendering the work visible while
20 writing is operated without consuming any of the power applied for actuating either the keys or the hammer. I attain this object by means of the mechanism herein-after described and shown in the accompanying drawings, in which—

25 Figure 1 is a side elevation, partly in section, of the base or bottom plate of a Hammond type-writing machine and of some of the parts mounted thereon with my improvement applied thereto. Fig. 2 is a rear elevation of part of the mechanism shown in Fig. 1.
30 Fig. 3 is a plan of the mechanism shown in Fig. 1.

1 is the base or bottom plate of the type-writing machine, 2 is one of the key levers fulcrumed on the support 3 and engaging with its left hand end a yoke 4 rigid on a shaft 5. Upon the forward or right hand end
35 of a key lever 2 being depressed its left hand end raises the yoke 4, thereby rocking the shaft 5. An arm 6 rigid on this shaft then acts upon the parts 7, 8 and 9 which thereupon release the hammer 10 in the usual and well known manner to cause the same to press the
40 paper against the type presented at the point of impression. The hammer 10 is fulcrumed at 11 and is there provided with a rigid depending arm 37 to which is attached a spring 12 which tends to draw the lower end of the said arm to the left.

45 30 is a guide for the rod 29 of the paper carriage 13, and 31' is a lug on the part 31. A slide 32 is arranged to move between the said parts 30 and 31', and to the end of this slide which extends into close proximity to the sheet of paper passing between the rollers 14 and 17 is
50 hinged a plate 33. The lower end of this plate rests against the sheet of paper when the slide 32 moves towards the sheet of paper, whereas when the slide is withdrawn therefrom the said plate rests against the friction roller 14. At the same time the two upper
55 prongs formed by the recessed portion 15 of the plate

33, on the one hand, rest against the paper, thereby pressing the same back to a certain extent, and, on the other hand, they rest against the small perforated shield in front of the tape ribbon, so as not to offer any resistance to the impression of the type.

The forward movement of the slide in the direction
60 towards the sheet of paper is produced as follows: A lever 35 pivoted at 34 engages with its upwardly projecting arm in an opening 36 formed in the slide 32 (Fig. 3), and the downwardly projecting other arm of
65 the said lever has a roller 38 situated in the line of movement of the depending arm 37 of the hammer 10. When the hammer moves into its position of rest its arm 37 engages the roller 38, thereby rocking the lever
70 35 so that its upper arm acting upon the slide 32 will cause the plate 33 to press the sheet of paper back, that is to say, away from the operator, thus enabling him to see what has then been written. As soon as the hammer becomes released, upon a key having been de-
75 pressed by the operator, a spiral spring 39 secured with its one end to the lever 35 and with its other end to a frame portion 16 turns the upper arm of the lever 35 back, the latter then withdrawing the slide 32 and with it the
80 plate 33, so that the latter will then rest against the small shield in front of the tape ribbon. In this arrangement it will be seen that the power employed for operating my improved mechanism is supplied by the return movement of the hammer into its position of
85 rest, the shock exerted by the paper carriage in its forward movement doing the work, and part of this work being stored away by the tension of the spring 39 to be utilized again in the subsequent stroke of the hammer. In the pressed-back position of the sheet of paper the
90 two prongs of the plate 33 are immediately below the line of writing, thus affording a very convenient means for readjusting the sheet of paper when making corrections and the like.

What I claim as my invention, and desire to secure by Letters Patent is:—

1. In a type-writing machine, the combination of a
95 transversely movable carriage having a paper-feed roller thereon; an impression hammer and a type carrier in operative relation thereto; a paper-moving plate intermediate said hammer and type-carrier; spring-pressed means for moving said plate in one direction and hammer-operated means for moving said plate in the opposite
100 direction.

2. In a type-writing machine, the combination of a transversely movable carriage having a paper-feed roller
105 thereon; an impression hammer and a type-carrier in operative relation thereto; a paper-moving plate normally held by the said hammer in position to press back the paper from its printing position, and plate-moving means released by the said hammer for moving said plate towards the type-carrier when the said hammer moves into striking
110 position.

3. In a type-writing machine, the combination of a transversely movable carriage having a paper roller there-

- on: an impression hammer, and a type-carrier in operative relation thereto: a paper-moving plate intermediate said hammer and type-carrier: a spring-actuated lever for moving said plate in one direction said lever engaging said hammer to move said plate in the opposite direction.
4. In a type-writing machine, the combination of a transversely movable carriage having a paper-feed roller thereon: an impression hammer and a type-carrier in operative relation thereto: a paper-moving plate having a hammer-receiving recess therein, a slide supporting said plate, a spring-actuated lever engaging said slide for moving said plate in one direction, said lever having a roller engagement with said hammer to move the plate in the opposite direction.
5. In combination with a typewriter having printing mechanism, means for normally pressing the paper away from its normal position opposite the type, said means being wholly located at the front of and acting upon the front face of the paper.
6. In combination in a typewriter, the type shuttle, feed rolls for directing the paper vertically in rear thereof, and means for pressing the paper rearwardly from the shuttle to expose the matter last printed to view, said means being wholly located at the front of and acting upon the front face of the paper.

7. In combination in a typewriter having a type shuttle, means for directing the paper vertically in rear thereof, a sliding presser or pressers having movement from front to rear for pressing the paper away from the shuttle to allow sight of the matter last printed, and means for operating the said presser or pressers.

8. In combination, the shuttle, means for directing the paper vertically in rear of the shuttle, a presser on each side of the printing point for pressing the paper rearwardly normally, and means for withdrawing the pressers from the paper for the printing action.

9. In combination with the shuttle, means for holding the paper vertically in relation thereto, a sliding rod or rods for pressing the paper rearwardly, and means for operating the said rod or rods.

10. In combination, the shuttle, the paper roll, and a presser moving substantially in a horizontal plane having its rear end to engage the front face of the paper, and means connected with its forward portion for operating it.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEF FRANZ FORKARTH.

Witnesses:

ABRAHAM SCHLESINGER,
LOUIS F. MUELLER.