

No. 844,666.

PATENTED FEB. 19, 1907.

P. T. DODGE.
TYPE WRITING MACHINE.
APPLICATION FILED MAR. 30, 1906.

Fig. 1.

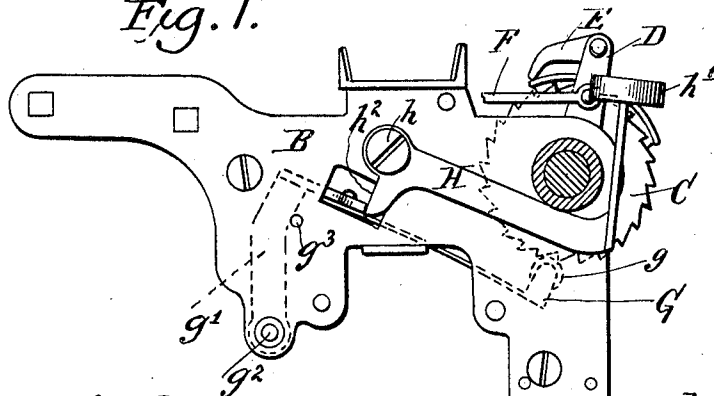


Fig. 2.

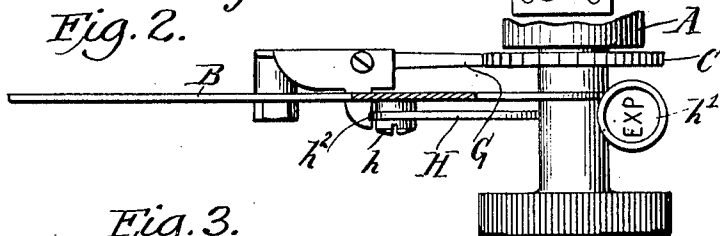


Fig. 3.

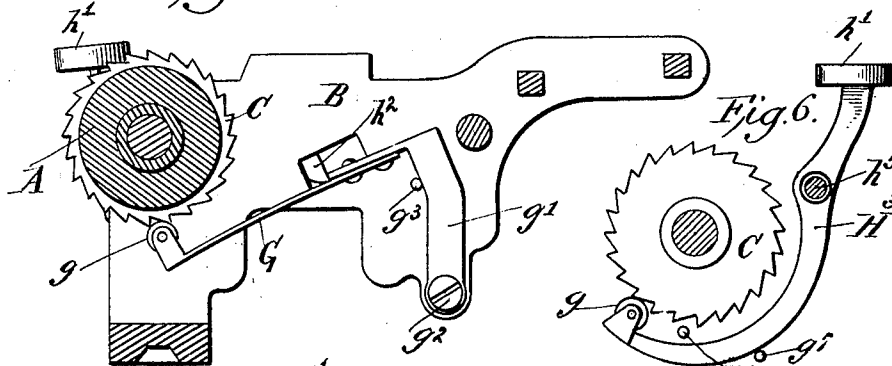


Fig. 4.

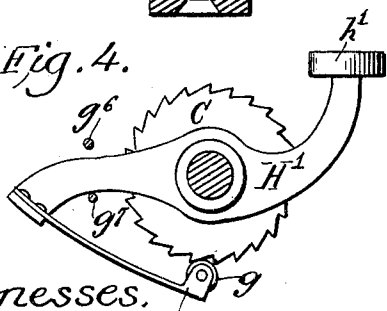


Fig. 5.

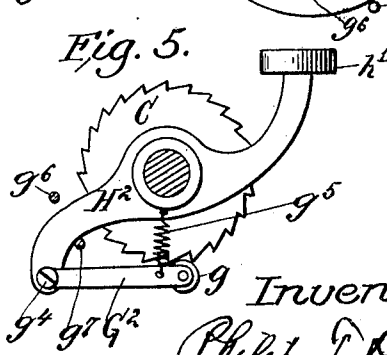
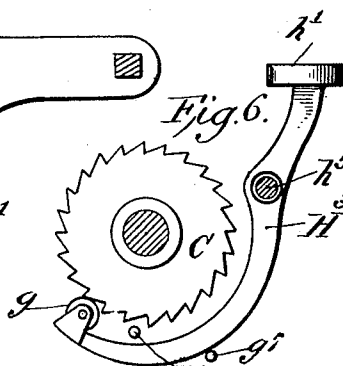


Fig. 6.



Witnesses.

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UNITED STATES PATENT OFFICE.

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TYPE-WRITING MACHINE.

No. 844,666.

Specification of Letters Patent.

Patented Feb. 19, 1907.

Application filed March 30, 1906. Serial No. 308,916.

To all whom it may concern:

Be it known that I, PHILIP T. DODGE, a citizen of the United States, and a resident of borough of Brooklyn, county of Kings, and State of New York, have invented a new and useful Improvement in Type-Writing Machines, of which the following is a specification

This invention has reference to type-writing machines wherein the paper is supported on a cylindrical platen which is turned forward step by step for line-spacing as the successive lines are completed.

The object is to enable the operator with one finger to instantly turn the platen backward a definite distance in order that exponents or superior characters may be printed at a fixed level above the other characters in the same line and also to effect the instant return of the platen and paper to their normal positions when the manual device is released.

To this end it consists in combining with the platen and normally disengaged devices for turning the same forward step by step a normally engaged dog or pawl and finger-piece for instantly turning the platen backward a definite distance and a spring for restoring the parts instantly to their first positions when the finger-key is released. By means of these devices, which may be made in various forms, the operator is enabled to instantly adjust the paper with one hand so as to cause the printing of the superior characters in definite and uniform relations to the normal line, the other hand being left free to operate the printing-keys. In other words, the operator is enabled to effect the printing of superior characters in the exact positions required without appreciable loss of time and without material interruption of the ordinary printing operation.

In the drawings, Figure 1 represents an end elevation of a type-writer platen and carriage with my improvement applied thereto in its preferred form. Fig. 2 is a top plan view of the same. Fig. 3 is an elevation of the parts shown in Fig. 1 viewed from the opposite side. Figs. 4, 5, and 6 illustrate alternative or modified constructions.

Referring to Figs. 1, 2, and 3, A represents the usual cylindrical platen mounted horizontally in a reciprocating carriage B, one end of which is shown in the drawings. The platen is provided at one end with the usual ratchet-wheel C, whereby it is turned for-

ward step by step through the action of a pawl E, carried by an arm D, swinging around the axis of the platen and actuated through a rod F from a finger-key or other connection, as usual. The pawl E rests normally on a stationary underlying plate d, whereby it is held out of engagement with the ratchet-wheel in order to permit the platen to be rotated backward at any instant by my devices. G represents a detenting pawl or dog standing normally in engagement with the ratchet-wheel C for the purpose of holding the platen in the successive positions to which it is turned by the pawl E in order that the machine may print along the normal lines on the paper. In the present instance this rotating pawl G is in the form of a spring-arm carrying at its free end a roll g, which engages between the teeth of the ratchet-wheel. This spring-arm is secured at its opposite end firmly to an arm g', connected to the carriage-frame by a pivot g², the motion being limited by a stud g³ on the carriage. H represents an angular lever pivoted to the carriage at h, its forward end being provided with a finger-button h' and its rear end arranged to bear at h² against the detenting carrying-arm g', as plainly shown in the drawings. The detent or dog G remains constantly in engagement with the ratchet-wheel, resting in the notches between its teeth, riding from one notch to another as the platen is turned forward, holding the platen and paper in the normal or printing positions. When it is required to print a character above the level of the others in the line, the button h' is depressed and the lever H caused to rock the arm g' backward, thereby pulling the detent G backward while it retains its engagement with the ratchet-wheel, the effect being to turn the platen and paper backward a fixed predetermined distance. While the key is held down with the finger of one hand the operator actuates the printing-key of the machine with the other hand and then releases the key h'. During the depression of the key the dog H is flexed by the swinging movement of the arm g', and when the finger key or button is released the spring instantly resumes its original shape and turns the platen forward again to its normal printing position.

It is to be observed that my contrivance acts to move the paper backward momentarily only and for a definite distance and to thereafter restore the paper instantly to its

first position, and it is not to be confused with those adjusting devices by which the platen may be gradually turned and set in one position or another to bring a particular point or character thereon to the printing-line.

Referring to the modified or alternative forms of my contrivance, (shown in Figs. 4, 5, and 6,) it is to be understood that the ratchet-wheel will be used in connection with normally disengaged means for turning it forward step by step, as in the preceding figures.

Referring to Fig. 4, G' represents my constantly-engaged spring-retaining dog secured to a finger-key lever H', turning around the axis of the platen. The end of the pawl is provided with a roll which engages between the teeth of the ratchet-wheel on the platen, as before. It serves, as in the first instance, the double purpose of holding the platen as it is turned forward from one position to another, of effecting its instantaneous and definite movement in a backward direction, and of finally turning it forward again to the first position.

In Fig. 5, G² represents the detenting and reversing dog provided with a roller g, as before, and pivoted at g⁴ to the lever H², mounted to turn around the axis of the platen and provided with a finger-key at the front edge. A spiral g⁵ connects the pawl with the lever. The motion of the lever is limited, as in Fig. 4, by studs g⁶ and g⁷. The dog stands normally in the position shown in Fig. 5, locking the wheel C and the platen as they are turned forward from line to line. When the motion of the lever is reversed, the dog rotates the platen backward a definite distance.

In Fig. 6, H³ is a finger-lever pivoted at h⁵, its lower end being flexible and provided with a roller g to constantly engage the teeth of the ratchet-wheel C. The parts stand normally in the position shown. When the platen is turned forward from line to line, the roller engages the successive teeth and holds the platen in position, as in previous instances. When the forward end of the lever is depressed, its rear end will rotate the platen in a rearward direction.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In combination, a cylindrical platen, normally disengaged means for turning the same forward step by step, normally engaged manual devices to turn the platen instantly backward a fixed distance, and a spring for instantly restoring the platen to its original position when the manual devices are released.

2. In combination, a cylindrical platen having a toothed wheel thereon, a normally disengaged pawl cooperating with the wheel to turn the platen forward step by step, a detent constantly engaging the wheel to hold the platen after it is turned forward, a manual device adapted to move the detent and thereby turn the platen backward a fixed distance, and a spring for restoring the detent and cylinder instantly to their original positions.

3. In a type-writer, a platen provided with a toothed wheel C, in combination with a spring-detent G engaging the wheel at one end, a pivoted arm g' to which the detent is rigidly secured at the opposite end, and a finger-lever H acting to swing the arm g'.

4. In a type-writer, and in combination, a cylindrical platen provided with a toothed wheel normally free to be turned in either direction, a device normally engaging said wheel, spring connections tending to hold said device in a given position and acting to return it thereto, and a finger-key arranged to move the device rearward a definite distance; whereby the platen and paper may be instantly moved back a definite distance and automatically restored to their first positions.

5. In combination with a platen having a toothed wheel C thereon, a reciprocating pawl E for turning the same step by step in a forward direction, means for holding the pawl normally out of engagement, a dog G in normal engagement with the toothed wheel, a finger-key mechanism for moving the dog to turn the wheel and platen in a reverse direction, and a spring for automatically restoring the parts.

In testimony whereof I hereunto set my hand, this 28th day of March, 1906, in the presence of two attesting witnesses.

PHILIP T. DODGE.

Witnesses:

F. M. EGGLESTON,
WALTER MOBLARD.