J. C. McLAUGHLIN.

TYPE WRITING MACHINE.

APPLICATION FILED JULY 3, 1908.

924,096. Patented June 8, 1909.

Fig. 1.

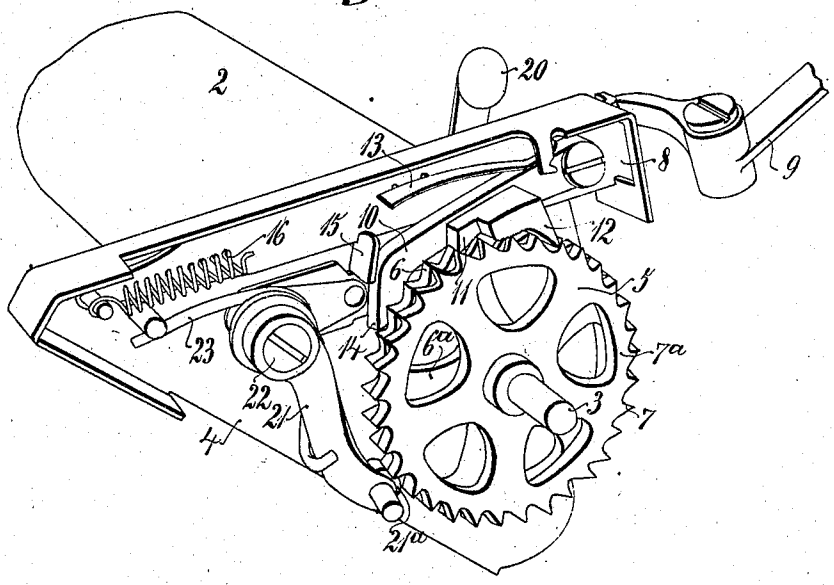


Fig. 2.

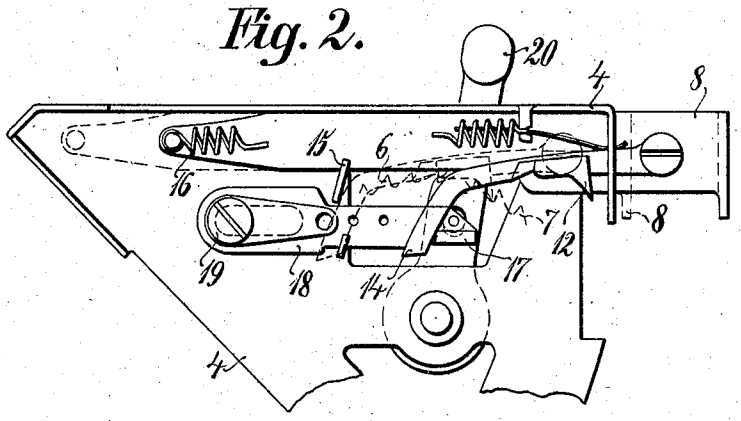
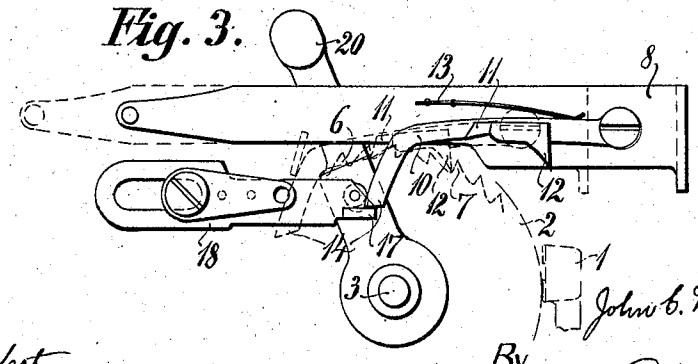


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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TYPE-WRITING MACHINE.

No. 924,096. Specification of Letters Patent. Patented June 8, 1909.

Application filed July 3, 1908. Serial No. 441,799.

To all whom it may concern:

Be it known that I, JOHN C. McLAUGHLIN, a citizen of the United States, residing in Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention relates to the line-spacing pawl-and-ratchet mechanism of writing machines.

It often happens, when a nervous operator gives an unusually quick stroke to the lever which operates the platen-driving pawl, that the platen overthrows. This is due principally to the weight of the platen, the usual spring detent being insufficient to arrest the platen at the proper point when the platen has received unusually great impetus from the jerky stroke of the spacing lever. The platen is sometimes overthrown only a portion of a line-space, and during the writing of a line it sometimes happens that the spring detent, acting upon the teeth of the ratchet wheel, gradually forces the platen back to its proper position; such gradual back rotation of the platen having the effect to cause the written letters to form a curved or slanting line instead of a straight line across the page.

The object of the present invention is to provide simple and inexpensive means for overcoming this disadvantage.

In carrying out the invention I connect to the usual revoluble platen a double ratchet or line-space wheel with the teeth of one wheel opposed to the teeth of the other, and pivot to a manually-driven member a device having two teeth, one tooth to engage with one portion of the line-space wheel to turn the platen, and the other tooth to engage the other portion of said wheel, and co-operating with a stop on the platen frame to arrest or lock the platen at the end of the stroke of the manually-driven member.

In the accompanying drawings, Figure 1 is a perspective view of an Underwood type-writing machine, with my improvements applied thereto, and in platen-arresting positions. Fig. 2 is an end elevation, showing in full lines the line-spacing mechanism in normal position, and in dotted lines the same in platen-arresting or locking position. In this view the mechanism is set for triple line-spacing. Fig. 3 is a view showing the mechanism set for single line-spacing.

Type bars 1 strike on the front of a platen 2, which is mounted by means of an axle 3 in the ends 4 of a platen frame. The axle carries a double ratchet or line-spacing wheel 5 having equally spaced teeth, and the teeth 6 of one portion 6^a of said wheel are opposed to the teeth 7 of the portion 7^a of said wheel.

A slide or pawl-actuator 8 is mounted upon the platen frame end 4, and movable backwardly by a finger-lever 9. Pivoted to said actuator 8 is a pawl device 10 having two teeth 11, 12, normally out of engagement with the line-space wheel.

Whenever a backward movement is imparted to the actuator 8 by the lever 9, the tooth 11 is carried into engagement with the tooth 6 of the wheel 5 by a spring 13 at the beginning of the line-space stroke, to rotate the platen. At the completion of the stroke, a nose 14 of the pawl device 10 engages an abutment or stop 15, fixed upon the platen frame; and at the same instant the tooth 12 engages a tooth 7 of the other portion 7^a of the line-space wheel, to check or lock the same, or to counteract any tendency of the platen to overthrow. It will be understood that the tooth of the wheel portion 7^a can only force the nose 14 against the stop 15, so that the platen is locked against further rotation.

The actuator 8 is returned forwardly to normal position by the usual spring 16. The teeth 11, 12 are withdrawn from the wheel 5 by reason of the nose 14 riding over a trip 17 formed upon a regulating plate 18, which is slotted at its rear end to engage a shoulder-screw 19 on the platen-frame end 4; said plate 18 being adjustable backwardly and forwardly by a finger-lever 20, to regulate the line-spacing of the platen.

The usual detent 21 is pivoted at 22 upon the platen frame end 4, having a roll 21^a which is normally pressed by spring 23 against the teeth of the wheel 5 to hold the platen steady.

Having thus described my invention, I claim:

1. In a typewriting machine, the combination of a revoluble platen, a pair of superposed ratchet wheels mounted thereon, and

a lever-operated slide having a pawl engaging with one wheel to rotate the platen, and engaging with the other wheel to check or lock the platen against overthrow.

2. In a typewriting machine, the combination with a revoluble platen, of a line-space wheel therefor, a supplemental wheel mounted at the side of the line-space wheel, and a pawl having a tooth to engage the line-space wheel to rotate the platen, and also having a tooth to engage with the supplemental wheel to check the platen against overthrow.

3. In a typewriting machine, the combination with a revoluble platen, of a line-space wheel therefor, a lever-operated slide having a pawl provided with a tooth to engage said wheel to rotate the platen, a supplemental wheel contiguous to the line-space wheel and engaged by another tooth of the pawl at the termination of a line-space stroke of the lever to lock the platen against overthrow.

4. In a typewriting machine, the combination with a revoluble platen, of a toothed line-space wheel normally engaged by a yielding detent, a supplemental toothed wheel at the side of and connected to the line-space wheel, and a lever-operated slide carrying a double pawl having a tooth to engage the line-space wheel to rotate the platen, and also having a tooth which at the termination of the line-space stroke of the lever engages with the supplemental wheel to lock the platen against overthrow.

5. In a typewriting machine, the combination with a revoluble platen, of a ratchet wheel therefor, a lever-operated slide having a pawl engaging with the ratchet wheel to rotate the platen, a stop to limit the movement of said pawl, a second ratchet wheel, the teeth of which are opposed to the teeth of the first ratchet wheel; said pawl also engaging the second ratchet wheel and coacting with said stop at the termination of the line-space stroke of the slide, to lock the platen against overthrow.

6. In a typewriting machine, the combination with a platen having a ratchet wheel engaged by a yielding detent, a lever-operated actuator having a pawl normally out of engagement with the wheel and engaging therewith to rotate the platen, and a stop for limiting the movement of said pawl, of means to prevent overthrow of the platen, comprising a supplemental ratchet wheel, the teeth of which are opposed to the teeth of the first wheel, and the pawl engaging said wheel and co-acting with the stop at the termination of the line-space stroke of the actuator.

7. In a typewriting machine, the combination with a platen frame and a platen mounted on an axle in said frame, of a pair of ratchet wheels on said axle, the teeth of one wheel opposed to the teeth of the other, a double pawl, and a stop; said pawl engaging one of said wheels to rotate the platen, and engaging with the other wheel and co-acting with the stop, to lock the platen against overthrow.

8. In a typewriting machine, the combination with a revoluble platen, of a pair of ratchet wheels therefor, a manually-operated actuator, a device pivoted to said actuator and having a double-toothed pallet normally out of engagement with the wheels, and a stop engageable by said pivoted device to limit the movement of the actuator; means being provided to cause said pallet to engage one of said wheels to rotate the platen, and to engage the other wheel at the end of the line-space stroke to lock the platen against overthrow.

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