C. GIBBS & J. SOKOLOV.

TYPE WRITING MACHINE.

APPLICATION FILED JULY 2, 1908.

924,606. Patented June 8, 1909.

Fig. 1.

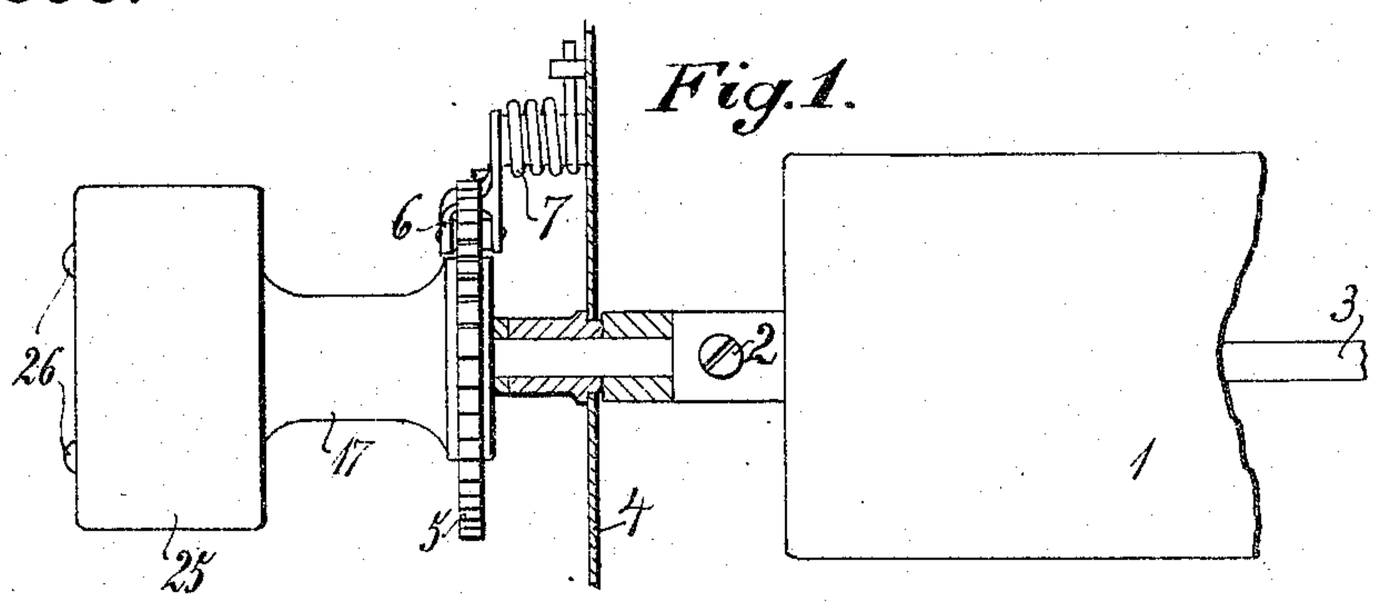


Fig. 2.

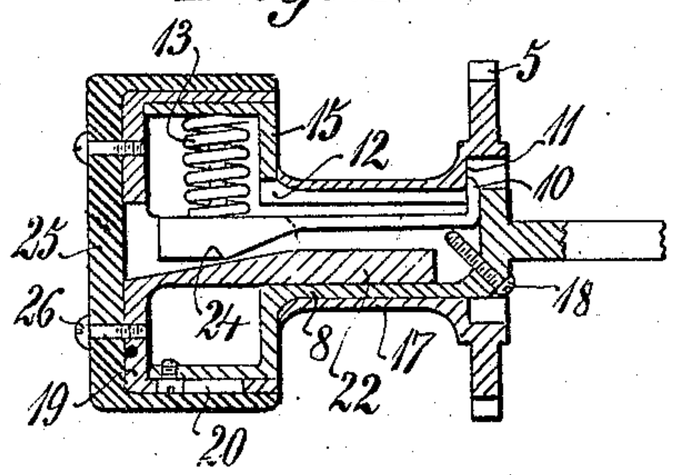


Fig. 3.

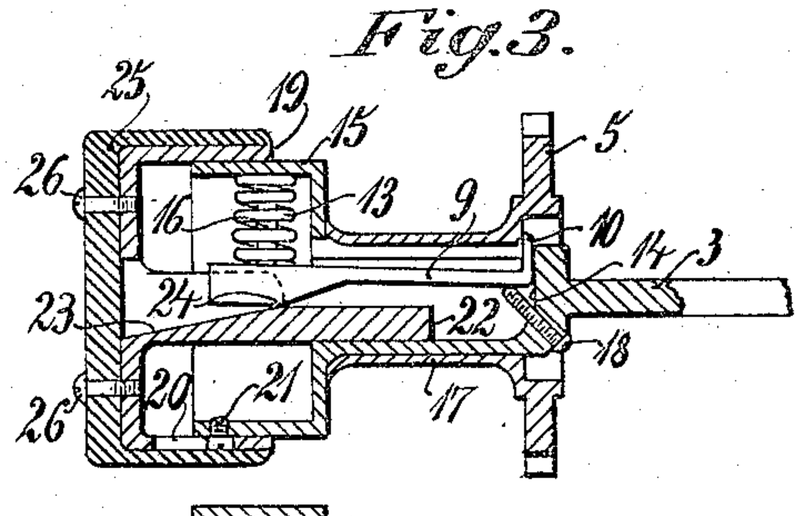


Fig. 4.

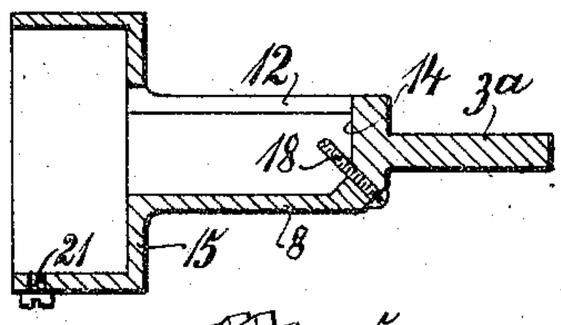
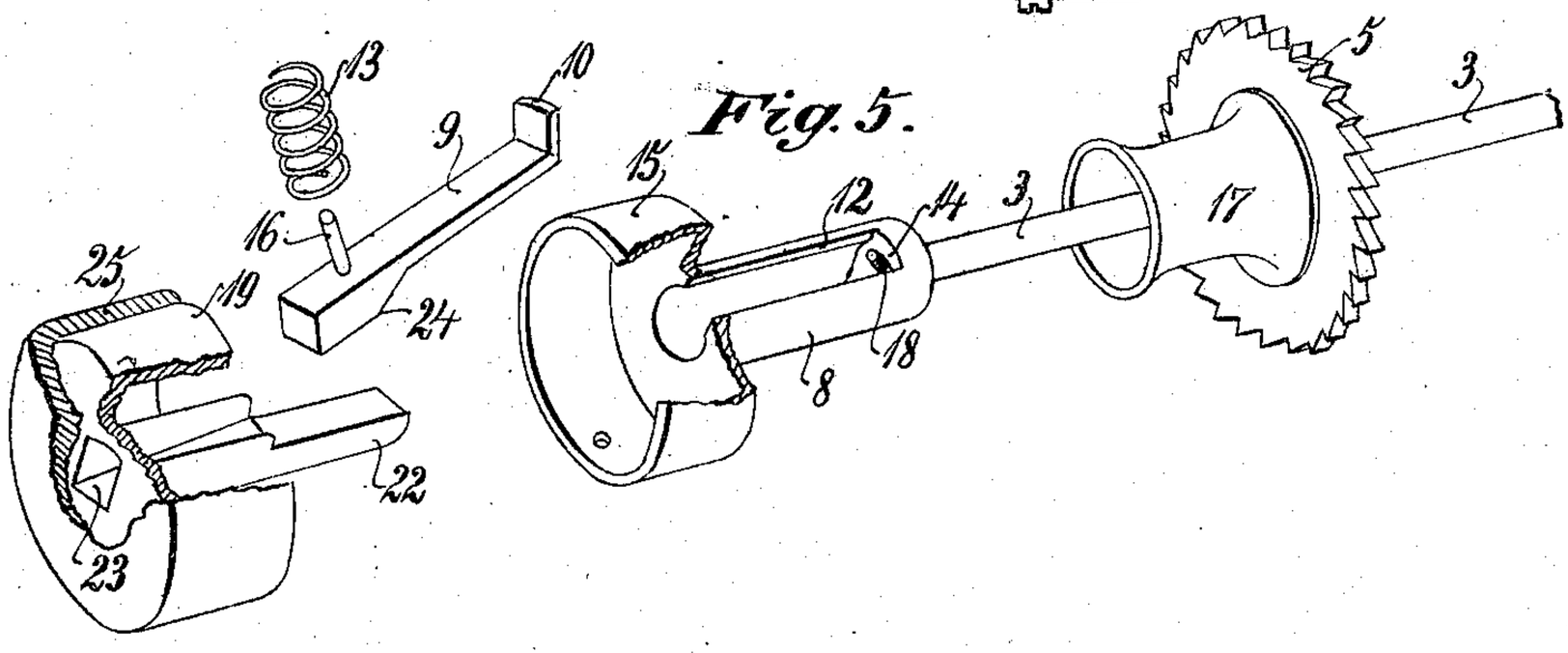


Fig. 5.



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UNITED STATES PATENT OFFICE.

CHARLES GIBBS AND JACOB SOKOLOV, OF NEW YORK, N. Y., ASSIGNORS TO UNDERWOOD TYPEWRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

TYPE-WRITING MACHINE.

No. 924,606. Specification of Letters Patent. Patented June 8, 1909.

Application filed July 2, 1908. Serial No. 441,547.

To all whom it may concern:

Be it known that we, CHARLES GIBBS, a citizen of the United States, residing in the borough of Bronx, city, county, and State of New York, and JACOB SOKOLOV, a subject of the Czar of Russia, residing in the borough of Brooklyn, city of New York, county of Kings, and State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention relates to means for releasing the platen of a typewriting machine, the control of the usual line-space wheel, or of the usual spring-detent which engages said wheel.

The object of the invention is to provide simple, inexpensive, and compact means, readily applicable to existing types of machines, for this purpose.

According to the present invention, there is connected to the platen axle, to rotate therewith, a clutching lever or vise having a jaw to bite upon the face of the line-space wheel and extending outwardly from said wheel to a finger-wheel, the latter movable axially to release said lever, and also usable for rotating the platen. The lever is mounted in a head which is provided upon the end of the platen axle, and both the line-space wheel and the finger-wheel are mounted upon said head, the whole making a simple and compact structure, which may be readily inserted in existing machines.

In the accompanying drawings, Figure 1 is a part sectional plan of one end of the platen and platen frame, showing the present improvements. Figs. 2 and 3 are longitudinal sections, Fig. 2 showing the line-space wheel clutched to the platen, and Fig. 3 showing it released. Fig. 4 is a sectional view of the platen-axle and head formed or secured thereon. Fig. 5 shows perspective views of the different parts of the apparatus.

The usual cylindrical platen 1 is fixed by a screw 2 upon an axle 3, which may extend from end to end of a platen frame 4, or which may be only long enough to serve as a gudgeon or bearing for one end of the platen as at 3^a, Fig. 4.

Outside of the platen-frame is mounted a notched line space wheel 5 with which engages a detent 6 pressed by a spring 7 into the notches of the line-space wheel, to hold the same stationary. Upon the other end of the axle 3 is carried or formed a long cylindrical head 8, which is hollow, to receive a lever 9, the latter having at its inner end a bent-up jaw 10 which acts as a vise to bite upon an inner face 11 of the line-space wheel 5. Said jaw 10 projects through an opening 12 in the head. The lever is normally caused by a compression-spring 13 to press to the left at Fig. 2 against the face 11, and to the right against the inside face 14 of the end of the head 8. Said spring 13 is confined in an enlargement or drum 15 formed on the outer end of said head, bearing at one end against the inner periphery of said drum, and at the other end against the outer end of the lever; the latter having a pin 16 to confine the spring. Owing to the length of the lever, the bite of the jaw 10 upon the face 11 of the line-space wheel is very great; and it will also be understood that the end of a hub 17 formed upon said line-space wheel is caused to bear with the same pressure upon the face or side of the drum 15, the hub 17 being confined between the jaw 10 and said drum. The friction between the end of the hub 17 and the bottom of the drum 15, taken with the friction between the jaw 10 and face 11, is sufficient to enable the line-space wheel to control the platen. The jaw 10 may fit closely in the opening 12, so that there may be no shake or looseness of the platen relatively to the line-space wheel.

A screw 18 may be threaded diagonally into the inner or right hand end of the head 8, to confine the lever; and said screw may bear against the lever near the jaw 10.

Upon the drum 15 fits loosely a telescopic casing or cap 19, having a longitudinal slot 20, to receive the head of a screw 21 threaded into the drum; whereby the cap is splined to said drum. Projecting inwardly from said cap or casing is a stem 22, at its inner end preferably fitting the cylindrical bore of the head 8, and having between its ends a cam 23, to engage a shoulder 24 formed upon the lever at its outer end, so that by drawing the cap 19 outwardly, as at Fig. 3, the upper end of the lever is cammed upwardly or against the tension of the spring 13, whereby the pressure of the vise jaw 10 upon the line-space wheel is relieved, and the platen may be rotated freely while the line-space wheel 5 remains stationary. Upon said cap 19 is

fitted a hand wheel 25, the two secured together by screws 26.

In operation, the hand wheel 25 may be used to rotate the platen and line-space wheel in the usual manner; but when it is desired to turn the platen independently of the line-space wheel, the hand wheel 25 is pulled axially to the left, Fig. 3, or in the direction of the letter-feeding movement of the carriage, whereby the cam 23 is caused to act upon the lever or vise 9 to release the line-space wheel; and while the parts are in this condition, the wheel 25 may be turned to rotate the platen to the desired point. After writing the desired words or characters, the hand wheel 25 is pressed back to normal position.

It will be seen that by removing the usual screw or screws 2 at the end or ends of the platen of an ordinary typewriting machine, as for instance the Underwood, the usual platen axle may be withdrawn together with the usual line-space wheel, and the device seen at Fig. 2 may be substituted therefor by simply inserting the platen axle 3 in the platen and securing the same. The device may therefore either be supplied as an appliance for the machine, or it may be applied to the machines during their original manufacture.

Variations may be resorted to within the scope of the invention, and portions of the improvements may be used without others.

Having thus described our invention, we claim:

1. In a typewriting machine, the combination with a platen, of an axle connected thereto, a head upon the end of said axle, a line-space wheel, the platen being revoluble independently of the line-space wheel, a lever formed at its inner end with a jaw to bite upon the line-space wheel and fulcrumed in the inner end of said head at said jaw, and extending toward the outer end of the head and provided with a spring to cause it to bite the line-space wheel, a finger-wheel splined upon said head, and a stem projecting from said finger-wheel into said head and having a cam to cause said lever to release the line-space wheel.

2. In a typewriting machine, the combination with a platen, of an axle fixed thereto, a head upon the end of said axle and having at its outer end an enlargement, a line-space wheel having a hub to turn loosely upon said head, a lever within said head and having at its inner end a jaw projecting through an orifice in said head to bite upon said line-space wheel, the latter being confined between said jaw and said enlargement and said lever extending into said enlargement, a spring within said enlargement to bear upon said lever to cause the jaw to bite the line-space wheel, and a finger-wheel splined upon said enlargement and having an interior stem formed with a cam to engage said lever and force it to release the line-space wheel.

3. In a typewriting machine, the combination with a platen, of a line-space wheel loosely connected thereto, said platen and line-space wheel carried upon a platen frame, a lever connected to the platen and having a jaw to bite the line-space wheel, said line-space wheel being outside of the platen frame and said lever extending outwardly from said line-space wheel, a hand wheel to turn the platen, said hand-wheel containing said lever, and means for enabling said hand wheel to operate said lever to release the platen from the line-space wheel.

4. In a typewriting machine, the combination with a platen, of an axle connected thereto, a head upon the end of said axle, a line-space wheel, the platen being revoluble independently of the line-space wheel, a lever formed at its inner end with a jaw to project through an opening in the head and bite upon the line-space wheel, said lever fulcrumed in the inner end of said head at said jaw, and extending toward the outer end of the head, and a finger-piece upon said head and having means to cause said lever to release the line-space wheel.

5. In a typewriting machine, the combination with a revoluble platen element, of a line-space wheel element, the platen being revoluble independently of the wheel, a lever mounted upon one of said wheel and platen elements and having at its inner end a jaw to bite the other thereof, said lever extending outwardly from said line-space wheel, and a lever-operator carried upon the platen axle outside of the line-space wheel to act upon the outer end of said lever to cause a releasing movement of said lever.

6. In a typewriting machine, the combination with a revoluble platen element, of a line-space wheel element, the platen being revoluble independently of the wheel, a lever mounted upon one of said wheel and platen elements and having at its inner end a jaw to bite the other thereof, said lever extending outwardly from said line-space wheel, and a lever-operator carried upon the platen axle outside of the line-space wheel to act upon the outer end of said lever to cause a releasing movement of said lever; said lever-operator movable along the platen axle.

7. In a typewriting machine, the combination with a revoluble platen element, of a line-space wheel element, the platen being revoluble independently of the wheel, a lever mounted upon one of said wheel and platen elements and having a jaw to bite the other thereof, a hand wheel upon the platen, said hand wheel movable axially, and said lever extending within said hand wheel, and means within said hand wheel to engage said lever to release the platen.

8. In a typewriting machine, the combina-

tion of a platen, a finger-wheel connected thereto, a line-spacing wheel, means, including a jaw-lever, for connecting said line-spacing wheel to said finger wheel, and a reciprocating cam within said finger wheel for operating upon said lever to release said line-spacing wheel from said finger wheel.

9. In a typewriting machine, the combination with a platen and a platen axle, of a line-space wheel, a clutching lever having a jaw to bite upon a face of the line-space wheel, a finger-wheel on said axle outside of said line-space wheel, said lever extending outwardly from said line-space wheel to said finger-wheel, and means for enabling the finger-wheel by an axial movement to release said lever; said lever mounted in a head provided upon the end of the platen axle and said line-space wheel also carried upon said head.

10. In a typewriting machine, the combination with a platen and a platen axle, of a line-space wheel, a clutching lever having a jaw to bite upon a face of the line-space wheel, a finger-wheel on said axle outside of said line-space wheel, said lever extending outwardly from said line-space wheel to said finger-wheel, and means for enabling the finger-wheel by an axial movement to release said lever; said lever mounted in a head provided upon the end of the platen axle and said head having an enlargement or drum, the finger-wheel being mounted upon said enlargement.

11. In a typewriting machine, the combination with a platen, a platen frame, and a platen axle, of a line-space wheel outside of the platen frame and provided with a detent, a long cylindrical hollow head provided upon the end of the platen axle, a lever within said head and having at its inner end a bent-up jaw which acts as a vise to bite upon an inner face of said line-space wheel, said jaw projecting through an opening in said head, a spring normally causing said jaw to bite the line-space wheel, and a hub upon said line-space wheel to be pressed by said jaw against an enlargement or drum formed upon the outer end of said head.

12. In a typewriting machine, the combination with a platen, a platen frame, and a platen axle, of a line-space wheel outside of the platen frame and provided with a detent, a long cylindrical hollow head provided upon the end of the platen axle, a lever within said head and having at its inner end a bent-up jaw which acts as a vise to bite upon an inner face of said line-space wheel, said jaw projecting through an opening in said head, a spring normally causing said jaw to bite the line-space wheel, and a hub upon said line-space wheel to be pressed by said jaw against an enlargement or drum formed upon the outer end of said head; said jaw fitting closely in said opening, and a screw or support being provided in said head to prevent displacement of said lever.

13. In a typewriting machine, the combination with a platen, a platen frame, and a platen axle, of a line-space wheel outside of the platen frame and provided with a detent, a long cylindrical hollow head provided upon the end of the platen axle, a lever within said head and having at its inner end a bent-up jaw which acts as a vise to bite upon an inner face of said line-space wheel, said jaw projecting through an opening in said head, a spring normally causing said jaw to bite the line-space wheel, and a hub upon said line-space wheel to be pressed by said jaw against an enlargement or drum formed upon the outer end of said head; and a screw or support bearing against the lever near said jaw.

14. In a typewriting machine, the combination with a platen, a platen frame, and a platen axle, of a line-space wheel outside of the platen frame and provided with a detent, a long cylindrical hollow head provided upon the end of the platen axle, a lever within said head and having at its inner end a bent-up jaw which acts as a vise to bite upon an inner face of said line-space wheel, said jaw projecting through an opening in said head, a spring normally causing said jaw to bite the line-space wheel, and a hub upon said line-space wheel to be pressed by said jaw against an enlargement or drum formed upon the outer end of said head; a telescopic casing or cap fitting loosely upon said drum and splined thereto, a stem projecting inwardly from said cap and having a cam to engage said lever to release the same.

15. In a typewriting machine, the combination with a platen, a platen frame, and a platen axle, of a line-space wheel outside of the platen frame and provided with a detent, a long cylindrical hollow head provided upon the end of the platen axle, a lever within said head and having at its inner end a bent-up jaw which acts as a vise to bite upon an inner face of said line-space wheel, said jaw projecting through an opening in said head, a spring normally causing said jaw to bite the line-space wheel, and a hub upon said line-space wheel to be pressed by said jaw against an enlargement or drum formed upon the outer end of said head; a telescopic casing or cap fitting loosely upon said drum and splined thereto, a stem projecting inwardly from said cap and having a cam to engage said lever to release the same, and a hand wheel fitted upon said cap.

16. In a typewriting machine, the combination with a platen axle having at one end an enlargement, a line-space wheel turning around the platen axle, and releasable means to clamp said line-space wheel against said enlargement; a finger-wheel being splined upon said enlargement and having means to

release the line-space wheel; and said clamping means including a lever extending from the finger-wheel to the line-space wheel, and provided with a support to enable it to thrust the line-space wheel against the drum.

17. In a typewriting machine, the combination with a platen, a platen frame, and an axle for the platen, of a head provided upon the end of said axle and having an enlargement or drum at its outer end, a line-space wheel having a hub loosely mounted upon said head, a detent for the line-space wheel, a lever lying within the head and having its end bent to form a jaw to bite a face of the line-space wheel, the latter being clamped between said jaw and said enlargement, a screw threaded into said head to form a fulcrum to bear against said lever close to said jaw, said lever extending outwardly from the line-space wheel, a compression spring bearing at one end against the outer end of said lever, and at the other end against the interior periphery of said enlargement to cause said jaw to bite the line-space wheel, said head having an opening through which said jaw protrudes, a casing splined upon said enlargement and having an interior stem provided with a cam to act upon said lever against the tension of said spring and cause the lever to release the line-space wheel, and a finger-wheel secured upon said casing to turn the platen.

18. In a typewriting machine, the combination with a platen, a platen frame, and an axle for the platen, of a head provided upon the end of said axle and having an enlargement or drum at its outer end, a line-space wheel having a hub loosely mounted upon said head, a detent for the line-space wheel, a lever lying within the head and having its end bent to form a jaw to bite a face of the line-space wheel, the latter being clamped between said jaw and said enlargement, said lever extending outwardly from the line-space wheel, a spring for said lever, and a casing splined upon said enlargement and having an interior stem to cause the lever to release the line-space wheel.

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