E. E. STRONG.

TYPE WRITING MACHINE.

APPLICATION FILED NOV. 7, 1913.

1,125,761.

Patented Jan. 19, 1915.

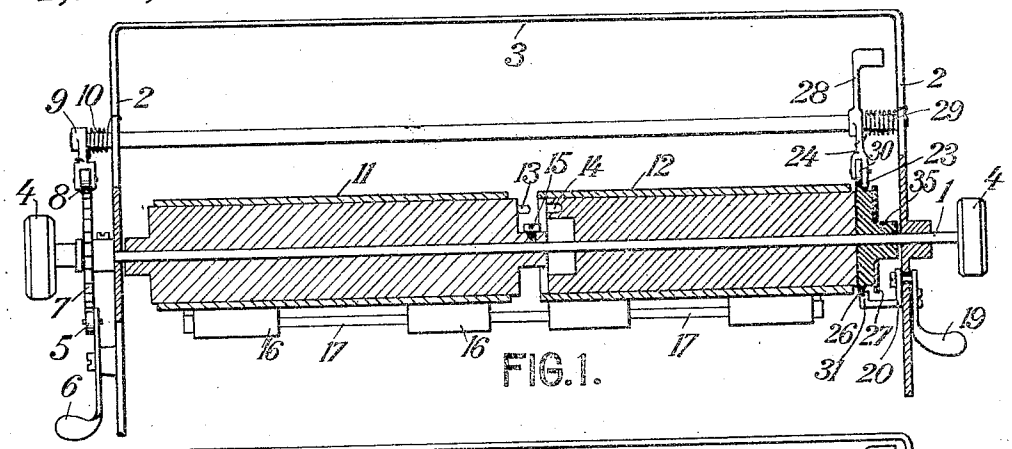


FIG. 1.

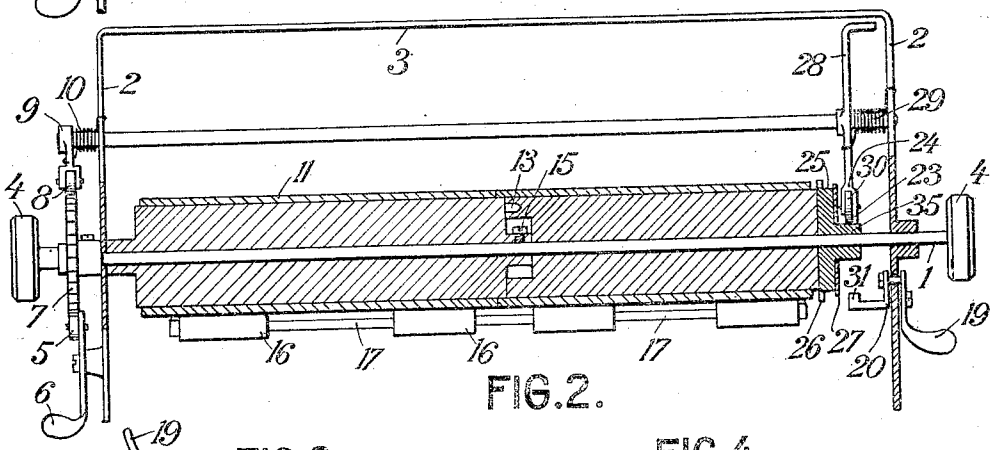


FIG. 2.

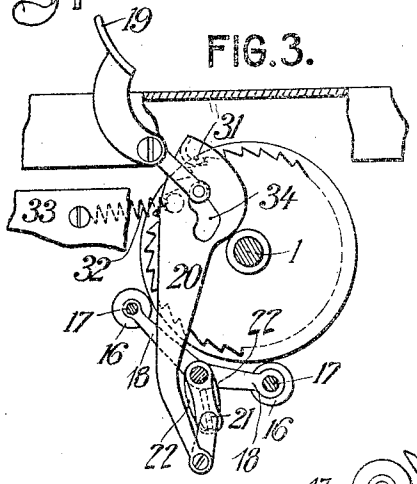


FIG. 3.

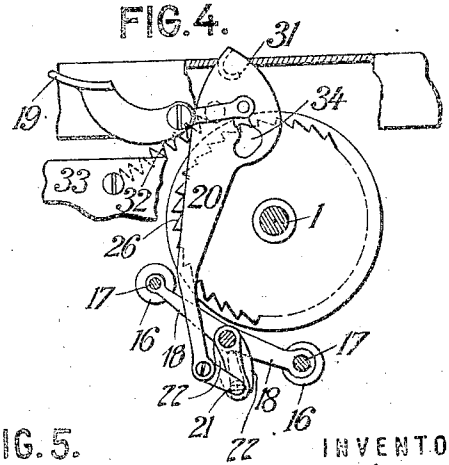


FIG. 4.

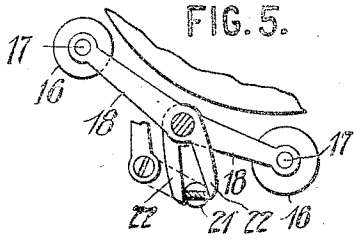


FIG. 5.

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TYPE-WRITING MACHINE.

1,125,761. Specification of Letters Patent. Patented Jan. 19, 1915.

Original application filed May 21, 1912, Serial No. 698,682. Divided and this application filed November 7, 1913. Serial No. 799,665.

To all whom it may concern:

Be it known that I, ELISHA EMMANUEL STRONG, a citizen of the United States, residing in the city of Paris, Republic of France, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention relates to so-called split platens for typewriting machines, that is, platens which are composed of two sections placed end to end.

This is a division of my application filed May 21, 1912, No. 698,682, Patent No. 1,099,134, June 2, 1914.

According to the present improvements, the typewriting machine is provided with two platen sections, each of which has a line-spacing mechanism independent of the other, and means whereby one of the sections may be coupled to the other section to constitute one long platen, controllable by one of the line-spacing mechanisms; the other line-spacing mechanism being temporarily silenced.

That line-spacing mechanism which is capable of turning the platen sections when coupled together is preferably placed at the left-hand end of the typewriter carriage, and may operate in the usual manner; while the other line-spacing mechanism, which is silenced when the platen sections are coupled together, may be placed at the right-hand end of the platen or carriage frame, and is preferably connected to the mechanism for throwing off the paper-feeding rolls of the typewriter, so that this right-hand platen section, when used separately, is fed only when the feed-rolls are cast off; or in other words, this right-hand section is rotated one line space every time a new work-sheet or bill is inserted around the left-hand or main platen; whereby a tally strip may be written on the right-hand section, while the left-hand section is used for the main bill or work-sheet.

The connection between the right-hand line-spacing mechanism and the feed-roll releasing mechanism is preferably such that the lever which operates both mechanisms is capable of being operated sufficiently to feed the platen, without releasing the feed-rolls; whereby a variety of work may be written upon the machine.

The right-hand line-feeding mechanism may comprise a spring detent, which may be released to permit the right-hand platen section to be shifted to the left to couple it to the left-hand section; and said detent may be then relied upon to hold the two sections against accidental separation. When the right-hand section is uncoupled, the same detent device may be relied upon to hold said section against being recoupled to the left-hand section.

Other features and advantages will hereinafter appear.

In the accompanying drawings, Figure 1 is a sectional top plan view showing the platen sections uncoupled, to be operated as two individual platens. Fig. 2 is a sectional top plan view showing the platen sections coupled together, to be operated as a single platen. Fig. 3 shows the feeding mechanism of the shiftable platen section, when detached from the platen section fixed to the platen axle. Fig. 4 is similar to Fig. 3 with the exception of showing the feed-rolls cast off. Fig. 5 is an enlarged detail view of the feed-roll release mechanism.

The platen axle 1 is journaled in the ends 2 of the platen frame 3, and is provided with finger wheels 4. A line-space pawl 5 is operated by a lever 6 to engage a ratchet or line-space wheel 7, fixed on the platen axle. A detent 8 carried on an arm 9 is forced between the teeth of the line-space wheel 7 by a spring 10. There are two platen sections 11 and 12, which are normally coupled together to be used as a single platen, by means of a pin or coupling 13 on one section, projecting into a socket 14 in the other section. The section 11 is fixed or held to said platen axle by a set screw 15. Feed-rolls 16 are mounted on shafts 17 and carried on rock arms 18 to run on the under side of the platen. The feed-rolls may be cast off from the platen, by depressing the release-lever 19, which draws up the connecting link 20 and rocks the cam shaft 21, which cams the free ends 22 of the rock arms 18 outwardly, in the well known manner.

When it is desired to use the platen sections for separate work-sheets, the sections are uncoupled by shifting the section 12 endwise away from the section 11, so that the coupling pin 13 will be clear of the socket 14, in which position each platen section can be rotated independently of the other. During the time the platen section 12 is un-

coupled from the platen section 11, section 12 is locked against endwise displacement by a finger or projection 23 on a rock arm 24, which enters an annular recess or groove 25 on said platen section, a disk 27 forming one wall of the groove. Spring 29 tends to keep the finger in the recess. The arm 24 may be rocked to insert or withdraw the finger 23 from the recess 25, by means of a finger-piece 28. While the platen section 12 is uncoupled, a detent roll 30 on the rock arm 24, coöperates with teeth of a ratchet wheel 26 to hold the platen section 12 from rotating with the platen axle, and also to hold the platen section 12 at line-space intervals when said section 12 is rotated by its line-spacing mechanism. The line-spacing of the detached platen section 12 is effected by a tooth 31 provided on the link 20 which extends between the feed-roll release-lever 19 and the cam shaft 21. The shaft 21 can rotate through a certan distance without effecting any movement of the feed rollers 16. When the release-lever 19 is depressed, it lifts the link 20, the tooth 31 of which causes the ratchet wheel 26 to advance by one tooth, and then it is disengaged from the ratchet wheel. In this movement the link 20 turns the shaft 21, but not sufficiently to lift the feed rollers from the platen. If at this period the movement of the release-lever 19 is stopped and it is permitted to return to its initial position, the rollers 16 will not be moved, but the link 20 returns rearwardly, the tooth 31 sliding on the teeth of the ratchet wheel 26 by reason of the free movement allowed by the slot 34, and arrives in engagement with another tooth on the ratchet wheel 26. Each time the release-lever 19 is only slightly depressed, the ratchet wheel 26 will be turned by one tooth space. If now the release-lever is pressed right down through its full stroke, it turns the shaft 21 through an angle sufficient to insure the movement of the feed rollers 16 away from the platen sections 11 and 12. It will therefore be seen that the release-lever 19 serves two purposes; in the first part of its travel it serves to rotate the platen section 12, and during the latter part of its course it effects the separation of the feed rollers 16 from the platen. The platen section 12 may be rotated while the feed-rolls hold the worksheet against said platen section to insure the proper advancement. Upon raising the release-lever, the lost-motion is taken up and the tooth 31 returned by means of a spring 32 to a position beneath the succeeding tooth of the ratchet wheel. Play is permitted at the connection of the release-lever and the link 20 by the slot 34, so that the tooth may be easily brought down to its normal position beneath a tooth of the ratchet wheel. When the platen section 12 is to be coupled up to the section 11, it is first released from the detent roll 30 and the locking finger 23, by rocking the arm 24, and then it is shifted endwise away from the feed pawl 31 and coupled to the section 11. Then the arm 24 is again rocked by spring 29, the detent roll 30 now running idly upon the hub 35 of the platen, while said arm also acts as a stop to prevent accidental uncoupling of the platen sections. After the platen sections are coupled together, they may be rotated or line-spaced as a unit, from either the finger wheels 4, or, the line-space pawl 5, during which time the feed pawl 31 rises idly when the feed-rolls are cast off, as the line-space wheel 26 of the section 12 is out of the effective zone of said feed pawl.

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

Having thus described my invention, I claim:

1. In a typewriting machine, the combination with a frame, of a platen axle journaled therein, a platen comprising alined sections one of which is fixed to the axle and the other rotatable independently of the axle, line-space mechanism at one end of the platen for rotating the said axle, and separate line-space mechanism at the opposite end of the platen for rotating the loosely-mounted section, said last-named mechanism comprising a ratchet wheel and detent to hold the ratchet wheel against rotation while the platen sections are separated, and also forming an abutment to prevent endwise movement of the ratchet wheel and thereby hold the sections separated.

2. In a typewriting machine, the combination with a frame, of a platen axle journaled therein, a platen section fixed to the axle, a second section loose on the axle and slidable longitudinally thereon into and out of abutting position to form a continuation of the first-named section, means to rotate the platen axle, line-space mechanism to rotate said second section, and means carried by said line-space mechanism to hold the sections separated.

3. In a typewriting machine, the combination with a frame, of a platen axle journaled therein, a platen section fixed to the axle, a second section loose on the axle and slidable longitudinally thereon into and out of abutting position to form a continuation of the first-named section, means to rotate the platen axle, line-space mechanism to rotate said second section, and means on said line-space mechanism for holding the platen sections separated and also for holding said sections together, said second platen section out of operative relation to said line-space mechanism while the platen sections are connected together.

4. In a typewriting machine, the combination with a frame and a platen axle journaled therein, of a platen section fixed to said axle, a second section loose on the axle and movable longitudinally thereon, a line-space wheel on said second section, a pawl in position to operate the line-space wheel when said sections are separated, and a holding detent movable into position to prevent separation of said sections when they have been moved toward each other and operative to hold the said line-space wheel at line-space intervals when rotated by said pawl.

5. In a typewriting machine, the combination of a platen frame and a platen axle journaled therein, a platen section fixed on said platen axle, a second platen section mounted loose upon said platen axle and slidable longitudinally thereon to form a unit with the first named section, pressure feed-rolls along said platen sections and a release mechanism therefor, means to rotate the platen axle, and means carried by the feed-roll release mechanism to rotate said second section without releasing the feed-rolls.

6. A typewriting machine carriage comprising a rotary spindle, a platen keyed thereon, means to rotate said spindle, means for holding it at rest, a second platen of the same diameter as the first mounted loosely on the rotary spindle and capable of sliding axially thereon into and out of interlocking connection with the first platen for rotation therewith, the second platen separable from the first platen to permit the first platen to rotate relatively to the second platen, means for rotating the second platen while the first platen is held at rest, means for holding the second platen at rest, and means for holding the second platen connected with the first platen to rotate therewith.

7. In a typewriting machine, the combination of a platen frame and a platen axle journaled therein, a platen section fixed on said platen axle, a second platen section mounted loosely upon said platen axle and slidable longitudinally thereon into and out of locking connection with the first-named section to rotate as a unit therewith, pressure feed-rolls bearing on said platen sections, a release mechanism to throw the feed rolls off the platen sections, means to rotate the platen axle, and means carried by the feed-roll release mechanism to rotate said second section while the feed rolls are in operative position on the platen sections.

8. In a typewriting machine, the combination with a platen frame and a platen mounted thereon, comprising platen sections in axial alinement and capable of separation and of junction such that the opposing ends of their peripheral faces meet to form a practically continuous platen surface for the reception of work-pieces, said platen sections relatively rotatable when separated, of means to interlock the sections when brought together to cause them to rotate as a unit, line-spacing mechanism for rotating one section and operable to rotate both sections when said sections are connected, and a second line-spacing mechanism operable to rotate the second section when said sections are disconnected and comprising means to hold said sections disconnected.

9. In a typewriting machine, the combination with a platen frame and a platen mounted thereon, comprising platen sections in axial alinement and capable of separation and of junction such that the opposing ends of their peripheral faces meet to form a practically continuous platen surface for the reception of work-pieces, said platen sections relatively rotatable when separated, of means to interlock the sections when brought together to cause them to rotate as a unit, line-spacing mechanism for rotating one section and operable to rotate both sections when said sections are connected, a second line-spacing mechanism operable to rotate the second section when said sections are disconnected, said second section being out of operative relation to said second line-spacing mechanism when the platen sections are connected, and means to hold the platen sections either connected or disconnected.

10. In a typewriting machine, the combination of a platen frame and a platen mounted thereon, said platen comprising a rotatable platen section, a line-spacing mechanism to rotate said section, a second platen section in axial alinement with the first section and movable longitudinally into and out of position to provide with the first section a practically continuous surface for the reception of work-pieces, means to lock the sections for rotation as a unit when the second section is brought to said position and releasable to permit relative rotation of the sections when they are separated, line-spacing mechanism to rotate said second section when the sections are separated, said second section moved out of operative relation to its line-spacing mechanism when the sections are connected, and means for locking the second section against longitudinal movement while in both of its positions of longitudinal adjustment.

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Witnesses:
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