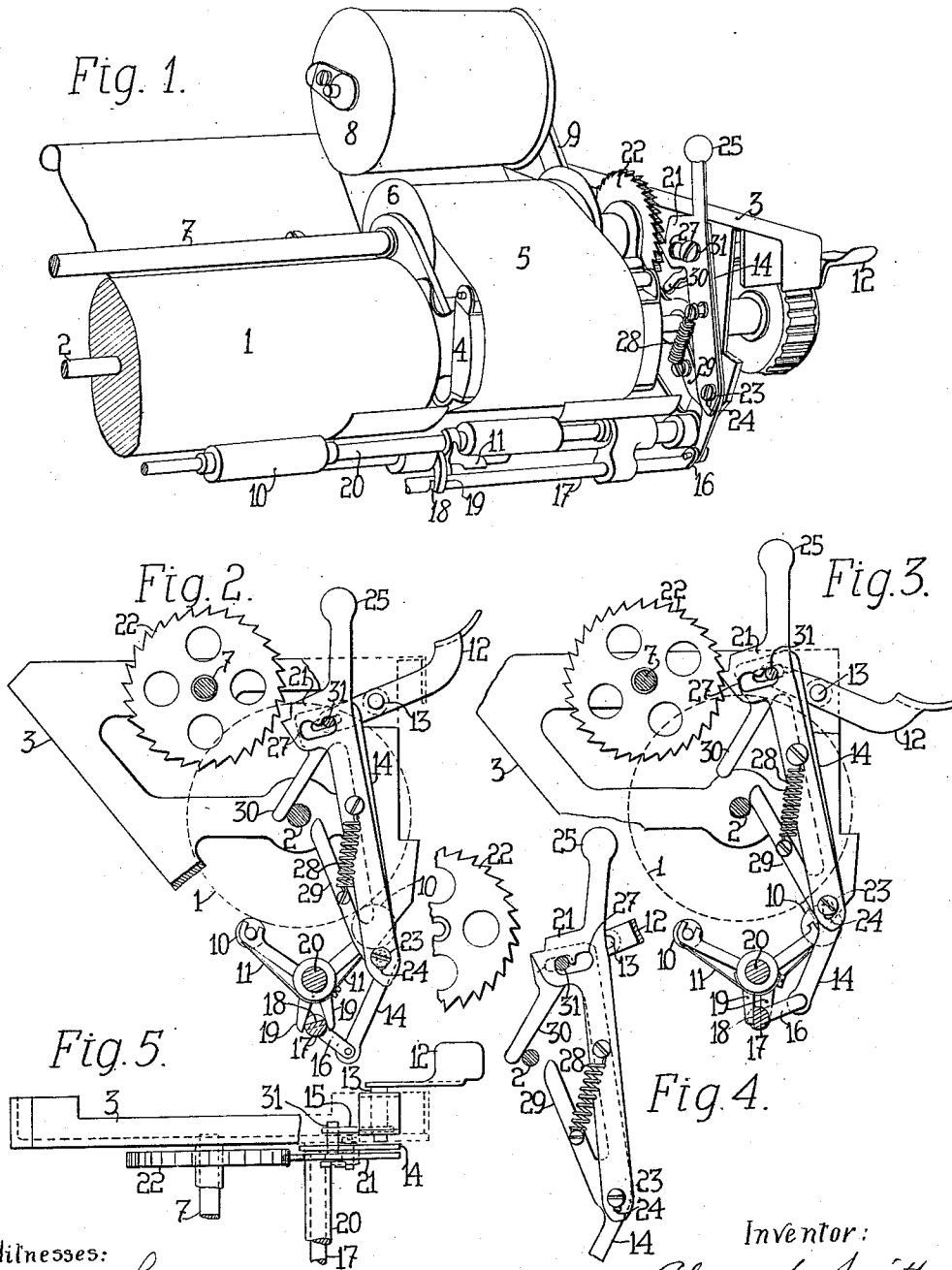


A. C. SMITH.
TYPE WRITING MACHINE.
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948,065.

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UNITED STATES PATENT OFFICE.

ALVEUS C. SMITH, OF ST. LOUIS, MISSOURI, ASSIGNOR TO UNDERWOOD TYPEWRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

TYPE-WRITING MACHINE.

948,065.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ALVEUS C. SMITH, a citizen of the United States, residing in St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention relates to the tally strip mechanism of typewriting machines, and more especially to line-spacing devices therefor.

The invention is an improvement upon the mechanism shown in patent to H. S. McCormack, No. 921,619, issued May 11, 1909, in which the tally strip is coiled on a delivery spool and fed onto a winding spool. Such feed is accomplished by a dog or pawl mounted rigidly on a link connecting the usual pressure rolls of the platen with a pressure roll release key and engaging a ratchet wheel on the winding spool whenever the release key is depressed to release the pressure rolls from the platen.

The object of the present invention is to improve the construction of the tally-strip feeding devices. I provide means to release the pressure rolls from the main platen without line-spacing the tally-strip, or to effect the simultaneous release of the pressure rolls and line-spacing of the tally strip.

In carrying out this invention, I provide the pressure roll releasing mechanism with a pawl adjustable into and out of operative relation with a ratchet wheel on the winding spool of the tally strip mechanism. When the pawl is thrown out of operative relation with the ratchet wheel, the pressure rolls can be released and restored, the pawl then being carried idly on the pressure roll controlling mechanism. When the pawl is thrown into use, the tally strip is line-spaced whenever the pressure rolls are released. By means of this arrangement, the operator can release the pressure rolls to square the leading edge of a sheet or otherwise adjust it on the main platen, or to insert and remove sheets from the machine at any time, without line-spacing the tally strip, hence the entries on the tally strip can all be spaced an equal distance apart; the strip will present a neat appearance and waste thereof will be avoided.

In the accompanying drawings, Figure 1 is a perspective view of my invention applied to the Underwood type of front strike

writing machine. Fig. 2 is a cross sectional view showing the mechanism in readiness to effect the simultaneous line-space feed of the tally strip and the release of the pressure rolls. Fig. 3 is a similar view showing the positions of the parts at the end of the line-spacing stroke. Fig. 4 is a detail side view showing the pawl in idle position. Fig. 5 is a top plan view.

The usual platen 1 has an axle 2 journaled in the ends of a platen frame 3, which also supports a tally strip mechanism, comprising an auxiliary platen 4 in front of which is fed a tally strip 5 coiling onto a winding spool 6 on a rod 7 usually extending between the ends 3 of the platen frame. The tally strip 5 is drawn from a delivery spool 8 mounted for rotation in a tally strip frame 9.

The usual front and rear pressure rolls 10 run upon the under side of the main platen 1, and are held yieldingly thereagainst by springs 11, and released by a finger-key 12, pivoted at 13 upon the end 3 of the platen frame. A link 14, extending from an arm 15 of the key to a crank 16 on the end of a rock shaft 17, connects the key and pressure rolls. The shaft 17 is provided with flats or cams 18 to engage arms 19 connected with the roll carriers 20 to release the rolls 10 in a well known manner. Depression and elevation of the key 12 alternately releases and restores the pressure rolls 10, the depression of the key 12 raising the link 14, and vice versa.

To effect the line-space feeding of the tally strip 5, I provide a pawl 21 on the link 14 for engaging a ratchet wheel 22 connected to the winding spool 6, and to permit the operator either to release the pressure rolls 10 without feeding the tally strip 5, or to accomplish both results by the same mechanism, I mount the pawl 21 shiftably on the link 14, as at 23, so that it may be swung to effective or ineffective position relative to the ratchet wheel 22 at will.

Assuming the pawl 21 to be in use, as shown in Figs. 1, 2 and 3, the operator, by depressing the pressure-roll release key 12, effects the elevation of the link 14 to not only release the pressure rolls 10 from the platen 1 which permits the adjustment of or the removal and substitution of sheets, but also causes the engagement of the pawl 21 with its ratchet wheel 22 to line-space the

tally sheet 5, the positions of the parts at the beginning and at the end of such stroke being illustrated in Figs. 2 and 3 respectively. The elevation of the key 12 returns the parts to inactive positions. Should the operator desire merely to release the pressure rolls 10, he will shift the pawl 21 by means of a handle 25 from the position shown in Fig. 2 to that illustrated in Fig. 4 to retract the pawl, so that upon elevating the link 14 the pawl will ride past the ratchet 22 without contact therewith.

The pawl 21 is detained in either of its positions, shown in Figs. 2 and 4 respectively, in any convenient manner, as by slotting the pawl at 24 to permit longitudinal movement thereof relative to the pivot 23 and providing the pawl with a rack 27 engaging a stud 31 connecting the link 14 and arm 15, which stud not only arrests the pawl, but maintains it in arrested position. Thus, in throwing the pawl from one position to the other, it is first drawn endwise to permit the tooth of the rack 27 to clear the stud 31, after which the pawl is swung toward or from the ratchet wheel, to bring the next notch of its rack over the stud, a spring 28 yieldingly holding the pawl in shifted position.

The link 14 may carry a cam or shoulder 29 coöperating with the axle 2 of the platen 1 during the upward travel of the link 14, to throw the pawl 21 away from the ratchet 22 to permit the latter to be rotated by hand if desired, the link 14 also having the usual hook or cam 30 engaging the top of the axle 2 to return the pawl 21 toward the ratchet 22, as shown in Fig. 2.

Variations may be resorted to within the scope of the invention.

Having thus described my invention, I claim:

1. In a typewriting machine, the combination with a revoluble platen and a pressure roll to run thereon, of a tally strip mechanism including a strip-winding ratchet wheel, a release key connected to the pressure roll to release it from the platen, a pawl operated by said release key to engage said ratchet wheel to wind the tally strip, and means for rendering said pawl ineffective.

2. In a typewriting machine, the combination with a revoluble platen and a pressure roll to run thereon, of a tally strip mechanism including a strip-winding ratchet wheel, a release key connected to the pressure roll to release it from the platen, a pawl operated by said release key to engage said ratchet wheel to wind the tally strip, the pawl being adjustable to occupy an operative or an idle relation to the ratchet wheel.

3. In a typewriting machine, the combination with a revoluble platen and a pressure

roll to run thereon, of a tally strip mechanism including a strip-winding ratchet wheel, a release key connected to the pressure roll to release it from the platen, a pawl operated by said release key to engage said ratchet wheel to wind the tally strip, the pawl being adjustable to occupy an operative or an idle relation to the ratchet, and means for yieldingly maintaining the pawl in adjusted position.

4. In a typewriting machine, the combination with a revoluble platen and a pressure roll to run thereon, of a tally strip mechanism including a strip-winding ratchet wheel, a release key connected to the pressure roll to release it from the platen, a pivotally supported pawl operated by said release key to engage said ratchet wheel to wind the tally strip, the pawl being adjustable to assume an idle or an operative relation to the ratchet wheel, and a spring for maintaining the pawl in adjusted position.

5. In a typewriting machine, the combination with a revoluble platen and a pressure roll to run thereon, of a tally strip mechanism including a strip-winding ratchet wheel, a release key, a link connection between the release key and pressure roll to effect its release from the platen, a pawl pivoted on the link for adjustment relative to the ratchet wheel, means to arrest the throw of the pawl to operative and inoperative relation to the ratchet, and means for maintaining the pawl in adjusted position.

6. In a typewriting machine, the combination with a platen and a pressure roll to run thereon, of a tally strip mechanism including a strip-winding ratchet wheel, a release key, a link connection between the key and pressure roll to effect its release from the platen, a pawl adjustable on the link relative to the ratchet wheel, and means for detaining the pawl in either of its positions relative to the ratchet wheel.

7. In a typewriting machine, the combination with a platen and a pressure roll to run thereon, of a tally strip mechanism including a strip-winding ratchet wheel, a release key, a link connection between the key and pressure roll to effect its release from the platen, a slotted pin shiftable toward and from the ratchet wheel and longitudinally of itself, the pawl having a rack for controlling its throw toward and from the ratchet, a relatively stationary member received in the notches of the rack, and a spring for yieldingly maintaining the engagement of the rack and member to hold the pawl in adjusted position.

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