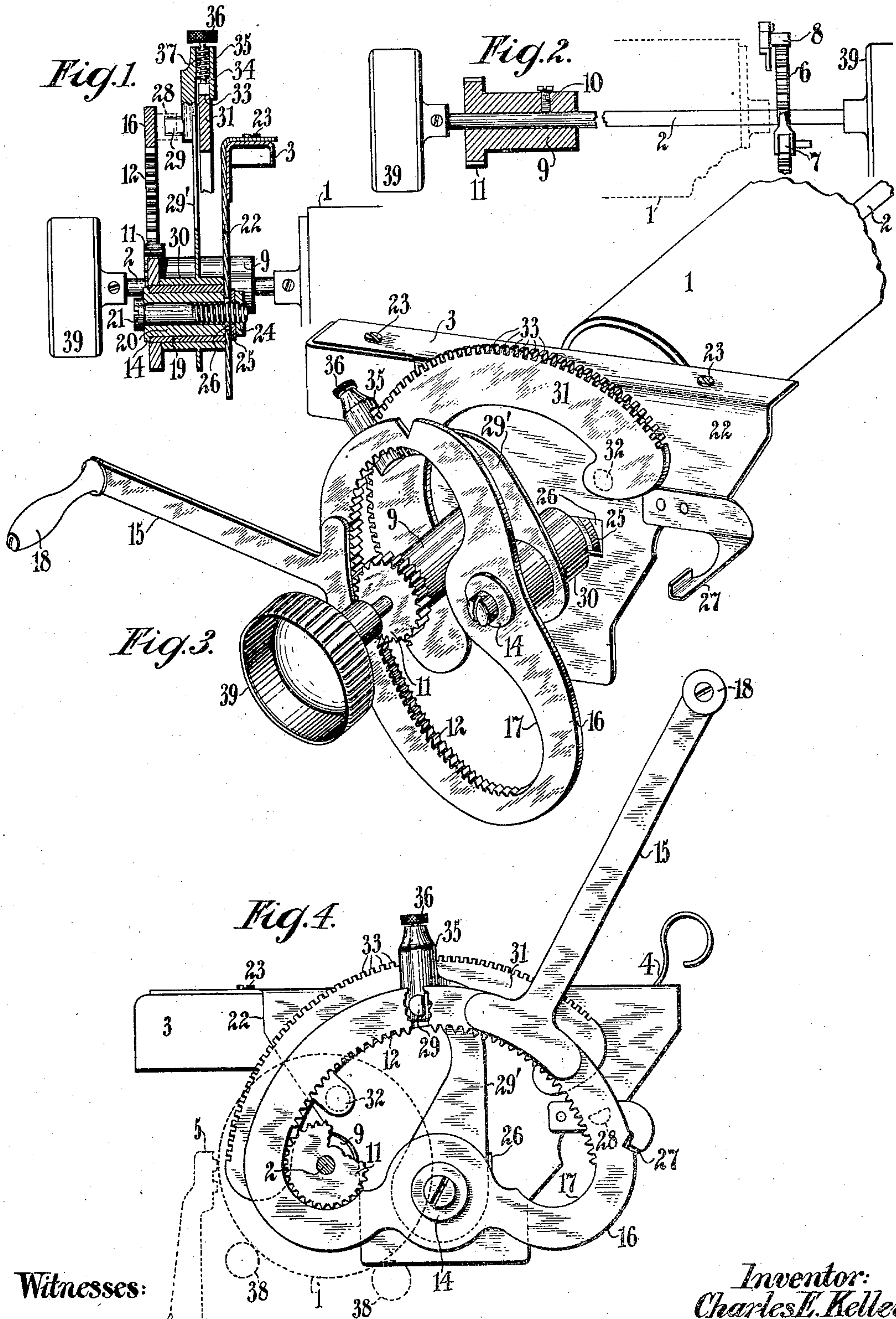


No. 863,070.

PATENTED AUG. 13, 1907.

C. E. KELLEY.  
TYPE WRITING MACHINE.  
APPLICATION FILED MAY 29, 1907.



Witnesses:

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# UNITED STATES PATENT OFFICE.

CHARLES E. KELLEY, OF CLARKSBURG, WEST VIRGINIA, ASSIGNOR TO UNDERWOOD TYPE-WRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

## TYPE-WRITING MACHINE.

No. 863,070.

Specification of Letters Patent.

Patented Aug. 13, 1907.

Application filed May 29, 1907. Serial No. 378,235.

*To all whom it may concern:*

Be it known that I, CHARLES E. KELLEY, a citizen of the United States, residing in Clarksburg, in the county of Harrison and State of West Virginia, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention relates to means for rotating the platens of typewriting machines through relatively long arcs first backwardly then forwardly, the first movement to bring the platen into position for insertion of the bill and the return motion to bring the first line of writing on the bill to the printing point.

The invention is adapted for writing bills and other documents where it is desired to preserve carbon copies of several such documents on a single long record sheet.

In accordance with my invention the platen may be rotated line by line by means of the usual line-space devices, and may also at any time be freely rotated either backwardly or forwardly to any desired extent; but when it is desired to give the platen the peculiar backward and forward movements required in billing, the handle is grasped, and by a single stroke two gears are caused to engage and rotate the platen backwardly. Then the new bill is inserted, and by means of a return stroke of said handle the platen is turned forwardly to its initial position, thereby bringing the first line of writing on the bill to the printing point and avoiding waste of space upon the long record sheet which remains in the machine.

This invention is in the nature of an improvement upon the devices disclosed in the application of Allin W. Hewitt, No. 283,452.

In the accompanying drawings, Figure 1 is a sectional rear elevation illustrating the mechanism seen at Figs. 3 and 4. Fig. 2 is a part sectional view illustrating the platen axle and some of the parts thereon. Fig. 3 is a perspective view illustrating the crank as having been swung forwardly to rotate the platen, the crank and platen being arrested by the engagement of the crank stop with the stationary stop. Fig. 4 is an end elevation showing the crank and gear in normal position, leaving the platen free for independent rotation.

A cylindrical platen 1 is revolvably mounted upon an axle 2, the latter journaled at its ends in a platen frame comprising the usual end bars 3 connected by a plate or paper shelf, seen at 4. The types 5 strike upon the front side of the platen. The latter is provided with a line space wheel 6 having a detent 7 and operated step by step by the usual line space pawl indicated at 8. All of the illustrated parts so far described are in common use on the well known "Underwood" typewriting machine.

Removably mounted upon the platen axle by means of a hub 9 and screw 10 is a pinion 11 having the same number of teeth as the line-space wheel 6. Said pin-

ion is operated by an internal gear segment 12 which is normally out of mesh with the pinion, as seen at Fig. 4, but may be swung about a stud 14 by means of a crank 15 until it not only meshes with but rotates said pinion, as seen at Fig. 3. The gear 12 is formed upon a segmental plate 16, which has a curved slot 17 to accommodate the pinion 11, the teeth of said gear 12 being cut upon the outer edge of said slot. The handle or crank 15 is fixed upon that part of the plate 16 which borders said gear 12, and extends outwardly or radially therefrom, so that it does not encounter the platen axle 2 or the pinion 11 thereon, as will be understood by reference to Fig. 3. The gear 12 is preferably of sufficient length to effect one or more complete revolutions of the platen 1 by means of a single stroke of the crank 15, the latter being provided with a suitable finger-piece 18. The gear plate 16 is provided with a hub 19, which turns upon a headed stud 20, the latter secured by a screw 21 to a sheet metal bracket 22, secured by screws 23 upon the platen frame end 3. A nut 24 upon said screw holds the stud rigidly against the outer vertical face of the plate 22. A washer 25 is placed between the nut 24 and the inner vertical face of the plate 22. The shank of the screw 21 passes through a slot 26 in said plate which admits of adjustment of the stud 20 towards and away from the platen axle 2, so as to secure proper engagement of the gears or substitution of pinions 11 of different sizes. The gear plate 16 is held by a yielding detent 27 in the normal position seen at Fig. 4, the gear being then out of mesh with the pinion, so that the latter may be rotated independently forward and backward together with the platen. It will be seen that the stud 20 is in rear of the platen axle 2 and parallel therewith.

Upon the segment plate 16 is provided a projecting stop 28, and in the path thereof is mounted a stationary stop 29 to limit the initial movement of the plate 16, which rotates the platen backwardly. The length of the stroke of the plate may be regulated, the stop 29 for this purpose being mounted upon an arm 29' which is pivoted by means of a hub 30 upon the hub 19. A segmental or crescent shaped rack 31 is fixed by means of studs 32 upon the plate 22, and is provided upon its peripheral edge with teeth 33 to be engaged by a pin 34 mounted in a head 35 carried upon the arm 29', said pin having a finger-piece 36, whereby it may be withdrawn from engagement with the teeth 33, and the arm adjusted along the rack as desired. A spring 37 holds the pin in engagement with the teeth 33. The stop rack 33 is curved concentrically with the axle 2.

In operation, the usual long record sheet and short bill head are introduced together and rolled forwardly around the platen, and the first bill is written in the usual manner. Then the bill may be withdrawn without disturbing the position of the record sheet in the



platen, the usual pressure rolls 38 being released for this purpose; then by grasping the handle 18 and swinging it to the left at Fig. 3, that is, in the opposite direction from the line spacing movement of the platen, the gear 12 is swung endwise into mesh with the pinion 11, and thereby the platen is rotated backwardly until the segment 12 and platen 1 are arrested by the engagement of the stop 28 with the stop 29. The gears and platen remain in this position while a fresh bill is inserted, and then the handle 18 is swung to the right thereby rotating the platen forwardly to its initial position while the gear 12 swings out of mesh with the pinion 11, thereby leaving the platen free to be rotated by the line spacing devices 6, 7, 8, or the usual hand wheels 39. The spring detent 7, acting on the wheel 6, serves to hold the pinion 11 always in proper position for meshing with the leading teeth in the rack 12, when the latter is swung forwardly around the pivot 20.

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. The combination with a revoluble platen and a set of single-line spacing devices therefor, of a pinion on the platen axle, an internal gear segment normally disconnected from said pinion and pivoted to turn on an axis parallel with the platen and movable into mesh therewith, and of sufficient length to effect an entire revolution of the platen, an adjustable stop for limiting the initial stroke of said gear, and a handle or crank upon said gear.
2. The combination with a revoluble platen and a set of single-line spacing devices therefor, of a pinion on the platen axle, an internal gear segment pivoted back of the platen axle, and normally disconnected from said pinion and movable into mesh therewith, and of sufficient length to effect an entire revolution of the platen, a crank normally extending upwardly and rearwardly from the said gear, and an adjustable stop for limiting the initial stroke of said gear and platen.
3. The combination with a revoluble platen, of a pinion on the platen axle, a plate mounted to turn on an axis parallel with the platen and having a slot, the outer edge of the slot having teeth forming an internal gear normally out of mesh with said pinion but movable into mesh therewith, and a crank or handle extending outwardly from the part of said plate which borders said segment.
4. The combination with a revoluble platen, of a pinion on the platen axle, an internal gear segment normally dis-

connected from said pinion and pivoted to turn on an axis parallel with the platen, and movable into mesh therewith, a stop arm pivoted to turn about the axis of said internal gear, and a segmental rack for said stop arm, said rack concentric with the axis of said internal gear.

5. In a typewriting machine, the combination of a platen having an axle, a pinion secured upon said axle, a platen frame, a stud upon said platen frame and parallel with said axle, a plate having a hub journaled upon said stud and having a curved slot, teeth being formed upon the outer edge of the slot to constitute an internal gear which is normally out of mesh with said pinion, but movable into mesh therewith by a pivotal movement of said plate, a crank or handle extending from the part of said plate which borders said segment, an arm revoluble upon said hub and curved to clear the axle of the platen, a stop carried upon said arm, and a segmental rack concentric with said stud and fixed upon said platen frame.

6. In a typewriting machine, the combination of a platen having an axle, a pinion secured upon said axle, a platen frame, a stud upon said platen frame and parallel with said axle, a plate having a hub journaled upon said stud and having a curved slot, teeth being formed upon the outer edge of the slot to constitute an internal gear which is normally out of mesh with said pinion, but movable into mesh therewith by a pivotal movement of said plate, a crank or handle extending from the part of said plate which borders said segment, an arm revoluble upon said hub and curved to clear the axle of the platen, a stop carried upon said arm and a segmental rack concentric with said stud and fixed upon said platen frame; the stud being adjustable toward and from the platen axle.

7. In a typewriting machine, the combination of a platen having an axle, a platen frame, a stud upon said platen frame and parallel with said axle, a plate mounted to turn upon said stud and formed with an internal gear normally out of mesh with said pinion, but movable into mesh therewith by a pivotal movement of said plate, a segmental rack concentric with said stud and fixed upon said platen frame, and a stop adjustable along said rack.

8. In a typewriting machine, the combination of a platen having an axle, a platen frame, a stud upon said platen frame and parallel with said axle, a plate mounted to turn upon said stud and having an internal gear normally out of mesh with said pinion, but movable into mesh therewith by a pivotal action of said plate, a crank or handle upon said plate, and a yielding detent for holding said plate in normal position, and a stop for arresting the initial movement of the plate and platen.

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Witnesses:

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