

C. GABRIELSON.
 PLATEN POSITION INDICATOR.
 APPLICATION FILED AUG. 2, 1913.

1,184,737.

Patented May 30, 1916.

Fig. 1.

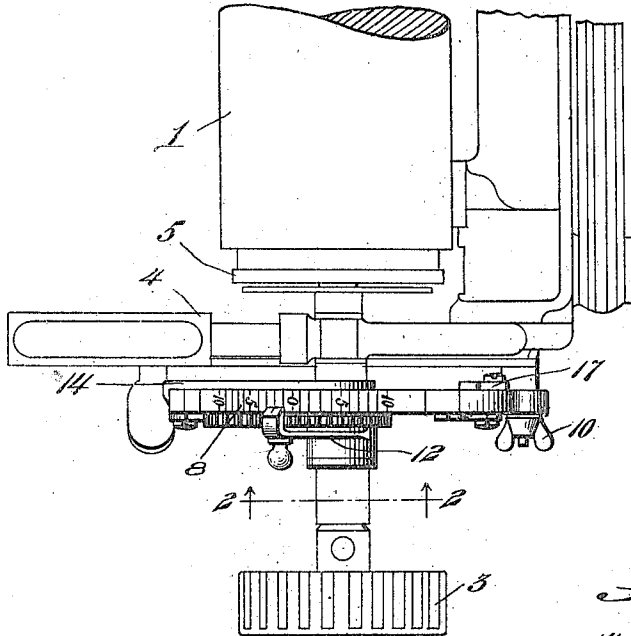


Fig. 2.

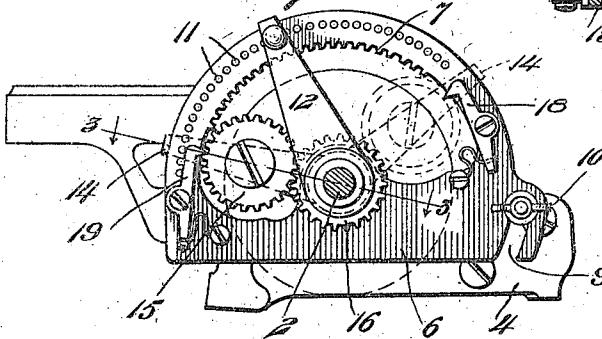


Fig. 3.

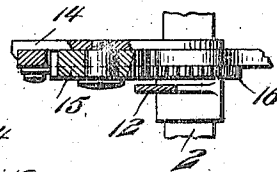
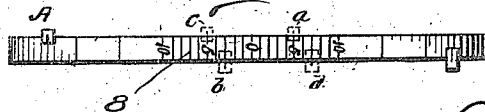


Fig. 4.



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UNITED STATES PATENT OFFICE.

CARL GABRIELSON, OF SYRACUSE, NEW YORK, ASSIGNOR TO L. C. SMITH & BROS. TYPE-WRITER COMPANY, OF SYRACUSE, NEW YORK, A CORPORATION OF NEW YORK.

PLATEN-POSITION INDICATOR.

1,184,737.

Specification of Letters Patent.

Patented May 30, 1916.

Application filed August 2, 1913. Serial No. 782,691.

To all whom it may concern:

Be it known that I, CARL GABRIELSON, a citizen of the United States, and resident of Syracuse, county of Onondaga, State of New York, have invented certain new and useful Improvements in Platen-Position Indicators, of which the following is a specification.

The present invention relates to improvements in typewriting machines and particularly to a "platen position indicator" of the type or character shown in an earlier application filed July 26, 1913, Serial No. 781,444.

The present invention is intended to obviate some objections noted during practical experience with the construction of said prior application. For example, it has been found that if the platen were suddenly started the two pinions on the pointer respectively engaging the platen pinion and stationary rack would slide or move relatively so that the movements of the platen and pointer would not be absolutely uniform. This result only occurs when the platen is improperly turned, that is, started very rapidly and at an uncalled for speed, but to render the device absolutely dependable the construction hereinafter more particularly described has been provided.

In the accompanying drawing, Figure 1 is a plan view of the right hand end of the platen of an ordinary typewriting machine having an embodiment of the present invention applied thereto; Fig. 2 is a view, substantially on the line 2-2 of Fig. 1; Fig. 3 is a sectional view substantially on the line 3-3 of Fig. 2; Fig. 4 is a more or less diagrammatic view of the upper surface of the stationary arc-shaped rack.

Referring to the drawings, 1 designates the rotary platen of a typewriting machine, the shaft 2 of which is provided with a hand wheel 3 by which it may be turned. The platen is as usual mounted in a suitable carriage, a portion of one end 4 of which only is illustrated and is provided with the usual line feed ratchet 5. A plate 6 loosely mounted on the platen shaft 2 is provided with an arc-shaped rack 7 and a scale 8. The plate is adapted to be held stationary by the engagement of a slot 9 therein over a stud projecting from the end of the carriage and a thumb nut 10. On its face toward the hand wheel 3 the plate 6 is provided with a series of sockets 11 with

which is adapted to engage a suitable pin carried by an indicator 12, that is loosely mounted on the shaft 2. The sockets 11 correspond to graduations of the scale 8 and by means of such sockets and the pin thereon the indicator 12 may be positioned so that a line on the face thereof which overlies the scale 8 will be in alinement with any desired graduation on said scale. An arm or pointer 14 is loosely mounted on the platen shaft 2 on the opposite side of the plate 6 from the indicator 12 and like said indicator terminates at its free end in a lip which overhangs the scale 8. Rotatably mounted on the arm 14 is a pinion 15 which constantly meshes with a pinion 16 keyed to the platen shaft so as to rotate therewith. The diameter of the pinion 15 is such that it also is adapted to mesh with the rack 7 and when in position to engage the rack it will be seen that the pointer 14 will be caused to turn with the platen. The aperture in the plate 6 is of such size that the pointer 14 is adapted to be moved to carry the pinion 15 thereon beyond either end of the rack and when the pinion is in such position the pointer rests upon a stationary abutment 17. Two similar pivotally mounted spring pressed dogs 18, 19, are provided on the plate 6 in position to respectively engage the pinion 15 when it is beyond opposite ends of the rack 7, as shown in Fig. 2. The tooth of either pawl 18, 19, corresponds to a tooth of the arc-shaped rack and when the pinion 15 is engaged therewith the pinion is allowed to turn freely in one direction (the direction in which it is turned by the movement of the platen which carries the pinion into engagement with the operative dog). If, however, the direction of movement of the platen is reversed, the operative dog acts as a solid tooth to force the gear 15 into engagement with the rack 7, and continued movement of the platen will effect movement of the pointer 14 longitudinally of the rack.

The scale 8 on the plate 6 affords a ready means for enabling an operator to properly position the relatively stationary indicator 12 when employing the device, as for example, for use in "condensed billing" work or filling in addresses, etc. on circular letters.

The manner of using the device may be briefly stated as follows: Assuming that

the pointer 14 is in the position A, Fig. 4, the operator will insert a bill in the machine in the regular manner and rotate the platen until the date line is at printing position.

- 5 The adjustable indicator 12 will then be moved to a corresponding position relative to the zero mark on the scale 8 less the number of line spaces which it is desired should separate successive bills. If, for example, 10 the pointer 14 is moved past the zero mark to the position indicated at *a* in Fig. 4, in bringing the date line of the first bill to printing position, and it is desired to leave two spaces between bills, the indicator 12 15 will be adjusted to a position three spaces from the zero mark in the opposite direction or to the position *b* in Fig. 4. If the initial movement of the platen above referred to does not carry the pointer 14 beyond the zero mark but terminates when 20 such pointer is at the point *c*, then the indicator 12 will be adjusted to the position *d*. As the bill is written the pointer 14 will be carried to the position indicated in dotted 25 lines in Fig. 2 and when completed it will be withdrawn from the machine, without removing the sales sheet, in the ordinary manner. Before inserting a second bill the platen will be rotated backward until the 30 pointer 14 is in alinement with the indicator 12 at which time the distance separating the last line on the sales sheet from printing position will be, in the example referred to, two spaces less than the number of line 35 spaces necessary to bring the date line of the second bill into printing position.

It will be seen that when the turning movement of the pointer 14 is checked by its contact with the stationary abutment 40 beyond either end of the rack, the pinion 15 thereon can turn freely, but immediately upon the direction of rotation of the platen being reversed, the operative dog or pawl 18, 19, will cause reengagement of said 45 pinion 15 and rack 7.

Having thus described the invention what is claimed and desired to be secured by Letters-Patent is,

- 50 1. In a typewriting machine, the combination with a rotary platen and means for turning it, of a stationary rack, an indicator adjustable along said rack, an arm or pointer loosely mounted on the platen shaft, a pinion rotatably mounted on the 55 arm and adapted to engage the rack, gearing connecting the platen and pinion whereby, through engagement of the pinion and rack, the pointer will be moved in the same direction and at the same time as the platen, 60 means for limiting such movement of the pointer beyond the end of the rack without preventing further movement of the platen in the same direction, and means engaging the pinion at the limit of its said movement 35 with the pointer and permitting it to rotate

freely out of engagement with the rack and automatically reengage the pinion and rack when the direction of rotation of the platen is reversed.

2. In a typewriting machine, the combination with a rotary platen and means for 70 turning it, of a stationary rack, an indicator adjustable along said rack, an arm or pointer loosely mounted on the platen shaft, a pinion rotatably mounted on the 75 arm and adapted to engage the rack, gearing connecting the platen and pinion whereby, through engagement of the pinion and rack, the pointer will move in the same direction and at the same time as the platen, 80 a stop arranged beyond one end of the rack to limit movement of the pointer in that direction, and a pivotally mounted dog adapted to engage the pinion when the pointer is bearing upon said stop and acting 85 to reengage the pinion with the rack when the direction of rotation of the platen is reversed.

3. In a typewriting machine, the combination with a rotary platen and means for 90 turning it, of a stationary rack, an indicator adjustable along said rack, an arm or pointer loosely mounted on the platen shaft, a pinion rotatably mounted on the arm and adapted to engage the rack, gearing connecting 95 the platen and pinion whereby, through engagement of the pinion and rack, the pointer will turn in the same direction and at the same time as the platen, a stop 10 arranged to limit movement of the pointer in one direction, the pinion being out of engagement with the rack when the pointer is in contact with said stop, and means for 10 automatically reengaging the pinion and rack when the direction of movement of the platen is reversed.

4. In a typewriting machine, the combination with a rotary platen and means for 11 turning it, of a stationary rack, an indicator adjustable along said rack, an arm or pointer loosely mounted on the platen shaft, a pinion rotatably mounted on the arm and adapted to engage the rack, gearing connecting 1 the platen and pinion whereby, through engagement of the pinion and rack, the pointer will turn at the same time and in the same direction as the platen, means for limiting movement of the pointer in either direction with the pinion out of engagement 1 with the rack, and means for automatically reengaging the pinion and rack when the direction of movement of the platen is reversed.

5. In a typewriting machine, the combination with a rotary platen and means for 1 turning it, of a stationary rack, an indicator adjustable along said rack, an arm or pointer loosely mounted on the platen shaft, a pinion rotatably mounted on the arm and adapted to engage the rack, gearing con- 1

necting the platen and pinion whereby, through engagement of the pinion and rack, the pointer will turn at the same time and in the same direction as the platen, means for limiting movement of the pointer in either direction with the pinion out of engagement with the rack, and pivotally mounted dogs adapted to engage the pinion when the pointer is held stationary and to force the pinion into engagement with the rack when the direction of rotation of the platen is reversed.

6. In a typewriting machine, the combination with a platen and means for turning it, of a stationary arc-shaped rack provided with a scale, the graduations of which correspond to line space movement of the platen, an indicator adjustable along said scale and adapted to be held stationary in any adjusted position, a pinion on the platen shaft, an arm or pointer adapted to turn about the platen axis and having rotatably mounted thereon a pinion adapted to engage the pinion on the platen shaft and rack, means for holding the pointer stationary when the pinion thereon passes from engagement with the rack by rotation of the platen in one direction, and means for automatically reengaging the pinion on the pointer with the rack when the direction of rotation of the platen is reversed.

7. In a typewriting machine, the combination with a rotary platen and means for turning it, of a stationary rack, a relatively stationary indicator mounted on the platen shaft and adjustable along the rack, an arm or pointer loosely mounted on the platen shaft, a pinion rotatably mounted on the arm and adapted to engage the rack, gearing connecting the platen and pinion whereby, through engagement of the pinion and rack, the pointer will turn at the same time and in the same direction as the platen,

and two pivotally mounted dogs arranged to respectively engage the pinion on the pointer when said pinion is carried beyond opposite ends of the rack and to automatically effect reengagement of said pinion and rack when the direction of rotation of the platen is reversed.

8. In a typewriting machine, the combination with a rotary platen and means for turning it, of a stationary rack, an indicator adjustable along said rack and adapted to be held stationary in any adjusted position thereon, a pinion mounted to rotate with the platen, a pointer loosely mounted on the platen shaft and having a pinion constantly meshing with said platen pinion and adapted to engage the rack, whereby the pointer will turn in the same direction and at the same time as the platen when its pinion is in mesh with the rack, and means for automatically reengaging the rack and pointer pinion when the direction of rotation of the platen is reversed after the pointer has been carried beyond either end of the rack.

9. In a typewriting machine, the combination with a rotatable platen and means for turning it, of a rack, an indicator adjustable with respect to the rack, an arm cooperating with said indicator, means between the platen and rack capable of causing said arm to move a limited distance in the same direction as the platen when the latter is turned, means capable of arresting the arm, and means for interrupting the function of said means between the platen and rack, whereby the platen is free to move beyond the limit of the movement of said arm.

In testimony whereof I affix my signature in presence of two witnesses.

CARL GABRIELSON.

Witnesses:

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H. W. FOSTER.