C. SPIRO.

PLATEN RELEASE MECHANISM.

APPLICATION FILED APR. 20, 1914.

1,151,059. Patented Aug. 24, 1915.

FIG. 1.

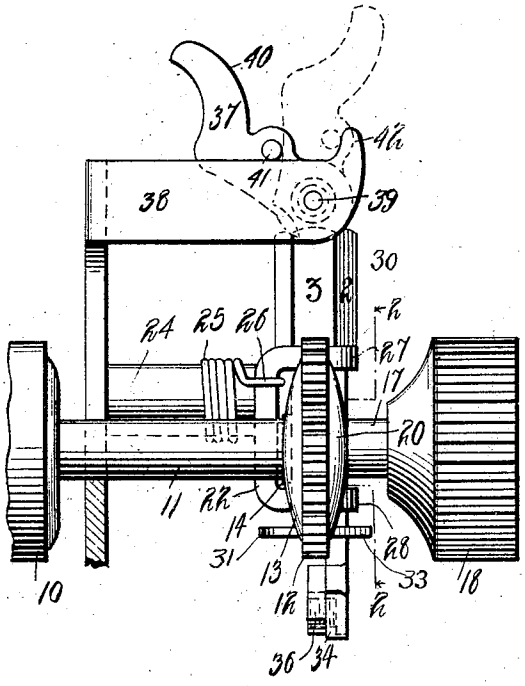


FIG. 2.

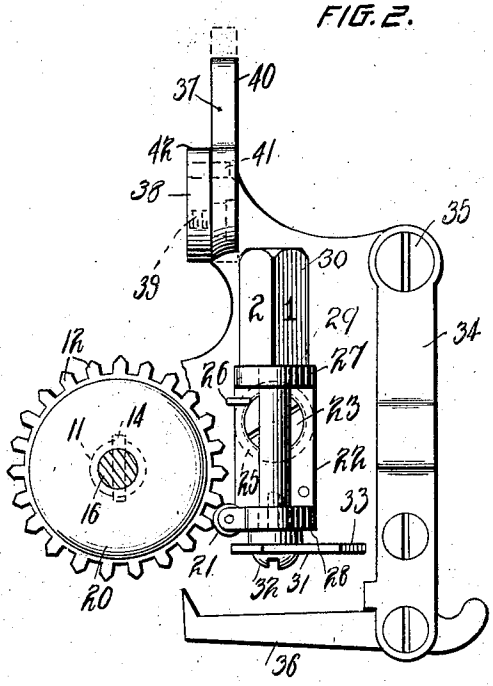
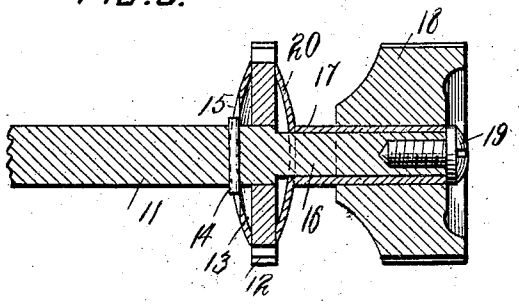


FIG. 3.



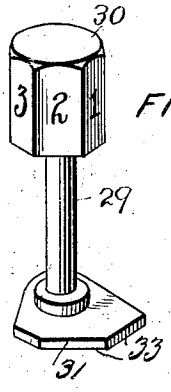
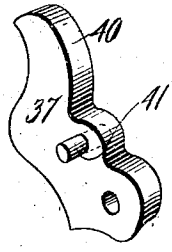


FIG. 4.

FIG. 5.



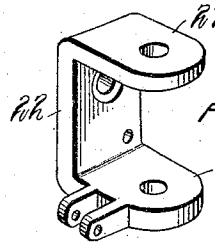


FIG. 6.

Witnesses

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PLATEN-RELEASE MECHANISM.

1,151,059. Specification of Letters Patent. Patented Aug. 24, 1915.

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To all whom it may concern:

Be it known that I, CHARLES SPIRO, citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Platen-Release Mechanism, of which the following is a specification.

This invention relates to a platen release mechanism and particularly to a construction wherein the platen may be fed by a pawl and ratchet movement or rotated independently thereof to any desired position.

The invention has for an object to present a novel and improved construction wherein the ratchet wheel is frictionally held upon the platen shaft and is retained in adjusted position by a movable detent contacting therewith, in connection with means for holding said detent against movement relative to the ratchet wheel so that the platen shaft may be rotated independently of the locked ratchet wheel.

Another object of the invention is to provide a swinging detent to engage the ratchet wheel and having pivotally mounted thereon a line space gage to coöperate with the feed pawl for said ratchet wheel.

Other and further objects and advantages of the invention will be hereinafter set forth and the novel features thereof defined by the appended claims.

In the drawing Figure 1 is a front elevation of the mechanism; Fig. 2 is a section on line 2—2 of Fig. 1; Fig. 3 is a longitudinal section through the platen shaft and frictionally held ratchet thereon; Fig. 4 is a detail perspective of the line space gage; Fig. 5 is a similar view of the detent holding lever, and Fig. 6 a detail perspective of the detent.

Like numerals of references refer to like parts in the several figures of the drawing.

The invention is applicable to any type or character of typewriter and the numeral 10 designates a platen which may be of any desired construction. The shaft 11 from this platen is provided with a loosely mounted ratchet wheel 12 which is frictionally held thereon by a cupped spring washer 13 secured to the shaft by means of a pin 14 extending therethrough and entering slots or cuts 15 in said washer. The end 16 of the shaft 11 has mounted thereon a sleeve 17 which carries the operating handle or knob 18 and is secured in position by a screw 19 entering the end of the said shaft.

A cupped spring washer 20 is interposed between the end of the sleeve 17 and the ratchet wheel 12 and is held under the proper frictional tension by the screw 19. The spring washers and their connections are shown as a desirable form for frictionally connecting the ratchet wheel to the platen shaft but other constructions may be used for accomplishing this purpose.

Coöperating with the teeth of the ratchet wheel 12 is a detent roller or retaining member 21 carried by the line space detent 22 which is pivotally mounted at 23 in a fixed part 24 of the carriage. This roller is held in constant yielding contact with the ratchet wheel by means of a spring 25 mounted upon the part 24 and engaging the upper portion of the detent as shown at 26. This detent is formed with parallel lateral flanges 27 and 28 at its opposite ends, the latter being formed with lugs in which the roller 21 is pivoted. In these flanges the line space gage 29 is rotatably mounted and has at is upper end an indicating block 30 adapted to bear any desired characters to indicate the space to be fed.

The lower end of the gage 29 has secured thereon a stop plate 31 by means of a screw 32. This plate has contact faces 33 at respectively different distances from its axis adapted to contact with the swinging lever 34 pivoted at 35 and carrying at its free end the feed pawl 36 to engage the ratchet wheel 12. These parts are of the usual construction and operated by any proper ordinary connections.

For the purpose of holding or locking the detent 22 against movement relative to the ratchet wheel 12 a lever 37 is provided and pivotally mounted upon a fixed part 38 by the screw 39. This lever is formed with a finger hold 40 and a stop pin 41 which when the detent is released rests upon the upper face of part 38 and when the detent is held contacts with a toe 42 formed on said part. The locking lever is shown as one form of device for engaging the detent or to be thrown into its path of travel to prevent movement thereof, but the invention is not specifically confined thereto.

In the normal line spacing operation the detent is released and yieldingly contacts with the ratchet wheel which is frictionally

held with sufficient tension to rotate the platen, through the usual line space feed mechanism. If it be desired to rotate the platen and leave the ratchet wheel in its proper relation to the detent, the latter is held or locked by the lever thrown into the path of movement thereof, as indicated by dotted lines in Figs. 1 and 2. The platen may then be turned to any desired extent by the knob upon its shaft and the spring washers slide upon the ratchet wheel which is held by the detent so that the platen shaft rotates independently thereof. This permits the platen to be turned to a line or a point enabling the operator to write on such line or between lines, or to interpolate a word or letter. When the holding lever is in full line position the detent is released and the line spacing proceeds through the feed pawl in the usual manner, the extent of feed however being determined by the line space gage carried by the detent and controlling the travel of said pawl. The invention presents a simple, economically constructed, and very efficient form of platen release mechanism.

What I claim is:—

1. In a platen release mechanism, the combination of a frictionally held ratchet wheel upon a platen shaft, a retaining detent pivoted intermediate its ends and adapted at one end to engage said wheel, and means for positively locking said detent at the opposite side of its pivot against movement relative to said ratchet wheel.

2. In a typewriter platen, the combination with a line spacing member adapted to be rotated with the platen shaft, of a detent pivoted intermediate its ends and contacting with said member at one end, and means engaging said detent at the opposite side of its pivot by which said member may be retained against movement to produce a drag thereof upon said shaft.

3. In a platen release mechanism, the combination of a frictionally held ratchet wheel upon a platen shaft, a detent pivoted intermediate its ends and bearing at one end against said wheel, and means extending into the path of movement of the opposite end of said detent for positively holding the same in contact with said ratchet wheel.

4. In a platen release mechanism, the combination of a frictionally held ratchet wheel upon a platen shaft, a detent pivoted intermediate its ends and bearing at one end against said wheel, and a swinging member adapted to be thrown into the path of movement of the opposite end of said detent to positively lock it in position.

5. In a platen release mechanism, the combination of a frictionally held ratchet wheel upon a platen shaft, a detent pivoted intermediate its ends and bearing at one end against said wheel, and a member adapted to be shifted into position to engage the opposite end of said detent to lock it in contact with said ratchet wheel.

6. In a platen release mechanism, the combination of a frictionally held ratchet wheel upon a platen shaft, an oscillating detent pivoted intermediate its ends and having one end yieldingly held in contact with said wheel, and locking means movable into the path of movement of the opposite end of said detent to hold the same in contact with said ratchet wheel.

7. In a platen release mechanism, the combination of a frictionally held ratchet wheel upon a platen shaft, an oscillating detent pivoted intermediate its ends and having one end yieldingly held in contact with said wheel, and a locking lever pivoted above said detent and adapted to be thrown into the path of movement of the opposite end thereof.

8. In a platen release mechanism, the combination of a frictionally held ratchet wheel upon a platen shaft, a detent swinging in a vertical plane and pivoted intermediate its ends and yieldingly held in contact with said wheel, a locking lever pivoted above said detent and adapted to be thrown into the path of movement of one end thereof, and a stop carried by said lever to determine its adjusted positions.

9. In a platen release mechanism, the combination with a line space member upon a platen shaft, of a detent pivoted intermediate its ends and yieldingly held in contact with said member, a line space gage mechanism mounted upon said detent, and locking means movable into the path of oscillating movement of a portion of said mechanism to hold the detent in contact with said member.

10. In a platen release mechanism, the combination of a frictionally held ratchet wheel upon a platen shaft, a swinging detent yieldingly held in contact with said wheel, a line space gage mounted on said detent and having a head portion extended therefrom, a locking lever movable into the path of movement of said portion, a stop plate carried by said gage, and a feed pawl for said ratchet wheel coöperating with said plate.

11. In a platen release mechanism, the combination of a platen shaft, a ratchet wheel loosely mounted thereon, a spring plate mounted upon said shaft and engaging said wheel, a sleeve bearing against said spring plate to force it into contact with said wheel, and an adjustable screw mounted upon said platen shaft and having its head contacting with the outer end of said sleeve.

12. In a platen release mechanism, the combination of a platen shaft, a ratchet wheel loosely mounted thereon, friction means carried by said shaft in contact with

said wheel, a sleeve mounted upon the end of said shaft, a cupped spring washer interposed between said sleeve and wheel, and means for adjustably forcing said sleeve in contact with said last mentioned washer.

13. In a platen release mechanism, the combination of a frictionally held ratchet wheel upon a platen shaft, a detent pivoted intermediate its ends and having parallel flanges at opposite ends, an extended member mounted in said flanges, means for retaining one end of said detent yieldingly in contact with said wheel, and means for locking said member against movement.

14. In a platen release mechanism, the combination of a frictionally held ratchet wheel upon a platen shaft, a pivoted detent having parallel flanges at opposite ends, means for retaining one end of said detent yieldingly in contact with said wheel, a line space gage pivotally mounted in said flanges, and a feed pawl controlled by said gage and coöperating with said ratchet wheel.

15. In a platen release mechanism, the combination of a frictionally held ratchet wheel upon a platen shaft, a pivoted detent having parallel flanges at opposite ends, means for retaining one end of said detent yieldingly in contact with said wheel, a line space gage post pivoted in said flanges, a stop plate at the lower end of said post having contact faces at different distances from its axis, and a feed pawl controlled by said plate and coöperating with said ratchet wheel.

16. In a platen release mechanism, the combination of a frictionally held ratchet wheel upon a platen shaft, a pivoted detent having parallel flanges at opposite ends, means for retaining one end of said detent yieldingly in contact with said wheel, a line space gage post pivoted in said flanges, an indicating head at the upper end of said post, a locking lever for said detent adapted to be thrown into the path of movement of said head, a stop plate at the lower end of said post having contact faces at different distances from its axis, and a feed pawl controlled by said plate and coöperating with said ratchet wheel.

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

CHARLES SPIRO.

Witnesses:

STEPHEN F. CURTIS,

DANIEL L. BAYLIS.