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LINE SPACING MECHANISM FOR PORTABLE TYPEWRITERS

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FIG. 1

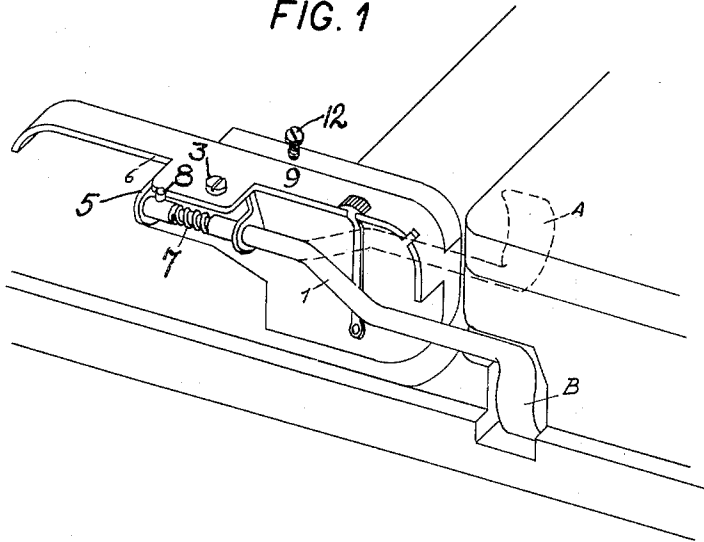
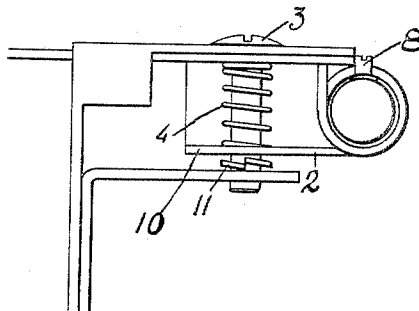


FIG. 2



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LINE SPACING MECHANISM FOR  
PORTABLE TYPEWRITERS

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4 Claims. (Cl. 197-114)

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This invention relates to a line-space and carriage-return lever and the mechanism associated therewith. It particularly refers to a line-space lever that can be doubled back over the body of the machine, so that the machine may be more compact and contained in a smaller case.

Line-space and carriage-return levers are generally articulated at one end of the carriage on the upper side, so that in those machines which are generally carried about in a case of small volume, it is necessary to equip said levers with a mechanical system for doubling them back over the body of the machine, in order to reduce the over-all height and thus enable the machine to be contained within a case of the smallest possible height.

This invention has for its object the provision of a line-space and carriage-return lever in the form of a right angle or obtuse angle having a straight line, waved or stepped or other form whose free end will take alternatively two positions, one, the elevated position which is necessary during typing, and the other the lower position or doubled back position over the body of the machine so that the whole of the mechanism shall be more compact and be contained within a carrying case of reduced dimensions. In the elevated position, the lever and its frame support oscillate conjointly horizontally above the machine on a vertical or inclined pivot, and move a pawl that in turn moves a ratchet wheel that is mounted at the extreme end of the platen. This causes the platen to turn upon its axis and with it the paper thus producing the required spacing between lines. In the lower or retractile position, which position is arrived at by turning the lever about its straight part which is supported in the frame that serves as the lever support, the lever remains at rest close to the machine body. Therefore, in order to use the machine it is necessary that the free end of the lever be in its elevated position, and when the machine is not in use or being carried in its case, this free end of the lever must be in its lower position.

An object of the present invention is to provide an operating finger piece fixed to the end of a single cranked lever having a rear portion serving as a shaft that turns in a bearing and whose operating finger piece occupies an elevated or working position or a lower or rest position, in which latter position the lever is disposed within the walls of the frame of the machine.

Another object of this invention is to provide a line-space lever whose contours are smooth and continuous, thus avoiding all uneven parts.

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With the above and other objects in view which will become apparent from the detailed description below the invention is shown in the drawings in which:

Fig. 1 is a partial perspective view of one end of a typewriter showing the construction of the line-space and carriage-return lever and associated parts, and

Fig. 2 is a rear view of the mounting for such lever.

Referring to the drawings the line-space and carriage-return lever is shown at 1, Fig. 1. The lever 1 is mounted in a frame 2 which is in turn mounted at the end of the carriage. The lever 1 and frame 2 are pivoted on the pivot 3.

When the lever 1 is in its upper position shown in dotted lines at A in Fig. 1 and is actuated by the operator a pawl 5 will be operated to actuate a ratchet wheel fixed upon the end of the platen in order to bring about line spacing. A spring 4 shown particularly in Fig. 2 surrounds the pivot 3 and returns the lever 1, frame 2, and pawl 5 to original position upon release of the lever 1. In order that this return movement may be effected it is essential that the lever 1 be in the upper position A shown in the drawings so that it may swing above the machine.

The pawl that actuates the ratchet wheel on the platen may be of the type wherein it contacts the ratchet teeth directly with its end or it may have an aperture such as shown at 6 adjacent its end in which the ratchet teeth may enter.

The elements for permitting the lever 1 to occupy its upper or lower position will now be described. A spring 7 coiled about the rear end of the lever 1 has one end thereof fixed to the frame 2. The spring 7 is designed to maintain the lever in the operating position A as shown in dotted lines in Fig. 1.

In order to maintain the lever 1 at either of its end positions there is fixed thereon a stop screw 8. When the lever is in position B the screw 8 will be locked in such position by contact with the frame 9 for the carriage. In order that the screw 8 may be permitted to pass below the frame 9 in order to bring the lever 1 into the operating position A the frame 2 together with its laterally extending plate 10 is so mounted that a slight vertical movement along the pivot 3 is permitted. This is accomplished by placing a split washer 11 below the plate 10 upon the pivot 3.

When the screw 8 is in the position shown in the figures engaging the frame 9 it will resist the pressure of the spring 7. The screw 8 also limits the rotary movement of the lever 1 caused

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by the spring 7 when passing from the lower position B to the elevated position A by abutting the bottom edge of the movable frame 2. The screw 8 therefore serves a double purpose.

In order to shift the lever 1 from the position B to the position A the screw or pin 12 of the pawl is moved backwardly or the free end of the lever 1 may be moved backwardly. Upon either one of these movements the stop screw 8 becomes separated slightly from the frame 9 of the carriage thereby allowing the lever to be rotated about its axis by the spring 7 until the lever occupies the operating position A.

It is thought that the invention and its advantages will be understood from the foregoing description and it is apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing its material advantages, the form hereinbefore described and illustrated in the drawings being merely a preferred embodiment thereof.

I claim:

1. In a typewriter having a platen and a platen carriage, a line-space mechanism comprising a manually operable lever, a frame in which said lever is rotatively mounted, a pivot secured to said carriage on which said frame is pivotally mounted, a pawl connected to said lever for actuating said platen and a stop on said lever for cooperating with said frame and carriage for limiting the rotation of said lever in said frame to two end positions corresponding to an operating position for said lever and a non-operating position wherein said lever is disposed along the side of the typewriter.

2. In a typewriter having a platen and a platen carriage, a line-space mechanism comprising a manually operable lever, a frame in which said lever is rotatively mounted, a pivot secured to said carriage on which said frame is pivotally mounted, a pawl connected to said lever for actuating said platen, a stop on said lever for cooperating with said frame and carriage for limiting the rotation of said lever in said frame to two end positions corresponding to an operating position for said lever and a non-operating position wherein said lever is disposed along the side of the typewriter and means whereby said lever may be moved so that said stop may clear said frame and carriage in order to permit said lever to assume either the operative or inoperative position.

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3. In a typewriter having a platen and a platen carriage, a line-space mechanism comprising a manually operable lever, a frame in which said lever is rotatively mounted, a pivot secured to said carriage on which said frame is pivotally mounted, a pawl connected to said lever for actuating said platen, a stop on said lever for cooperating with said frame and carriage for limiting the rotation of said lever in said frame to two end positions corresponding to an operating position for said lever and a non-operating position wherein said lever is disposed along the side of the typewriter and a washer spring system associated with said pivot permitting said frame to move along said pivot to permit the passage of said stop below said carriage to allow said lever to assume its operating position.

4. In a typewriter having a platen and a platen carriage, a line-space mechanism comprising a manually operable lever, a frame in which said lever is rotatively mounted, a pivot secured to said carriage on which said frame is pivotally mounted, a pawl connected to said lever for actuating said platen, a stop on said lever for cooperating with said frame and carriage for limiting the rotation of said lever in said frame to two end positions corresponding to an operating position for said lever and a non-operating position wherein said lever is disposed along the side of the typewriter and a coil spring on said pivot for returning said lever when actuated to original position.

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