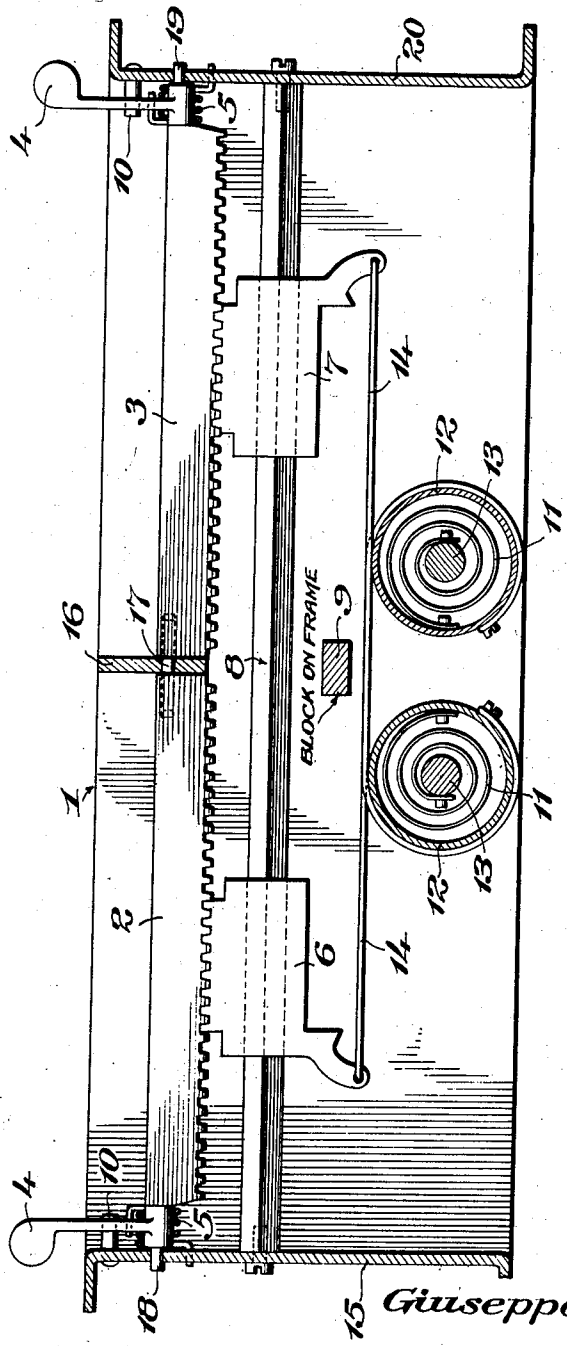
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MARGIN MECHANISM FOR TYPEWRITERS

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MARGIN MECHANISM FOR TYPEWRITERS

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5 Claims. (Cl. 197—63)

This invention relates to typewriters and more particularly to a mechanism for automatically changing the positions of the margin stops without the necessity of individually manually releasing, sliding, and re-locking, each stop.

In the ordinary known constructions the margin stops in general are provided with pawls which it is necessary to operate for the purpose of manually bringing and maintaining the margin stops into desired position on the rack. In the case of so-called automatic margin stops, that is to say margin stops which are moved automatically, the actuating mechanism is necessarily complicated by reason of the fact that this actuation must be effected from the ends of the carriage so as to act individually on the pawl of each margin stop in all the positions which it may occupy.

In the known constructions of this type there have been provided for this purpose rods which are actuated individually and extend over the entire length of the carriage, thus unduly encumbering and over-crowding the construction.

The present invention enables the above mentioned disadvantages and complications to be eliminated by reason of the fact that the margin stops are not provided with a pawl.

According to the present invention each margin stop slides on a guide rod on which it is held against any angular rotating movement, the rack being mounted in a rotatable manner so as to be capable of being disengaged from the margin stop, the margin stop being subjected to the action of a return spring which moves it automatically towards a fixed block mounted on the carriage bed or frame of the typewriter, and which is located in the middle portion of the carriage in normal rest position.

A form of construction of the subject of the invention is shown diagrammatically and by way of example in the accompanying sole figure of the drawing, which is a longitudinal vertical sectional view looking toward the rear of the rear movable part of the carriage with racks and marginal guides and the fixed counter block.

This drawing shows partly in longitudinal section the movable part of the carriage 1 which carries a rack divided into two isolated parts 2 and 3 which are pivotally mounted at their ends in such a manner as to enable them to rotate. The paper guides and platen have been omitted for purposes of clarity. Each of these parts is actuated by a member such as a lever 4 and is subjected to the action of a helical return spring 5 tending to maintain it always in the position in which it is in engagement with a margin stop. A fixed stop 10 is provided for maintaining each part 2 and 3 in its correct angular position for such engagement.

The left and right hand margin stops 6 and 7, each of which is formed by a simple block provided with teeth opposite and engageable with the rack and not provided with any pawl or similar member, slide freely on a guide formed by a rod 8 of square section which thus prevents any angular or rotating movement of stops 6 and 7. The margin stops can each move between one end of the carriage and a fixed block 9 provided at the middle stationary portion or bed of the carriage or on the frame of the machine.

Each margin stop is subjected to the action of a spirally wound spring 11 mounted in a drum 12 turning on a shaft 13 carried on carriage 1 and on which there is mounted a flexible member 14 such as a tape or cable.

The rack mounting block 16 is centrally disposed on the carriage 1 and a double-ended pin 17 is mounted therein. Rack 2 is rotatably mounted on pin 17 and on a pin 18 mounted on one end cheek plate 15 of carriage 1. Rack 3 is rotatably mounted on pin 17 and on pin 19 which is mounted on the other end cheek plate 20 of carriage 1.

When it is desired to change the position of a margin stop, the corresponding portion of the rack, say 2, is actuated by means of its lever 4 so as to disengage it from the margin stop which is then free to move along rod 8 under the action of its spring drum 12 until it engages block 9 or the end portion of the undisplaced rack, say 3, which remains in the path of the margin stop. The carriage having been brought into the position corresponding to the desired margin location, the margin stop in engagement with block 9 slides on rod 8 to the desired location, and the actuating lever 4 is released and the rack returns into engagement with its margin stop under the action of the return spring 5.

The placing in position is therefore effected automatically.

I claim:

1. In a margin stop mechanism for typewriters, a movable carriage, a rack member unit mounted on said carriage, a rod member unit mounted on said carriage substantially parallel to said rack member unit and adjacent thereto, a pair of margin stops slidably mounted on said rod member unit, the portions of said stops adjacent said rack member unit being provided with teeth adapted to engage the teeth of said rack member unit, one

of said units having portions individual to the respective margin stops, and said rack member unit and said rod member unit comprising mounting means constructed to provide for rocking displacement of said portions of said one unit individually about their respective longitudinal axes relative to the other of said units for engaging or disengaging as desired said teeth of said stops respectively with the corresponding adjacent teeth of said rack member unit, means for normally maintaining rocking positioning of said portions of said one unit relative to the other of said units to cause said teeth of said stops to engage with the teeth of said rack member unit adjacent thereto, a fixed block mounted on the typewriter frame in position to engage said stops as said carriage is moved, said block being positioned to be intermediate of the ends of the said carriage when said carriage is in normal rest mid-position, and means for normally urging said stops along said rod member unit respectively toward the center of said carriage.

2. In a margin stop mechanism for typewriters, a movable carriage, a rack member unit mounted on said carriage, a rod member unit mounted on said carriage substantially parallel to said rack member unit and adjacent thereto, a pair of marginal stops slidably mounted on said rod member unit, said rod member unit and said stops comprising means for maintaining said stops in fixed angular position relative to the axis of said rod member unit, the portions of said stops adjacent said rack member unit being provided with teeth adapted to engage the teeth of said rack member unit, said rack member unit and said rod member unit being so mounted, constructed and arranged that individual portions of one of said units associated with the respective margin stops may be individually displaced about their respective longitudinal axes relative to the other of said units for engaging or disengaging as desired the teeth of said stops respectively with reference to the teeth of said rack member unit adjacent thereto, means for normally maintaining rocking positioning of said portions of said one unit relative to the other of said units to cause the teeth of said stops to engage with the teeth of said rack member unit adjacent thereto, a fixed block mounted on the typewriter frame in position to engage said stops as said carriage is moved, said block being positioned to be intermediate of the ends of said carriage when said carriage is in normal rest mid-position, and means for normally urging said stops along said rod member unit respectively toward the center of said carriage.

3. In a margin stop mechanism for typewriters, a movable carriage, a pair of rack members, supporting means for coaxially pivotally mounting said rack members on said carriage, a rod fixedly carried by said carriage substantially parallel to said rack members and adjacent thereto, a pair of margin stops slidably mounted on said rod, said rod and said margin stops comprising means for maintaining said stops in fixed angular position relative to the axis of said rod, the portions of said stops adjacent said rack members being provided with teeth adapted to engage the teeth of said rack members respectively, a fixed block mounted on the typewriter frame in position to engage said stops as said carriage is moved, said block being positioned to be intermediate of the ends of said carriage when said carriage is in normal rest mid-position, means for normally maintaining axial orientation of said rack members in engagement with said teeth of said stops, said rack members respectively comprising means for selectively rocking either of them about their respective axes out of engagement with said teeth of said stops, and means for normally urging said stops along said rod respectively toward the center of said carriage.

4. A margin stop mechanism according to claim 3, said stop urging means comprising individual spring drums and strap means connecting said spring drums to said stops respectively.

5. A margin stop mechanism according to claim 3, said rod being polygonal, and said stops being provided with polygonal apertures adapted to engage said rod.

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