March 18, 1947. E. T. WICKLAND 2,417,532

PAGE END ALARM FOR TYPEWRITERS

Filed May 4, 1945

FIG. 1

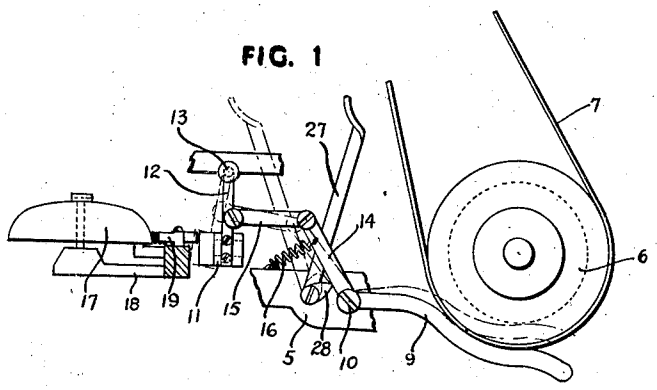


FIG. 2

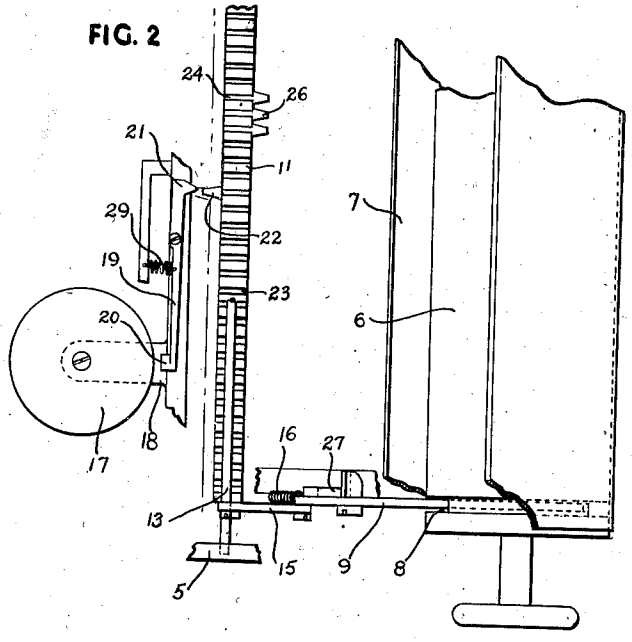
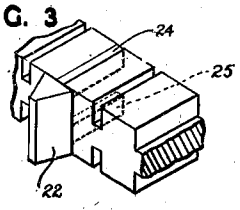


FIG. 3



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4 Claims. (Cl. 197—189)

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The present invention relates to new and useful improvements in typewriters, and more particularly to an attachment through the medium of which the operator of the typewriter will be warned that the end of the sheet of paper being typed is being approached.

An important object of the invention is to provide an attachment for typewriters of this character embodying means controlled through the medium of a sheet of paper placed on the platen of the machine to control the sounding of an alarm when the end of the sheet of paper is reached and also embodying means for rendering inoperative the signalling mechanism while inserting a sheet of paper on the platen, or when it is desired to shift or adjust the sheet of paper thereon after the same has been inserted on the platen.

Another object of the invention is to provide a typewriter attachment of this character which may be mounted on a conventional typewriter without necessitating any material changes or alterations therein.

A still further object is to provide a device of this character of simple and practical construction, which is efficient and reliable in use, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawing forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a fragmentary end elevational view of a typewriter carriage showing my invention attached thereto.

Figure 2 is a top plan view.

Figure 3 is a perspective view of one of the adjustable signal operating lugs.

Referring now to the drawing in detail, wherein for the purpose of illustration I have disclosed a preferred embodiment of the invention, the numeral 5 designates a part of a typewriter carriage of conventional construction and on which the platen or roller 6 is operatively mounted, the platen being adapted for feeding the sheet of paper 7 thereon in the usual manner.

The platen 6 is formed adjacent one end thereof with an annular groove 8 and in which one end of a substantially bell crank lever 9 is adapted to ride in a position under the platen, the lever 9 being pivotally mounted intermediate its ends

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on a part of the carriage 5 by means of a screw 10.

A bar 11 extends in parallel relation behind the platen 6 and is provided at its ends with upwardly extending hangers 12 pivoted at their upper ends to a rod 13 carried by the carriage, to swingably support the bar for forward and rearward swinging movement relative to the platen.

One end of the bell crank lever 9 extends substantially horizontally forwardly under the platen 6, while the other end of the bell crank lever extends upwardly, as indicated at 14, and is pivotally attached to one of the hangers 12 by means of a link 15, whereby a raising and lowering movement of the front end of the lever 9 will cause a front and rear swinging movement of the bar 11, as indicated by the full and dotted line positions in Figure 1 of the drawing.

A coil spring 16 is attached at one end to a part of the carriage 5 and is attached at its other end to the upwardly extending end portion 14 of the bell crank lever to yieldably urge the front end of the lever upwardly into the groove 8 and to urge the bar 11 rearwardly.

A bell 17 is attached to an arm 18 projecting rearwardly of the frame of the machine and a clapper or hammer 19 is pivoted intermediate its ends to the frame and extends in a substantially parallel relation to the bar 11. One end of the clapper 19 is formed with a head 20 adapted for striking the bell and the other end of the clapper is formed with a laterally extending beveled lug 21 disposed in the path of a rearwardly projecting beveled lug 22 carried by the bar 11.

The upper and lower surfaces of the bar 11 are formed with transversely extending slots 23 in which the upper and lower legs 24 and 25 projecting from the rear face of the lug 22 are adapted for slidable engagement thereby to adjust the lug 22 longitudinally on the bar 11, in accordance with the period of movement of the carriage at which it is desired to sound the alarm.

One or more reserve lugs 26 may be carried by the bar 11 by inserting the arms 24 and 25 in the slots 23 at the side of the bar opposite from the lug 21, as indicated in Figure 2 of the drawing.

In order to prevent interference with the feeding of the sheet of paper 7 on the platen 6 by the bell crank lever 9, a lever 27 is pivoted at one end to a part of the carriage 5 for forward and rearward swinging movement, the lever being provided with a cam 28 adjacent its pivoted end adapted

to ride behind the upwardly extending end 14 of the lever to move the same forwardly and to swing the front end of the lever 9 downwardly out of engagement with the groove 8 of the platen, as shown by the full line position of Figure 1. The sheet of paper 7 may then be fed on the platen 6 to cover the groove 8 and the cam 28 is then released from the upper end 14 of the bell crank lever by means of the lever 27 which is moved into its dotted line position, as shown in Figure 1, and the paper 7 will then prevent the front end of the lever 9 from entering the groove 8 and the bar 11 will thus be maintained in its forward position, so that during the backward and forward movement of the carriage, the lug 22 will not strike the lug 21 of the clapper.

However, when the end of the sheet of paper 7 has been reached during the typing thereof, the groove 8 will be uncovered, thus permitting the lever 9 to enter the groove and to swing the bar 11 rearwardly so that when the carriage again travels along the machine, the lug 22 will strike the lug 21 and pivot the clapper 19 to exert tension on a coil spring 29 connecting the clapper to a stationary part of the machine whereby to cause the clapper to strike the bell 17 and thus sound the alarm to indicate that the end of the page has been reached.

It is believed the details of construction, manner of operation and advantages of the device will be readily understood from the foregoing without further detailed explanation.

While I have herein shown and described a preferred embodiment of the invention, it is to be understood that changes in the details of construction may be resorted to which will fall within the scope of the invention as claimed.

Having thus described the invention, what I claim is:

1. A page end alarm for typewriters having a carriage provided with a platen, said platen having an annular groove normally covered by a sheet of paper placed thereon, a bell mounted on a stationary part of the machine and including a pivoted clapper having a laterally projecting lug at one end, a bar pivotally suspended on the carriage for forward and rearward swinging movement, normally inactive means connected to the bar and operable to enter the groove upon uncovering thereof by the paper to swingably actuate the bar rearwardly toward said lug of the clapper, and a lug adjustably carried by the bar for engaging said first-named lug.

2. A page end alarm for typewriters having a carriage provided with a platen, said platen having an annular groove normally covered by a sheet of paper placed thereon, a bell mounted on a stationary part of the machine and including a pivoted clapper having a laterally projecting lug at one end, a bar pivotally suspended on the carriage for forward and rearward swinging movement, normally inactive means connected to the bar and operable to enter the groove upon uncovering thereof by the paper to swingably actuate the bar rearwardly toward said lug of the clapper, said bar having transverse longitudinally spaced grooves, and a lug having an arm selectively engaged in said last-named grooves to support said last-named lug laterally on the bar for engaging said first-named lug.

3. A page end alarm for typewriters having a carriage provided with a platen, said platen having an annular groove normally covered by a sheet of paper placed thereon, a bell mounted on a stationary part of the machine and including a pivoted clapper having a laterally projecting lug at one end, a bar having a laterally projecting lug, means for pivotally suspending the bar on the carriage for swinging movement toward and away from the lug of the clapper to move the lug of the bar into and out of position to engage said lug of the clapper during movement of the carriage, a link pivoted at one end to the means, a bell crank lever connected to the other end of the link and having one end adapted to enter the groove when uncovered by the end of the sheet, and spring means for actuating the lever in a direction to cause engagement of said lugs.

4. A page end alarm for typewriters having a carriage provided with a platen, said platen having an annular groove normally covered by a sheet of paper placed thereon, a bell mounted on a stationary part of the machine and including a pivoted clapper having a laterally projecting lug at one end, a bar pivotally suspended on the carriage for forward and rearward swinging movement, normally inactive means connected to the bar and operable to enter the groove upon uncovering thereof by the paper to swingably actuate the bar rearwardly toward said lug of the clapper, manually operable means to hold the first means retracted from the groove, and the bar at a distance from the clapper, and a lug adjustably carried by the bar for engaging said first-named lug.

EDWARD T. WICKLAND.

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