May 25, 1943. G. A. WALKER 2,320,110

ELECTRIC INDICATOR FOR TYPEWRITERS

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Fig. 1.

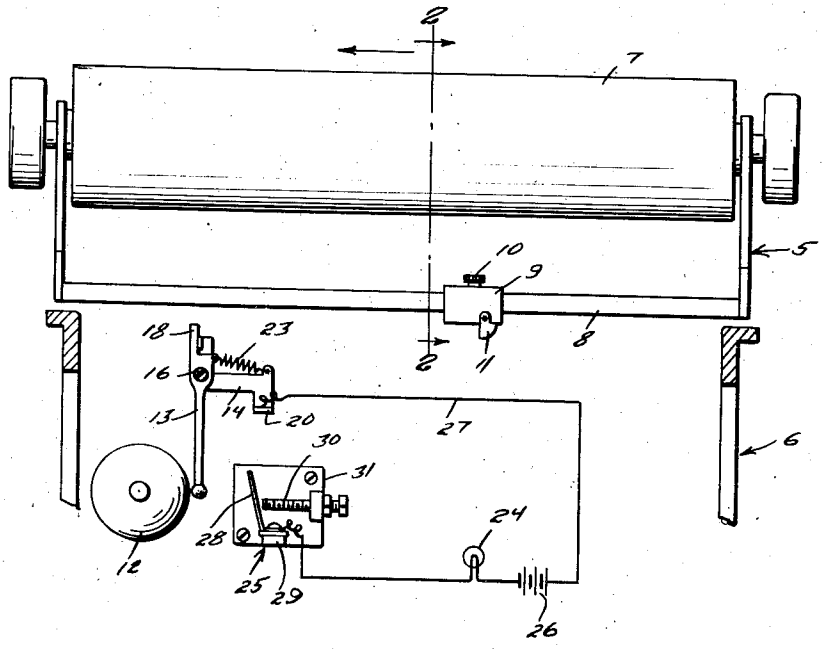


Fig. 2.

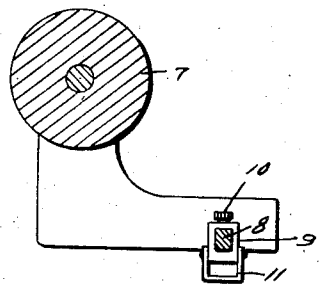


Fig. 3.

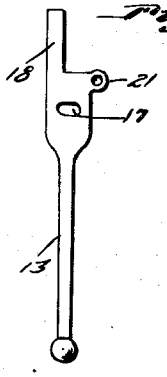
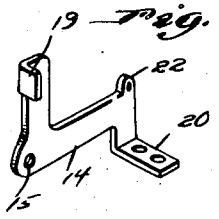


Fig. 4.



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Fig. 5.

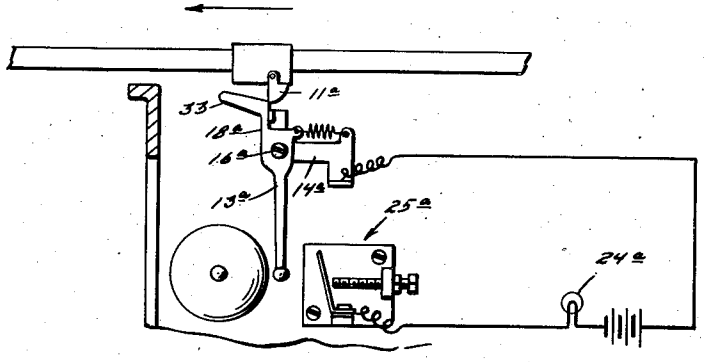


Fig. 6.

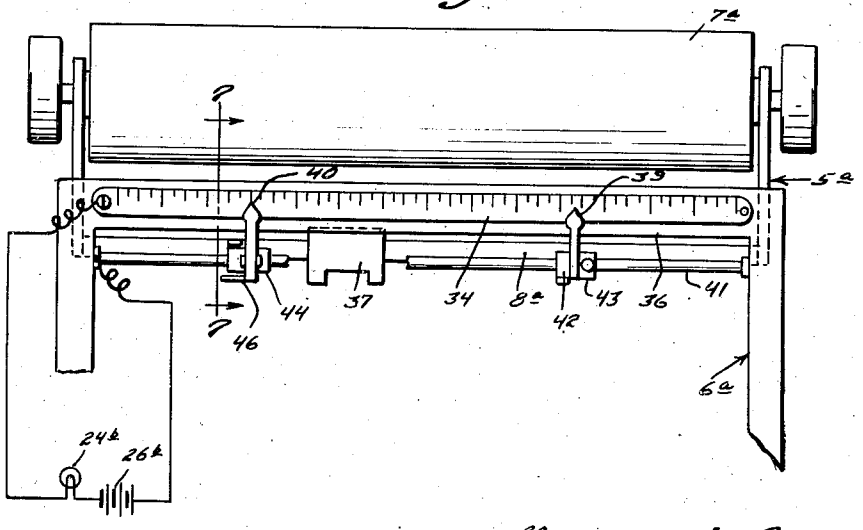


Fig. 7.

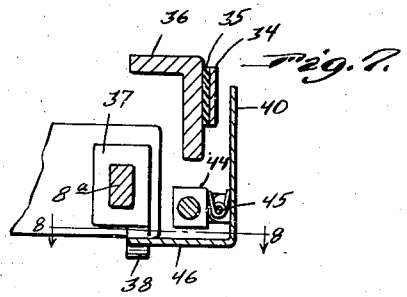
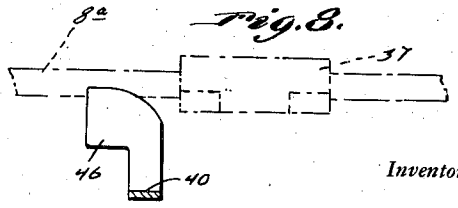


Fig. 8.



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2,320,110

ELECTRIC INDICATOR FOR TYPEWRITERS

George A. Walker, Brunswick, Mo.

Application April 29, 1941, Serial No. 390,988

1 Claim. (Cl. 197—187)

This invention relates to new and useful improvements in indicators and more particularly to a visible indicator for typewriters adapted to indicate the approach of a line end while typing.

The principal object of the present invention is to provide an electric indicator which will automatically indicate to the typist the approach of the end of a line.

Another important object of the invention is to provide a typewriter line end visual indicator including switch means operated by the usual bell clapper or substitute therefor.

Other objects and advantages of the invention will become apparent to the reader of the following specification.

In the drawings:

Figure 1 represents a fragmentary skeleton view showing the relationship of the typewriter carriage with respect to the signal switch means, and showing the electrical means in wired relation.

Figure 2 is a sectional view on the line 2—2 of Figure 1.

Figure 3 is an elevational view of the switch operating clapper.

Figure 4 is a perspective view of the clapper bracket.

Figure 5 is a fragmentary detailed and diagrammatic view showing a modified form of clapper construction.

Figure 6 is a top plan view of a third form of the invention.

Figure 7 is a section on the line 7—7 of Figure 6.

Figure 8 is a section taken substantially on the line 8—8 of Figure 7.

Referring to the drawings wherein like numerals designate like parts, it can be seen that numeral 5 generally refers to the carriage of a typewriter which is slidably mounted on a frame 6. The carriage 5 includes a roller 7 and an elongated rod 8 extending longitudinally of the carriage and having the conventional line end bell clapper operating unit thereon consisting of a collar 9 held by a set screw 10 and a suitable dog 11 mounted on the collar 9.

The usual signal means consists of a bell 12 suitably mounted on the frame 6 and a rockable clapper 13 mounted on a bracket 14. As is shown in Figure 4, it is preferable that the bracket 14 be of substantially L-shape having an opening 15 at its heel portion to receive a pivoting member 16 which extends through a transverse slot 17 in the upper portion of the clapper 13 has a finger 18 extending upwardly to engage a stop lug 19 at the upper end of the bracket 14. A frame attaching foot 20 is provided at the lower end of the bracket 14. An apertured ear 21 is provided on the upper portion of the clapper 13 and another apertured ear 22 is provided on the lower portion of the bracket 14 and between these ears is disposed a tension spring 23 serving to hold the clapper 13 with its head toward the bell 12.

In carrying out the present invention, an electrical indicator is employed and the element for indicating is a lamp 24. This lamp 24 has one side connected to a switch generally referred to by numeral 25 while its other side is connected to one side of a source of current 26. The other side of the source of current is connected by a jumper 27 to the bracket 14. The bracket 14 and clapper 13 are of current conductive material, the clapper 13 being swung by the action of the dog 11 riding over the protruding finger 18. In other words, as the dog 11 moves to the left in Figure 1, it gradually swings the clapper 13 as it rides against the finger 18 and as it rides over the finger 18 in the conventional way, it releases the clapper 13 and it strikes the bell 12. However, in carrying out the present invention the switch 25 is provided with a spring contact finger 28 having one end mounted as at 29 and this spring finger is located within the path of the clapper head. An adjusting screw 30 is provided on a base 31 which also carries the spring contact finger 28 and this screw is adapted for adjusting the spring finger 28 with respect to the clapper 13. Due to the presence of the slot 17 in the switch operating clapper 13, after the clapper head engages the spring finger 28 to complete the circuit including the indicating lamp 24, the carriage can move a substantial distance with the dog 11 riding against the finger 18 because rather than permit releasement of the dog 11 from the finger 18 the entire clapper 13 will slide at the slot 17 on the pivot member 16 affording a duration to the illuminating time of the lamp 24.

Of course, the current passes from the battery by way of the jumper 27 to the bracket 14, the clapper 13, spring arm 28 and back to the lamp 24 and battery 26.

A modified form of the invention is shown in Figure 5 wherein the switch 25a is of the same construction as the switch 25. The bracket 14a is of the same construction as the bracket 14, but the clapper 13 is constructed somewhat differently. In this form of the invention, the clapper 13 need not have the slot 17, but is pivot-

ally mounted on a pivot member 16a. The clapper 13a has an upstanding finger 18a terminating in an oblique toe member 33 against which the dog 11a can ride. Obviously, as long as the dog 11a rides against the oblique toe member 33 the clapper head will be in operated position against the switch 25a for maintaining the lamp 24a energized.

A third form of the invention is shown in Figures 6, 7 and 8, and in this form of the invention, the usual gauge strip 34 which is of metal is insulated by a strip of insulation 35 from the front cross bar 36 of the frame 6a.

Numeral 5a denotes the typewriter carriage including a roll 7a and a longitudinal rod 8a which carries a line end signal determining element 37. This element 37 has a depending cam-like formation 38. Numerals 39 and 40 represent line end determining pointers, the pointer 39 being held on a rod 41 spanning the frame 6a by collars 42, 43, while the pointer 40 is mounted on a set screw secured sleeve 44 slidable on the rod 41. The pointer 40 overlaps the gauge strip 34 and is rockably supported as at 45 on the sleeve 44, a spring at the pivot point 45 serving to normally hold the pointer 40 in the spaced relation shown in Figure 7 with respect to the gauge strip 34.

Obviously, as the carriage 5a moves to the left, the cam 38 will ride a backwardly disposed tail portion 46 of the pointer 40, swinging the pointer 40 so as to contact the same against the contact gauge strip 34. This results in energization of a signal lamp 24b which is in circuit with a source of current 26b, the contact gauge strip 34, rod 41, and pointer 40.

While the foregoing specification sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size and materials may be resorted to without departing from the spirit and scope of the invention as claimed hereinafter.

Having described the invention, what is claimed as new is:

In combination with a typewriter having a carriage and a frame, a line end indicating device, an electric circuit including the device, switch means operated by the carriage at one end of its movement for completing the circuit, said switch means consisting of a gauge strip insulated from the frame and a rockable pointer overlapping the strip, and a cam carried by the carriage for tilting the pointer to engage the gauge strip, said gauge strip and pointer being in circuit with the indicating device.

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