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M. D. BROWN ET AL

2,142,603

SHEET SIGNAL FOR TYPEWRITERS

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Fig. 1.

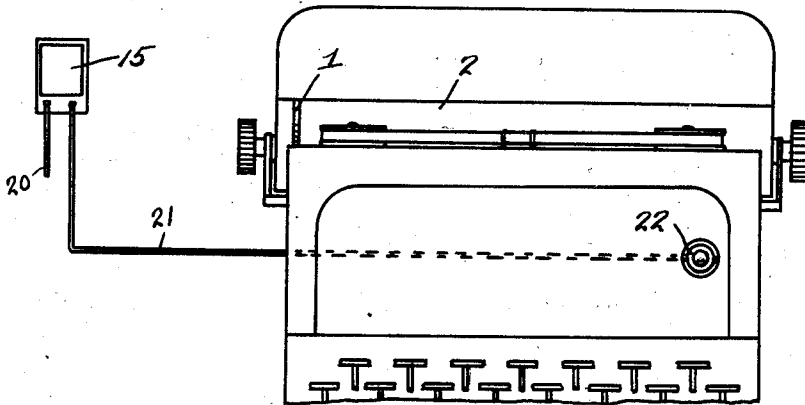


Fig. 2.

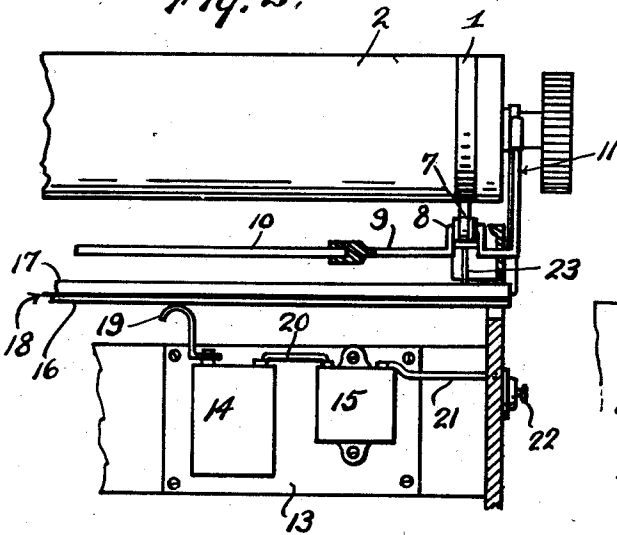


Fig. 3.

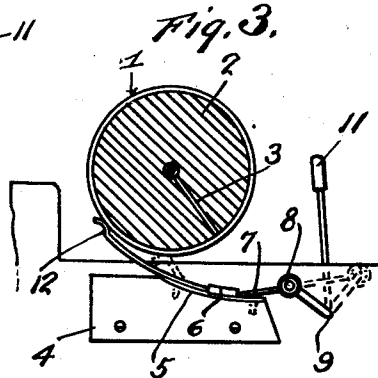


Fig. 5.

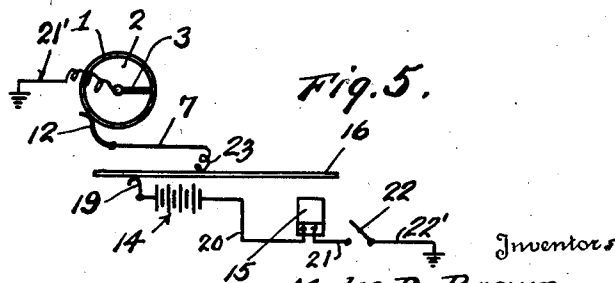
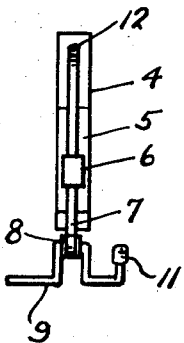


Fig. 4.



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SHEET SIGNAL FOR TYPEWRITERS

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Application January 31, 1938, Serial No. 188,004

1 Claim. (Cl. 197—189)

This invention relates to a sheet and signal for typewriters, the general object of the invention being to provide means for closing the circuit to an electric alarm when the end of a sheet of paper in a typewriter approaches a certain part of the platen.

Another object of the invention is to provide means whereby the device can be adjusted to have the alarm operate with the bottom of the sheet at different points on the platen.

The invention also consists in certain other features of construction, combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawing and specifically pointed out in the appended claim.

In describing the invention in detail, reference will be had to the accompanying drawing wherein like characters denote like or corresponding parts throughout the several views, and in which:

Fig. 1 is a fragmentary front view of a typewriter with the invention applied thereto.

Fig. 2 is a fragmentary back view of a typewriter with the invention applied thereto, showing the cover of the battery box removed.

Fig. 3 is an end view with parts in section of Fig. 1.

Fig. 4 is a detail view showing the supporting and adjusting means for the spring strip.

Fig. 5 is a diagrammatic view of the circuit.

As shown in this drawing, a metal band 1 is placed around one end of the platen 2 of the typewriter and a metal number 3 passes through a part of the platen and connects the band to the shaft of the platen, so that the band is grounded on the typewriter, as shown at 21' in Fig. 5. A support 4, of non-conducting material, is attached to an end part of the frame of the carriage and has a curved part in its upper edge in which is fastened a curved metal strip 5 having a guiding loop 6 on its upper face in which is slidably arranged an elongated strip 7 of spring metal which has one end rolled about a roller 8. The roller has an annular groove therein to receive the rolled part of the strip so as to hold the strip to the roller. The roller is carried by the crank part of a shaft 9 having a part journaled in the frame of the carriage and its inner end is enlarged and has a socket therein to receive one end of the paper release rod 10. The outer end of the shaft has a lever 11 connected therewith, by which the shaft can be rocked so as to adjust the spring strip 7 in the guide 6, and thus adjust the point of con-

tact of the curved end 12 of the strip 7 on the platen.

A box or other suitable closure 13 is attached to a part of the frame and carries the battery 14 and the buzzer 15, the box being of non-conducting material. A metal strip 16 is attached to the tabulator bar 17 of the typewriter and is insulated therefrom by a strip 18 of non-conducting material. A suitable wiper 19 preferably of the roller type is attached to one terminal of the battery and engages the strip 16, the other terminal of the battery being connected to the buzzer by a conductor 20. A switch, shown at 22, is disposed in convenient reach of the operator and a conductor 21 connects the buzzer to the switch, the switch being grounded on the typewriter frame, as shown at 22'. A conductor 23 connects the strip 16 to the strip 7.

Thus it will be seen that when a sheet of paper is in the typewriter it will separate the spring strip 7 from the band 1 so that the circuit is broken, but when the bottom of the sheet passes the end 12 of the strip 7, said end will engage the band, and thus the circuit will be closed and the buzzer will operate, so the typist will know that the sheet must be removed and a new sheet put in the typewriter. By adjusting the lever 11 the point of contact of end 12 of strip 7 can be changed on the platen, as shown in full and dotted lines in Fig. 3. Thus the operator can adjust the device to have the buzzer operate with the bottom of the sheet at different points on the platen. The range of this adjustment will depend upon the size of the platen on which the invention is used. By providing the switch 22 the operator can render the device inoperative when desired.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction, combination, and arrangement of the several parts, provided such changes fall within the scope of the appended claim.

What we claim and desire to protect by Letters Patent is:

In a typewriter, a grounded metal band encircling the platen, a spring strip having a part for engaging the band but held out of contact therewith when a sheet of paper is in the typewriter, means for supporting the strip from the carriage and insulating it therefrom, a battery and alarm attached to and insulated from the typewriter, means for electrically connecting the

alarm to one terminal of the battery, a strip carried by and insulated from carriage, a wiper connected with the other terminal of the battery and engaging the last mentioned strip, means
5 for connecting the first mentioned strip to the last mentioned strip, means for grounding the

alarm, means for adjusting the point of contact of the first strip with the band and switch means for opening the circuit when desired.

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