UNITED STATES PATENT OFFICE

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TABULATION PAPER RUNOUT WARNING SWITCH

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1 Claim.  (Cl. 200—52)

1. This invention relates to business machines, and more particularly to the provision of a device for indicating and producing a warning signal when the paper in such machines has run out.

In tabulating machines, which use a continuous stack form of paper in sheets, not rolls, heretofore, an operator could determine the supply of paper only by inspecting the stack. Where a number of machines are operated simultaneously, the inspection of machines requires considerable time and is inconvenient, often resulting in the loss of time and many times requiring reports to be made over.

It is an object of this invention to provide a warning device as to the exhaustion of paper in a printing tabulator or similar machine, and to indicate a breakage in the paper.

A further object is the provision of a warning device for printing tabulating machines and the like which can be employed without in any way altering the machine.

A further object is the provision of a device for producing a visual indication and an audible signal upon the exhaustion of a supply of sheets of paper used in a printing business machine and to indicate a break in a chain of such sheets should such a break occur before the paper has been exhausted.

These and other objects are attained by the novel construction and arrangement of parts hereinafter described and illustrated by the accompanying drawings, forming a part hereof, and in which:

Fig. 1 is an elevational view of a device embodying the invention.

Fig. 2 is an end view of a control device used in the warning device.

Fig. 3 is a plan view of the warning device.

Fig. 4 is a sectional view taken on line 4—4 of Fig. 3.

Fig. 5 is a sectional view taken on line 5—5 of Fig. 3.

Referring to the drawings, in Fig. 3 is shown a table 1 upon which sheets are received after they have passed through a business printing machine. Movable positioned on the table 1 over a slot in the table through which paper passes (not shown) is an elongated casing 2 made of a plastic or other insulating material, having a slot 3 through which the paper passes, the paper being indicated by the numeral 4. Secured to the casing 2 are terminals 5 and 6, connected respectively to wires 7 and 8 running along the casing and respectively connected to spring contacts 9, 10, 11, and 12 supported by the casing, the paper 4 passing through the spring contacts and preventing contact thereof.

Attached to the terminals 5 and 6, respectively are wires 13, 14 which lead to a buzzer 15 and bell 16 and to an indicating bulb 21, preferably red in color. Power for the apparatus is received through a transformer 22, switch 17, and wires 18 which are connected to a plug 19, which may be plugged into a wall, or to a socket on the business machine.

In operation, when the supply of paper is exhausted, or there is a break in the paper, the spring contacts 9, 10, 11, and 12 will engage, and close an electrical circuit through the buzzer and bell and the light bulb to produce an audible warning and a visual indicator, on housing 23. It will be seen that the device is of simple structure, positive in operation and adapted to be used in many situations. The capability of the device to indicate any irregularity in the condition of the paper renders it of considerable value in business printing machines which operate at high speeds, such as eighty sheets per minute.

The above description is to be considered as illustrative and not limiting of the invention, of which modifications can be made without departing from the spirit and scope of the invention as set forth in the appended claim.

The invention having been described, what is claimed is:

In a warning circuit closing switch, the combination which comprises a printing press table having an elongated slot therein, an elongated casing of insulating material having a base with spaced outwardly extended tapering walls with the walls converging from the base outwardly, said casing positioned over the slot in the table with the walls thereof on opposite sides of the said slot, spaced pairs of outwardly extended arcuate spring fingers carried by the walls of the casing and positioned with the inner surfaces of the spring fingers in contacting relation except when separated by a sheet of paper therebetween, terminals carried by the walls of the casing and spaced from the ends thereof, and wires embedded in the walls of the casing connecting the said spring fingers and terminals, respectively whereby when a supply of paper passing through the slot and between the said spring fingers is exhausted the circuit is completed through the terminals.

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(References on following page)
The following references are of record in the file of this patent:

### UNITED STATES PATENTS

<table>
<thead>
<tr>
<th>Number</th>
<th>Name</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,410,308</td>
<td>Holt</td>
<td>Mar. 21, 1922</td>
</tr>
<tr>
<td>1,647,148</td>
<td>Rosenman</td>
<td>Nov. 1, 1927</td>
</tr>
<tr>
<td>2,120,373</td>
<td>Tauschek</td>
<td>June 14, 1938</td>
</tr>
<tr>
<td>2,141,037</td>
<td>Franklin</td>
<td>Dec. 20, 1938</td>
</tr>
</tbody>
</table>

### FOREIGN PATENTS

<table>
<thead>
<tr>
<th>Number</th>
<th>Country</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>404,112</td>
<td>France</td>
<td>Oct. 11, 1909</td>
</tr>
</tbody>
</table>