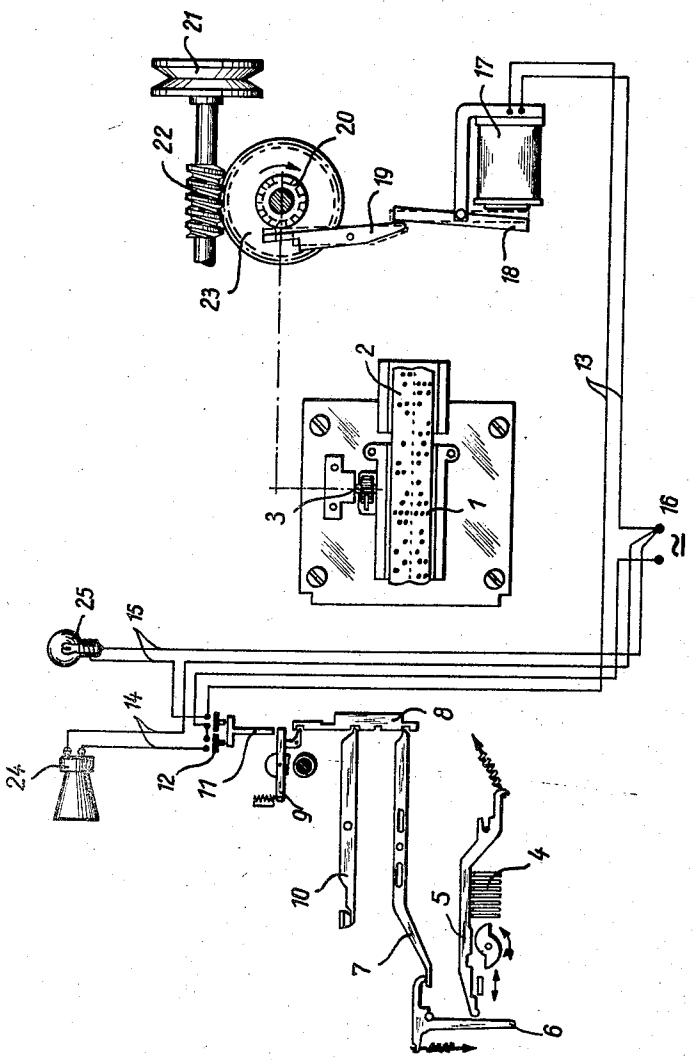
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MATRIX-SETTING AND LINE CASTING MACHINES

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MATRIX-SETTING AND LINE CASTING MACHINES

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In matrix-setting and line casting machines controlled by perforated tape it has been found to be a disadvantage that the existing mechanism does not permit the interruption of the automatic matrix escapement for example so as to permit the insertion by hand, in the current sentence, of hand matrices for certain symbols not contained in the magazine.

According to the invention this drawback is overcome in a simple manner as a result of the fact that a selected combination of holes in the perforated strip, intended for stoppage, actuates, via the scanning device, a lock which interrupts the automatic matrix escapement, and that a member such as a manual key, which can be actuated at will, is provided for re-starting this automatic matrix escapement.

The mechanism is preferably so constructed that, simultaneously with the stopping of the automatic matrix escapement, an optical and/or acoustic signal is actuated, for example a coloured light shines, a bell rings, or a buzzer sounds, and this signal ceases as soon as the automatic matrix escapement is set in operation again. It is also a great advantage to construct the device in such a manner that the member intended for re-starting the automatic matrix escapement at will for example a manual key, can also be used for interrupting the automatic matrix escapement at will.

The device of the invention further makes it possible, in a simple manner, to hold a finished line of matrices in the assembler elevator as a result of which the operator is able to cast this line of matrices repeatedly as desired. For this purpose the combination of holes in the strip, intended for stopping according to the invention, is used instead of the so-called releasing control.

Further features can be seen from the accompanying diagrammatic illustration by way of example, of an arrangement of the co-operating parts of the automatic matrix-escapement mechanism and from the following description.

When the predetermined combination of holes for example **1**, in the perforated strip **2**, serving for the interruption of the automatic matrix escapement, comes in front of the feeler pin, which is not illustrated, of the feed and scanning mechanism **3**, the key rails **4**, are displaced in known manner so that, also in known manner, the switch rod **11**, via the members **5**, **6**, **7**, **8** and **9**, taking with them the manual key **10** provided for stopping at will, actuates the double-pole quick-break switch **12**. As a result, the circuits **13**, **14** and **15** fed from the source of current **16**, are closed. Through the closing of the circuit **13**, the stop magnet **17** is energised and attracts its armature **18**, and the axial dog clutch **20** is thus opened that is, disengaged, via the double-armed lever **19**. The result of this is that the worm **22**, driven via the pulley **21**, turns the wormwheel **23** idly, so that the feed and scanning mechanism **3** is no longer driven, and the automatic matrix escapement is interrupted.

Simultaneously with this interruption, the acoustic signalling system **24** and the optical signalling system **25** are caused to respond due to the closing of the circuits **14** and **15**. The special matrices can now be inserted in the line of matrices, for example by hand.

In order to set the automatic matrix escapement in motion again afterwards, the double-pole quick-break switch **12** is again actuated via the members **8**, **9** and **11**, by pressure on the key **10**, and so the circuits **13**, **14** and **15** become dead. Accordingly the armature **18** of the magnet **17** drops so that the double-armed lever again engages the axial dog clutch **20**, and the drive from the pulley **21** again drives the feed and scanning mechanism **3** via the worm system **22/23**. At the same time the signals **24** and **25** are switched off.

If the automatic matrix escapement is to be stopped independently of the perforated strip, the double-pole quick-break switch is actuated by pressure on the manual key **10**, via the members **8**, **9** and **11**, so that the circuits **13**, **14** and **15** are connected in exactly the same manner as with the automatic actuation, the signal systems are caused to respond, and the feed and scanner device is stopped.

I claim:

1. In a tape-controlled matrix composing machine having a keyboard, in combination, driving means for driving said machine; electrical control means operatively associated with said driving means and including switch means movable between a first position wherein said driving means drive said machine and a second position wherein said driving means do not drive said machine; tape-controlled means operatively associated with said switch means for moving same from its first position to its second position in response to predetermined indicia on the tape; and an operator-controlled key arranged on said keyboard and operatively associated with said switch means for moving the same, whenever desired, from the position it occupies at the instant of actuation of said key to the other position, whereby said switch means may be moved from its first position to its second position either in response to the tape or independently thereof and whereby said key may be utilized to move said switch means to its first position after said switch means has been moved to its second position either under the influence of the tape or as the result of the actuation of said key.

2. In a tape-controlled matrix comprosing machine, in combination, driving means for driving said machine; electrical control means operatively associated with said driving means and including switch means movable between a first position wherein said driving means drive said machine and a second position wherein said driving means do not drive said machine; tape-controlled means operatively associated with said switch means for moving same from its first position to its second position in response to predetermined indicia on the tape; and operator-controlled means operatively associated with said tape-controlled means for moving said switch means, whenever desired, from the position it occupies at the instant of actuation of said operator-controlled means to the other position, whereby said switch means may be moved from its first position to its second position either in response to the tape or independently thereof and whereby said operator-controlled means may be utilized to move said switch means to its first position after said switch means has been moved to its second position either under the influence of the tape or as the result of the actuation of said operator-controlled means.

3. In a tape-controlled matrix composing machine, in combination, driving means for driving said machine; electrical control means operatively associated with said driving means and including switch means movable between a first position wherein said driving means drive said

machine and a second position wherein said driving means do not drive said machine; tape-controlled mechanical means operatively associated with said switch means for moving same from its first position to its second position in response to predetermined indicia on the tape; and operator-controlled means mechanically connected to said tape-controlled means for moving said switch means, whenever desired, from the position it occupies at the instant of actuation of said operator-controlled means to the other position, whereby said switch means may be moved from its first position to its second position either in response to the tape or independently thereof and whereby said operator-controlled means may be utilized to move said switch means to its first position after said switch means has been moved to its second position either under the influence of the tape or as the result of the actuation of said operator-controlled means.

4. In a tape controlled matrix composing machine, in combination, driving means for driving said machine; electrical control means operatively associated with said driving means and including switch means movable between an open position wherein said driving means drive said machine and a closed position wherein said driving means do not drive said machine, said switch means moving from said open to said closed position when operated in one direction and moving from said closed to said open position when operated in the same direction; tape controlled mechanical means including a member operatively associated with said switch means and movable in said one direction for moving said switch means from its open to its closed position in response to predetermined indicia on the tape; spring means operatively connected to said member and tending to move the same in a direction opposite to said one direction; and operator controlled key means mechanically connected to said member for moving the same in said one direction, whereby said switch means may be moved from its open to its closed position by said tape controlled mechanical means in response to said predetermined indicia on the tape or independently thereof by said key means and whereby said key means may be utilized to move said switch means to the closed position thereof after said switch means has been moved to its open position either under the influence of the tape or as a result of the actuation of said key means.

5. In a matrix composing machine in which a plurality of standard matrixes is held in magazines and in which the release of said matrixes from their magazines is controlled by a tape, in combination, driving means for driving said machine; electric control means operatively associated with said driving means and including switch means movable between a first position wherein said driving means drive said machine and a second position wherein said driving means do not drive said machine; a tape having a plurality of different indicia respectviely controlling the release of matrixes from their magazines and predetermined indicia in place of any special matrix not contained in said magazines; mechanical means controlled by said tape and operatively associated with said switch means for moving the same from its first position to its second position in response to predetermined indicia on the tape so that the machine is stopped whenever a predetermined indicia on the tape cooperates with said tape controlled mechanical means and so that a special matrix may be inserted by the operator by hand; and operator controlled means mechanically connected to said tape controlled means for moving said switch means from said second position again to said first position so that said drive means drive again said machine and said tape controls the release of the matrixes from their magazines.

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