

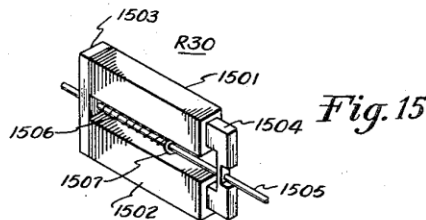
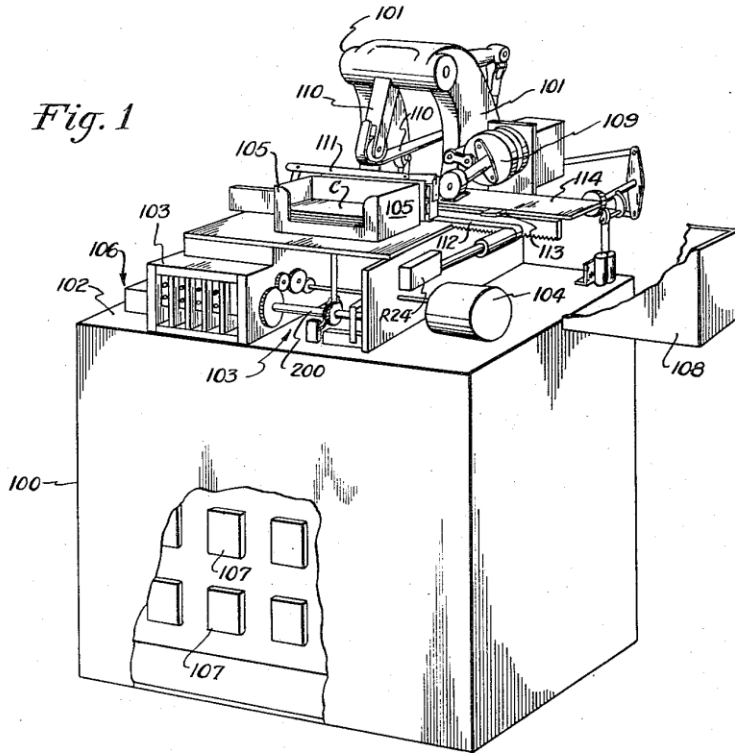
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AUTOMATIC STENCIL CUTTER

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AUTOMATIC STENCIL CUTTER

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21 Claims. (Cl. 197—20)

This invention relates to an automatic stencil cutter for inscribing intelligence in response to sensed coded information. The invention particularly relates to the inscribing of intelligence such as the particular identity of a subject on a perforated card such as is commonly employed in a data processing machine.

The use of perforated cards on which information data is stored by means of Hollerith coded perforations is well known. The information generally stored on such cards includes, in addition to specific technical data of any variety, coded perforations which identify the subject of the card, as, for example, a person or company, together with the address and serial numbers which give a ready indication of information which further identifies the person or company as to address, age, type of business etc. However, in order to discern such information, the perforated cards must be run through a data processing machine which sorts the cards according to predetermined desired subject categories and then reads and decodes the perforations and prints out the desired information in an automatic typewriter.

If, for example, the name and address of the card's subject is desired, such involved procedure must be performed for each card and the resulting information thereby made available must then be transferred to an envelope either by actuating an automatic typewriter or cutting stencils for subsequent transfer to an envelope.

To obviate the necessity for such involved procedure, the present invention provides a rapid and economical way of providing on each perforated card, in addition to the coded information already provided thereon, an integral stencil which directly indicates desired information such as the name and address of the particular subject corresponding to a card. Thus there is readily available on the card, without subsequent processing, a stencil for directly addressing communications to the subject.

It is therefore an object of this invention to provide an automatic stencil cutter which is singularly adapted to punch out on a conventional perforated card or other record medium the name and address and other identifying information concerning a subject.

It is a further object of this invention to provide an automatic stencil cutter which is automatically operated in accordance with coded information provided by a programming device.

It is a still further object of this invention to provide an automatic stencil cutter which automatically handles stacked groups of cards in sequence and accurately positions and records desired information on a predetermined area of the card.

Still another object of this invention is to provide a sequence controlled stencil cutter which automatically responds to coded instructions provided in the form of programmed information which will perform the operations of (1) selecting a card from a stack, (2) positioning said card in operative position in the stencil cutter, (3) punching out groups of intelligence with automatic spac-

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ing between words, (4) automatically line-spacing the perforated information, and (5) ejecting the completed card into a collection hopper.

Other uses and advantages of the invention will become apparent upon reference to the specification and drawings.

Fig. 1 is a perspective view of the automatic stencil cutter as seen from the front;

Fig. 2 is a front elevation of a portion of the machine shown in Fig. 1;

Fig. 3 is a side elevation of the portion of the machine shown in Fig. 2, certain parts being omitted;

Fig. 4 is a top view of the machine shown partly in section and with certain parts omitted for purposes of clarity;

Fig. 5 is a rear view of the machine;

Fig. 6 is an isometric view showing the card carriage together with some of the pertinent control mechanism;

Fig. 7 is a vertical section taken on line 7—7 of Fig. 2 showing the card perforating mechanism;

Fig. 8 is an isometric view which details the card feed mechanism;

Fig. 9 is a mechanical schematic diagram showing the operative relationship among the machine components;

Figs. 10A—10B which form a single diagram with Fig. 10B arranged on top of Fig. 10A is a schematic wiring diagram illustrating the electrical circuitry;

Fig. 11 is a diagrammatic illustration showing the arrangement of the character-punch selecting solenoids employed in the machine;

Fig. 12 details a portion of a preferred type of programming tape employed and further illustrates typical coded instructions and their meaning;

Fig. 13 is a timing diagram showing the operative periods of respective control elements employed;

Fig. 14 shows the type of stencil cutting produced in a typical perforated card, and

Fig. 15 is an isometric view of a special electromagnet construction employed to actuate various mechanisms of the invention.

The overall assembly of the automatic stencil cutter is shown in Fig. 1. The machine includes a cabinet enclosure 100 which houses a main machine frame 101 portions of which are contained within the cabinet in Fig. 1. The frame includes a machine base plate 102 which serves as the support for the card handling mechanism. Mounted on such base plate is the card feed control mechanism generally designated as 103, the tape reader and card feed drive motor 104, the card feed hopper 105, and the tape reading mechanism 106. A relay type information translator 107 is shown occupying a portion of the interior of the cabinet 100. Fig. 1 further shows the card storage hopper 108, the card ejecting roller assembly 109, and the card perforating punch mechanism 110. There is also shown in Fig. 1 the shiftable card carriage 111 which is slidably mounted on a guide and is indexed by means of a carriage word spacing mechanism co-operably related with a carriage return solenoid R-24. The punch-cards C when in operative position are supported on a platen 114 which extends up to the storage hopper 108.

In order to orient the various mechanisms involved in the overall functioning of the machine, the general arrangement and operation of the machine will first be described with particular reference to the mechanical schematic diagram shown in Fig. 9.

The machine is automatically sequence-controlled by a perforated programming tape T bearing distinct rows of coded information patterns each containing a particular machine control instruction as shown in Fig. 12.

The programming tape T may be of the type prepared