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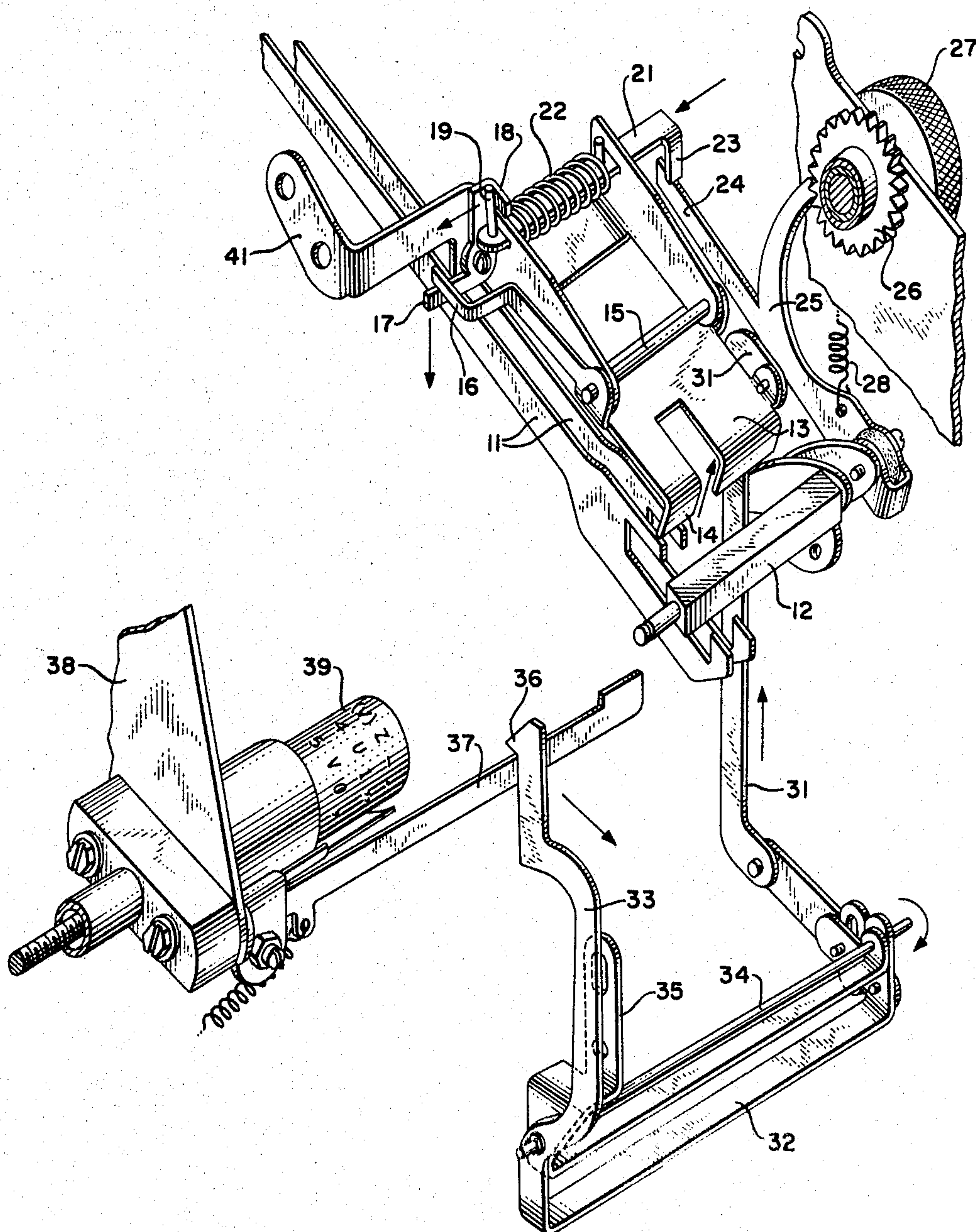
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BLANK DELETER

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FIG. 1



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BLANK DELETER

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4 Claims. (Cl. 178—92)

This invention relates to the printing telegraph, and more particularly to a novel device for the deletion of blank code signals from the output tapes of printing and non-printing reperforators.

Central office telegraph routing by the common method of message storage and switching involves the segregation of several functions such as reperforation, cross-office transmission, retransmission, etc., to physically separated machines. Several of such machines may be concerned with the code perforations of the same paper tape, and the tape therefore is fed from one machine to the next in sequence. It then becomes necessary, in order for a subsequent machine to gain access to a last-punched character on the tape, for the preceding machine to feed out sufficient tape to bridge the gap between the physical locations of the respective machines. This is accomplished by perforating a succession of "blank" signals into the tape, sufficient in number to provide the required length of tape.

It is obvious, however, that such signals form no part of a message to be transmitted and it is therefore necessary for them to be deleted from the transmission. This has been accomplished in some instances by means of a device known as a "function box," which is an accessory for the typing reperforator and which acts upon receipt of such a blank signal to energize an electromagnet for disabling the spacing mechanism and printing mechanism thereof.

Such "function box" being both complex, and completely unavailable for the non-printing reperforator which also is used in large numbers, it is an object of the present invention to provide a simple and entirely mechanical device for the deletion of telegraph signal blanks in both printing and non-printing reperforators.

It is a further object of the invention to provide such a device which is quickly and conveniently installed without disassembly of the reperforator.

These and other objects of the invention I achieve by means of a mechanism which will be more clearly understood from a consideration of the following detailed description of a specific illustrative example thereof, taken in conjunction with the drawing wherein:

FIG. 1 is an isometric assembly view of the instant invention.

Turning now to the drawing, there is seen in FIG. 1 an example of the mechanism of the instant invention, together with connecting portions of an existing mechanism well known to those skilled in the art as the Model 28 reperforator, which may be of the typing or the non-typing kind, and with which the instant invention is especially adapted to cooperate.

It will be understood that in the case of a non-typing reperforator, that portion of the mechanism of the instant invention which is effective to delete typing during blank deletion is unnecessary to the operation of that particular type of machine, but the example about to be described is so arranged that the identical device is fully operative to the extent required for either of the above mentioned types of printer which is a highly advantageous arrangement in that stock supplies, spares, repair parts, and complexity of identification all are minimized.

Existing punch slides such as 11, upon receipt of appropriate marking signals, are moved forward to engage

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the existing oscillating slide post 12, and are lifted by the rotary oscillation thereof, causing a tape punching operation to occur. Such motion of any such slide 11 is detected by the code sensing vane 13 whose forward edge 14 rests on the punch slides 11, and causes its rotation about its axle 15, thus lowering the rear extension arm 16, which is a part of vane 14, to rotate the bell crank lever 17. An extension 18 of the lever 17 engages a pin 19 in the slide 21, and by its motion, withdraws said slide to the left, against the tension of return spring 22. A turned-down portion 23 of slide 21 thereby is removed from the path of travel of the feed pawl skag 24 and the feed pawl 25 thus enabled to rotate the ratchet wheel 26 and attached tape shaft knob 27 under the urging of spring 28 to provide tape advance.

It will be apparent that in the converse situation, where five consecutive spacing signals leave the five punch slides 11 unmoved, the portion 23 of slide 21 remains in the position shown, to block motion of the feed pawl 25 by engaging its skag 24 and thus preventing rotation of shaft knob 27 under this condition of reception of a blank signal.

A link 31 pinned to the vane 13 is lifted by any upward motion of said vane caused by punch slide 11 motion, and rotates the link 32 bearing arm 33 on its axle 34, which is secured in the fixed bracket 35 fastened to the machine frame not shown. Arm 33 has a hook portion 36 whereby the print hammer 37 is engaged in downwardly retracted position unless and until arm 33 is moved to release it because of motion of punch slides 11 as above described. Hammer 37 is journaled on and retained by a web 38 fastened like the brackets 41 and 35 to the machine frame not shown, which web also retains the conventional type wheel assembly 39. It will be evident that motion of a punch slide 11 is necessary if link 31 is to be moved for unlatching the hook 36 from the print hammer, and this can occur only upon reception of a mark signal during one of the five coding periods of the character interval, an event which does not occur during transmission of a blank, so that printing can occur only when the received character is not a blank, and no printing occurs when the received character is a blank.

Although this invention has been described in terms of a specific illustrative example thereof, it will be understood that various elaborations and modifications thereof will occur to those skilled in the art, which do not depart however from the essential spirit of the invention. It is therefore intended that the invention be limited only by the appended claims.

I claim:

1. Blank deleter means for a reperforator of the kind having a ratcheting feed roller, a movable feed pawl on the ratchet, and a plurality of energizable punch slides arranged for actuation of the feed pawl after energization of any punch slide, which comprises rotatably mounted tailed sensing vane means having a movable portion located in the path of travel of the punch slides, resiliently biased slidable means normally urged into pawl motion blocking relationship with the feed pawl, and crank lever means engaged by said tail of said sensing vane means and engaging said slidable means for feed pawl release upon punch slide motion.

2. Feed pawl and print hammer disabling means for a reperforator having movable punch slides, comprising punch slide motion sensing vane means hinged adjacent the path of punch slide travel for rockingly detecting the motion of any punch slide, slidable means resiliently urged into feed pawl blocking relationship, retraction means therefore comprising a tail on said sensing vane means and a crank lever in engagement therewith and with said slidable means, eccentric ear means on said sensing vane

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means, a rocking bar fixedly hinged, and link means for rocking connection therebetween, and hook means on said rocking bar for print hammer engaging and disablement.

3. In a reperforator for the printing telegraph which comprises a plurality of punch slide individually movable according to the marking signals in a received character and a type wheel and a print hammer therefor and a feed pawl, the combination comprising sensing vane means having an end movable into the path of travel of the said punch slides, having a tail portion, and hingedly mounted for rotation upon punch slide motion to depress the tail portion, resiliently returned slider means and fixedly hinged bell crank lever means in engagement therewith and with said tail portion for slider means translation upon sensing vane means motion, and a latch portion on said slider means normally located in the path of travel of said feed pawl, and retractable therefrom upon slider means motion whereby the feed pawl is rendered operative by latch retraction only upon receipt of marking signals in the character.

4. In a telegraph reperforator having punch slides, a

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print hammer and a feed pawl, rocking vane means consisting of a rocking vane hinged for rockingly detecting punch slide motion by contact with the punch slides, linkage means including a hook member, fixedly hinged for hook engagement with and disabling of the print hammer, said linkage means being connected to said vane means for rocking thereby, and sliding means resiliently urged into blocking relationship with the feed pawl including fixedly hinged linkage means in engagement with said vane means and effective upon vane means rocking to retract said sliding means from blocking the feed pawl.

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