Oct. 17, 1944. R. J. ANSPACH ET AL 2,360,637

REPERFORATOR TAPE FEED-OUT ARRANGEMENT

Filed March 13, 1943 2 Sheets-Sheet 1

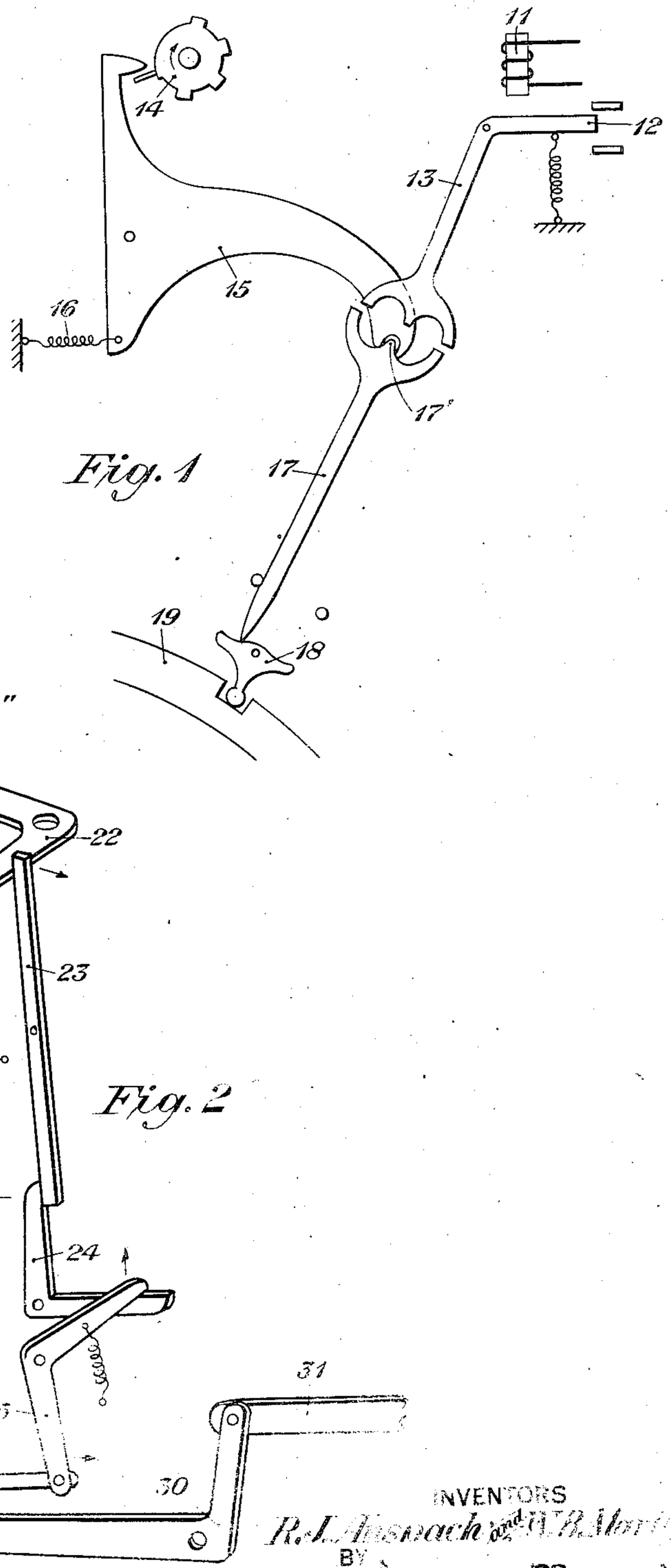

Fig. 1

Fig. 2

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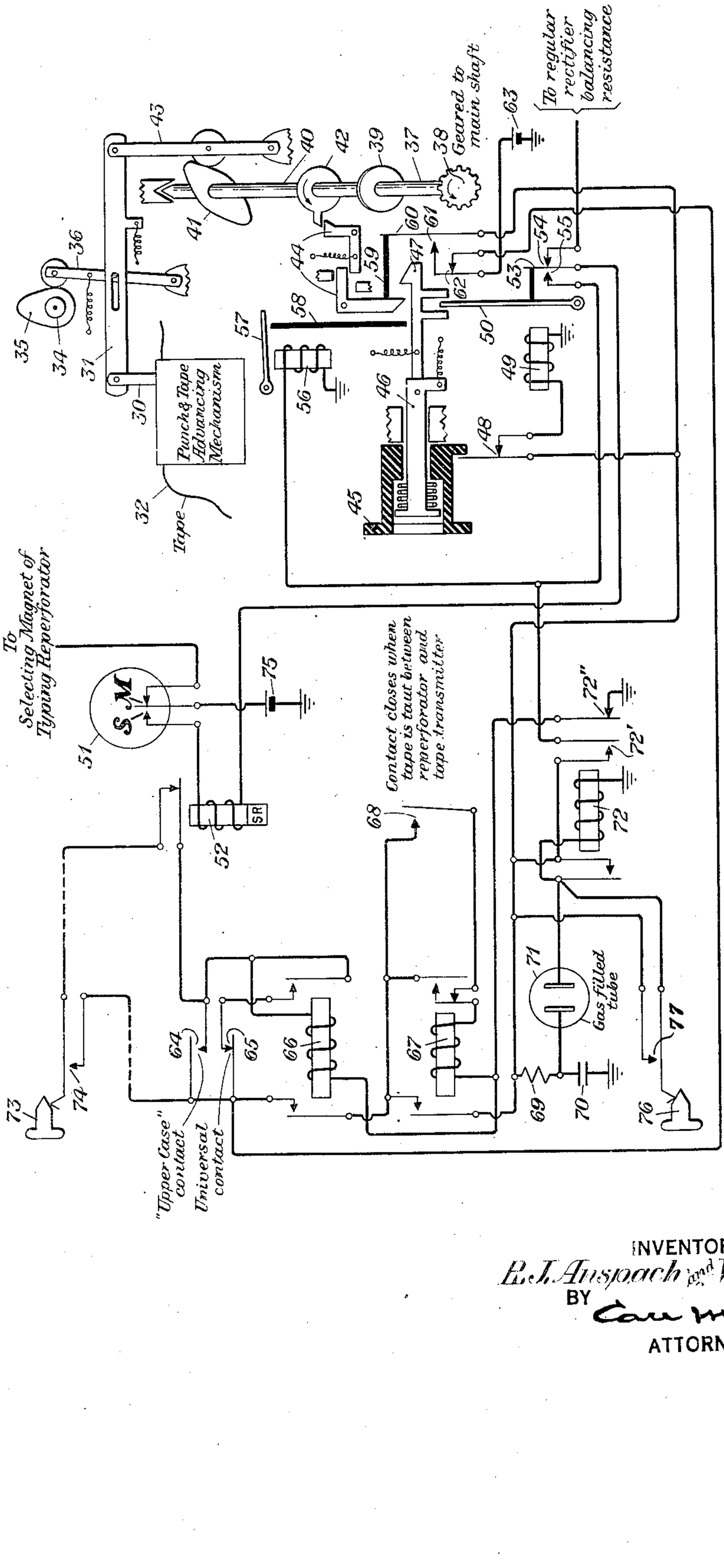

Fig. 3

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REPERFORATOR TAPE FEED-OUT ARRANGEMENT

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19 Claims. (Cl. 178—42)

This invention relates to printing telegraph signal controlled mechanism for producing perforated tape, and more particularly to the mechanisms auxiliary thereto for feeding out tape during periods of inactivity of such signal controlled mechanisms. The invention is particularly applicable to the so-called "typing reperforator."

Reperforators as used in teletypewriter service are receiving instruments which serve to relay messages from one circuit to another. In accordance with the incoming message a tape is perforated and is then used to retransmit the message. The typing reperforator types the characters corresponding to the code punchings on the same tape so that the destinations or the contents of the messages can be read quickly. During the code signal controlled operation of the reperforator the tape advancing means are actuated to advance the tape with each operation of the selecting mechanism. Upon the cessation of the signal impulses it is often necessary or desirable to feed out a considerable length of the tape for handling, or to clear the end of a message through the tape transmitter if the tape is fed directly into it from the reperforator in a continuous piece. For some purposes it is highly desirable that this tape feed-out be on a "non-interfering" basis, i. e., that the tape be fed out without employing or disturbing the receiving mechanism of the reperforator.

The principal object of the present invention is to provide an improved non-interfering tape feed-out arrangement which will be satisfactory as an auxiliary to reperforators such as the typing reperforator.

Another object of the invention is to provide a manual tape feed-out which upon operation will initiate the auxiliary feed-out and upon release immediately terminate such feed-out.

Another object of the invention is to provide a manual tape feed-out such that it will be effective only during periods of inactivity of the code signal receiving mechanism, and upon resumption of activity of such mechanism control of the tape feed will be promptly returned to the signal responsive mechanism.

Another object of the invention is to provide an auxiliary arrangement which will feed out tape at an abnormal speed.

Another object of the invention is to provide for a manual tape feed-out in response to the operation of a local device and also an automatic tape feed-out in response to special signals transmitted from the distant sending station, and at the same time to provide in either case for the prompt return of tape feed control to the code signal responsive mechanism upon the resumption of activity of such mechanism.

In accordance with a feature of the invention the return of the control of the tape fed by the auxiliary feed-out, whether manual or automatic, to the code signal responsive mechanism upon resumption of activity of such mechanism is so rapid that the typing reperforator will receive, print and punch the first character transmitted without the need of sending synchronization characters in advance of the messages.

In accordance with another feature of the invention control of the tape feed-out may be exercised through the local manually operable device, by remote control from the distant transmitting station or by a manually operable device located at the receiving station but at a point removed from the typing reperforator.

In accordance with another feature of the invention, if the tape is being fed out in response to the operation of the manual control at the reperforator, the auxiliary feed-out will be terminated by the release of the manual control or by the resumption of activity of the signal receiving mechanism, whichever occurs earlier.

These and other objects and features of the invention will be clearly understood from the following description of one desirable embodiment of the invention when read with reference to the accompanying drawings, in which—

Figure 1 shows diagrammatically a part of the receiving mechanism of a typing reperforator;

Fig. 2 shows diagrammatically another portion of the typing reperforator, including the tape punching mechanism, and

Fig. 3 shows diagrammatically and in part schematically the applicants' non-interfering tape feed-out mechanism and the associated electrical circuits.

Like characters of reference in the several figures of the drawings designate corresponding parts.

The typing reperforator, as is well known in the art, includes mechanism whereby received current pulses are translated to the code bars to position the code bars to type the character called for; at the same time the corresponding code combination is set up by a mechanical linkage which positions the punch fingers to punch the tape in accordance with the character typed; a punch arm or hammer then drives the punch pins through the tape into a die block while the corresponding character is typed.

With reference to Fig. 1 of the drawings, which discloses one unit of that part of the receiving mechanism which functions to position the code bars, the selector magnet 11 controls the position of the armature 12 and the armature extension 13 in accordance with the open or closed condition of the telegraph circuit. It will be understood that the mechanism includes six rotating cams so spaced angularly on a shaft that each will function at the same time that the corresponding signal pulse is being received. When the open start pulse is received the armature 12 is released. This operates a latch (not shown) and allows the shaft carrying the selector cams to start rotating. One of these cams 14 is disclosed in Fig. 1. The cams are so spaced that at the same time that the first of the five pulses of the code signal is being received the first cam engages the projection on the code bar operating lever associated with the first code bar and rotates it slightly in a counterclockwise direction. The effect of this movement depends upon whether or not the magnet armature is operated. If it is operated, the movement of the code bar operating lever 15 (controlled in its movement by the spring 16) by the first selector cam 14 lifts up the sword 17 and causes the right-hand projection of the upper end of the sword to strike the right-hand end of the armature extension 13. This rotates the sword 17 in a clockwise direction on its pivot 17', and when the selector cam 14 in its continued rotation clears the code bar operating lever 15 and allows the code bar operating spring 16 to restore it to normal position, the point of the sword 17 is brought down against the left-hand side of the lever 18, rotating it in a counter-clockwise direction and so moving the code bar 19 to the right. It will be understood that in like manner each of the signal pulses is translated to the appropriate code bar, and that after all five signal pulses have been received and the code bars properly positioned, the sixth cam releases a clutch and allows the printing mechanism to operate.

With reference to Fig. 2, disclosing a part of the receiving mechanism having to do with the positioning and operation of the punch fingers, the position of the code bar 19 and the position of the code bar locking lever 20 controlled by the bail 21 determine the position of the selecting finger 26 through the selecting finger linkage. It will be understood that there is disclosed only one of the five units of the apparatus for positioning the punch fingers.

It will be noted that the code bar 19 has notches 19' and 19''. When the locking lever 20 is in notch 19', the code bar is locked in the marking position; if lever 20 is in notch 19'', the mechanism is in the spacing position; whereas if the lever 20 is as disclosed in the drawing between notches 19' and 19'', the mechanism is in what is termed the instantaneous intermediate position, to which the lever 20 is restored by the bail 21 as the latter returns to its normal idle position. With reference to the arrows of Fig. 2, it will be noted that the bail 21 is in its lower position and has forced the lever 20 in the direction indicated to bring it to the intermediate position. Thus the levers 20, 22, 23, 24 and 25 are positioned as indicated to move the selecting finger 26 to the right. In this position the raised portion 27 of the finger 26 is interposed between the punch bail 29 and the punch pin 28, and when the punch hammer 30 is operated by the actuation of the punch hammer linkage 31, the pin 28 will be driven through the tape 32 into the die block 33. It will be understood that if the finger 26 is moved to the left, the raised portion 27 will not be between the bail 29 and the pin 28, and accordingly the operation of the punch hammer would not drive the pin 28 through the tape.

It is important in connection with the present invention to note that when the code signal responsive mechanism of the reperforator is inactive bail 21 remains in the position shown in Fig. 2.

It is believed that the disclosures of Figs. 1 and 2, when examined along with Fig. 3 which shows the applicants' feed-out arrangement per se, will give to the reader skilled in the art sufficient foundation for a full understanding of the invention. Further reference, however, may be made to the description of the single magnet reperforator found in U. S. Patent No. 1,884,743, issued to Kleinschmidt, October 25, 1932.

With reference to Fig. 3 of the drawings, it will be understood that during the normal typing and punching of the typing reperforator the main shaft 34 and the punch cam 35 rotate and cause the regular punch bail 36 to oscillate and operate the punch and tape advancing mechanism (schematically indicated), including the punch hammer 30, whereby the tape 32 is punched in accordance with the incoming message and duly advanced with each operation. For a detailed disclosure of the punch and tape advancing mechanism reference may be had to the above-identified Kleinschmidt patent, page 2, line 126 to page 3, line 35.

The present invention as disclosed in one desirable embodiment provides auxiliary means including the shaft 40 and the cam 41 for actuating the linkage 31 to feed out the tape 32 during periods of inactivity of the code signal responsive selecting mechanism, a latch 44 which normally prevents the auxiliary feed-out mechanism from operating, various means including primarily the manual latch release button 45 for releasing the latch 44, and means whereby the tape feed control will be promptly returned to the receiving mechanism of the reperforator upon the resumption of activity of such mechanism.

In addition to the manual control through operation and release of button 45 provision is made in accordance with the embodiment disclosed for remote control from the distant sending station through the operation of contacts 64 and 65 associated with the reperforator and alternative control from a point at the receiving station remote from the reperforator itself through the operation of the key 73.

It will be noted that the driving shaft 37 is geared to the main shaft at 38 and is associated with the driven feed-out shaft 40 through a clutch 39. Shaft 40 carries a member 42 with which the latch 44 normally engages. Thus, although the shaft 37 is rotating, the driven feed-out shaft 40 is normally stationary because latch 44 prevents it from rotating.

If it is desired to feed out tape, manual control is exercised at the reperforator by pulling (to the left) the latch release button 45 which, it will be noted, has associated with it a plunger 46 and a plunger extension 47 with a hooked right end. When button 45 is pulled, the member 47 trips the latch 44 and permits the shaft 40 with the feed-out cam 41 to rotate. It is to be noted that the pulling of button 45 opens a

contact **48** to disable an electromagnet **49**, which if not disabled would lock the member **47** in the engaged position. The rotation of the feed-out cam **41** causes the linkage **43** to impart to the punch hammer linkage **31** oscillation of the type normally produced by the main punch cam **35** through bail **36**. It will be noted that cam **41** has two lobes, and that there is thus produced a frequency of oscillation which is higher than—specifically twice as high as—the normal frequency. Accordingly auxiliary apparatus will produce a feeding out of the tape at twice the speed of the normal tape feed which is under the control of the code signal responsive mechanism. It will be readily understood that this abnormal frequency of oscillation and the consequent abnormal speed of feed-out may be provided for by any suitable means, including the adjustment of the gearing at **38** to drive the shaft **37** at a higher speed. When sufficient tape has been fed out, the auxiliary feed-out is terminated by the release of the button **45** and member **47**, which permits latch **44** to re-engage member **42** and stop the rotation of cam shaft **40**.

The tape fed out by the applicants' arrangement will, if the condition of the punch selecting mechanism is as shown in Fig. 2, be punched with the "letters" character, as will be readily understood from an examination of that figure and the discussion of it given hereinbefore. As already indicated, the main bail on the typing reperforator has returned to its normal idle position and has restored the code bar locking lever to the non-locking position. Accordingly the punch selecting levers are in the marking position whatever may be the position of the code bars above the type basket. Accordingly in the arrangement specifically disclosed the result of the pulling of the button **45** is the abnormally rapid feeding out of the tape punched with the "letters" character.

If while the latch release button **45** is operated and tape is being fed out through the operation of the auxiliary mechanism, signaling is recommenced, the first mark to space transition on the line will cause the armature of the line relay **51** to move to its spacing contact (S), and a circuit will be completed from ground through battery **75**, this contact, the winding of a slow-release relay **52** and contact **55** to the winding of electromagnet **56**. Normally the spacing contact of line relay **51** is connected through contact **54** to the regular rectifier balancing load. If, however, button **45** and member **47** have been operated, a member **50** is rotated counter-clockwise and causes the attached spring member **53** to open contact **54** and close contact **55**. When electromagnet **56** operates as the result of the operation of button **45**, and the subsequent operation of the line relay **51** to the spacing position, armature **57** drives member **58** downward to disengage the hooked member **47** and permit latch **44** to re-engage member **42** on shaft **40** and stop the auxiliary feed-out. Because of the fact that electromagnet **56** can be operated from the spacing contact of line relay **51** only when contact **55** has been closed through the operation of the hooked member **47**, the unnecessary operation of electromagnet **56** during the reception of a message is prevented.

It will be understood from the description given hereinbefore that the applicants' tape feed-out arrangement is strictly non-interfering—i. e., upon resumption of the activity of the reperforator the auxiliary feed-out control is promptly terminated and control of the tape feed is immediately returned to the code signal responsive mechanism. There will be no interference with the printing and punching of the first character of the incoming message because that character is not printed or punched until after all five selecting pulses of the character have been received. The time interval is at least 132 milliseconds at 60-speed operation, and this allows ample time for latch **44** to re-engage and terminate the rotation of shaft **40**. As indicated hereinabove, this shaft, in addition to carrying a double-lobe cam such as **41**, may be driven at any reasonable and desired speed through suitable gearing at **38** to the main shaft.

It should be noted that once the member **47** is disengaged from the latch through the operation of electromagnet **56**, the feed-out cannot be begun again through this manual operation until the latch release button **45** with its associated members has been restored and re-operated.

In addition to the manual feed-out control provided at the reperforator, the applicants' arrangement provides for tape feed-out by remote control from the sending station. For this purpose there are provided in association with the reperforator at the receiving station contacts **64** and **65**, relays **66** and **67** for controlling the operation of the feed-out electromagnet **49** and a timing circuit **69—70**, a gas-filled tube **71** and a relay **72** for controlling the operation of the feed-out terminating electromagnet **56**. It is believed that these elements and the associated circuits will be best understood from an examination of the following description of the operation of the system whereby feed-out is effected by remote control.

Contact **64**, which may be termed the "upper case" contact, is normally open and is operated in response to the sending of a designated upper case character from the transmitting station. On the reception of the predetermined code sequence, this contact is closed and re-opened during a part of one operation of the receiving mechanism. Contact **65**, which may be termed the "universal" contact, is normally held closed during the idle periods of the receiving mechanism. While the receiver is operating in response to incoming signals, contact **65** opens and then closes for a portion of each cycle of operations. The adjustment is such that contact **64** will re-open after contact **65** has closed. The operation of the tape feed-out system, following the reception of a feed-out sequence, is as follows:

The closing of contact **64** completes a circuit through battery **63**, contact **62**, contact **64**, the winding of relay **66** and contact **72''**, and relay **66** operates. Contact **65** will open and then close. Relay **66** locks up over a circuit from ground through contact **72''**, the winding and right-hand contact of relay **66**, contact **65**, contact **62** and battery **63**. At this point the action stops until the closure of the "tape out" contact **68**. If the receiving mechanism should operate before the closure of contact **68**, contact **65** would open momentarily with the consequent release of relay **66** and the erasure of the effect of the previous operation of contact **64**. Contact **68** is closed when the tape is pulled taut between the reperforator and the tape transmitter by the action of the latter.

When contact **68** closes, a circuit is completed through battery **63**, contact **62**, the left-hand contact of relay **66**, contact **68**, the right-hand contact and winding of relay **67**, and contact

72'', and relay 67 operates. The relay is locked in its operated condition over a circuit through contact 72'', the winding and right-hand contact of relay 67, the left-hand contact of relay 66, contact 62 and battery 63.

It is to be noted that relays 66 and 67 are both operated and locked through the unoperated contact 72'' of relay 72 and that the operation of relay 72 will cause the release of relays 66 and 67.

Relay 67 on operation charges condenser 70 through the timing resistor 69. It also energizes electromagnet 49 by completing a circuit through the winding of the electromagnet, contact 48 (which is closed because latch release button 45 is unoperated), the left-hand contacts of relays 67 and 66, contact 62, and battery 63.

The operation of electromagnet 49 moves the armature 50 to the left, causing the movement of member 47, the tripping of latch 44 and the start of the feed-out operation through the rotation of shaft 40. The operation of electromagnet 49, as will be clear from examination of Fig. 3, also results in the moving to the left of spring member 60 connected with the latch mechanism, and the closing of contact 61 and the opening of contact 62 on a make-before-break basis. The operation of electromagnet 49 does not result in the opening of contact 48 because of the back lash between the button 45 and the associated plunger 46, indicated in Fig. 3. The movement to the left of armature 50 and the associated spring 53 upon the operation of electromagnet 49 opens contact 54 and closes contact 55, with the result that the connection of the spacing contact S of line relay 51 is transferred from the rectifier balancing resistance (not shown) to the winding of electromagnet 56.

The closure of contact 61 establishes a locking circuit for electromagnet 49 through contact 48 and battery 63. It also completes a circuit which continues the charging of condenser 70. Relay 67 is locked up over a circuit through contact 72'', the winding and right-hand contact of relay 67, the left-hand contact of relay 67, contact 61 and battery 63. Relay 66 is now locked up over a circuit including contact 72'', the winding and right-hand contact of relay 66, contact 65, the left-hand contacts of relays 66 and 67, contact 61 and battery 63.

It will now be clear that, following the operation of electromagnet 49, tape will be fed out until electromagnet 56 operates. This operation may be brought about in either of two ways. First, if there is a mark-to-space transition of line relay 51, battery 75 will be connected over the spacing contact, the winding of slow release relay 52 and contact 55 to the winding of electromagnet 56. The same mark-to-space transition will also cause the reperforator receiving mechanism to operate, opening contact 65 during part of the cycle and releasing relay 66. The second way in which the operation of electromagnet 56 may be brought about is through the operation of relay 72, which will be discussed hereinafter.

When electromagnet 56 operates, the armature 57 and the member 58 are moved downward and member 47 is disengaged from the latch 44, allowing the latch to re-engage the member 42 on the driving shaft 40 and terminate the tape feed-out. The operation of electromagnet 56 also results in the closing of contact 62 and the subsequent opening of contact 61. This transfers the locking path of electromagnet 49 back to the left-hand contact of relay 67 and the locking path of relay 66 to contact 65. The last-mentioned contact will open during the ensuing cycle of operations of the reperforator, and relay 66 will release. The locking path of relay 67 is likewise transferred to the left-hand contact of relay 66 and will release when relay 66 releases. Electromagnet 49 then releases and all contacts are restored to the normal unoperated condition. The charging of condenser 70 will be terminated and the condenser will lose any accumulated charge to ground over the winding of electromagnet 49. The tape feed-out system is now idle and will not interfere with the normal operation of the reperforator but may, of course, be re-energized by any one of the several actions of applicants' arrangement.

Let it be assumed now that relays 66 and 67 are operated, condenser 70 is being charged, electromagnet 49 is energized, and the train of levers associated with latch 44 operated to permit the feeding out of the tape. As condenser 70 is charged an electromotive force is impressed on the plates of the gas-filled tube 71 until the electromotive force becomes great enough to render the tube conductive. It will be understood, of course, that the time required to "fire" tube 71 depends upon the constants of the circuit including resistance 69, condenser 70, battery 63 and tube 71. After the lapse of the predetermined time from the operation of relay 67, the operation of electromagnet 49 and the start of the feed-out operation, tube 71 becomes conductive, condenser 70 discharges through the tube and the winding of relay 72, and the last-mentioned relay operates. On its operation relay 72 locks up through its left-hand contact, contact 61 and battery 63. The operation of relay 72 opens its contact 72'' and releases relays 66 and 67. The operation also closes contact 72' and completes the circuit through the winding of electromagnet 56, with the result that latch 44 is re-engaged with the member 42 and the tape feed-out is terminated. As has been described hereinbefore in connection with the feed-out termination following the mark-to-space transition of the line relay 51, this latch operation closes contact 62 and opens contact 61. Thus the locking path for electromagnet 49 is transferred to the left-hand contact of relay 67, which opens. The electromagnet is then released with the consequent restoration of the feed-out system to its idle condition.

It remains to describe another feature of the applicants' arrangement as specifically disclosed whereby the auxiliary tape feed-out may be begun in response to a manual operation which may occur at the receiving station but at a point removed from the reperforator. This control is effected by the momentary operation of the non-locking key 73, which closes contact 74 and momentarily shorts the "upper case" contact 64. It will be understood that the completion of this short circuit has the same effect as the closing of contact 64 in response to the reception of the upper case character impulses and the circuit will operate as described hereinbefore to cause the auxiliary tape feed-out. It will be noted that the winding of the slow release relay 52 is in series with the spacing contact S of line relay 51. This arrangement serves to prevent the initiation of a feed-out operation by key 73 while signals are being received. The release time of relay 52 should be at least one-sixth second for 60-speed operation.

The manual release key 76 may be operated

to close a contact 77 and thus effect the termination of the auxiliary feed-out operation or to erase the effect of the operation of relay 66. The key may also be used as an emergency stop of the tape feed-out in case of circuit trouble.

While the invention has been specifically described in a preferred embodiment, it is to be understood that there may be embodiment in other and different forms within the true scope of the invention as defined in the appended claims.

What is claimed is:

1. In a tape recorder including code signal controlled selecting mechanism, tape advancing means and means responsive to code signals for actuating the tape advancing means to advance the tape with each recording operation of the selecting mechnism; manually operable means effective when the selecting mechanism is inactive for initiating and terminating at will the operation of the tape advancing means, and means responsive to the resumption of activity of said selecting mechanism for promptly terminating the control of the operation of said tape advancing means by said manually operable means.

2. In a receiving tape recorder including code signal controlled selecting mechanism, tape advancing means and means responsive to the reception of code signals for actuating the tape advancing means to advance the tape at a normal speed with each recording operation of the selecting mechanism; manually operable means effective when the selecting mechanism is inactive for causing the tape advancing means to advance the tape at an abnormal speed and for terminating the tape advancement so caused, and means responsive to the resumption of activity of said selecting mechanism for promptly removing said tape advancing means from the control of said manually operable means.

3. In a tape reperforator, selecting mechanism responsive to received signals, tape advancing means normally operable by said selecting mechanism, manually operable means at the reperforator effective when the selecting mechanism is inactive to advance the tape at an abnormal speed, and means for promptly restoring control of the tape advancing means to said selecting mechanism upon the restoration of said manually operable means or upon the resumption of the reception of signals, whichever occurs earlier.

4. In combination in a tape reperforator, a code signal controlled selecting device, a normal feeding means, an auxiliary feeding means, means for rendering said normal feeding means effective to feed the tape for each code selection, local manually operable means for initiating and terminating at will the operation of said auxiliary feeding means when the selecting device is inactive, and means responsive to the resumption of activity of said selecting device for promptly terminating the effect of said manually operable means.

5. In a telegraph receiver, a tape perforating mechanism, a code signal responsive device for controlling the operation of said mechanism, a tape feed-out device, means effective when the signal responsive device is idle for actuating said feed-out device upon operation and terminating the feed-out upon release, and means responsive to the resumption of activity of said signal responsive device for terminating the feed-out operation.

6. In a teletypewriter system, a tape perforating mechanism, a code signal responsive device for normally controlling the operation of said mechanism, a tape feeding mechanism, manually operable means associated with the perforating mechanism for operating said tape feeding mechanism at an abnormally high speed during periods of idleness of said signal responsive device, and means responsive to the resumption of activity of said signal responsive device for terminating the tape feed-out at abnormal speed.

7. In a tape perforator, code signal responsive mechanism, tape advancing means, auxiliary means adaptable to actuate said tape advancing means, a latch normally preventing the operation of said auxiliary means, manually operable non-locking means for tripping said latch to cause the operation of said auxiliary means, the release of said non-locking means immediately restoring said latch, and means responsive to the actuation of said code signal responsive mechanism for promptly restoring said latch if it is in the tripped condition.

8. In a tape perforator, code signal responsive mechanism, means for advancing the tape at a normal speed in acordance with the actuation of said code signal responsive mechanism, auxiliary means adaptable to actuate said tape advancing means at an abnormal speed, a latch normally preventing the operation of said auxiliary means, manually operable non-locking means for tripping said latch to cause the operation of said auxiliary means, and means responsive to the release of said non-locking means or to the actuation of said code signal responsive mechanism, whichever occurs earlier, for promptly restoring said latch.

9. In a tape reperforator, manually operable non-locking means for initiating and terminating auxiliary tape feed-out, and means responsive to the reception of signals for promptly terminating the auxiliary feed-out.

10. In a tape reperforator, manually operable non-locking means for producing auxiliary tape feed-out, the release of said non-locking means terminating said feed-out, and means responsive to the reception of signals for promptly terminating the auxiliary feed-out.

11. In a tape reperforator, code signal responsive mechanism for feeding tape at a normal speed, manually operable non-locking means for producing auxiliary tape feed-out at an abnormal speed, and means responsive to the reception of signals for promptly terminating such auxiliary feed-out.

12. In a tape reperforator, receiving mechanism for punching the tape to correspond with the received signals, manually operable non-locking means for causing tape to be fed out punched with the "letters" character and for terminating such feed-out, and means responsive to the reception of signals for promptly terminating the auxiliary feed-out.

13. In a tape reperforator, means responsive to received regular signals for regularly feeding the tape, local manually operable means for producing auxiliary tape feed-out at an abnormal speed, means responsive to received special signals for automatically producing auxiliary tape feed-out at the abnormal speed, and means responsive to the release of said local means or to the renewed reception of regular signals for promptly restoring control of the tape feed to said regular feeding means.

14. In a tape reperforator including means for

advancing the tape in response to received code signals, means for initiating auxiliary tape feed-out, manually operable means at the reperforator for actuating and terminating the actuation of said local initiating means, manually operable means removed from the reperforator for initiating such auxiliary feed-out, and means responsive to the renewed reception of code signals for promptly terminating the auxiliary feed-out initiated by either of said initiating means.

15. In a reperforator, a signal responsive mechanism, tape advancing means, a tape feed-out mechanism tending to actuate said advancing means, a latch normally engaging said feed-out mechanism to prevent the operation thereof, a manually operable device effective when said signal responsive mechanism is idle to disengage said latch upon operation and re-engage the same upon release, and means responsive to the resumption of activity of said signal responsive mechanism for promptly causing the re-engagement of said latch.

16. In a reperforator, a signal responsive mechanism, tape advancing means, a tape feed-out mechanism tending to actuate said advancing means, a latch normally engaging said feed-out mechanism to prevent the operation thereof, a manually operable non-locking device effective when said signal responsive mechanism is idle to disengage said latch upon operation and re-engage the same upon release, and means responsive to the resumption of activity of said signal responsive mechanism for promptly causing the re-engagement of said latch.

17. In a reperforator, a signal responsive mechanism, tape advancing means, an auxiliary tape feed-out mechanism tending to actuate said advancing means at an abnormal speed, a latch normally engaging said feed-out mechanism to prevent the operation thereof, a manually operable device effective when signal responsive mechanism is idle to disengage said latch upon operation and re-engage the same upon release, and means responsive to the resumption of activity of said signal responsive mechanism for promptly causing the re-engagement of said latch.

18. In a reperforator, a signal responsive mechanism, tape advancing means, an auxiliary tape feed-out mechanism tending to actuate said advancing means at an abnormal speed, a latch normally engaging said feed-out mechanism to prevent the operation thereof, a manually operable non-locking device effective when said signal responsive mechanism is idle to disengage said latch upon operation and re-engage the same upon release, means responsive to received special signals for disengaging said latch, and means responsive to resumption of the regular activity of said signal responsive mechanism for promptly causing the re-engagement of said latch.

19. In a telegraph receiver, a tape perforating mechanism, a code signal responsive device for controling the operation of said mechanism, a tape feed-out device, manually operable means proximate to said mechanism and effective when said signal responsive device is idle, said means being adapted upon actuation to initiate auxiliary operation of said feed-out device and upon release to terminate such operation, and means responsive to resumption of activity of said signal responsive device for terminating the auxiliary feed-out operation.

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