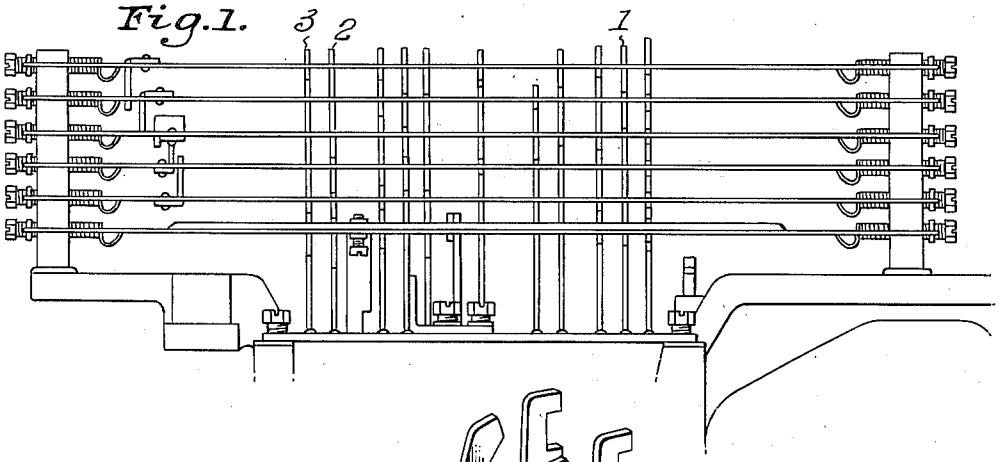
June 21, 1949. T. M. KNIGHT ET AL 2,473,529

FEED LINE MACHINE

Original Filed June 12, 1945 2 Sheets-Sheet 1

Fig. 1.



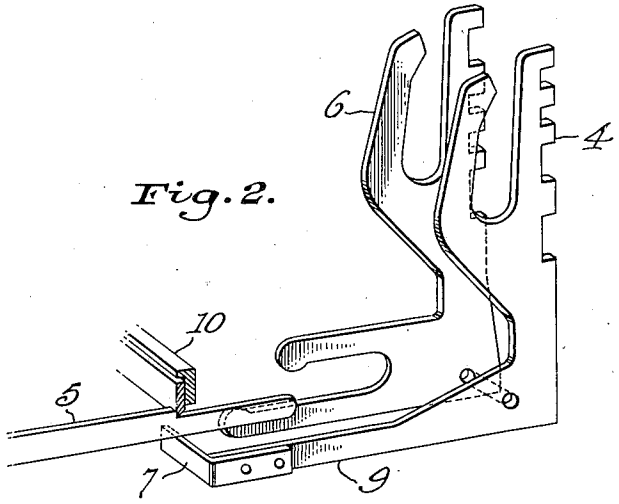


Fig. 2.

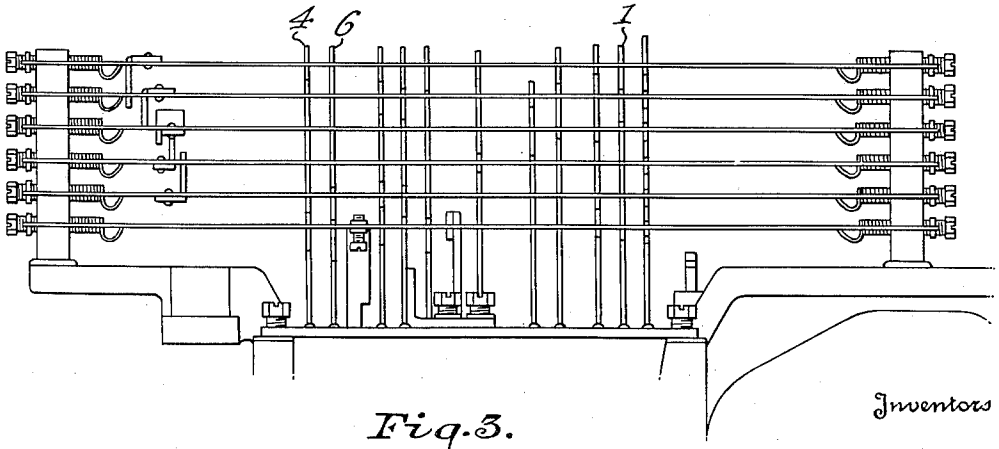


Fig. 3.

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Fig. 4.

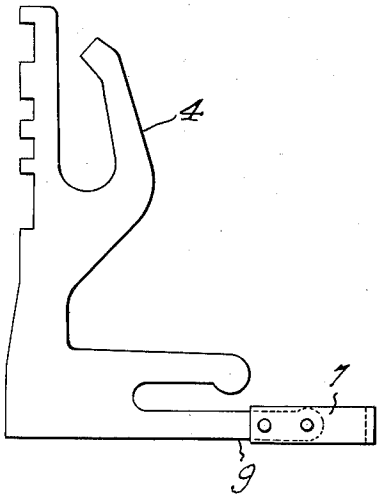
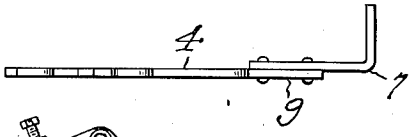


Fig. 5.



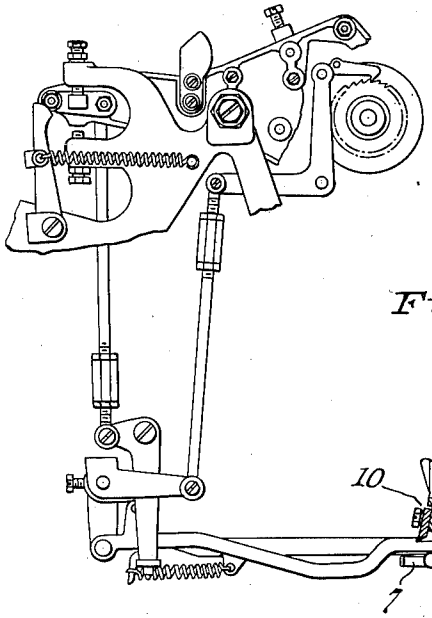


Fig. 6.

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UNITED STATES PATENT OFFICE

2,473,529

FEED LINE MACHINE

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Continuation of application Serial No. 599,039, June 12, 1945. This application March 10, 1949, Serial No. 80,702

1 Claim. (Cl. 178—25)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

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The invention described in the following specification and claim may be manufactured and used by or for the Government for governmental purposes without the payment to us of any royalty thereon.

This application is a continuation of our copending application Serial No. 599,039, filed June 12, 1945, for Feed line machine, now abandoned.

This invention relates to teletypewriters, and more particularly to improvements in devices for controlling the line feed of teletypewriters.

In teletypewriters, frequently a false carriage return impulse is received or a line feed impulse is lost, which results in overlining of a line already printed. This is obviously objectionable as it obliterates the message being transmitted.

It is, therefore, an object of this invention to provide means for eliminating lost operator and machine time incident to correcting messages containing false carriage returns and minus essential line feeds, thus speeding delivery of messages and conserving man and machine hours.

A further object is the provision of means for insuring a line feed whenever a carriage return impulse is received.

Although the invention can be applied to teletypewriters in general, it is hereinafter described as applied to teletypewriters of the type described in the United States patent to Morton et al., No. 1,904,164, granted April 18, 1933.

The above and other objects are attained by the structure and arrangement of parts hereinafter described and illustrated by the accompanying drawings, forming a part hereof, and in which:

Figure 1 is an elevational view of function levers and vanes of a teletypewriter.

Figure 2 is a perspective view showing the arrangement of function levers in accordance with the invention.

Figure 3 is an elevational view of function levers and vanes of a teletypewriter in accordance with the invention.

Figure 4 is an elevational view of a standard type of line function lever modified in accordance with the invention.

Figure 5 is a top view of the lever shown in Fig. 4.

Figure 6 is an elevational view of a part of the line feed mechanism used in conjunction with the present invention.

As will be seen from the Morton et al. patent mentioned above, the various function levers of a teletypewriter have different arrangement of notches so that a definite impulse will arrange the

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vanes to receive a specific function lever. The carriage return function lever has one arrangement of notches and the line feed function lever has a different arrangement of notches.

In accordance with one embodiment of this invention the motor stop function lever of the teletypewriter is removed from its position and replaced by a line feed function lever modified to engage the line feed push bar of the machine. A second carriage return lever is placed in the position previously occupied by the line feed function lever. Thus, upon receipt of a carriage return impulse, the second carriage return function lever engages the line feed push bar to produce line feed. Should a line feed impulse be received, the modified line feed function lever will operate to engage the line feed push bar to produce line feed alone.

In Figure 1, there is shown for reference purposes the general arrangement of function levers. The carriage return function lever is located at 1, and the line feed function lever is positioned at 2. As shown in Figure 1, these levers are widely spaced from each other. According to this invention the carriage return function lever is not disturbed, but the line feed lever at 2 is replaced by a second carriage return function lever. The motor stop function lever 3 is replaced by a line feed function lever 4 (see Figs. 2, 3) which has means for engaging the line feed push bar 5. The motor stop function lever 3 is not used on machines modified in accordance with this invention. As shown in Figure 3, the second carriage return function lever 6 is closely adjacent to the line feed function lever.

Referring more particularly to Figure 2, a carriage function lever 6 is shown in the usual position of a line feed function lever, engaging the line feed push bar 5. Adjacent the lever 6 is positioned the lever 4 which has notches for the line feed code. The lever 4 has been modified by the addition of an angularly directed portion 7 also engageable with push bar 5.

In operation, whenever a carriage return impulse is received the lever 6 will operate and engage the line feed push bar 5 to produce line feed.

Figure 4 shows a standard type of line feed function lever 4 and provided with an extension 9 having a bent portion 7.

An alternate embodiment of the invention would be one in which the second carriage return function lever 6 is provided with a trip extension, and placed in the motor stop function lever position. In this case the line feed function lever would be undisturbed. As in the preceding ar-

rangement, a carriage return signal would operate the modified carriage return function lever to engage the line feed push bar **5** through its extension. The line feed function lever would operate on line feed impulses only.

Figure 6 illustrates the invention when used in conjunction with a line feed mechanism of the type described in the Morton et al. patent mentioned above. Reference numeral **4** shows a line feed function lever modified as described above. Reference numeral **5** shows a line feed push bar which when actuated by line feed lever **4**, engages the function bail—and operates the line feed mechanism. Since the second carriage return lever (not shown for purposes of clarity, see Fig. 2) is in a line feed function lever position, it will operate to engage push bar **5** upon the receipt of carriage return signals.

From the above description it will be seen that there has been provided a simple and effective means for insuring a line feed whenever a carriage return impulse is received.

The above description is to be considered as descriptive and not limitative of the invention, of which modifications can be made without departing from the spirit of the invention as denoted in the appended claim.

The invention having been described, what is claimed is:

In a teletypewriter mechanism which includes line feed mechanism and carriage return mechanism, a carriage return function lever for operating the carriage return mechanism in response to carriage return signals and a line feed function lever for operating the line feed mechanism in response to line feed signals, said levers being widely spaced from each other, means for operating the line feed mechanisms whenever return function signals are received, comprising an additional lever closely adjacent to the line feed lever and also responsive to the carriage return signal, and connections between the second carriage return function lever and the line feed mechanisms for operating the line feed mechanism when the second carriage return function lever is operated.

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