

Aug. 5, 1947.

E. F. BRITTEN, JR

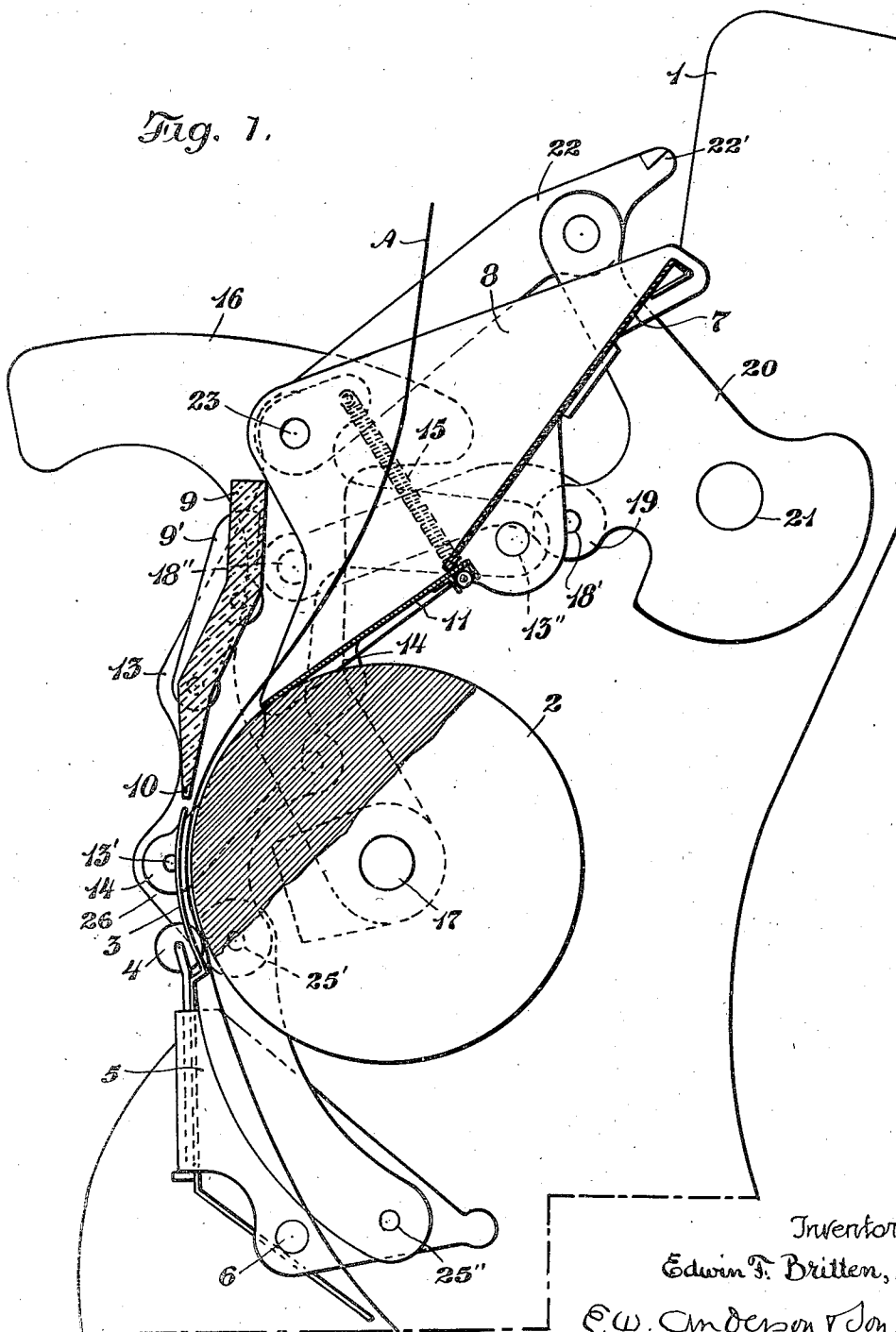
2,425,172

FRONT FEED PAPER GUIDING MEANS FOR WRITING MACHINES

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3 Sheets-Sheet 1

Fig. 1.



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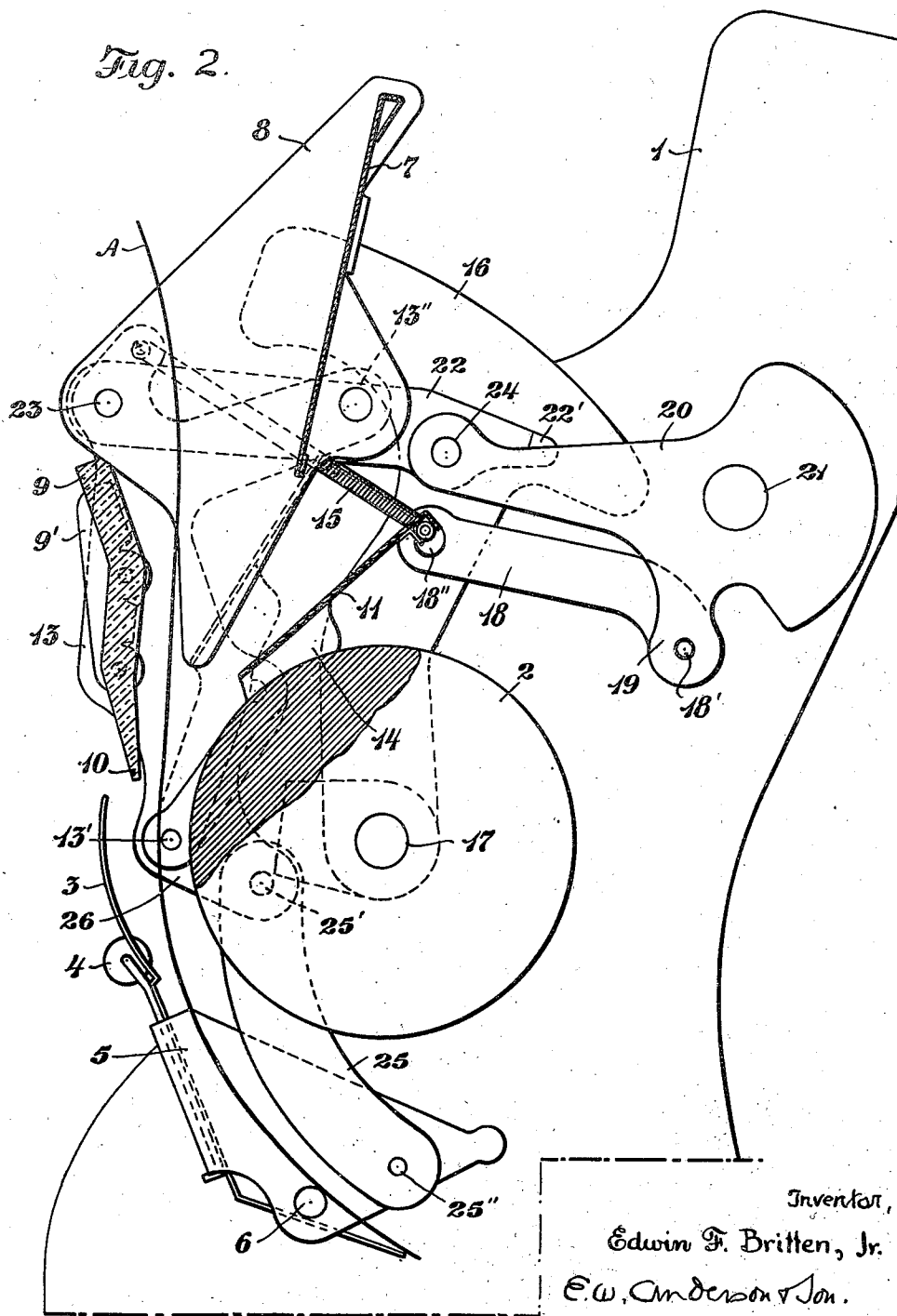
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FRONT FEED PAPER GUIDING MEANS FOR WRITING MACHINES

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3 Sheets-Sheet 3

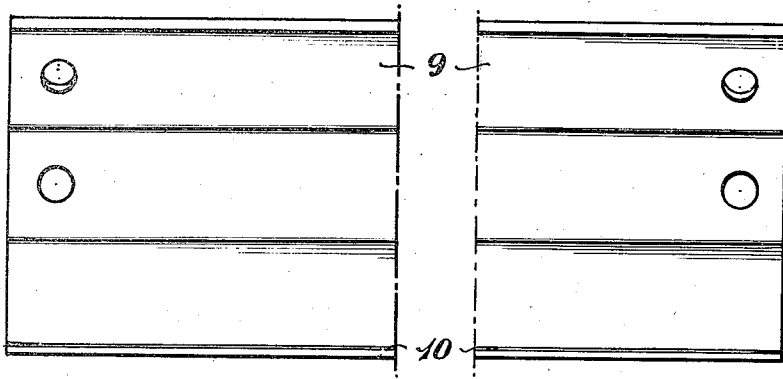


Fig. 3.

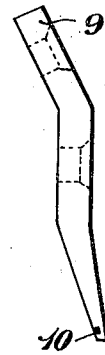


Fig. 4.

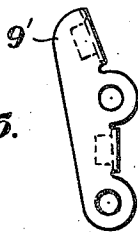


Fig. 5.

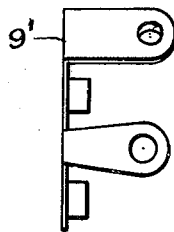


Fig. 6.

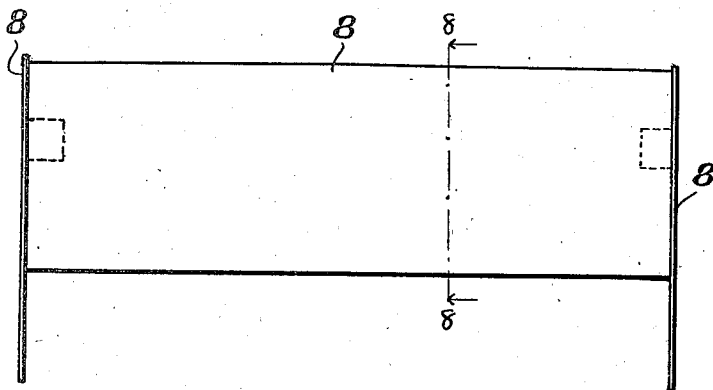
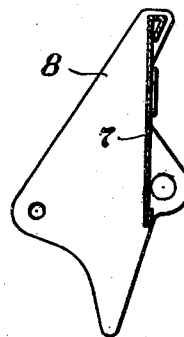


Fig. 7.

Fig. 8.



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UNITED STATES PATENT OFFICE

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FRONT FEED PAPER GUIDING MEANS FOR
WRITING MACHINESEdwin F. Britten, Jr., Short Hills, N. J., assignor
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Application September 8, 1945, Serial No. 615,182

4 Claims. (Cl. 197-127)

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The invention relates to listing calculators and other machines having an endwise shiftable carriage provided with a rotatable platen and a paper guide having pressure rolls engaging the platen to feed a paper sheet thereover during rotation of the platen wherein the paper is fed to the machine forwardly of the platen, an object of the invention being to provide the machine with improved means for facilitating the insertion of the paper into the machine wherein the paper sheet to be inserted may be grasped by the operator at its top edge and pushed into the machine with the throat open, and a line printed near the top edge of the paper may be aligned by hand. Other objects and advantages will appear hereinafter or will be obvious.

The invention consists in the novel construction and combinations of parts as hereinafter set forth in the claims.

In the accompanying drawings,

Figure 1 is a side view of the invention as applied with the throat closed, parts being in section and parts broken away, the view being somewhat diagrammatic with respect to overlapping of parts.

Figure 2 is a view similar to Figure 1, with the carriage open, the lower section 11 of the rear composite plate of the upper paper guide being shown in dotted lines in normal position with carriage open and in full lines in position taken when pushed rearwardly (by the operator's fingers), to enlarge the throat of the paper insertion passage.

Figure 3 is a detail front view of the transparent front plate, partly broken away.

Figure 4 is a detail end view of the same.

Figure 5 is a detail end view of one of the end brackets for the transparent front plate.

Figure 6 is a detail front view of the same.

Figure 7 is a detail front view of the assembly of certain parts of the upper paper guide.

Figure 8 is a section of the same on the line 8-8 of Figure 7.

In these drawings, the numeral 1 designates a denominationally shiftable carriage, having mounted thereon a rotatable platen 2, provided with the usual means for rotating the same and holding it in position as rotated.

A lower paper guide 3 is provided with pressure rolls 4, and is carried by right and left duplicate brackets 5, pivoted at 6 to the carriage framing.

An upper paper guide is adapted to facilitate insertion of paper sheets into the machine, in such manner that the paper may be grasped by the operator at its top edge and pushed in with the throat open, and a line printed near the top edge of the paper may be aligned by hand, as will be described.

This upper paper guide has a paper insertion passage between front and rear plates thereof converging to form a throat, the front plate 9 be-

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ing transparent, acting as a hold-back for the paper sheet and bearing near its lower edge a line finder line 10, thereby rendering visible that portion of the paper sheet located above said line; and the rear plate being composite, comprising an upper section 7 provided with end plates 8 forming the ends of the paper insertion passage, and a lower spring-urged section 11 the normal position of which is shown in dotted lines in Figure 2, this lower section being yieldable against the tension of its springs 15 to the operator's fingers in pushing a paper sheet into the machine to the full line position of Figure 2 to enlarge said throat.

This upper paper guide, with exception of said lower rear spring-urged plate section 11, is carried by other right and left duplicate end plates 13 thereof, which latter are pivoted to the carriage framing at 13'. Said lower rear plate section 11 is provided with downwardly extending arms 14, pivoted to the carriage framing also at 13', and with coiled springs 15 connecting the same at the upper portion thereof with the forward portion of said end plates 13, whereby the throat of said paper insertion passage will be enlarged upon pivotal movement rearwardly of said rear plate section 11 forward movement of said rear plate section being suitably limited. The end plates 13 have arms connected at 13'' with the assembly of parts 7 and 8, the lower rear plate section 11 projecting at its upper end past the lower end of upper rear plate section 7 and having the aforesaid spring connections 15 with plates 13. The transparent front plate 9 is connected with end plates 13 through the medium of end brackets 9', suitably secured to parts 9 and 13.

Thus the parts 7, 8, 9, 11 and 13 constituting the upper paper guide are movable as a unit upon pivot 13' away from the platen to the open position of Figure 2 and reversely to the closed position of Figure 1. The lower paper guide and its pressure rolls 4 are similarly movable away from the platen to open position and reversely to closed position upon the carriage frame pivots 6.

Manipulable means are provided for displacing the upper paper guide to closed position and to open position, any suitable means for this purpose being employed.

In the drawings, manipulable means are provided for locking the upper and lower paper guides both in normal open position; for disabling said locking means and conjointly displacing both paper guides to and locking the same in closed position, and for disabling the last named locking means, conjointly restoring both paper guides to normal position and rendering again effective the first-named locking means as will be described.

A manipulable lever 16 is pivoted to the sta-

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tionary framing of the machine at 17, which latter is the platen carriage shaft, said lever having operating link connection 18 with a crank arm 19 of one of two toggle links 20, pivoted at 21 to the carriage framing, the other 22 of said toggle links being pivoted at 23 to the forward portion of said upper paper guide, an abutment 22' of said link 22 engaging the link 20 to prevent fall of said links from the aligned position, wherein the pivots 21, 23 and the pivot 24 of the two links together are aligned for locking purposes.

Thus forward manipulation of lever 16 will break the lock of the toggle links 20 and 22 and close the paper guides to the platen, and at the end of this movement the pivot 21 of link 20, the pivot 18' of link 18 to the crank arm 19, and the pivot 18'' of link 18 to the lever 16 will become aligned to lock the paper guides in closed position.

The throat being closed (Fig. 1), the pivot 24 will be located above dead center position of the aligned points 18', 18'' and 21, so that the throat cannot be opened by manipulation of lever 16, and in order to open the throat the transparent front plate 9 of the upper paper guide is pulled forwardly by hand, thus breaking the lock of the toggle of crank arm 19 and link 18.

In the manipulation of lever 16 as aforesaid, both the upper and lower paper guides will be simultaneously operated to close the same to the platen; and in the manipulation of transparent front plate 9, both the upper and lower paper guides will be simultaneously operated to open the same away from the platen, due to links 25 connecting crank arms 26 of the end plates 13 with the brackets 5 of said lower paper guide, links 25 being pivoted at 25' to said crank arms 26 and pivoted at 25'' to said brackets 5.

In practice, pivot 18' will in locked position of the parts be located slightly above aligned position with pivots 18'' and 21, so that part 11 will not bang violently against the platen in closing; and pivot 24 will be located slightly above aligned position with pivots 21 and 23, so that the throat may if desired be closed by pushing upon the upper paper guide.

Certain parts herein described will necessarily be provided in duplicate at the platen ends.

It will be noted from the language used herein that when the paper guides are closed to the platen the throat is said to be closed, and when the paper guides are moved away from the platen the throat is said to be open.

I claim:

1. In a machine of the class described, the combination with a rotatable platen; of a front-feed paper guide comprising front and rear spaced plates converging to form a throat, and manipulable means for displacing said paper guide as a unit forwardly away from the platen from closed to open position for insertion of a paper sheet into the machine, said front plate being transparent, acting as a hold-back for the paper sheet, bearing a line finder line and rendering visible that portion of said sheet located above said line, said rear plate being spring-urged and yieldable rearwardly against the tension of its spring to the operator's fingers grasping the top edge of said sheet being inserted into the machine to enlarge said throat and permit alignment by hand of a line printed near the top edge of said sheet.

2. In a machine of the class described, the combination with a rotatable platen; of a front-feed

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paper guide comprising front and rear spaced plates converging to form a throat, and manipulable means for displacing said paper guide as a unit forwardly away from the platen from closed to open position for insertion of a paper sheet into the machine, said front plate being transparent, acting as a hold-back for said sheet, bearing at its lower edge a line finder line and rendering visible that portion of said sheet located above said line, said rear plate being composite and having a lower spring-urged part yieldable rearwardly against the tension of its spring to the operator's fingers to enlarge said throat and permit alignment by hand of a line printed near the top edge of said sheet.

3. In a machine of the class described, the combination with a rotatable platen; of a lower paper guide having pressure rolls engaging the platen, an upper front-feed paper guide having front and rear spaced plates converging to form a throat, and manipulable means for conjointly displacing both paper guides as a unit forwardly away from the platen from closed to open position for insertion of a paper sheet into the machine, said front plate being transparent, acting as a hold-back for the paper sheet, bearing a line finder line and rendering visible that portion of said sheet located above said line, said rear plate being composite and having a lower spring-urged part yieldable rearwardly against the tension of its spring to the operator's fingers to enlarge said throat and permit alignment by hand of a line printed near the top edge of said sheet.

4. In a machine of the class described, the combination with a rotatable platen; of a lower paper guide having pressure rolls engaging the platen, an upper front-feed paper guide having front and rear spaced plates converging to form a throat, and manipulable means for locking both paper guides in closed position, for disabling said locking means and conjointly displacing both paper guides as a unit forwardly away from the platen to and locking the same in open position for insertion of a paper sheet into the machine, and for disabling the last named locking means, conjointly restoring both paper guides to closed position and rendering again effective the first named locking means, said front plate being transparent, acting as a hold-back for the paper sheet, bearing a line finder line and rendering visible that portion of said sheet located above said line, said rear plate being composite and having a lower spring-urged part yieldable rearwardly against the tension of its spring to the operator's fingers to enlarge said throat and permit alignment by hand of a line printed near the top edge of said sheet.

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