Jan. 12, 1926. **1,569,052**

J. WALDHEIM

TYPEWRITING MACHINE

Filed June 17, 1925 2 Sheets-Sheet 1

Fig. 1.

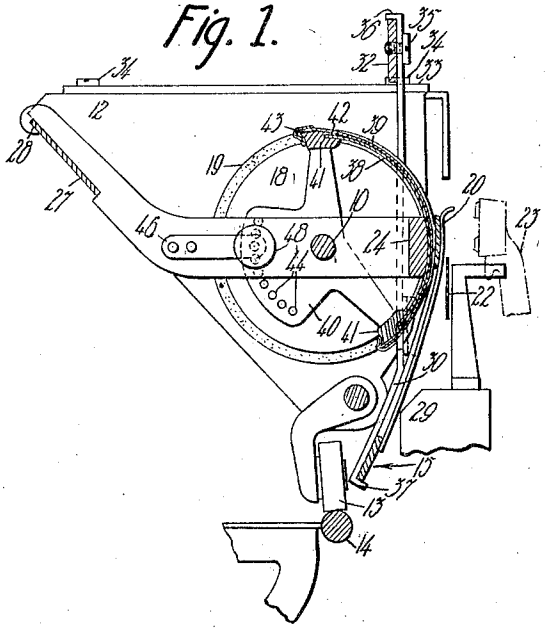


Fig. 2.

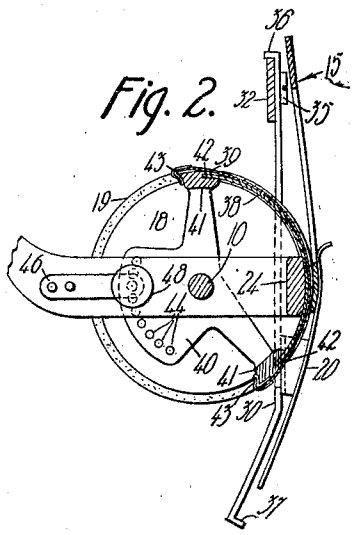


Fig. 3.

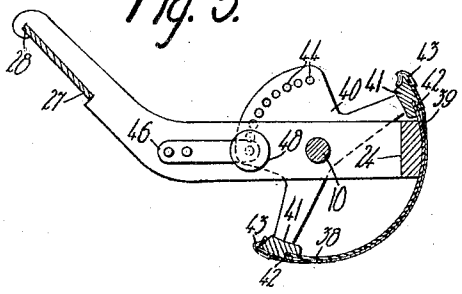


Fig. 4.

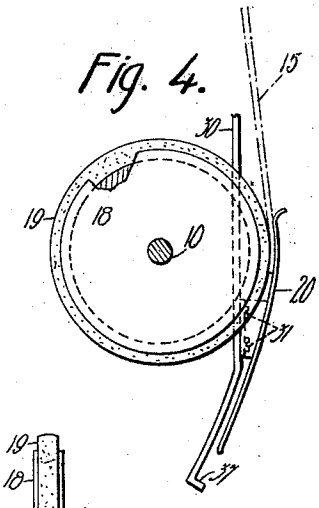
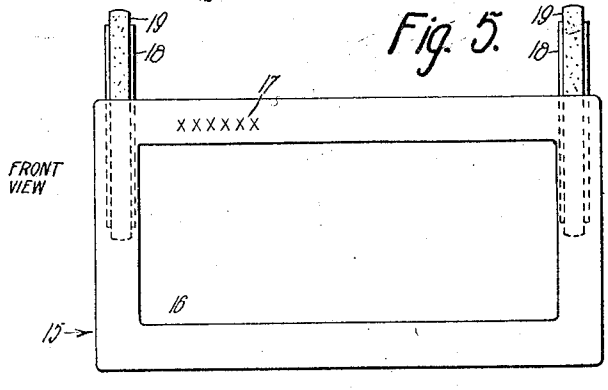


Fig. 5.



Inventor:
John Waldheim
by B. L. Stickney
Attorney

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TYPEWRITING MACHINE

Filed June 17, 1925 2 Sheets-Sheet 2

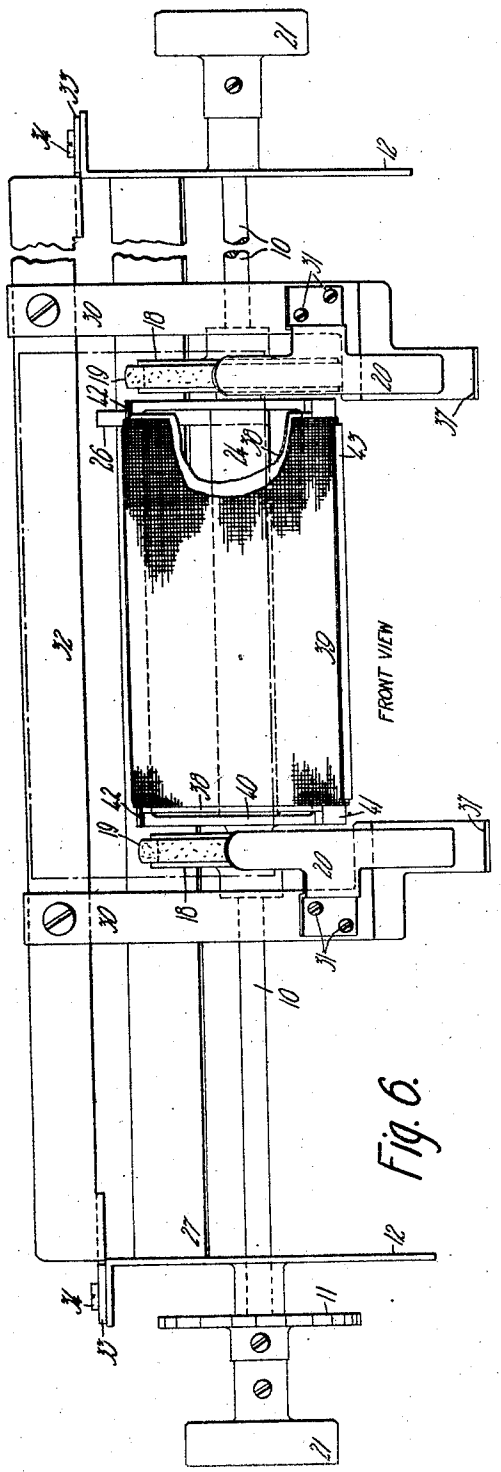

Fig. 6.

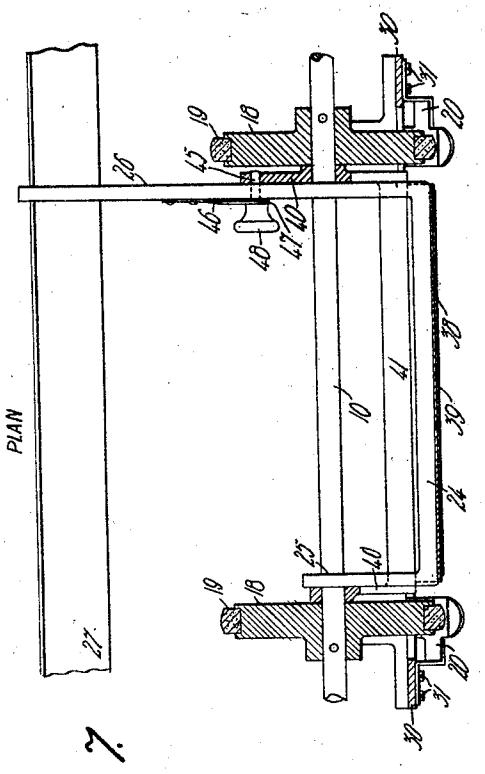

Fig. 7.

Inventor:
John Waldheim
by B. C. Stickney
Attorney

Patented Jan. 12, 1926. 1,569,052

UNITED STATES PATENT OFFICE.

JOHN WALDHEIM, OF ELIZABETH, NEW JERSEY, ASSIGNOR TO UNDERWOOD TYPEWRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF DELAWARE.

TYPEWRITING MACHINE.

Application filed June 17, 1925. Serial No. 37,647.

To all whom it may concern:

Be it known that I, JOHN WALDHEIM, a citizen of the United States, residing in Elizabeth, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Typewriting Machines, of which the following is a specification.

This invention relates to stencil-typing machines, in which a stencil-card is inserted in front of a stationary platen, and is lowered to the printing point by means of friction-wheels gripping the edges of the card, which is guided between front finger-pieces co-operating with the rollers.

One of the features of this invention relates to the provision of a stationary platen-strip mounted upon the platen-shaft, and of means for mounting a backing and a ribbon strip in a manner to interpose the platen and the card, so as to facilitate the cutting of the stencil, and to render visible the impressions upon the stencil-sheet.

Another feature relates to means for line-spacing the card, said means including a pair of rubber-tired wheels or disks fast to the platen-shaft, the outer edges of the card being held in engagement with the periphery of the wheels by means of resilient finger-pieces.

The stencil-card is inserted, bottom edge first, behind the finger-pieces in front of the stationary platen-strip, and then the line-space finger-wheels are rotated backwardly to lower the card to a printing position. The card is line-spaced in the regular manner by the line-space mechanism of the machine, the platen-shaft upon which the wheels are mounted being rotated as the carriage is returned, preparatory to typing a second line upon the card.

There is provided a combination backing and inking frame, which is rotatably and settably mounted upon the platen-shaft to facilitate the typing and the reading of the typed lines on the card. The backing is provided in the form of a strip of celluloid, the ends thereof being fast to a hollow drum covering a portion of its cylindrical surface. The inking means may comprise an inking ribbon over the celluloid strip, also fast to the hollow drum by means of clips fast to the ribbon at the ends thereof. When it is desired to present a fresh portion of the carbon to the printing line, the drum is rotated an amount equal to the width of a line of typing, and to this end, there is provided mechanism which includes an extension forming an integral part of the platen-strip and holes equidistantly spaced and drilled into said extension, each of the holes being effective to receive a plunger slidably mounted in a housing fixed relatively to the platen-strip.

Other features and advantages will hereinafter appear.

In the accompanying drawings,

Figure 1 is a cross-sectional view, in elevation, of the device as applied to an Underwood standard typewriting machine, through the center of the machine, showing the card in its lowermost position corresponding to the printing line on the upper edge of the frame of the card.

Figure 2 is a similar view of the device, showing the card in its uppermost position.

Figure 3 is a cross-sectional view through the center of the machine, showing the backing and the inking means in one of its extreme positions.

Figure 4 is an end view of the card-spacing wheels and the pressure-fingers therefor.

Figure 5 shows the card in its lowermost position.

Figure 6 is a front view of the device, as applied to an Underwood standard typewriting machine.

Figure 7 is a top cross-sectional view, in elevation, through the platen-shaft, showing the stationary platen mounted thereon.

This invention is illustrated as applied to an Underwood standard typewriting machine, in which there is provided a platen-shaft 10 operatively connected to a line-space mechanism 11, the platen-shaft being rotatably mounted upon end plates 12 of a platen-frame, borne by a carriage arranged for letter-space travel. The platen-frame is shiftably mounted upon a carriage, and is operatively connected to a shift-key, not shown, by means of a wheel 13 slidably mounted on a rail 14, which is raised by the depression of the shift-key.

A stencil-card comprising a frame 15 and a stencil-sheet 16, upon which it is desired to type a line 17 at the upper edge of the frame, and then to raise or line-space the card to write upon the stencil-sheet with the bare

type, is inserted, bottom edge first, in front of wheels 18 having a rim 19 of soft, gripping material, and is held thereagainst by means of fixed finger-pieces 20. Then a finger-wheel 21, fast to the shaft 10, is rotated rearwardly, and the card is lowered to a position, as shown in Figures 1 and 5, whereupon a line is typed upon the upper edge of the frame through a ribbon 22 by means of type-bars 23. In the Underwood machine there is provided mechanism whereby the ribbon is automatically raised in front of the type at each key-depression, and also mechanism to prevent the ribbon from being raised when cutting the stencil. Said mechanism is selectively operated by means of keys in front of the machine, and is fully illustrated and described in the patent to Cook, No. 926,050, dated June 22, 1909.

One of the features of this invention relates to the provision of a fixed platen-strip 24 mounted upon the platen-shaft 10, and is designed to receive the blows of the types. The platen-strip is provided with side supporting arms 25 and 26, the latter extending upwardly at the rear thereof and engaging a table-supporting bar 27 at 28, the bar being, in turn, fast to the end plates 12 of the platen-frame.

The shaft 10 is operatively connected to the line-spacing mechanism of the machine, and is controlled by a lever, not shown, which serves also as a means to simultaneously return the carriage. When the shaft is rotated, the wheels 18, which are fast thereto, will also rotate, and due to the gripping surfaces of the peripheries of the wheels upon the edges of the card, the same is raised one step by the line-spacing mechanism corresponding to the spacing between two lines of typing.

When the card is lowered to the printing position, it is desirable to deflect it away from the type-bar-supporting plate 29, and to this end, there are provided deflector-plates 30 upon which the fingers 20 are fastened by means of screws 31. The deflector-plates are mounted upon a cross-bar 32, overlying the platen-shaft and parallel thereto, the cross-bar being provided at the ends thereof with tabs 33, through which the bar is secured to the end plates 12 by means of screws 34.

Referring to Figure 1, it will be noted that the deflector-plates 30 are fast to the cross-bar 32 by means of screws 35, the uppermost edges of the plates being bent at 36 to provide a locating surface for the plates, which are bent inwardly at the bottom thereof. The lowermost edges of the plates are bent at 37, forming a bottom rest for the card, against which edges the card is squared parallel to the line of typing.

In order to render the typing upon the card visible when cutting the stencil-blank, and in order to facilitate the cutting thereof against a metal platen, there is provided, in this invention, a celluloid sheet 38 and an inking ribbon 39, both mounted on a supporting frame pivotally supported by the platen-shaft. The frame may comprise side plates 40 joined together by means of two cross-pieces 41, in which there are provided grooves 42 for receiving the sheet of celluloid, the inking ribbon being also mounted upon the cross-pieces 41 by means of clips 43, fast to the ribbon, at the ends thereof. In order to prevent a fresh line of the celluloid sheet and of the ribbon to the printing field, there is provided mechanism including a series of indexing holes 44 on one of the side plates 40, which is provided with an extension in which the holes 44 are perforated and equidistantly spaced. The holes 44 are designed to receive a locating plunger 45, slidably mounted on the arm 26, the plunger being held in engagement with one of the holes by means of a spring 46 fast to the arm. The spring is provided with an open slot at the end thereof, the slot engaging with a groove 47 in a finger-piece 48 designed to operate the plunger 45, and forming an integral part thereof.

Variations may be resorted to within the scope of the invention, and portions of the improvements may be used without others.

Having thus described my invention, I claim:

1. The combination with a typewriting machine, a carriage, a platen-frame borne by said carriage, a platen-shaft and a line-spacing mechanism therefor, of a stationary platen-strip mounted on said platen-shaft, and means controlled by said line-spacing mechanism for line-spacing a stiff work-sheet in front of the platen-strip.

2. The combination with a typewriting machine, a carriage, a platen-frame borne by said carriage, a platen-shaft and a line-spacing mechanism therefor, of a stationary platen-strip mounted on said platen-shaft, and means controlled by said line-spacing mechanism for line-spacing a stiff work-sheet in front of the platen-strip, said means including wheels having a periphery of soft material and fixed resilient finger-pieces in front thereof, the finger-pieces being effective to hold the work-sheet in engagement with the periphery of the wheels.

3. The combination with a typewriting machine, a carriage, a platen-frame borne by said carriage, a platen-shaft and a line-spacing mechanism therefor, of a stationary platen-strip mounted on said platen-shaft, and means controlled by said line-spacing mechanism for line-spacing a stiff work-sheet in front of the platen-strip, said means including rubber-tired wheels engaging with the edges of the work-sheet

and means for holding the work-sheet under pressure over the periphery of the wheels and tangent thereto.

4. The combination with a typewriting machine, a carriage, a platen-frame borne by said carriage, a platen-shaft and a line-spacing mechanism therefor, of a stationary platen-strip mounted on said platen-shaft, and means controlled by said line-spacing mechanism for line-spacing a stiff work-sheet in front of the platen-strip, said means including rubber-tired wheels engaging with the edges of the work-sheet and means for holding the work-sheet under pressure over the periphery of the wheels and tangent thereto, said last-mentioned means including resilient finger-pieces in front of the wheels, said finger-pieces being fast to the platen-frame and fixed relatively to the platen-shaft.

5. The combination with a typewriting machine having a carriage, a platen-shaft borne by said carriage, a line-spacing mechanism operatively connected to said shaft, and typing elements, of a fixed platen-strip mounted on the platen-shaft, and means for presenting a stencil-card to the printing field in front of the platen-strip and to deflect the card in a manner to afford typing at the upper edge thereof.

6. The combination with a typewriting machine, having a carriage, a platen-shaft borne by said carriage, a line-spacing mechanism operatively connected to said shaft, and typing elements, of a fixed platen-strip mounted on the platen-shaft, means for presenting a stencil-card to the printing field in front of the platen-strip and to deflect the card in a manner to afford typing at the upper edge thereof, and means for line-spacing the card in front of the platen-strip, said means including a pair of rubber-tired wheels fast to the line-space shaft, and a pair of resilient finger-pieces in front of said wheels, said finger-pieces being effective to hold the edges of the card in engagement with the periphery of the wheels.

JOHN WALDHEIM.