

No. 855,542.

PATENTED JUNE 4, 1907.

F. I. VAN ANDEN.
TYPE WRITING MACHINE.
APPLICATION FILED AUG. 17, 1906.

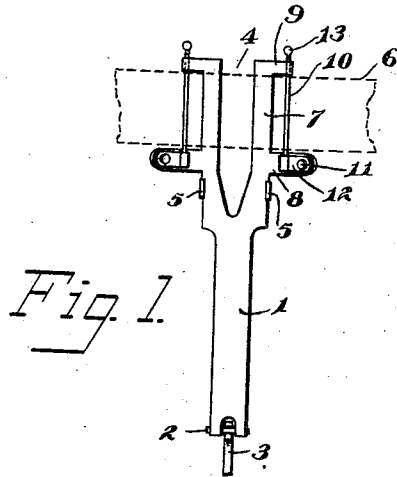


Fig. 1.

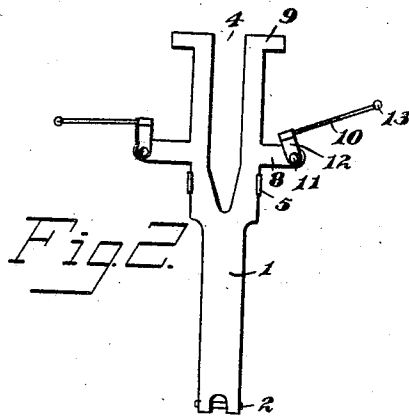


Fig. 2.

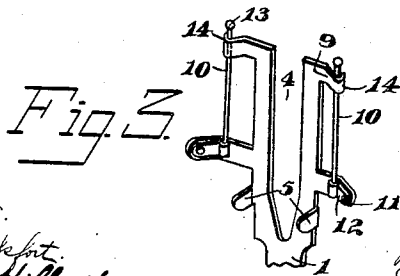


Fig. 3.

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UNITED STATES PATENT OFFICE.

FREDERICK I. VAN ANDEN, OF WASHINGTON, DISTRICT OF COLUMBIA,
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TYPE-WRITING MACHINE.

No. 855,542.

Specification of Letters Patent.

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Application filed August 17, 1905. Serial No. 274,561.

To all whom it may concern:

Be it known that I, FREDERICK I. VAN ANDEN, a citizen of the United States, residing in Washington, District of Columbia, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention relates to the ribbon mechanism of typewriting machines, in which the ribbon is vibrated to cover and uncover the printing point at each type stroke. In many of such machines, particularly in the well-known "Underwood" machine, in which I illustrate an embodiment of my invention, it is the practice to employ at the printing point a vibrator having opposite apertures or eyes one at each side of the type guide; and the ribbon must be threaded through said eyes. This operation in practice is found difficult, owing to the narrowness and limpness of the ribbon; moreover the unavoidable soiling of the fingers in handling the inky ribbon is highly objectionable.

The object of my invention is to overcome these disadvantages.

In carrying out my invention, I preferably construct each eye of two separable parts, and, as illustrated in the accompanying drawings, these parts may in said "Underwood" machine be hinged at each eye, so that, although the eye is normally closed to retain the ribbon, still it may be instantly open at any time in order to release the ribbon or to permit the introduction of a ribbon into the vibrator.

In the accompanying drawings, Figure 1 is an elevation of the ribbon vibrator of the front-strike "Underwood" typewriting machine, showing my improvements applied thereto; the parts being in normal position, with the ribbon eyes closed. Fig. 2 is a similar view, showing the ribbon eyes open. Fig. 3 is a perspective view of the device seen at Fig. 1.

The ribbon vibrator consists principally of an upright stem portion 1, connected at its lower end by a pivot 2, to an operating lever 3, and at its upper end bifurcated to leave an opening 4 for the passage of the types. Said stem is also usually provided with guiding ears 5. The ribbon 6 is threaded through a pair of eyes, one at each side of

said bifurcation; each eye comprising a main upright portion 7, a lower arm projecting from the portion 7, and an upper projection or ear 9 at the top of the portion 7 and overlying the arm 8; said portions 7, 8 and 9 being integral with the stem 1. The remaining portion of each eye is in the form of a vertical pin 10, which, instead of being rigidly fixed upon the vibrator as heretofore, is pivoted as at 11 to the said arm 8, so that, although the eye is normally closed by said pin, as at Figs. 1 and 3, still the pin may be swung out to open the eye, as at Fig. 2. The lower end of the pin is provided with a sheet metal hinge-plate or leaf 12 to receive the pivot 11. The upper end thereof may be provided with a tip 13 for the convenience of the operator in manipulating the pin.

Each of the ears 9 is provided with a catch portion 14, to receive and retain the pin 10 during the operation of the vibrator; the parts 9 and 10 being relatively formed so that the pin 10 may spring into the catch 14 and can only be released therefrom by being sprung open; so that it is securely held.

The tip 13 projects above the ribbon carrier, and hence cannot come into contact with the ribbon, and is never inky; so that the ribbon eyes may be opened without soiling the fingers, and the ribbon may be lifted out or dropped in instantly and with a minimum of handling. This operation it will be seen is very convenient, especially where it is desired to take out the spools together with the attached ribbon; or to introduce into the machine a fresh set of spools with an attached ribbon.

It will be understood that the keeper or mousing 10 may be changed greatly in form and manner of mounting or releasing within the scope of the invention, and also that my improvements are applicable to various other vibrators than this specific form here-illustrated. It will also be understood that it is not essential in all cases that the eye when in normal condition shall be completely closed, so long as the ribbon is securely retained thereby and the mousing can be moved to release the ribbon.

Having thus described my invention, I claim:

In a typewriting machine, a ribbon-vibra-

tor comprising a stem having a pair of opposite arms, a pair of upstanding pins, sheet-metal hinge plates or leaves holding said pins and pivoted to said arms, and ears extending from said stem above said arms and formed with catch-portions to receive and retain the pins, the latter being constructed to spring

into the catch-portions of said ears, and extending above said ears for convenience of the operator in manipulating the pins.

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Witnesses:

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