B. C. STICKNEY.

TYPE WRITING MACHINE.

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1,104,015.

Patented July 21, 1914.

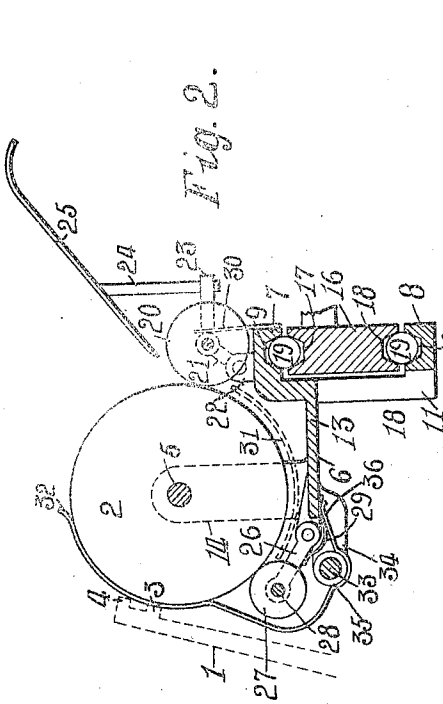


Fig. 2.

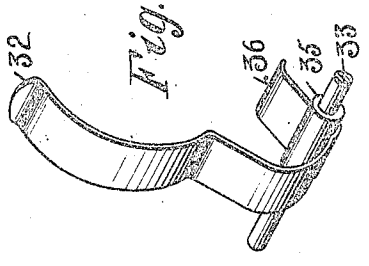


Fig. 3.

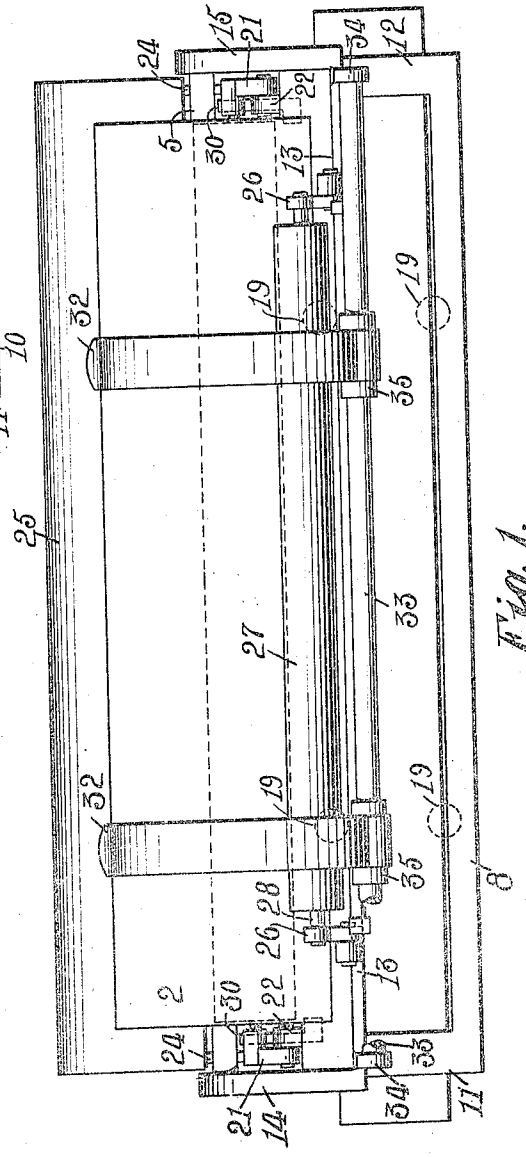


Fig. 1.

WITNESSES

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TYPE-WRITING MACHINE.

1,104,015. Specification of Letters Patent. Patented July 21, 1914.

Original application filed June 30, 1903, Serial No. 163,704. Divided and this application filed March 12, 1913. Serial No. 755,109.

To all whom it may concern:

Be it known that I, BURNHAM C. STICKNEY, 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 Type-Writing Machines, of which the following is a specification.

This invention relates to typewriting machines, and particularly to so-called visible writing machines in which the line of writing is always in view, and more especially to those of the front-strike class.

My invention consists in certain combinations of devices, features of construction and arrangement of parts which will be hereinafter described, and particularly pointed out in the concluding claims.

This case is a division of my application No. 163,704, filed June 30, 1903.

In the drawings forming part of this specification, Figure 1 is a front view of a typewriter carriage, showing my invention as applied thereto. Fig. 2 is a section of the same. Fig. 3 is a perspective view of a paper-guiding finger.

Type bars 1 are pivoted at their ends upon a fulcrum (not shown herein) and strike rearwardly against a platen 2, which type bars are provided with lower case type 3 and upper case type 4, the latter being uppermost when the type bar is in printing position, although this relation may be reversed within the scope of certain features of my improvements, and the type bars may be otherwise mounted. The type bars may be operated by any suitable means (not shown herein). The platen 2 may be mounted by means of an axle 5 mounted upon a carriage 6, which may be of any suitable construction, but which preferably comprises upper and lower bars 7 and 8, the former provided in its under side with a longitudinal groove 9, and the latter in its upper side with a longitudinal groove 10, these bars being connected at their ends by upright bars 11 and 12, formed integral therewith. An integral plate or bar 13 projects forwardly from said connected bars, and at its ends is formed with upright arms 14 and 15, in which the platen axle 5 is journaled.

Embraced by the grooved bars 7 and 8 is a rail 16 set on edge, and provided at its top and bottom edges with grooves 17 and 18, which are provided with bearing balls 19 whereon the carriage runs. A feeding-in roller 20 may be mounted in rear of the platen upon links 21 rising from ears 22 on the upper carriage bar 7, and said links may be provided with rearwardly extending lugs 23 for receiving legs 24 of a paper shelf 25.

From the front side of the plate 13 may project forwardly and upwardly extending arms 26. A pressure roll 27 may be mounted upon an axle 28 mounted at its ends in said arms 26. Springs 29 are provided for pressing up said arms and roller, and springs 30 for the rear pressure roller arms. A paper-guiding apron 31 may curve from the rear pressure roller beneath the platen to the forward pressure roller. Paper-guiding fingers 32 extending upwardly in front of the platen and terminating at their upper ends at the top side of the platen, may be adjustably mounted at their lower ends upon a horizontal rod 33 mounted in arms 34 projecting forwardly from the carriage plate 13. Said fingers may be attached to collars 35 fitting upon said rod, and may be prolonged at 36 beneath the collars to bear up with some force against the under side of the plate 13, causing the fingers 32 to hug the platen and preventing accidental displacement thereof along the rod 33.

It will be observed that the rolls 20 may be swung away from the platen against the tension of their springs 30 by pressing down on the paper shelf 25. A work sheet may be then easily inserted past said rolls 20, and said work sheet will be carried by the apron 31 forwardly beneath the platen until it strikes the front roll 27. Said front roll continually bears against the platen, and therefore said front roll may serve as a gage for adjusting the leading edge of said work sheet.

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. In a typewriting machine, the combination with a rotatable platen and a paper apron therefor, of a paper table on which a work-sheet may be placed to be fed to said apron, arms on which said paper table is

mounted, a pressure roll on said arms, and pivots on which said arms are mounted so that said paper table and said pressure roll may be swung together away from the platen.

2. In a front-strike typewriting machine, the combination with a rotatable platen, of a paper table, a rear pressure roll over which a work sheet is passed from said paper table, means normally holding said pressure roll against the platen, a paper apron arranged to receive a work sheet from said pressure roll, arms carrying said rear pressure roll on which it may be swung clear of the platen, and a gage extending substantially the entire length of the platen in front of the paper apron against which a work sheet may be centered while said rear pressure roll is free from the platen that said rear pressure roll may grip the paper to the platen.

3. In a front-strike typewriting machine, the combination with a rotatable platen and a carriage upon which said platen is mounted, of a rod beneath said platen toward its front surface on said carriage, paper-guiding fingers slidable upon said rod, and integral extensions of said fingers bearing against said carriage beneath said platen to cause said fingers to hug said platen.

4. In a front-strike typewriting machine, the combination with a rotatable platen and a carriage in which said platen is mounted, of a front pressure roll, a rod beneath said front pressure roll, paper fingers slidable on said rod lying outside said pressure roll and hugging said platen above said pressure roll, and rearward extensions of said fingers bearing against said carriage beneath the platen to cause said fingers to hug said platen.

5. In a front-strike typewriting machine, the combination with a rotatable platen and a carriage in which said platen is mounted, of a front pressure roll below the printing line bearing against said platen, supports for said pressure roll below it, paper fingers extending above the printing line, supports and springs for said paper fingers below said pressure roll, and rearward extensions of said fingers bearing against said carriage beneath the platen, to cause said fingers to hug said platen.

6. In a typewriting machine, the combination with a revoluble platen, of a roll to run on the platen at the introductory side thereof, and a second roll between the first roll and the printing line, the first roll being releasable without disturbing the second roll, and the latter extending the main portion of the length of the platen, to form a universal gage for both wide and narrow sheets when the first roll is released.

7. In a front-strike typewriting machine, the combination with a rotatable platen, of a paper-table behind said platen, a spring-pressed pivotal support for said paper-table, a rear pressure roll mounted on said support, a paper apron, and a front pressure roll extending over the main portion of the length of the platen against which front pressure roll the leading edge of a work-sheet may be centered when said rear pressure roll is moved away from the platen by depressing said paper table.

8. In a typewriting machine, the combination with a platen, of a rear feed roll and a forward gage, both independently and yieldingly supported, the forward gage extending over the main portion of the length of the platen and being continually pressed toward its surface, the rear feed roll extending substantially the entire length of the platen and being normally spring-held against the platen, and means for releasing said rear feed roll from the platen to introduce work-sheets therebetween.

9. In a typewriting machine, the combination with a platen, of a rear feed roll and a forward gage, both independently and yieldingly supported, the forward gage extending over the main portion of the length of the platen and being continually pressed toward its surface, the rear feed roll extending substantially the entire length of the platen and being normally spring-held against the platen, and means enabling the rear feed roll to be released from the platen, whereby work-sheets may be introduced between said feed roll and platen to the forward gage, to be squared thereby.

10. In a typewriting machine, the combination with a platen, of a rear feed roll and a forward feed roll, the latter also serving as a gage, both independently and yieldingly supported, the forward feed roll extending over the main portion of the length of the platen and being continually pressed toward its surface, the rear feed roll extending substantially the entire length of the platen and being normally spring-held against the platen, and means enabling the rear feed roll to be released from the platen, whereby work-sheets may be introduced between said rear feed roll and platen to the forward feed roll, to be gaged by the latter.

11. In a typewriting machine having a platen, the combination with a forward feed roll serving as a gage, and a rear feed or introductory roll, said rolls extending over the main portion of the length of the platen, of means continually pressing against said forward roll toward the platen, means normally pressing the rear roll toward the platen, finger-operated means to separate said rear feed roll from the platen for the purpose of introducing a work-sheet between said rear feed roll and platen, and means guiding the work-sheet around the platen until met and gaged by the forward feed roll.

12. In a typewriting machine having a platen, the combination with a forward feed roll serving as a gage, and a rear feed or introductory roll, said rolls extending over the main portion of the length of the platen, of means continually pressing said forward roll toward the platen, means normally pressing the rear roll toward the platen, a paper-table connected with said rear feed roll, means whereby pressure upon said paper-table releases said rear feed roll from the platen for the purpose of introducing a work-sheet between said rear feed roll and platen, and means guiding the work-sheet around the platen until met and gaged by the forward feed roll.

13. In a front-strike writing machine, the combination with a revoluble platen, of a releasable feed roll to run upon the rear or introductory side of the platen, means normally holding said feed roll against the platen, and independently supported means between said releasable feed roll and the printing point extending over the main portion of the platen length to be a universal guide for both gaging and feeding the work-sheet; said feed roll being releasable independently of said gaging means to permit the leading edge of the sheet to be introduced and gaged.

14. In a writing machine, the combination with a revoluble platen whose printing line is at the front thereof, of a releasable feed roll to run upon the rear or introductory side of the platen, means normally holding said feed roll against the platen, and independent means between the bottom of said platen and its front printing line and extending over the main portion of the length of the platen, to be a universal guide for both gaging and feeding the work-sheet, whereby at the moment of squaring the work-sheet against the gaging means, a considerable extent of the platen circumference is overlaid by said sheet, insuring positive feeding of the work-sheet in its trued position; the said rear feed roll being movable to permit the sheet to be placed against the gaging means by the operator.

15. In a typewriting machine, the combination with a revoluble platen whose printing line is at the front thereof, of a feed roll to run upon said platen at the rear thereof, said feed roll being releasable to admit of the introduction of a work-sheet between said feed roll and said platen, means normally holding said feed roll against the platen, and movable gaging means located between said feed roll and the printing line, and extending over the main portion of the length of the platen, said feed roll and said gaging means being independently supported and separately movable to and from the platen.

16. In a front-strike typewriting machine, the combination with a rotatable platen, of a paper table behind the platen, a rear pressure roll, means normally holding said pressure roll against the platen, means for casting off said rear pressure roll, and independently supported means intermediate the printing line and said rear pressure roll, extending over the main portion of the platen length as a universal guide for alining the leading edge of a work-sheet while said pressure roll is cast off.

17. In a front-strike typewriting machine, the combination with a front pressure roll and a rear pressure roll, of means for moving said rear pressure roll away from the platen without disturbing said front pressure roll, said front pressure roll extending over the main portion of the length of the platen between the rear pressure roll and the line of printing on the platen to be a universal guide for the work-sheets.

18. In a front-strike typewriting machine, the combination with front and rear pressure rolls having separate supports, of a platen, paper fingers embracing the front of said platen, and an independent rod supported beneath said front pressure roll on which said paper fingers are mounted, said paper fingers having a return forward bend to enable them to be clear from said front roll for adjustment across the face of said platen.

19. In a typewriting machine, the combination with a rotatable platen and a paper table therefor, of arms on which said paper table is mounted, a pressure roll separated from said paper table and journaled on said arms, the introductory portion of said pressure roll lying in advance of the forward edge of said paper table, that said pressure roll may receive work-sheets leaving said paper table, and pivots around which said arms swing.

20. In a front-strike typewriting machine, the combination with a paper table and a rear pressure roll, of a platen around which a work-sheet is passed from said paper table, means normally and releasably holding said roll against said platen, a front pressure roll continually bearing against the platen and extending over the main portion of the platen length to be a universal guide in both gaging and feeding the work-sheet, and paper fingers continually bearing against the platen in advance of said front pressure roll.

21. In a typewriting machine, the combination with a rotatable platen having a front pressure roll, and a paper table behind said platen, of a rear pressure roll co-extensive with the platen and adapted to receive a work-sheet from said paper table, and a connection from said paper table to said rear pressure roll whereby the depression of said paper table will move said

rear pressure roll clear of the platen without disturbing said front pressure roll, said rear pressure roll lying between said paper table and its fulcrum, whereby the movement of said rear pressure roll is in the same direction as that of said paper table.

22. In a typewriting machine, the combination with a rotatable platen and a paper table behind said platen, of a rear pressure roll co-extensive with the platen and adapted to receive a work-sheet from said paper table, a connection from said paper table to said pressure roll, whereby the depression of said paper table will move said pressure roll clear of the platen, said rear pressure roll lying between said paper table and its fulcrum, whereby the movement of said rear pressure roll is in the same direction as that of said paper table, a paper apron beneath the platen, and a front pressure roll continually bearing against the platen.

23. In a front-strike typewriting machine, the combination with a platen, of a front pressure roll beneath said platen and extending over the main portion of the platen length to be a universal guide in both gaging and feeding the work-sheet, a rear pressure roll, said front pressure roll lying between said rear pressure roll and the printing line on the platen, a paper table behind said platen, connections between said table and the rear pressure roll, and means for casting off the rear pressure roll, by pressure on said table, separately from the front pressure roll.

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Witnesses:
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