F. A. HART.

TYPE WRITING MACHINE.

APPLICATION FILED AUG. 7, 1916.

1,282,572. Patented Oct. 22, 1918.

FIG. 1.

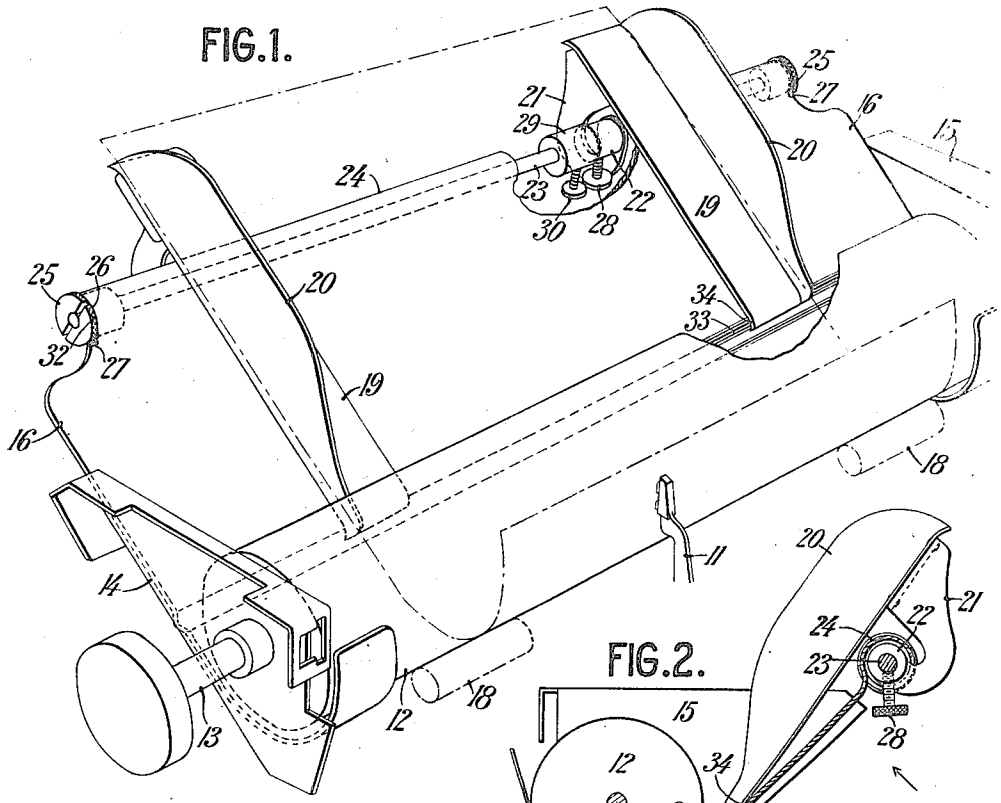
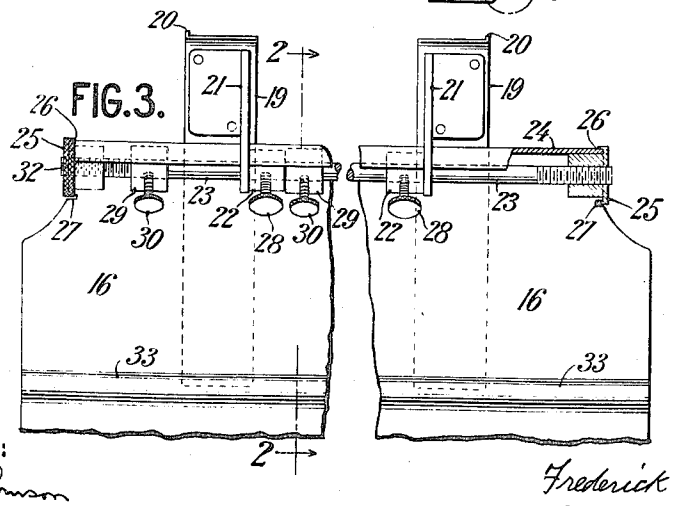



FIG. 2.




FIG. 3.




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## TYPE-WRITING MACHINE.

1,282,572. Specification of Letters Patent. Patented Oct. 22, 1918.

Application filed August 7, 1916. Serial No. 113,440.

*To all whom it may concern:*

Be it known that I, FREDERICK A. HART, a citizen of the United States, residing in Newark, in the county of Essex 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 means for guiding work sheets around the platen of a typewriting machine and more particularly to lateral guides slidably attached to the paper-shelf or table at the introductory side of the platen for guiding the paper as it is advanced around the platen, and for other purposes.

To avoid marring the paper table and to avoid the necessity of providing a mounting for the guides other than the paper table, it has been customary to mount the lateral guides to bear against the inner surface of the rolled rim or bead usually formed on the paper table, said lateral guides being slidable along the paper table to adjust them. It is sometimes difficult to slide the guides along the paper table for adjusting purposes because the japan with which the paper table is finished makes the inner surface of the rolled rim very irregular.

In order to overcome the above difficulty and secure other advantages I mount the lateral guide upon a guide rod supported by the paper table so that no part of the guide engages the paper table except its forward extremity which is behind the platen and therefore invisible, and at this point there is very little pressure of the guide on the paper table, thereby offering very little resistance to the sliding of the guide. The guide rod may be mounted in bushings inserted within the rolled rim of the paper table at its ends. The guides may be provided with means whereby they are secured to the rod and held against movement therealong.

The guide rod may be threaded into the bushings, the latter being preferably provided with knurled ends so that they may be rotated in either direction. The device is readily attachable and detachable to and from the machine.

The invention further provides stop collars whereby the lateral guides may be quickly adjusted to predetermined relative positions, for work sheets of various widths.

In practice it has been found that when the paper is moved backwardly after it has passed beyond the guides, the edge thereof is liable to catch the lower extremities of the guides and foul thereon. To overcome this difficulty, I provide the paper table with a groove into which said extremities extend.

Other features and advantages will hereinafter appear.

In the accompanying drawings;

Figure 1 is a perspective view of the platen and paper table of an Underwood typewriting machine with my invention applied thereto, parts being broken away to show the construction.

Fig. 2 is a section at the line 2—2 of Fig. 3.

Fig. 3 is a view looking in the direction of the arrow of Fig. 2 showing further details of my invention.

In the usual Underwood typewriting machine, types 11 strike upwardly and rearwardly against the platen 12, which is journaled by means of an axle 13 in the ends 14 and 15 of the platen frame which also comprises a plate 16 forming a paper table upon which the sheets are supported as they are introduced into the machine and fed forward between the platen and the usual feed rolls 17 and 18. In order to guide the work-sheets at their side edges, there is provided a pair of lateral guides 19, each having an upturned guiding flange 20.

Each of the guides has an arm 21 fixed to a collar 22 slidably mounted upon a rod 23. The rod 23 is mounted within a rolled rim 24 of the paper table by means of clamping nuts or bushings 25, threaded on the ends 31 of the rod and fitting in the ends of the rolled rim. Flanges 26 on the bushings 25 engage the end edges of the rolled rim 24 and hold the rod 23 firmly within the rim. The paper table is cut out at 27 to receive the flanges 26 which may project inwardly to surround the outer ends of the rolled rim 24 and assist in holding the rod 23 firmly.

In order to prevent the paper table from being marred, the arms 21 are hook shape and arranged to hold the lateral guides 19 out of contact with the paper table except at the forward extremities of the guides which are behind the platen and thus out of sight.

The collar or hubs 22 on which the lateral

guides are mounted, are provided with thumb screws 28 by which the guides may be secured to the rod 23.

Where the operator uses work sheets of specified different widths, as for example, sheets 10 inches and 8 inches in width respectively, the adjustments of the guides to these various widths of paper may be secured mechanically, by providing upon the rod 23 limiting stops which may be in the form of collars 29 on each side of one or both of the collars 22 upon which the lateral guides are mounted. Assuming for example that the guides as shown in Fig. 3 are adjusted for 8 inch paper, and the operator desires to use 10 inch paper, the thumb screw 28 of the left hand lateral guide is loosened and the guide slid along outwardly until arrested by the outer limiting collar 29. The guides are now in position to receive the 10 inch paper, assuming that the collar 29 has been previously set for paper of this width. These collars 29 are slidably mounted upon rod 22 and each provided with a thumb screw 30 by which it may be secured to the rod 23.

The rod 23 and guides 19 may readily be removed as a unit from the machine by unscrewing one of the bushings 25 and withdrawing the rod endwise while the guides are clamped thereto.

Should it be desired to adjust the lateral guides simultaneously in either direction lengthwise of the platen, the bushings 25 may be rotated so as to move the rod and the guides secured thereto in either direction. The bushings 25 may be provided with knurled surfaces 32 for rotating them. For instance, should it be desired to move the guides to the left, the bushing at the right-hand side would be unscrewed, and the bushing at the left-hand side screwed up, thereby moving the rod leftwardly.

In order to prevent the bottom edge of the paper from striking against the bottom edge of the lateral guide when the platen is rotated backwardly the paper table 16 is provided with a U-shaped groove 33, into which the inwardly bent or curved lower end or tip 34 of the paper gage extends. This groove 33 is formed with an inclined or curved surface 35 so that in inserting the paper into the machine, the leading edge thereof cannot catch at said groove but will pass freely over the groove. If the sheet has passed beyond the lateral guides and is moved backwardly the end of the sheet will engage with the curved surfaces 34 and ride up on the guides.

Thus it will be seen that the paper may pass freely from the paper to the guides and from the guides to the paper table.

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 of a paper table having a U-shaped groove therein, and a lateral guide having a tip bent down into said U-shaped groove.

2. The combination of a paper table, a rod mounted thereon, a lateral guide adjustable along said rod, and collars mounted on said rod at either side of the lateral guide and adjustable therealong for limiting the movement of the lateral guide.

3. In a typewriting machine, the combination with a paper table, of a lateral guide, a rod mounted on said paper table, said lateral guide being slidable on said rod, means by which the guide may be fastened to said rod, and collars adjustable along said rod to restrict the range of movement of the lateral guide, said collars being also provided with securing means.

4. In a typewriting machine, the combination with a paper table, of a rod adjustably mounted on said paper table, a lateral guide adjustably mounted on said rod, and limiting collars mounted on either side of the lateral guide.

5. In a typewriting machine, the combination with a paper table, of a rod adjustably mounted thereon, a lateral guide adjustably mounted on said rod, and limiting collars mounted on opposite sides of the lateral guide, said limiting collars being adjustable along said rod.

6. In a typewriting machine, the combination with a platen and a paper table extending rearwardly from the introductory side of the platen, the rear edge of said table being rolled to form a hollow rim, a rod mounted in said rim, bushings screwthreaded on said rod and fitting into the ends of said rim, said bushings having flanges to engage the ends of said rim, paper guides overlying said table, and collars mounted on said rod and secured to said guides, said collars adjustable along the rod to adjust the guides to different positions over the paper table.

7. In a typewriting machine, the combination with a platen and a paper table extending rearwardly from the introductory side of the platen, the rear edge of said table being rolled to form a hollow rim, a rod mounted in said rim, bushings screwthreaded on said rod and fitting into the ends of said rim, said bushings having flanges to engage the ends of said rim, paper guides overlying said table, collars mounted on said rod and secured to said guides, said collars adjustable along the rod to adjust the guides to different positions over the paper table, and stops mounted on said rod on opposite sides of a collar to limit the adjustment of the collar in either direction.

8. In a typewriting machine, the combination with a paper table, of guides for the side

edges of a work-sheet on the table, said guides overlying the table, a rod on which said guides are mounted, said rod having screwthreaded portions, and bushings threaded on said portions, said table provided with sockets to receive said bushings, said bushings rotatable in their sockets for adjusting the rod in the direction of its length and thereby adjusting the guides.

9. In a typewriting machine, the combination with a paper table, of guides for the side edges of a work-sheet on the table, said guides overlying the table, a rod on which said guides are mounted, said rod having screwthreaded portions, and bushings threaded on said portions, said table provided with sockets to receive said bushings, said bushings rotatable in their sockets for adjusting the rod in the direction of its length and thereby adjusting the guides, said bushings each provided with a knurled head by which it may be manually rotated.

10. In a typewriting machine, the combination with a roller platen, of a paper table at the introductory side thereof, the outer edge of said table being rolled to form a hollow rim or bead, a rod mounted in said rim, means for clamping said rod in position comprising a nut or bushing threaded on the end of the rod to be set up against the end of the paper table, guides for the lateral edges of a work-sheet, said guides overlying the table, and means to connect said guides to said rod, said clamping nut being removable, and said rod and guides being bodily removable as a unit from the machine by an endwise movement of the rod from said table when said nut has been removed.

11. In a typewriting machine, the combination with a roller platen, of a paper table at the introductory side thereof, the outer edge of said table being rolled to form a hollow rim or bead, a rod mounted in said rim, means for clamping said rod in position comprising a nut or bushing threaded on the end of the rod to be set up against the end of the paper table, guides for the lateral edges of a work-sheet, said guides overlying the table, and means to connect said guides to said rod, said connecting means comprising collars on said rod and connecting brackets attached to said collars and guides and holding the latter out of contact with the paper table except at the inner or bottom edge of said guides.

12. In a typewriting machine, the combination with a roller platen, of a paper table at the introductory side thereof, the outer edge of said table being rolled to form a hollow rim or bead, a rod mounted in said rim, means for clamping said rod in position comprising a nut or bushing threaded on the end of the rod to be set up against the end of the paper table, guides for the lateral edges of a work-sheet, said guides overlying the table, means to connect said guides to said rod, said connecting means comprising collars on said rod and connecting brackets attached to said collars, and guides and holding the latter out of contact with the paper table except at the inner or bottom edge of said guides, said collars being slidable on the rod lengthwise thereof for adjusting the guides along the table, and set screws to clamp said collars in adjusted position on the rod.

13. In a typewriting machine, the combination with a roller platen and a paper table at the introductory side of the platen, of guides for the work-sheets, said guides overlying the table in position to engage the side margins only of the work-sheets, a support on which said guides are mounted, said support removably mounted on the said table whereby said guides and support may be bodily removed as a unit from the table, means for adjusting the support and thereby adjusting the guides laterally, and means to individually adjust the guides laterally on said support.

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Witnesses:
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