April 8, 1924. 1,489,855

J. A. B. SMITH

TYPEWRITING MACHINE

Filed Sept. 29, 1920

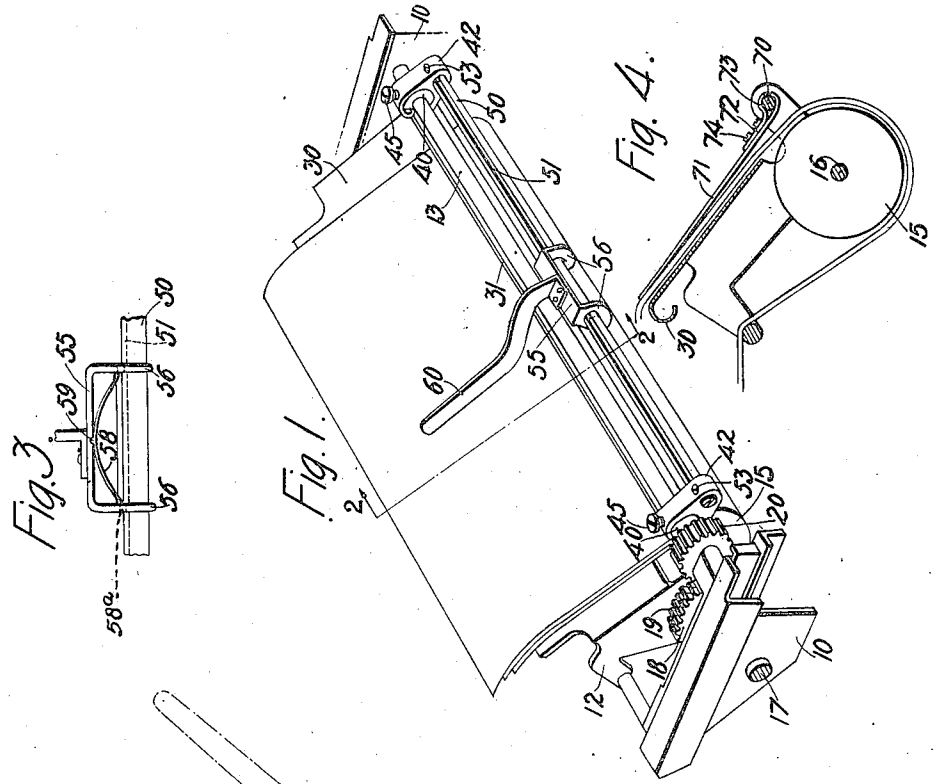


Fig. 1.

Fig. 3.

Fig. 4.

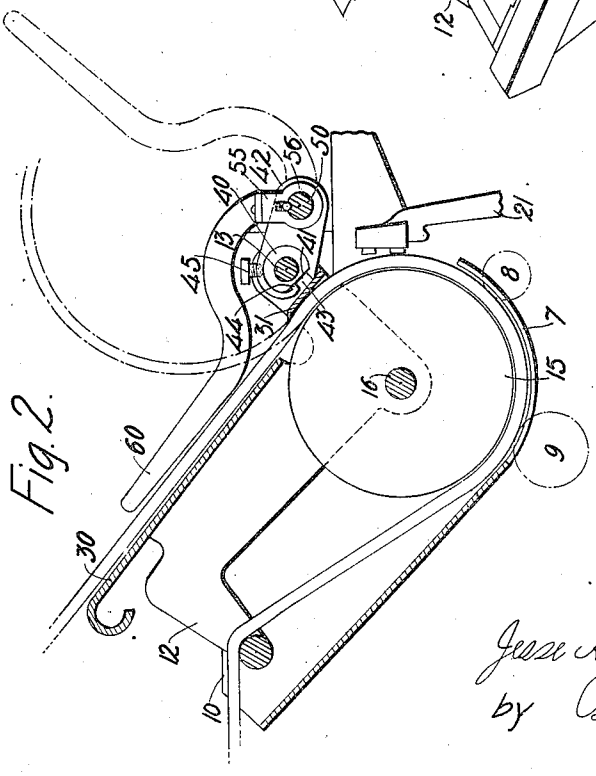


Fig. 2.

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UNITED STATES PATENT OFFICE.

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TYPEWRITING MACHINE.

Application filed September 29, 1920. Serial No. 413,476.

To all whom it may concern:

Be it known that I, JESSE A. B. SMITH, a citizen of the United States, residing in Stamford, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Typewriting Machines, of which the following is a specification.

This invention relates to improvements in typewriting machines, more particularly machines of the type known as Underwood fan-fold or continuous billers.

In a machine of this type, it is customary to use layers of work-webs fed to the machine from reels at the rear thereof, or from a cross-folded pack, and when such work-webs with interleaved carbons are fed around the platen there is frequently a tendency for the sheets to curl forwardly and downwardly from the guide-shelf or paper-table on the platen-displacing frame at the delivery side of the platen and over the front of the platen to obstruct the view of the work by the typist.

According to the present invention, provision may be made of a guide-finger mounted on the platen-displacing frame and normally resting adjacent the front table or guide-shelf. It will be understood that, by so mounting the guide-finger, it is possible to avoid such interference with the swinging of the platen-displacing frame as would arise if the guide-finger were mounted on the front rail of the carriage.

To permit movement of the work-sheets from the front paper-table, for severing them, or for making the underneath sheets accessible for erasures, the guide-finger may be shiftable to ineffective position.

Provision may also be made for adjusting the guide-finger to different positions longitudinally of the platen.

Other features and advantages will hereinafter appear.

In the accompanying drawings,

Figure 1 is a perspective of the device applied to a standard billing machine (shown in part only).

Figure 2 is a section taken on the line 2—2 of Figure 1.

Figure 3 is an enlarged detail showing the mounting of the finger-supporting slide-member on the rod.

Figure 4 is a section, similar to Figure 2, of a modification.

The drawings show a carriage having end-walls 10 between which is supported a swingable platen-displacing frame 12, which, as herein disclosed, is fixed upon and rotatable about rock-shaft 13 pivoted in the end-walls. A platen 15, having an adjacent apron 7 and pressure-rolls 8, 9, is mounted upon a shaft 16 journaled in the swinging frame and is operable from the outer end of the carriage by a shaft 17 through the usual train of gears 18, 19 and 20, whose well-known function is explained in the Wernery & Smith Patent, No. 1,132,055, granted March 16, 1915. Types 21 are arranged to strike the platen in the ordinary manner. The swinging frame also carries the usual web-supporting and guiding shelf 30 and a tearing knife 31, as in said patent.

Mounted on the rock-shaft 13 near each end is a collar 40 fixed to the adjacent end of the frame 12 and having a portion of its periphery flattened as at 41. End bracket-members 42 are provided with rear cut-away portions 43 large enough to permit the shaft 13 to enter therein, said cut-away portions leading into larger cut-out portions of a size to permit the brackets to fit on the collars 40. The cylindrical portion of each bracket terminates at the cut-away portion in an upturned edge or lip 44 which co-acts with the flattened portion 41 to prevent turning of the bracket relatively to the collar. Each bracket is further fixed to the collar by means of a screw 45 passing through the bracket and contacting with the collar. It will be apparent from the above construction that the brackets must be applied to the shaft 13 to one side of the collars, since the openings 43 permit the shaft, but not the collars, to pass therethrough. Having been applied to the shaft, the brackets are then slid over the collars which fit into the larger cut-out portions of the brackets.

In the forward ends of the brackets 42 are fixed, by means of screws 53, the ends of a rod 50 running parallel to the shaft 13 and having a lengthwise groove 51. A slide-member 55, having depending ears 56 through which passes the rod 50, is adapted to move lengthwise of

the rod, and carries on its upper surface the forwardly-projecting paper-guiding finger 60 adapted normally to rest adjacent the web-supporting or guide-shelf 30, to check any tendency of the upper written portions of the sheets to curl forwardly. A spring-member 58 fixed to the slide at 59 urges a spline 58a into the groove 51 and tends to hold the slide and finger in effective position. The slide and attached finger may obviously be moved to ineffective position by rotating said slide in a clockwise direction on the rod 50. The guide-finger 60 may be adjusted along the platen by moving the slide 55 along the rod 50.

In the modification illustrated in Figure 4, the grooved rod 50, the slide 55 and attached finger 60 are replaced by a smooth rod 70 about which rotates loosely the members 71 and 72 forming a collar 73, the two parts being fastened together by any suitable means, as at 74. The weight of the finger tends to position it normally against the shelf 30. It may be moved to ineffective position by rotating in a clockwise direction, and may be adjusted along the platen by sliding it on the rod 70.

While I am aware that the front-guiding fingers have been used in machines having paper-shelves upstanding at the delivery side of the platen, still in those machines the platen is not mounted in a swinging frame for displacement upwardly and forwardly, for straightening out the webs, to permit the shifting back of the carbons as in said Wernery & Smith patent. On the contrary, the paper-fingers are mounted directly upon the carriage-frame, where they would form an obstruction in the way of swinging the platen-frame upwardly and forwardly for said purpose. According to the present invention, these difficulties are overcome, and the web is held from curling forwardly from said front paper-table, even though both the table and the platen-frame are displaceable upwardly and forwardly.

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 continuous billing typewriting machine comprising a carriage having end-walls, the combination of a shaft journaled in said end-walls, a swingable platen-displacing frame fixed to said shaft and having a front guide-shelf, and paper-guiding means supported by said shaft and comprising a guide-finger normally resting adjacent said guide-shelf to prevent webs fed from the platen to the front guide-shelf from falling away from the guide-shelf while permitting a free passage along the latter.

2. In a continuous billing typewriting machine comprising a carriage having end-walls, the combination of a shaft journaled in said end-walls, a swinging platen-carrying frame fixed to said shaft and having a front guide-shelf, brackets fixed to said shaft, a rod carried by said brackets and running parallel to said shaft, and a guide-finger supported by said rod and normally resting adjacent said guide-shelf, said guide-finger being adjustable along the platen lengthwise of the rod.

3. In a continuous billing typewriting machine comprising a carriage having end-walls, the combination of a shaft journaled in said end-walls, a swinging platen-carrying frame fixed to said shaft and having a front guide-shelf, brackets fixed to said shaft, a rod fixed to said brackets and running parallel to said shaft, and a guide-finger rotatably supported by said rod and normally resting adjacent said guide-shelf, said guide-finger being adjustable lengthwise of said rod to adjust it along the platen and adapted to be rendered ineffective by rotating it around said rod.

4. In a continuous billing typewriting machine comprising a carriage having end-walls, the combination of a shaft journaled in said end-walls, a swinging platen-carrying frame fixed to said shaft and having a front guide-shelf, brackets fixed to said shaft, a rod fixed to said brackets and running parallel to said shaft, said rod having a longitudinal groove on its periphery, a guide-finger supported by said rod and normally resting adjacent said guide-shelf, said guide-finger being adjustable along the platen lengthwise of the rod, and means, including a spring fixed to said guide-finger, co-operating with said groove to maintain the guide-finger in normal position, the guide-finger being arranged to be rendered ineffective by rotating the guide-finger about the rod.

5. In a continuous billing typewriting machine comprising a carriage having end-walls, the combination of a shaft journaled in said end-walls, a swinging frame fixed to said shaft and having a front guide-shelf, collars attached to said shaft, brackets having cut-away portions adapted to receive said collars, means for fixing the brackets on the collars, a rod fixed in said brackets and running parallel to said shaft, and a finger-piece supported by said rod and normally resting adjacent said guide-shelf, said finger-piece being adjustable lengthwise of the rod.

6. In a continuous billing typewriting machine comprising a carriage having end-walls, the combination of a shaft journaled in said end-walls, a swinging frame fixed to said shaft and having a front guide-shelf, collars attached to said shaft and each having a portion of its periphery flattened, brackets

having cut-out portions forming cylindrical surfaces adapted to receive said collars, a portion of each of said cylindrical surfaces large enough to permit the shaft to pass therein being cut away, means for fixing the brackets relatively to the collars comprising an upturned lip on said cylindrical surface adjacent the cut-away portion and co-operating with the flattened portion of the shaft and screws passing through the brackets and contacting with the shaft, a rod fixed in said brackets and running parallel to said shaft, and a slide member rotatably mounted upon said rod and having a finger-piece fixed thereto, said slide member and finger-piece being adjustable lengthwise of the rod, and said finger-piece normally resting adjacent said guide-shelf and adapted to be rendered ineffective by rotating the slide member on said rod.

7. In a continuous billing typewriting machine comprising a traveling carriage, a platen-displacing frame swingably mounted in said carriage and comprising a guide-shelf at the delivery side of the platen, a rod fixed to said platen-displacing frame at the front thereof and extending parallel to the platen, a guide-finger mounted to swing about said rod and to be displaced with said frame, and a spring-detent device to yieldably detain said guide-finger adjacent said guide-shelf to guide work-webs along the shelf when fed thereto by the platen.

8. In a continuous billing typewriting machine comprising a traveling carriage, a platen-displacing frame swingably mounted in said carriage and comprising a guide-shelf at the delivery side of the platen, and a guide-finger normally adjacent said guide-shelf, to guide therealong work-sheets fed thereto by the platen and mounted on the forward part of said platen-displacing frame for displacement therewith and for movement to an ineffective position to permit the work-sheets to move away from the face of said guide-shelf.

9. In a continuous billing typewriting machine comprising a traveling carriage, a platen-displacing frame swingably mounted in said carriage and comprising a guide-shelf at the delivery side of the platen, a work-severing knife extending across the face of the guide-shelf, and a guide-finger normally adjacent said guide-shelf above the knife, to guide along the guide-shelf work-sheets fed thereto by the platen, the guide-finger being pivoted on the displacing frame below the knife and therefore mounted both for movement about the same axis as the platen-displacing frame to be displaced therewith, and for movement relative to the platen-displacing frame to ineffective position to permit the work-sheets to be moved away from the face of said guide-shelf and drawn against the knife for severing.

10. In a continuous billing typewriting machine comprising a traveling carriage, a platen-displacing frame swingably mounted in said carriage and comprising a guide-shelf at the delivery side of the platen, a work-severing knife extending across the face of the guide-shelf parallel to the platen, and a guide-finger normally adjacent said guide-shelf to guide work-webs therealong, said guide-finger pivoted on the forward part of said platen-displacing frame for swinging movement about a horizontal axis, the arrangement being such that the guide-finger may be moved in unison with the displacing frame when the latter is displaced, and may be swung away from the guide-shelf to ineffective position by the drawing forward of the work against the knife in the work-severing operation.

11. In a continuous billing typewriting machine comprising a traveling carriage, a platen-displacing frame swingably mounted in said carriage and comprising a guide-shelf at the delivery side of the platen, and a finger mounted on the forward part of said platen-displacing frame and extending along said guide-shelf to guide therealong work-sheets fed thereto by the platen.

12. In a continuous billing typewriting machine comprising a traveling carriage, a platen-displacing frame swingably mounted in said carriage and comprising a guide-shelf at the delivery side of the platen, a rod fixed to said platen-displacing frame at the front thereof and extending parallel to the platen, and a guide-finger mounted on said rod for adjustment therealong and extending along said guide-shelf to guide along the guide-shelf work-sheets fed thereto by the platen.

13. In a typewriting machine, a shaft, a collar thereon having a flat at one side, and a bracket having a collar to fit over the first collar, the second collar being provided at one side with an opening to receive the shaft, so that the second collar may be placed around the shaft and moved along the shaft to position on the first collar.

14. In a typewriting machine, a traveling carriage, a platen therein, a guide-shelf at the delivery side of the platen, a work-severing knife at the delivery side of the platen between the guide-shelf and the position of the operator, and a guide-finger normally adjacent said guide-shelf above the knife to guide work-webs therealong, said guide-finger mounted for swinging movement in a direction substantially at right angles to the plane of the guide-shelf to an ineffective position; the construction and arrangement being such that the guide-finger may be swung away from the guide-shelf to ineffective position by the drawing forward of the work-webs against the knife to sever them.

15. In a typewriting machine, a traveling

carriage, a revoluble platen therein, a guide-finger for engaging the work fed forward at the delivery side of the platen, and means supporting said finger for movement about an axis parallel to the platen axis and for yieldingly detaining the finger in effective or ineffective position; the construction and arrangement being such that the finger may be moved to ineffective position by the drawing forward toward the operator of the upper end of a work-sheet in the machine.

JESSE A. B. SMITH.

Witnesses:
EDITH B. LIBBEY,
CATHERINE A. NEWELL.