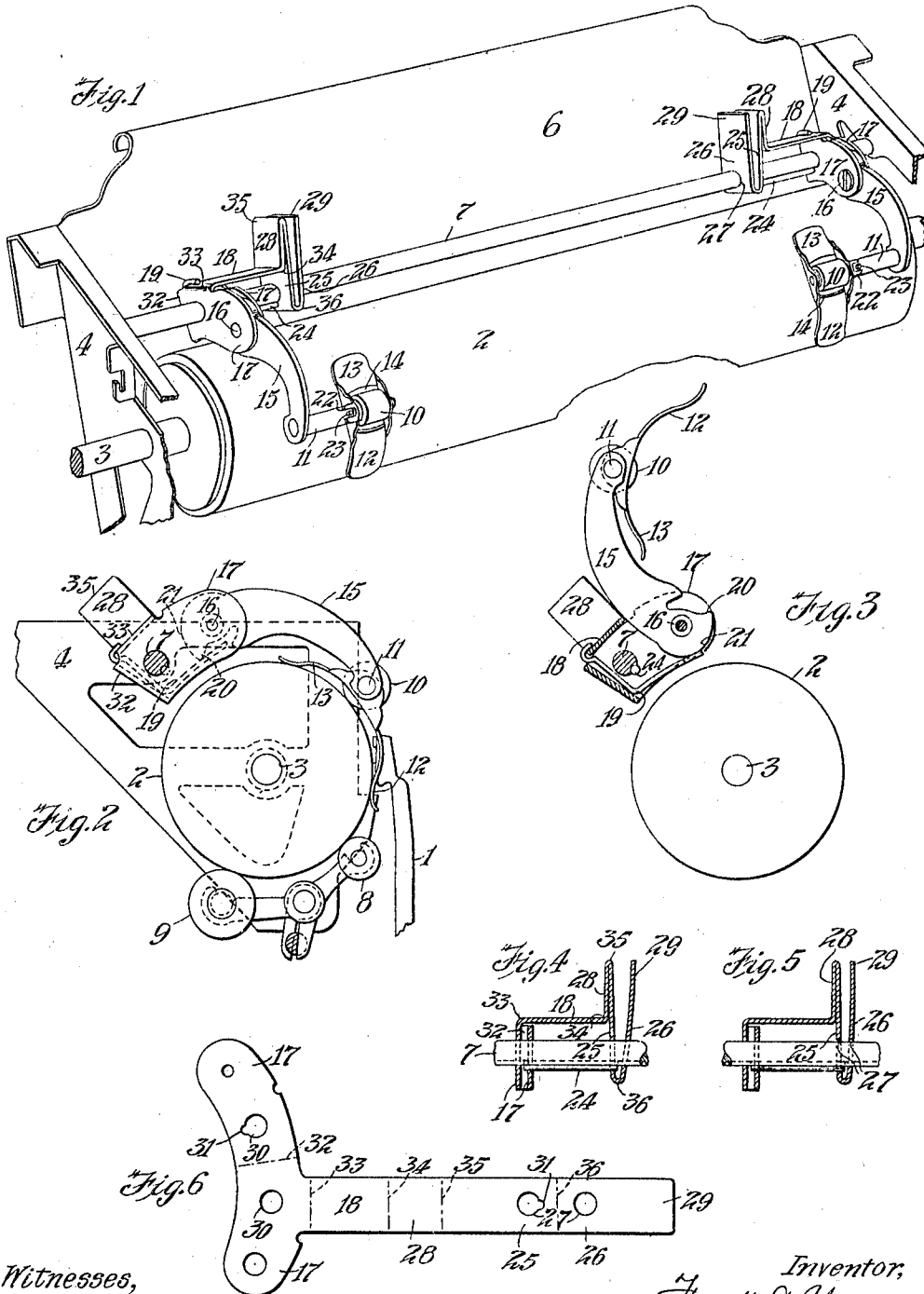


F. A. YOUNG.
TYPE WRITING MACHINE.
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988,531.

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UNITED STATES PATENT OFFICE.

FRANK A. YOUNG, OF NEW YORK, N. Y., ASSIGNOR TO UNDERWOOD TYPEWRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF DELAWARE.

TYPE-WRITING MACHINE.

988,531.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK A. YOUNG, a citizen of the United States, residing in New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention relates to paper-guiding devices for typewriting machines, in which the sheets are fed upwardly in front of the platen, beneath a pivoted guide which adjusts itself to the contour of the platen and conducts the sheets under a guide roll journaled on the pivot supporting the guide and thence backwardly over the platen.

The principal objects of the invention are to improve, simplify and render less expensive this class of devices; and to enable them to be readily adjusted along the platen and firmly held against displacement.

The guide and roll are mounted on an arm hinged to a one-piece bracket splined to a guide-rod, and are pressed toward the platen by a spring engaging the arm. Said spring also holds the arm idle when the latter is cast-off from the platen. The bracket includes a clutch having a pair of spring jaws to bite on the rod and hold the device where adjusted.

In the accompanying drawings, Figure 1 is a perspective showing one form of the invention applied to the platen frame of an Underwood writing machine. Fig. 2 is an end view. Fig. 3 shows the guide cast off. Fig. 4 is a detail section, showing the clip biting on the rod. Fig. 5 shows the clip released. Fig. 6 is a plan of the blank from which the bracket and clip are formed.

Type bars 1 strike a platen 2 fixed on an axle 3 journaled in the ends 4 of a platen frame. Said ends are connected by a paper shelf 6 and a rigidly mounted rod 7. The work sheets are dropped between the paper shelf and platen, from whence they are fed beneath and up in front of the platen by means of rolls 8 and 9 running upon the under face of the platen. As the leading end of the sheet feeds upwardly from the front pressure rolls 8, it is caught beneath a guide 12, 13 which holds it close to the platen surface and leads it under a guide roll 10 which presses the sheet against the platen. After passing the roll, the sheet is led backwardly by the guide 13 over the platen and out of

the machine. There are preferably two of these paper guides to press the opposite margins of the paper against the platen. Each of the guides 12, 13 is pivoted intermediate its ends to a pin 11 to form oppositely extending curved fingers 12, 13 which conform to the platen and adjust themselves to its contour, and to piles of sheets of various thicknesses. The roll 10 is journaled on the same pin and preferably above the guide, which is apertured, as at 14, for the roll. The pin 11 projects laterally from an arm 15 and carries the paper guide and roll at its outer end so that the margin of the sheet may be pressed thereby, while the arm lies out of the path of the sheet. Said arm is hinged at 16 between ears 17 forming the head of a bracket 18 so as to enable the guide and roll to be cast off from the platen. A spring 19 (preferably between the ears 17) bears against a cam 20 on the hinged end of the arm 15 (Fig. 2) to press the roll 10 against the platen. This spring is effective even when the roll is moved to a point far away from the platen so that it is efficient in feeding numbers of sheets. A dwell portion 21 on the arm is engaged by the spring 19 when the arm is cast off from the platen (Fig. 3) to hold the arm idle. A yoke 22 on the guide 12, 13 may embrace a stop 23 on the pin 11 to limit the turning of the guide on its pivot when cast off.

The bracket 18 is splined at 24 on the rod 7 (which passes through apertures 30 in the ears 17) to adjust the guide and roll to sheets of varying widths, said bracket having a clip preferably formed integral therewith, to hold the device where adjusted. The clip may comprise a piece of metal bent or folded to form a clutch comprising two opposed spring jaws 25, 26 having apertures 27 through which the rod 7 passes, said apertures being of slightly larger diameter than the rod to enable the jaws to spring away from each other and bite the rod (Fig. 4). The jaws are released by pinching together the finger-pieces 28, 29, formed by the outer ends of the jaws, to bring the jaws at about right angles to the rod, (Fig. 5); said finger pieces also affording a means whereby to adjust the paper guide along the rod by the same movement of the hand that releases the guide. Preferably, the spline 24 which may extend between the inner ear 17 and the inner jaw

25, being seated in recesses 31 communicating with the apertures 30 and 27 in said ear and jaw respectively, is confined between the outer ear 17 and outer jaw 26.

- 5 The integral bracket may be formed from a sheet-metal blank, (Fig. 6), somewhat T-shaped, as shown, the cross-piece of which is folded over or doubled at 32 to form the pair of ears 17, which are then bent at an angle to the stem of the T-shaped strip, as at 33. The free end of the stem or arm 18 extending from one of said ears is bent upwardly at 34 to form the finger piece 28, thence bent downwardly, as at 35, past the end of the arm 18 and then bent backwardly, as at 36, and upwardly to form the pair of opposing spring jaws 25, 26, and terminating in the second finger piece 29 opposite the first-named finger piece.
- 10 Special attention is called to the extension 18 of the bracket which connects the clutch jaws 25 and 26 with the ear plates 17. This extension holds the jaws 25 and 26 removed a considerable distance from the plates 16 so that the bracket is virtually given a long bearing on the guide rod. In this way the clamp jaws facilitate sliding the bracket along the rod.

Having thus described my invention, I claim:

1. In a typewriting machine, the combination with a platen frame having a guide rod, and a platen, of a bracket splined on the rod, an arm pivoted to the bracket, a spring to press the arm toward the platen, a pin on the arm, a roll journaled on the pin, oppositely extending guide fingers pivoted on the pin, and a stop to limit the movement of the guide fingers.
2. In a typewriting machine, the combination with a platen frame and platen, of a pivotally supported arm, means to press the arm toward the platen, a laterally extending pin on the arm, a roll journaled on the pin, a paper guide pivoted intermediate its ends on the pin, and a stop to arrest the guide.
3. In a typewriting machine, the combination with a platen frame and platen, of a pivotally supported arm, means to press the arm toward the platen, a laterally extending pin on the arm, a roll journaled on the pin, a paper guide pivoted intermediate its ends on the pin, a yoke on the guide, and a stop between the arms of the yoke to arrest the guide.
4. In a typewriting machine, the combination with a platen frame, a platen and a guide rod, of an integral bracket comprising a pair of ears folded together and splined on the rod, a plate extending from one of the ears, the opposite end of the plate being folded at about right angles to itself to form a finger piece, the outer fold of which is extended and bent backwardly

upon itself, to form two spring jaws through which the rod passes, and terminating at its free end in a finger piece opposite the first-named finger piece, an arm hinged to the bracket, and paper holding and guiding means on the arm.

5. In a typewriting machine, the combination with a platen frame, a platen and a guide rod, of a one-piece bracket comprising a lug having a plate and a pair of opposed spring jaws carried thereby, said jaws having finger pieces, an arm secured to the lug, and paper holding and guiding means on the arm.

6. In a typewriting machine, the combination with a platen frame, a platen and a guide rod, of a paper guiding mechanism adjustable along the rod, a pair of spring jaws connected to the mechanism and having enlarged apertures through which the rod passes, the jaws normally diverging from each other to bite upon the rod.

7. In a typewriting machine, the combination with a platen frame and platen, of a bracket having a pair of separated ears of plate form, forming a pocket therebetween, an arm hinged between the ears, paper guiding means on the arm, and a spring mounted in the pocket formed between the ears to press said means toward the platen.

8. In a typewriting machine, the combination with a platen, of a bracket formed from a substantially T-shaped blank, the cross-piece of which is folded or doubled over and bent at about right angles to the stem, to form a pair of ears, the outer end of the stem being bent upwardly to form a finger piece, then downwardly to form a jaw, and thence upwardly to form the cooperating jaw of a clip, and terminating in a second finger piece, the jaws and lugs being apertured, a guide rod passing through the lugs and jaws and upon which the jaws bite, and paper guiding and holding means supported by the lugs.

9. In a typewriting machine, the combination with a platen, of a guide-rod, a paper guide including a bracket slidable on said guide rod, said bracket having a part bent upwardly to form a finger piece, and thence downwardly to form a jaw, and thence upwardly again to form the cooperating jaw of a clip and terminating in a finger piece, the jaws being apertured to accommodate the rod on which they bite.

10. In a typewriting machine, the combination with a platen and a guide rod, of a clip slidable along the rod, one end of the clip being bent downwardly, and thence extended about horizontally to form the body of a bracket, the opposite end of the horizontal part having an integral cross piece extending laterally in both directions, said cross piece being bent downwardly at about right angles to the body of the bracket and

folded over to form lugs which lie about parallel with each other, and paper guiding and holding means supported by the lugs.

11. In a typewriting machine, in combination, a platen frame, a platen, a guide-rod, a bracket mounted on said rod and having a releasable jaw tending to move along the rod and normally jamming said bracket on said rod, and guiding means carried by said bracket.

12. In a typewriting machine, in combination, a platen frame, a platen, a guide-rod, a bracket mounted to slide on said rod having a clutch comprising a pair of spring pressed jaws arranged to bite against said rod by a relative movement along the rod, and paper-guiding means carried by said bracket.

13. In a typewriting machine, in combination, a guide-rod, a bracket having a bearing point on said rod and a releasable clutch for locking said bracket to said rod, said clutch forming a second bearing point on said rod, and guiding means attached to said bracket; said clutch comprising a pair of springy jaws arranged to bite against said rod by a relative movement along the rod.

14. In combination a guide rod, a guide bracket adapted to slide on said guide-rod, comprising a plate bent to form a head, said head having an opening receiving said rod, said plate being bent at another point to form a clutch for biting the said rod to lock said guide bracket thereto; said clutch comprising a pair of springy jaws arranged to bite against said rod by a relative movement along the rod.

15. In a typewriting machine, the combination of a platen frame, a platen, a guide-rod extending longitudinally therewith, a bracket having a head and a releasable clutch removed therefrom along said rod, said head and said clutch having openings receiving said rod, and an arm attached to

said head to guide the paper on said platen; said clutch comprising a pair of springy jaws arranged to bite against said rod by a relative movement along the rod.

16. In a typewriting machine, the combination of a platen frame, a platen, a guide-rod extending longitudinally with said platen, a bracket having a head comprising a plate mounted to slide on said rod, said bracket having a releasable clutch removed from said head sliding on said rod, and also having an extension connecting said clamp with said head, and a pressure arm carried by said head for guiding the paper on said platen; said clutch comprising a pair of springy jaws arranged to bite against said rod by a relative movement along the rod.

17. In a typewriting machine, the combination of a platen frame, a platen, a guide rod extending longitudinally with said platen, a bracket having a pair of integral plates having openings and forming a guide head receiving said rod, said bracket further having a clutch removed from said head along said rod, said clutch being formed of spring-plates tending to jam themselves on said rod, said spring plates having guide openings receiving said rod and guiding said bracket, and means attached to said bracket for guiding the paper adjacent to said platen.

18. In a typewriting machine, in combination, a platen frame, a platen, a guide-rod, a bracket mounted on said guide rod, said bracket comprising a plate bent at one end to form a head and bent at the other end to form spring jaws to clutch the said rod, and paper-guiding means attached to said head.

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Witnesses:

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