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Effinger

[11] **3,900,098**

[45] **Aug. 19, 1975**

[54] **PAPER GUIDE AND SUPPORT FOR FREE PLATEN TYPEWRITER**

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[22] Filed: **Oct. 18, 1973**

[21] Appl. No.: **407,643**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 784,518, Nov. 22, 1968, Pat. No. 3,767,023, which is a continuation-in-part of Ser. No. 594,025, Nov. 14, 1966, abandoned.

[52] **U.S. Cl.** ..... **197/127 R;** 197/143; 197/144

[51] **Int. Cl.** **B41j 11/04;** B41j 13/18

[58] **Field of Search** ..... 197/143, 144, 145, 146, 197/147, 127 R, 129, 133 R

[56] **References Cited**

UNITED STATES PATENTS

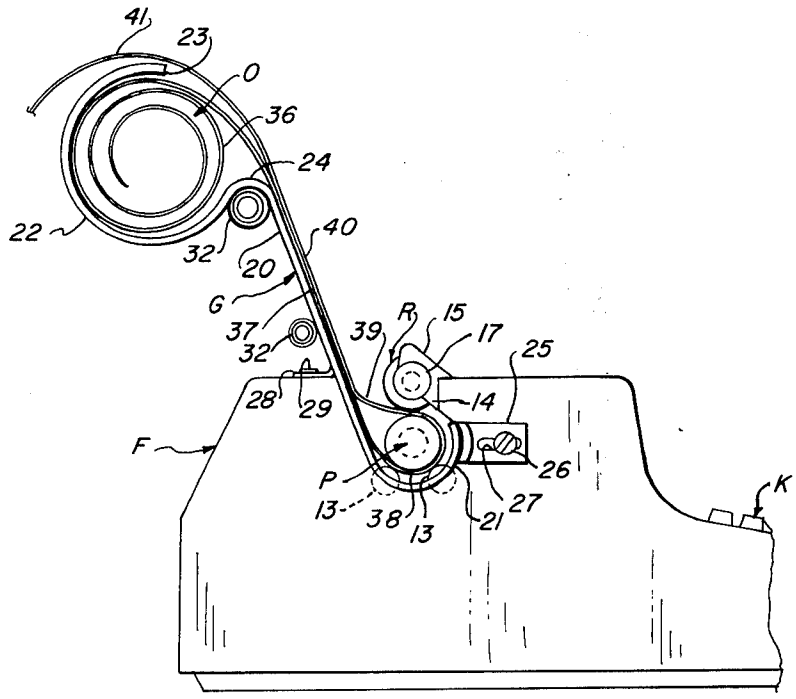
779,408	1/1905	Bruce	197/143
1,099,134	6/1914	Strong	197/129
1,280,678	10/1918	De Clamecy	197/127 R
2,047,359	7/1936	Dayment et al.	197/127 R
2,882,978	4/1959	Smith et al.	172/305 X
3,064,790	11/1962	Emig	197/127 R

Primary Examiner—Clifford D. Crowder
Attorney, Agent, or Firm—Horace B. Van Valkenburgh; Frank C. Lowe

[57] **ABSTRACT**

A paper guide and support, which guides a sheet of paper or the like downwardly to the underside of a platen having free ends and which supports the paper for movement around and away from the platen, as well as when the paper is at an extreme lateral position at either side, includes a planar surface which is wider than the platen support, or wider than a frame on which the platen and its support are mounted, or wider than a carriage on which the platen and its support are mounted. The planar surface merges downwardly into a semicircular curl at each side which is slightly larger in diameter than the platen and which partially surrounds the platen. At its upper edge, the planar surface may curve into a pocket for receiving a roll of the paper, with the upper edge of the pocket being rearwardly of the line of extension of the planar surface, so that paper moving upwardly after passing around the platen will not tend to move into the pocket, but will rather move over the upper edge of the pocket and rearwardly of the typewriter. For a carriage type typewriter, a similar pocket may be used, or the planar surface may merge into a surface which curves upwardly, then downwardly and behind the carriage.

5 Claims, 7 Drawing Figures



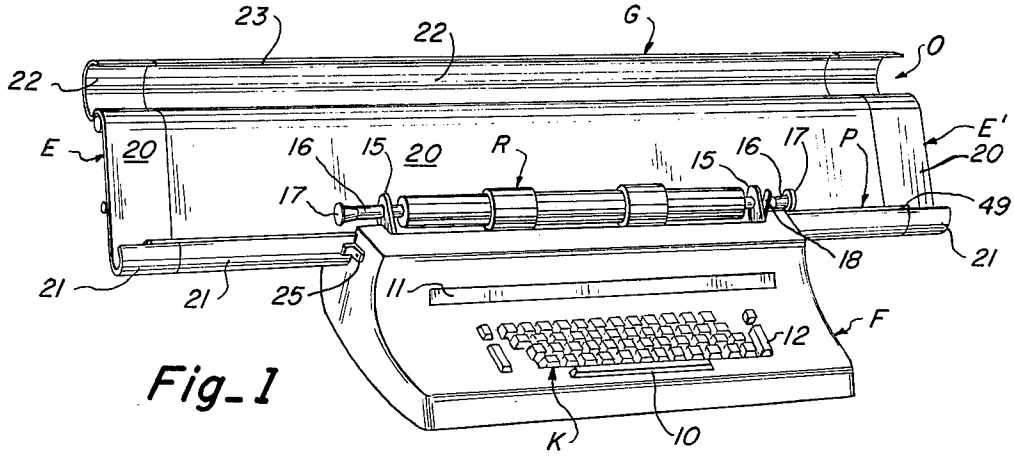


Fig_1

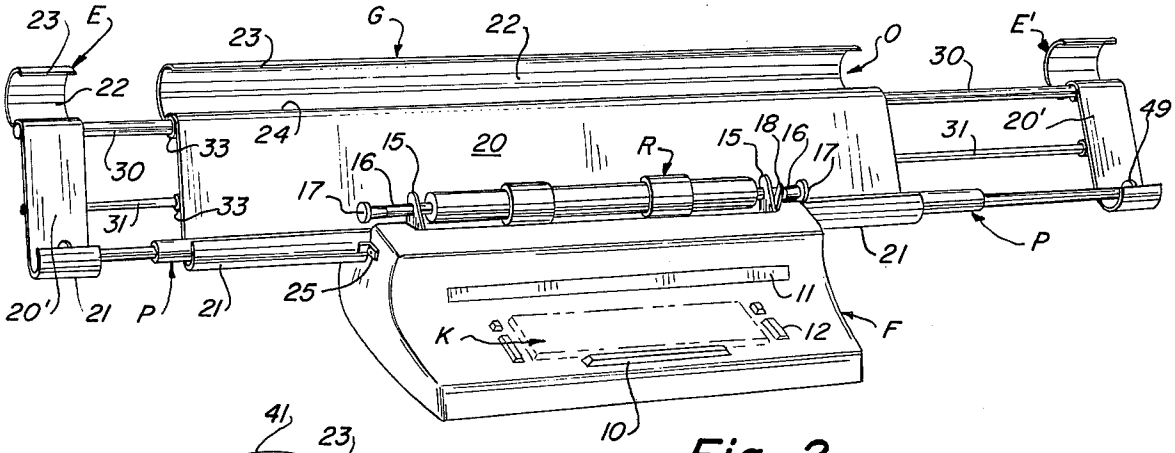


Fig_2

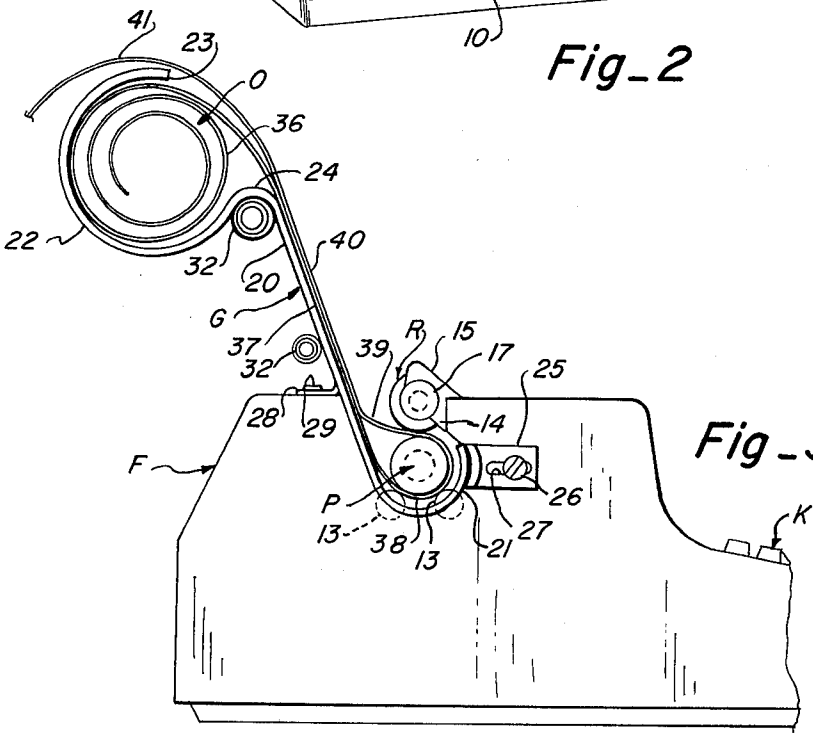


Fig_3

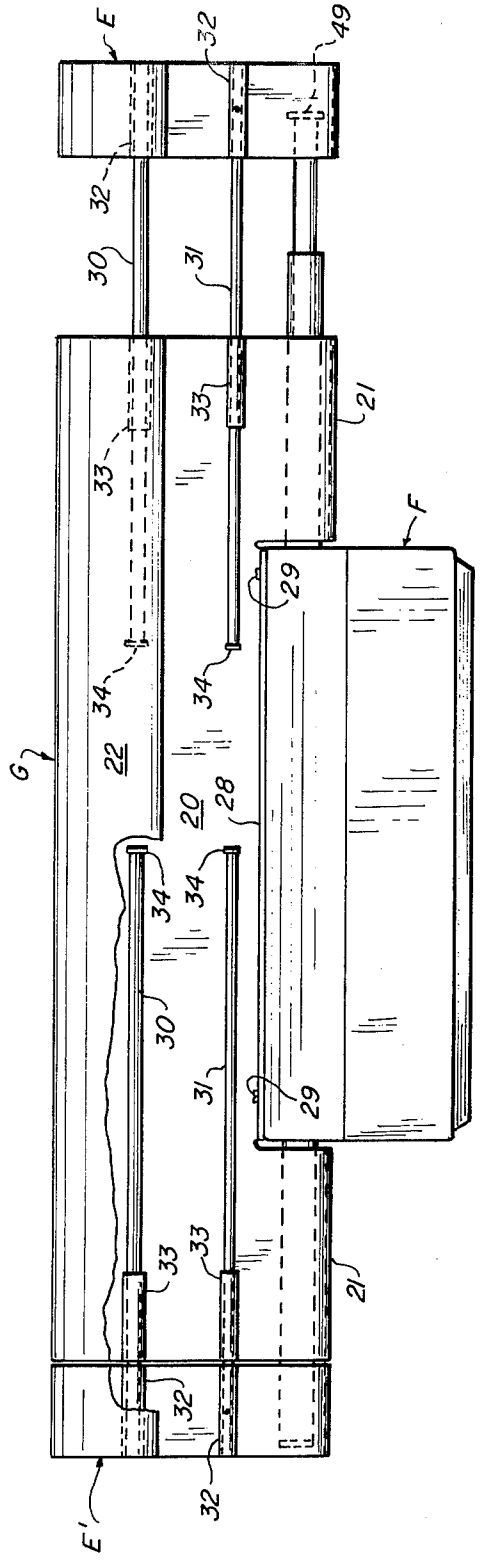


Fig_4

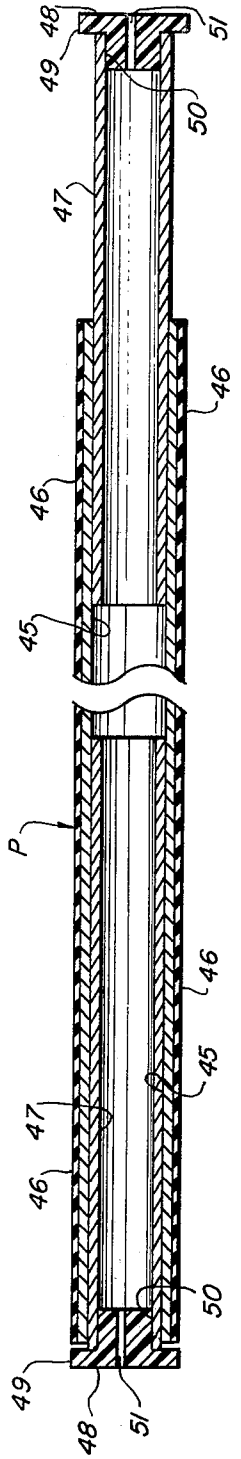


Fig_5

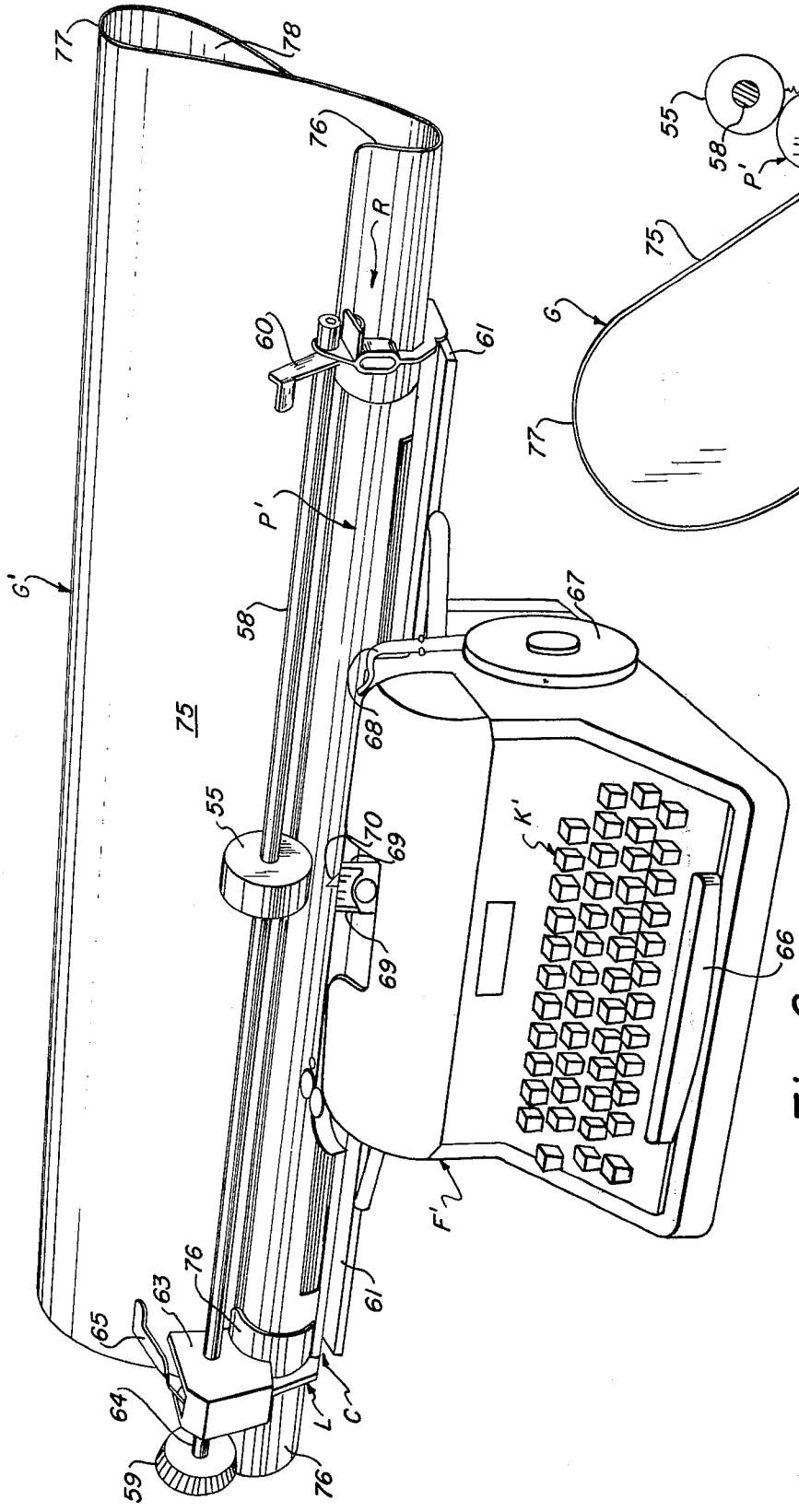

77
78
76
R
60
61
P'
G'
58
75
55
67
68'
70
69
K'
66
F'
63
65
64
59
C
L

Fig-6

76
57
55
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P'
56
75
L
G
77
78

Fig-7

PAPER GUIDE AND SUPPORT FOR FREE PLATEN TYPEWRITER

This application is a continuation-in-part of my copending application Ser. No. 784,518 filed Nov. 22, 1968 for Free Platen Typewriter, now U.S. Pat. No. 3,767,023, in turn a continuation-in-part of my application Ser. No. 594,025 filed Nov. 14, 1966 for Free Platen Typewriter, now abandoned.

This invention relates to paper guides and supports for free platen typewriters, and more particularly to such a paper guide for a typewriter which is adapted to handle large sheets of paper or the like, on which various types of indicia are to be placed, including but not limited to drawings and diagrams.

One embodiment of the paper guide and support of this invention is particularly adapted to be used with a typewriter having a free platen but utilizing a generally spherical typing element which is movable along a stationary platen, such as the well-known "Selectric" typewriter, manufactured by I.B.M. An alternative embodiment of the paper guide and support of this invention is particularly useful for conventional typewriters having a carriage but modified to utilize a free platen. For the alternative embodiment, the typewriter may be provided with a keyboard and type bars similar to those of my U.S. Pat. No. 3,388,781 of June 18, 1968. Also certain of the features of my prior U.S. Pat. Nos. 2,672,228 of Mar. 16, 1954 and 2,904,156 of Sept. 15, 1959, may be utilized.

In conventional typewriters, the width of the sheet of paper or the like, on which numerical or alphabetical characters or other indicia are to be placed, is limited by the distance between end plates supporting the platen and by the relative travel between the paper and the printing element. Whether the paper itself is mounted on a movable carriage or the type elements are mounted to travel laterally, does not affect this limitation on the width of the paper which may be conveniently used. Typewriters have, of course, been made with special carriages of up to 36 inches between end plates, but the limitations still exist at that point. Furthermore, such carriages present many mechanical difficulties, including bulkiness, inertia problems, difficulties of alignment and maintenance, as well as excessive expense in manufacture. Special typewriters, namely the IBM model D (engineering) and the Varityper, have also been made with end openings through which the paper is inserted, in tightly rolled condition, into a circular space and then fed around a fixed platen to the printing area and permitting lateral shifting of the paper. However, these machines present certain paper handling inconveniences, limitations and difficulties which it is the purpose of this invention to overcome.

Among the objects of the present invention are to provide a novel paper guide and support for a typewriter adapted to handle large or small sheets of paper or the like for imprinting indicia thereon, including not only parts of drawings or diagrams, but also legends, instructional or informational material or the like, of either a diagrammatic or alpha-numerical character; to provide such a paper guide for a typewriter which will enable a sheet of paper of any usable width to be handled; to provide such a paper guide for a typewriter which is not provided with a carriage but is provided with a free platen and the width of the sheet on which the indicia are to be placed may be greater than the

frame width; to provide such a paper guide which will allow accurate and convenient aligning or angling of large sheets, including 90° reorientation of such sheets without removal from the paper guide; to provide such a paper guide which will allow typing at each extreme vertical edge of large sheets without sag, feed lag, or fouling at the opposite extreme edge; to provide such a paper guide which will allow convenient frontal insertion of loosely rolled paper into controlled paper feeding position; to provide such a paper guide which will be equally adaptable to the handling of rolled or flat sheets; to provide such a paper guide which will allow adequate visibility of and orientation to substantial areas of large sheets; to provide such a paper guide which will present the least possible friction between the guide and the printing side of the paper; to provide such a paper guide which provides smooth control throughout the course of feeding large sheets into, through, and past the printing area; to provide an alternative paper guide, particularly adapted for use with a typewriter having a laterally movable carriage and a free platen mounted on the carriage but the width of the sheet may be greater than the carriage width; to provide such a paper guide with which the lateral position of the sheet may be readily shifted, with or without removal of the sheet from the typewriter; to provide such a paper guide with which the sheet is adequately supported during movement in the typewriter; to provide such a paper guide which, in each form, may be produced economically; and to provide such a paper guide which, in each form, will coact with the free platen efficiently and effectively.

Additional objects and the novel features of this invention will become apparent from the following description, taken in conjunction with the accompanying drawings, in which:

FIG. 1 is a front perspective view of a free platen typewriter with a movable type element and provided with a paper guide constructed in accordance with this invention;

FIG. 2 is a perspective view of the typewriter of FIG. 1, but with end extensions of the paper guide and platen shown in extended positions;

FIG. 3 is a left end elevation, on an enlarged scale, of the typewriter and paper guide of FIG. 1, with a long sheet of paper placed therein;

FIG. 4 is a rear elevation, on an enlarged scale, of the typewriter and paper guide of FIG. 1, with one end only of the paper guide and platen extended;

FIG. 5 is a longitudinal section, on a further enlarged scale, of the free extensible platen of the typewriter of FIG. 1;

FIG. 6 is a front perspective view of a free platen typewriter having a carriage and provided with a paper guide constructed in accordance with this invention which comprises an additional embodiment thereof; and

FIG. 7 is a fragmentary left end elevation of the carriage of the typewriter of FIG. 6 and showing particularly the alternative paper guide and associated parts.

The free platen typewriter of FIG. 1, having a frame F on which a paper guide G constructed in accordance with this invention is mounted, may be of the type known as "Selectric" manufactured by International Business Machines Corporation, Office Products Division. Thus, the frame F is provided with a keyboard K, as well as a space bar 10, a margin gauge 11 and an on-

off button 12. The typewriter is also provided with a free platen P which has free ends and which is pressed downwardly by a top roller R against a conventional lower roller assembly, which consists essentially of a cradle type structure (not shown) in which are mounted a series of spaced front rollers 13 in longitudinal alignment and a series of spaced rear rollers 13' in longitudinal alignment. However, in order to allow clearance for sheets wider than the frame F, an essentially U-shaped notch 14 is made on both sides of the frame F. The roller R is supported for rotation by brackets 15, being mounted on a shaft 16, with a knob 17 at each end for manually turning the roller. Also, a lever 18 may be utilized to move the roller R and associated parts toward or away from the platen, while a detent mechanism (not shown) may be associated with the shaft in order to turn the roller R manually or automatically from the keyboard K. As will be evident from FIG. 3, the platen P is freely rotatable and has free ends from which the paper may extend outwardly for as great a distance as desired.

In order to guide the paper or other sheet on which the indicia is placed by the conventional spherical typing assembly (not shown) which moves along within the frame beneath the roller R to engage the paper at printing points along the platen P, the paper guide G is mounted on the frame. The guide G includes a planar surface 20 which extends upwardly and rearwardly from a tangent with the platen P and is provided with a curl 21 which is essentially semicircular and is slightly larger in diameter than the platen, to permit the paper to proceed around the curve without binding on the platen. In FIG. 3, the clearance between the platen and curl 21 is exaggerated, for clarity of illustration. An elongated pocket 22 is provided at the upper rear edge of the guide, being partially circular in cross section, with its front upper edge 23 being spaced rearwardly from an extension of the planar surface 20, for a purpose hereinafter described, but the chord of the arc of the opening, as shown, is greater than the radius but less than the diameter of the pocket. The front lower edge of the pocket 22 is connected by an arcuate portion 24 of the paper guide with the planar surface 20. The rear side of notch 14 corresponds to the planar surface 20, so that the portion of surface 20 below the top of the frame may lie alongside the edge of the notch, as does also the curl 21. Of course, the position of the platen may be adjusted, as through adjustment of its supporting rollers, so that it may be desirable to adjust each curl 21. For this purpose, as well as to support the curl and the front of the paper guide, an angular bracket 25 may be attached to each curl 21 and secured to the respective side of the frame F by a screw 26. A slot 27 in bracket 25, through which screw 26 passes, permits the forward and rearward adjustment of a curl 21. Also, it may be desirable to adjust the entire paper guide forwardly or rearwardly, so that a rear flange 28 which extends rearwardly from surface 20 and along the top of frame F, as in FIG. 4, and is attached thereto by screws 29, may also be provided with transverse slots permitting such adjustment. In order to accommodate paper of extreme width, without the paper guide taking up an undue amount of space when papers of such width are not being used, the guide may be provided at each end with an extension E or E'. The extensions E and E' are shown as abutting the remainder of the guide G in FIG. 1, but in FIG. 2, the extension E is partly extended at the left but extension E' is fully extended at the right. In the rear view of FIG. 4, one extension is abutted and the other extension is partially but not fully extended.

Each extension E or E' is formed with a configuration identical to that of the remainder of the paper guide. Thus, each paper guide G may be molded from a suitable plastic to the necessary width, while a series of end extensions E or E' may be separately molded or cut from a guide G formed for that purpose. Of course, the guide G is molded with a lower center section omitted to accommodate the frame F, as will be evident from FIG. 4. Thus, each end section E or E' will include a planar surface 20, a lower curl 21 and an upper pocket 22. The extensions E and E' are adjustably attached to the remainder of the paper guide, as by an upper support rod 30 and a lower support rod 31. As in FIG. 4, each rod 30 and 31 extends into an attachment tube 32 which is attached in an appropriate position on the rear side of the extension. Also, a slide tube 33 is attached to the rear side of the guide G at a position corresponding to an attachment tube 32, so that the support rods 30 and 31 may be moved inwardly and outwardly within the slide tubes 33 to position the respective extension at a desired location. To prevent either extension E or E' from being accidentally disconnected from the paper guide G, a stop 34 may be placed at the inner end of each of the tubes 30 and 31 to engage the respective slide tube 33, when the desired limit of movement is reached. As will be evident, while the distance each extension E or E' may be moved outwardly is less than one half the width of the paper guide G, this results in the effective width of the paper guide being almost doubled when the extensions E and E' are pulled out to their maximum distance.

As indicated previously, the upper edge 23 of the pocket 22 is spaced rearwardly of an extension of the planar surface 20, while the lower edge 24 of the pocket 22 is arcuate to curve smoothly from the pocket into the plane of surface 20. In addition, an opening O or slot between the upper edge 23 and lower edge 24 of the pocket 22 is sufficiently wide that a roll 36 of paper, which may include the entire length of the paper, rather than only a portion thereof, as shown in FIG. 3, may be placed frontally into the pocket. For proper feed of the sheet from pocket 22, the material is loosely and conveniently rolled starting from the bottom edge with the side to be printed on face up. Thus, the side to be printed on is inside the roll and the top edge of the sheet is on the outside. The roll 36 is then placed directly into pocket 22 with the left edge to the left. The top edge of the paper may then be drawn down along planar surface 20 until engaged between the platen P and the lower support rollers, in the same manner as normal typewriter paper insertion. Thus, the roll 36 of paper in pocket 22 unrolls in clockwise manner, as viewed in the left end elevation of FIG. 3. After engagement of the leading edge of the sheet with platen P, the platen may then be turned by the upper roller R and since the platen also turns the lower rollers 13 and 13', the paper will wind around the platen. In doing so, the paper is guided by the curl 21 at each side of the frame F. The edge of the paper then moves up between the platen and the roller R. The initial edge of the paper may be spaced, as desired, in relation to the typing element and as typing progresses along the paper and the paper is turned around the platen by the roller R, the

paper will extend rearwardly and upwardly, with a portion 37 of the paper against the planar surface **20,** a portion 38 around the platen, thence beneath the roller R and a portion **39** extending from the roller R toward the surface **20.** As movement of the paper progresses, a portion **40** of the paper will move upwardly along the downwardly moving paper portion **37.** When the edge of the paper reaches the upper edge of planar surface **20,** it will tend to move upwardly and rearwardly in a straight direction, due to travelling along the paper portion **37,** which, in turn, is moving downwardly along the planar surface **20.** Thus, due to the rearward spacing of the upper edge **23** of pocket **22,** from an extension of the planar surface **20,** a portion **41** of the paper will move past edge **23** to fall downwardly behind the typewriter. This spacing is an important feature of this invention, since it permits the opening O to be wide enough to permit a roll of paper of desirable size to be placed in pocket **22,** but overcomes the tendency for paper coming back up the guide to reenter the pocket. The leading edge proceeds freely, without being forced into the confinement of a "pick up" roll or other such containment, a maneuver which involves resistance to paper movement, is complicated and costly to contrive mechanically, and which serves little purpose in any case, since the paper must eventually be rerolled with the top edge out. Normally, the procedure for removal or reorientation of paper in the use of a guide of this invention is to feed or draw the paper out over the top of the paper guide and manually reroll the paper from the lower edge as it emerges from the platen, using the general structure of the guide and particularly the top curve near the edge **23** as a support. This can be done quickly and conveniently with large sheets and the roll is ready for replacement into pocket **22,** either immediately or later.

A certain amount of reverse feeding is feasible when some of the material yet remains rolled in pocket **22,** with manual urging of the paper back into the pocket as necessary. If, however, as in specific instances, a considerable amount of reverse feeding of the paper is called for, then the "flat sheet" method of use of the guide G is recommended, in the same manner as the use of guide G' described below, in which the material is handled over the top of the guide, printing side down, and both the top and bottom edges of the sheet are free. It will be noted that the guide G is constructed with a distance from the lower curl **21** to the upper edge **23** sufficient to allow handling of most sheets over the top of guide G without undue contact with the desk surface behind the typewriter. It will be further noted that such construction of guide G allows visibility of and orientation to a considerable portion of a large sheet. As will be evident, when it is necessary to turn the leading edge of moving paper essentially 180° or more against gravity and in short radius, the paper must be urged by a relatively narrow guideway both outside and inside the radius of the path of the paper. This fact applies in connection with the desirability of avoiding reentry of the leading edge of the paper back into the pocket, and also applies in the coaction of the platen and curl **21,** and the coordinated extension thereof, as a guide to the leading edge of the paper substantially along its length, as described below.

As will be evident, the roll manner of handling the paper produces a minimum of contact between a pressure roller and a printed surface of the paper, which tends to avoid any smudges or the like. As will be evident from FIG. **3,** if the paper has already been typed or printed on and additional typing is to be placed on the paper, the printed side of the portion **37** will move along the planar surface **20,** but the pressure in this area is not very great. Of course, as the paper passes around the lower portion of the platen, it will be engaged at two positions by the supporting rollers for the platen and also at one position by the upper roller R, but in passing upwardly from the roller R, the printed side will be uppermost. Thus, contact with previous typing is reduced to a minimum.

For sheets of paper wider than the frame F, it will be evident that the curl **21** at each side of the platen will cause the paper to curl in substantially the same arc as the platen to prevent folds or the like in the paper, thereby avoiding bunching of the paper. More particularly, the curve in the paper is supported adequately at each side of the platen. For greater widths of sheets, the extension E or E' or both may be moved outwardly, it being evident that a sheet wider than the full width of the paper guide, when both extensions are pulled outwardly to the maximum extent, may be accommodated. However, it is desirable to have a guideway effect at the extensions which influences the paper from the inside, as well as the outside, to make the paper make the turn, to follow around the curl. For this purpose, the platen itself may be extensible, although only a portion thereof need be placed in the curl of each end extension to accomplish the desired purpose of successfully controlling the upward turn of the leading edge of the paper, substantially throughout its width.

The preferred embodiment of an extensible platen is illustrated in FIG. **5.** Thus, the platen P may comprise a hollow tube **45,** as of aluminum, which is provided with a resilient covering layer **46** formed of a suitable material, such as fairly hard rubber. The resilient covering of the platen forms a conventional backing for the paper at the position at which the type characters strike the paper. Relatively thin tubing **45** can be used, since the platen is not subjected to the strain of being supported by bearings at the ends. Inside the tube **45** are a pair of extension tubes **47** which may be collapsed inwardly, so that their inner ends are adjacent the center of the platen, or may be pulled outwardly for any desired distance permitted by their length. Each extension tube **47** carries at its outer end a plug **48** having a circular flange **49** which corresponds in outer diameter to the outer diameter of the covering layer **46.** Each plug **48** is provided with a shoulder **50** which has a diameter to produce a friction fit when the plug is inserted in the outer end of the respective tube **47,** thereby retaining the plug therein. Also, each plug **48** is provided with a hole **51** to permit air to flow inwardly and outwardly through the plug, when the respective tube **47** is being extended or retracted. As will be evident, the circular plug flange **49** may be placed at any position spaced from the remainder of the platen, accommodated by the length of tube **47,** so as to coincide with the position of an adjusted extension E or E' of the paper guide. As will be evident, a suitable stop to prevent complete separation of either tube **47** from the platen may be provided.

As will be evident, with a circular flange **49** within curl **21** of a spaced guide extension E or E', the paper at the extension is forced to move around the same arcuate path as the paper passing around the platen and

within the curls 21 of the guide G proper. Thus, there is little tendency for the paper to flatten instead of curving between the guide G proper and either extension, as well as for a relatively considerable distance outwardly from either extension E or E', if the paper be that wide.

A typewriter having an alternative paper guide G' of this invention, as in FIGS. 6 and 7, is provided with a free floating platen P' which is supported on an open end carriage C and maintained in contact with the sheet of paper or the like by a lower roller assembly (not shown) and an upper roller 55, with the lower roller assembly being a cradle type structure which includes rollers 56 and 57 of FIG. 7. Upper roller 55 is mounted on a rod 58 which is turned by a knob 59, conveniently at the left end. Rod 58, and roller 55 with it, is adjusted toward and away from the platen P' by a lever 60, conveniently at the right end of the carriage. Although the upper roller 55 presses the platen toward the lower rollers 56 and 57, the platen P' is otherwise free floating, i.e. the platen can be shifted laterally or the platen can be removed from the carriage in an upward or endwise direction, when the pressure against the platen P' is released, as by moving the upper roller 55 away from the platen by shifting lever 58. Thus, the sheet of paper or the like can then be shifted laterally, without removal from the carriage C.

It will be noted that the paper is rolled around the platen P', not by turning the platen directly, as in the conventional typewriter, but by turning the upper roller 55. For this reason, the diameter of the upper roller 55 corresponds to that of the platen P', although other ratios of the diameter of the upper roller to the platen may be utilized. As will be evident, the length of the platen and carriage C need be no more than that of a standard, conventional typewriter whose carriage corresponds generally to the frame F' of the typewriter, on which carriage C moves through guide bars 61 on frame F', although it is preferred to use a slightly wider carriage, in order to provide greater width of the area in which indicia may be applied without shifting the paper laterally. The platen P' may comprise a tube, as of aluminum, and a resilient covering layer of a suitable material, such as fairly hard rubber, as described more fully in U.S. Pat. No. 3,767,023. The resilient covering of the platen forms a conventional backing for the paper at the position at which the type characters strike the paper. Relatively thin tubing can be used, since platen P' is not subjected to the strain of being supported by bearings at the ends, but rather is supported by the plurality of lower rollers which provide elongated bearing areas, with the inner lower rollers close to the point of applied force by the upper roller 55.

Carriage C' is also provided with a left end plate L and a right end plate R for mounting rod 58 and other parts, as hereinafter described. Thus, lever 60 and associated parts are mounted on right end plate R, while rod 58 extends into a housing 63 which encloses suitable gearing to which knob 59 is connected by a shaft 64. Housing 63 also encloses a detent which is actuated by a lever 65. On frame F' is mounted a suitable keyboard K', space bar 66 and ribbon spool 67, from which a ribbon 68 is fed past the printing point through a ribbon guide having bars 69. The exact printing point may be indicated to the user by a printing point indicator 70, constructed as in my U.S. Pat. No. 2,904,156.

In further accordance with this invention, the typewriter is provided with a paper guide G' having a generally flat portion 75 which slants upwardly from front to rear, from a point just above and behind the rear lower rollers 56, and a pair of preferably integral curls 76 at each end and flanking the lower roller assembly or support for the platen, each curl 76 being approximately semicircular and having an inside radius slightly greater than the maximum diameter of the platen, as in FIG. 7. A curved top 77 of the paper guide G' may be approximately semicircular but inclined rearwardly so that the sheet will move smoothly thereover, while a rear face 78 curves downwardly and then forwardly underneath, to assist movement of the sheet from or to the surface on which the typewriter is placed. The paper guide G' may also have any other configuration which presents a smoothly curving surface, which guides the paper upwardly from the rear, downwardly to the platen, around the platen, upwardly and rearwardly at the front, then rearwardly over the top of the paper guide, moving over the portion of the sheet concurrently moving forwardly. As will be evident, in general, the sheet inserted around the platen will follow the curvature of the paper guide G'. The end curls 76, particularly, support any overhang of the sheet at each end of the platen and will produce a smooth curve in the sheet laterally from the platen at each end, corresponding to the curve around the platen. Thus, the paper guide G' will support, both for typing and particularly for turning with the platen, a sheet which is much wider than the width of the paper guide itself. When extreme widths of the sheet are being used, such as 5 to 6 feet, and with a paper guide G' approximately 36 inches in width, an extension may be attached to each end of the guide, such as shown in connection with paper guide G of FIGS. 1–4. In the latter event, an extensible platen, such as platen P, would be desirable.

Although preferred embodiments of this invention have been illustrated and described, it will be understood that other embodiments may exist and various changes made therein, without departing from the spirit and scope of this invention.

What is claimed is:

1. A paper guide for a sheet of paper or the like having a width greater than the frame of a typewriter provided with a platen having free ends and means on said frame for supporting said platen, said guide accommodating a sheet of paper or the like having a width greater than said guide, comprising:

means providing a generally planar smooth surface having a width greater than said platen support means, for guiding said sheet downwardly and forwardly to the underside of said platen;

an approximately semicircular curl formed as an extension of said planar surface at each side and extending laterally outwardly from said frame, each curl being adapted to partially surround at least a portion of the length of said platen;

said guide being provided with an extension at each end corresponding in contour to said guide and movable away from said guide for a predetermined distance;

a pair of rods at each end of said guide connected to the respective end extension; and

a sleeve attached to the rear side of said planar surface for receiving each said rod.

2. In a typewriter, a platen having free ends, roller means for engaging said platen at a plurality of positions around the circumference thereof, at least one of said roller means being adapted to turn said platen, including:

a guide for paper to be moved around said platen providing a planar surface leading to said platen and a curl at each side corresponding to a portion of said platen;

an extension at each end of said guide, corresponding in contour to the adjacent portion of said guide and movable away from such adjacent portion; and

an extension at each end of said platen and movable away from said platen, said end extensions having an outer diameter corresponding to said platen.

3. In a typewriter as defined in claim 2 wherein said platen comprises:

a cylindrical tube provided with an outer layer forming a backing for typing on said paper;

a tubular cylindrical member movable inwardly and outwardly within each end of said tube; and

a plug for the outer end of each cylindrical member, each plug having a circular flange corresponding in diameter to said backing layer, a shoulder providing a frictional fit within said cylindrical member and a longitudinal opening for the egress and ingress of air to the interior of said cylindrical members and tube.

4. A paper guide for a sheet of paper or the like for a typewriter provided with a platen having free ends and roller means for supporting said platen, comprising:

means providing an inclined generally planar surface extending downwardly and forwardly to said roller means, said planar surface guiding said paper downwardly and forwardly to said platen;

means, including said supporting roller means, for guiding said paper around said platen and upwardly and rearwardly therefrom, so that the paper moving upwardly will move along a path corresponding to said inclined planar surface;

a pocket at the upper end of said planar surface and rearwardly thereof, said pocket having a front longitudinal opening through which a roll of said paper may be bodily inserted; and

said pocket opening having an upper edge rearwardly of the line of extension of said planar surface so that the paper following movement upwardly along said planar surface will be guided over and above said upper edge of said opening to move above said pocket and rearwardly thereof.

5. A paper guide as set forth in claim 4, wherein:

said pocket is essentially cylindrical; and

the chord of the arc of the longitudinal opening is greater than the radius but less than the diameter of the pocket.

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