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TYPEWRITING MACHINE

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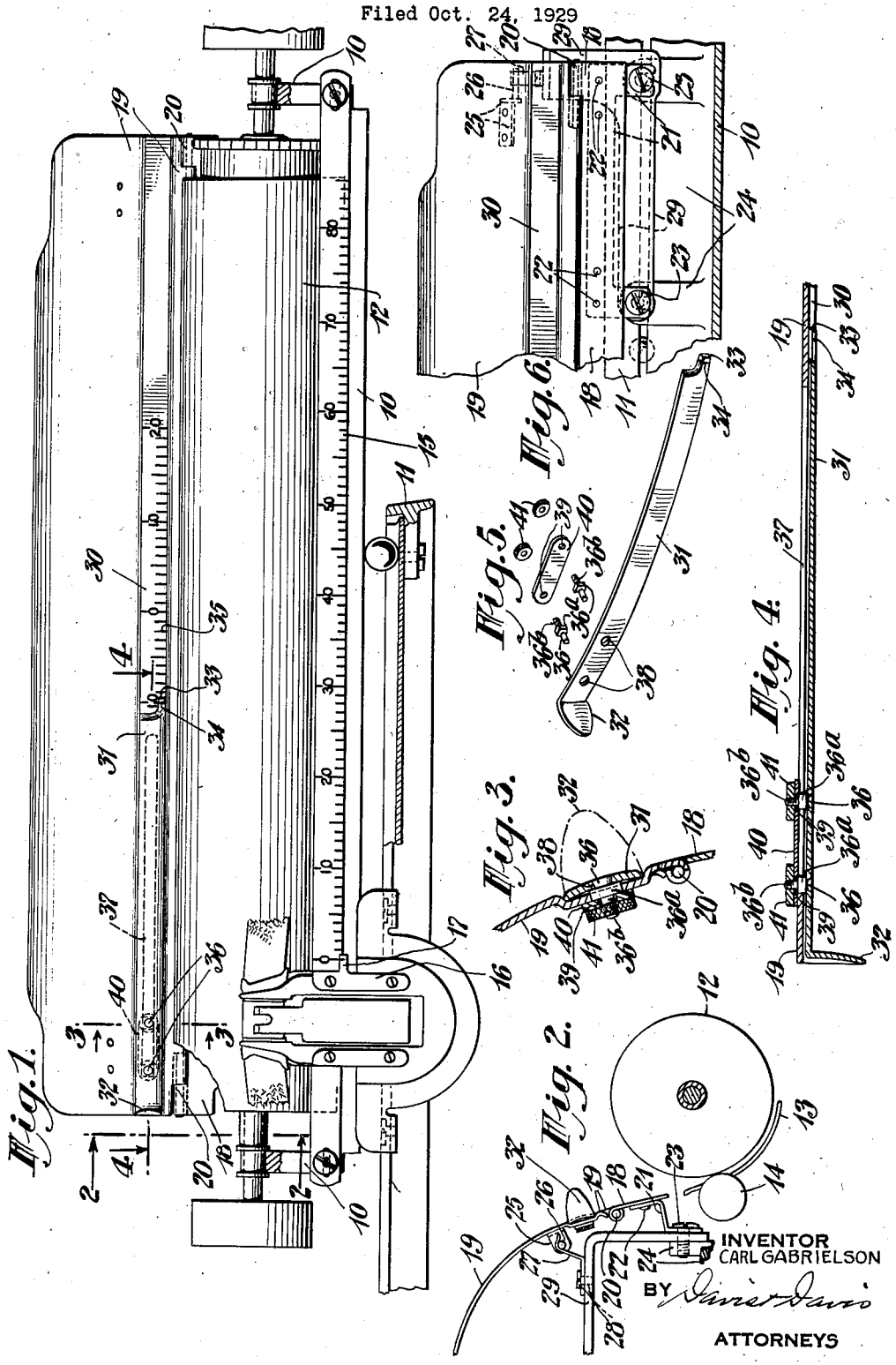

Fig. 1.

Fig. 6.

Fig. 5.

Fig. 4.

Fig. 3.

Fig. 2.

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TYPEWRITING MACHINE

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This invention relates to improvements in tyepwriting machines, and has for its object to provide an improved paper table and side edge gauge for the platen carriage.

The improvements are illustrated as embodied in the L C Smith typewriting machine, and only so much of the machine being shown as is necessary for a full understanding of the present invention and its advantages.

In the drawings:

Fig. 1 is a fragmentary front view of the machine;

Fig. 2 a sectional view on the line 2—2 of Fig. 1;

Fig. 3 a sectional view on the line 3—3 of Fig. 1;

Fig. 4 a sectional view on the line 4—4 of Fig. 1;

Fig. 5 a view showing the parts of the side edge gauge detached; and

Fig. 6 a detail front view showing the right hand portion of the paper table and the adjacent supporting means therefor and the right hand latching means for the hinged section of the table.

The platen carriage 10 is mounted on suitable ball bearings to travel transversely of the main frame 11 and has the usual roller platen 12 journalled thereon. In its passage under the platen the paper is guided by the usual paper guide apron 13, and the usual feed rolls, one of which is shown at 14, are provided. The usual letter space scale 15 is mounted on the carriage, and the usual indicator 16 is fixed on the main frame, said indicator having the finger 17 with a graduation mark co-active with the graduation marks of the carriage scale 15 to indicate the letter space position in which the printing point on the platen is located, as is usual in the L C Smith machine as heretofore constructed.

In the present construction the sheet metal paper table located at the rear of the platen comprises a fixed lower section 18 and an upwardly and rearwardly curved upper section 19 hinged at 20—20 at its lower edge to the upper edge of the fixed table section. Section 18 of the table is supported in an upwardly and rearwardly inclined plane with its upper edge substantially at the same level as the top of the platen by a pair of sheet metal brackets 21 secured by rivets 22 at their upper ends at the rear face of said table section and detachably fastened by screws 23 to the usual rear cross-bar 24 of the platen carriage.

A pair of angular metal latch members 25 are riveted to the rear face of hinged table section 19 adjacent the opposite side edges of said section, and the rearwardly projecting arm of each member carries a laterally projecting metal latch pin 26. Pins 26 are adapted to snap into the downwardly and forwardly facing throats of upstanding spring steel latch hooks 27 to hold the table section 19 in operative position. By pulling forwardly on table section 19 it may be swung downward over the top of the platen to afford easy access to parts located behind and below the paper table. Spring hooks 27 are each fastened at their lower ends by screws 28 to the rearwardly extending arms of one of a pair of angular sheet metal brackets 29 located adjacent opposite ends of the carriage, the pendent arms of brackets 29 being held to carriage cross-bar 24 by the screws 23 which hold the fixed table section to said cross-bar.

The hinged table section 19 is pressed rearwardly from edge to edge along a narrow zone above the level of the top of the platen to form a shallow channel 30 therein extending parallel with the platen. A sheet metal gauge bar 31 is slidably confined in said channel with its outer face flush with the front face of the adjacent portions of table section 19. Bar 31 preferably has a slight permanent transverse curvature, as shown, with the concave face at the rear, and its

upper and lower edges curved or rounded from the rear face to the front face of the bar. This arrangement insures that the upper and lower edges of the bar will seat and remain down in the channel and not project forward beyond the paper supporting and guiding face of the table section. The rounding of the edges of the bar and the rounded corners of the table section along the mouth of the pressed in channel avoid presenting surfaces against which either end edge of a paper sheet can abut in such manner as to impede movement of the sheet either forwardly or rearwardly.

The gauge bar 31 is preferably formed of tempered spring steel with a slight normal curvature lengthwise of the bar, as shown in Fig. 5, so that the bar normally tends to bow outwardly. At its left hand end the bar is permanently bent forwardly at a right angle to form a combined rigid finger piece and side edge abutment 32 for the left hand side edge of the paper sheets or other work pieces introduced into the machine. The permanent transverse curvature of the bar stock, heretofore referred to, serves also to stiffen this combined finger piece and abutment 32.

At its right hand end the gauge bar is cut away from its upper edge to a point adjacent its lower edge to leave a narrow horizontally extending finger 33 having thereon a graduation mark 34 coactive with a scale 35, the graduation marks of which are stamped, or printed or formed in any other suitable manner, on the bottom surface of the gauge bar channel, with the scale numerals located above the level of the upper edge of finger 33 and the scale graduations extending in part above said level. The transverse curvature of the gauge bar, heretofore referred to, also avoids erasure of the scale 35^5 by rubbing of the rear face of the bar over the graduations in adjustments of the gauge bar. The scale 35 is a duplex reversed scale, or a scale with graduations and numerals of progressively increasing value at either side of a zero graduation.

The gauge bar has a pair of small stud bolts 36 rigidly held thereto in spaced relation longitudinally of the bar adjacent the finger piece 32. Each of these stud bolts has a rectangular intermediate guiding portion 36^a engaged in a longitudinal slot 37 in the bottom wall of channel 30 at the left hand portion of said channel, scale 35 being to the right of the slotted portion of the channel. The reduced forward ends of bolts 36 are headed over in forwardly flaring holes 38 in the gauge bar to securely rivet the bolts to the bar. The reduced rear ends 36^b of the stud bolts are screw threaded and project rearwardly beyond the rear face of table section 19, passing loosely through holes 39 in a flat sheet metal clamping and friction plate 40 which straddles slot 37 and bears against the flat rear face of the bottom wall of channel 30 to afford a broad smooth friction clamping surface. Nuts 41 are screwed on the threaded rear ends 36^b of the stud bolts against plate 40 to lock the gauge bar in adjusted position.

The normal longitudinal curvature of the resilient body portion of the gauge bar insures secure frictional clamping of the bar to the paper table against accidental displacement without the necessity of very tightly screwing up nuts 41, so that the bar may be adjusted when desired without loosening the nuts, and it also insures that the free inner or right hand end of the gauge bar will at all times remain seated and countersunk in channel 30 and not curl out to obstruct passage of paper sheets over the table.

The gauge bar and its scale are correlated with the letter space scale of the carriage, as shown, in such manner that the edge of a work sheet engaged with finger piece 32 will, when the carriage is at its "0" letter space position, be ten letter spaces to the left of the printing point when the graduation on the scale bar finger registers with graduation "10" to the left of the "0" graduation of the paper table scale, will be at the printing point when the gauge bar finger graduation is at "0" on the table scale, and will be ten letter spaces to the right of the printing point when the gauge bar finger graduation is at graduation "10" to the right of the "0" graduation of the table scale. The provision of the duplex reverse scale on the paper table correlated as above described with the letter space scale of the platen is advantageous in properly gauging the introduction of wide and narrow work sheets into the machine.

As more clearly shown in Fig. 6, it will be observed that each of the attachment brackets 21 riveted to the table section 18 has two pendent legs each of which is provided with a vertical slot open at the lower end of the leg, and that the screws 23 pass through said slots in the legs of each bracket 21 and the lower ends of the adjacent latch-carrying brackets 29 and are threaded into the rear cross-bar 24 of the platen carriage. The table is thus securely held to the carriage, and may be removed as a unit, without detaching brackets 29, by slightly loosening the two pairs of screws 23.

What I claim is:

1. A paper supporting and guiding means for paper carriages of typewriting machines, comprising a paper table having a depressed portion forming a transverse channel in its paper supporting surface, the bottom wall of which channel is formel with a longitudinal slot adjacent one side edge of the table and also provided with letter space scale indicia between the opposite side edge

of the table and the inner end of the slot, a side edge gauge bar slidable along said channel having its outer face flush with the adjacent paper supporting face portions of the table and having at its outer end an abutment portion projecting above the said surface portions of the table for engagement therewith of a side edge of a work sheet on the table, said bar being provided at its inner end with an index finger coactive with said scale indicia, and clamping means carried by the bar and extending through said slot for frictionally holding the bar in different adjusted positions transversely of the table.

2. A paper support and side edge gauge means for paper carriages of typewriting machines, comprising a paper table having a depressed portion forming a transverse channel in its working face, said channel having a longitudinal slot in its bottom wall, a sheet metal gauge bar of less length than the width of the table having its body portion slidably confined in said channel with its outer face substantially flush with the adjacent working face portions of the table and its outer end permanently bent transversely to provide a combined finger piece and side edge abutment for paper sheets, a pair of stud bolts at the inner face of said bar spaced longitudinally of the bar and rigidly held to said bar, said bolts having guide shank portions adjacent the bar slidably engaged with the two longitudinal edges of the slot and also having reduced threaded shank portions projecting beyond the rear face of the bottom wall of the channel, a sheet metal clamping plate wider than the slot and having apertures through which the threaded shank portions of said stud bolts loosely extend, and nuts screwed upon the threaded shank portions of the bolts and frictionally clamping the bar and plate to said bottom channel wall.

3. A paper support and side edge gauge means as claimed in claim 2, wherein the body portion of the gauge bar is resilient and has a normal tendency to bow outwardly from the bottom wall of the channel.

4. A paper support and side edge gauge means as claimed in claim 2, wherein the bottom wall of the channel is provided with letter space scale indicia on its front face and the body portion of the gauge bar has a permanent bow in transverse section with the concave face of the bar adjacent the scale indicia bearing face of the bottom wall of the channel, and said body portion of the bar is provided with an index means coactive with said scale indicia.

5. A paper supporting and side edge gauging means for platen carriages of typewriting machines, comprising a sheet metal paper table having a depressed portion extending transversely thereof and provided with indicia to form an integral countersunk letter space scale in the working face of the table, and a sheet metal side edge gauge member slidably held to the table to move longitudinally over said countersunk scale, said member having a body portion lying in said depressed portion of the table with its outer surface substantially flush with the working face of the table and having one end bent up to form a combined finger piece and side edge abutment for work pieces, the body portion of the gauge member having an index means cooperative with the indicia of the letter space scale.

6. A paper supporting and side edge gauging means as claimed in claim 5, wherein the body portion of the gauge member is permanently bowed in transverse section to present a concave face to said letter space scale.

7. A paper supporting and side edge gauging means for platen carriages of typewriting machines, comprising a sheet metal paper table having a depressed portion extending transversely thereof and provided with indicia to form an integral countersunk letter space scale in the working face of the table, and a sheet metal side edge gauge member slidably held to the table to move longitudinally over said countersunk scale, said member having a body portion lying in said depressed portion of the table with its outer surface substantially flush with the working face of the table and having one end bent up to form a combined finger piece and side edge abutment for work pieces, the opposite end of said body portion of the gauge member having an index finger projecting therefrom in the direction of its length adjacent one edge thereof and provided with an index graduation coactive with the scale indicia, said scale indicia being so located that they are visible at one longitudinal edge of said finger when in register with said finger graduation.

8. In a typewriting machine, having a main frame and a platen carriage traveling thereon, the combination of a paper table carried by the carriage and extending upward and rearward from the platen, said table having an upper section formed with an integral pressed in letter space scale portion and hinged to the lower section to fold downward and forward over the platen, means on said carriage and hinged section for releasably holding the hinged section in working position, and a side edge gauge slidably held to the hinged section having a body portion slidable over said pressed in scale portion with its outer face substantially flush with the working face of said table section, one end of said body portion having a side edge abutment projecting forwardly beyond the working face of the hinged table section.

9. In a typewriting machine, the combina-

tion of a main frame, a platen carriage on the main frame, a platen on the carriage, cooperative scale and index devices on the carriage and frame for indicating the letter space position of the carriage, a paper table on the carriage having a duplex scale extending lengthwise of the platen and visible above the platen, the scale having indicia of progressively increasing value at opposite sides of an intermediate "0" graduation, and a side edge gauge slidably held to the table for adjusting movements longitudinally of the table scale and having a side edge abutment for work sheets and an index means coactive with the table scale.

10. In a typewriting machine, the combination of a platen carriage, a paper table carried thereby and having a channel in its working face extending transversely of the table with a bottom wall provided with a slot extending longitudinally of the channel, a side edge gauge bar countersunk in said channel and provided at its left hand end with a combined adjusting finger piece and side edge abutment for work sheets, a pair of stud bolts spaced longitudinally of said bar and rigidly secured at their forward ends thereto, a friction plate straddling said slot and engaging the rear face of the table, said bolts having non-threaded shank portions slidably engaging both longitudinal edges of said slot and threaded rear end portions extending loosely through apertures in said friction plate, and clamping nuts threaded on said rear end portions and frictionally clamping the gauge bar and plate to the table.

11. A typewriting machine as claimed in claim 10, wherein the transverse channel in the working face of the table is located above the level of the platen, the bottom wall of said channel has letter space scale graduations thereon, and said bar has an index device coactive with said graduations.

12. In a typewriting machine, the combination of a platen carriage having a rear cross-bar, a paper table at the rear of the platen comprising a lower section and an upper section hinged to the lower section to fold forwardly over the platen, a pair of hook-supporting brackets behind the table, resilient latch hooks held to said brackets, keepers held to the rear face of the hinged table section adapted to snap into the throats of said hooks to hold the hinged table section in normal paper supporting position, attachment brackets secured to the lower table section, and screws passing through both the latch hook brackets and attachment brackets on the lower table section and threaded into said carriage cross-bar.

13. In a typewriting machine, the combination of a platen carriage having a cross-bar behind the platen, a paper table behind the platen, a pair of brackets riveted at their upper ends to said table adjacent opposite side edges of the table, said brackets having pendent legs extending rearwardly and downwardly from the rear face of the table and provided with vertical slots open at the lower ends of said legs, and clamping screws extending rearward through said slots and threaded into said carriage cross-bar.

In testimony whereof I hereunto affix my signature.

CARL GABRIELSON.