983,462.

H. H. STEELE.

TYPE WRITING MACHINE.

APPLICATION FILED OCT. 7, 1909.

Patented Feb. 7, 1911.

2 SHEETS—SHEET 1.

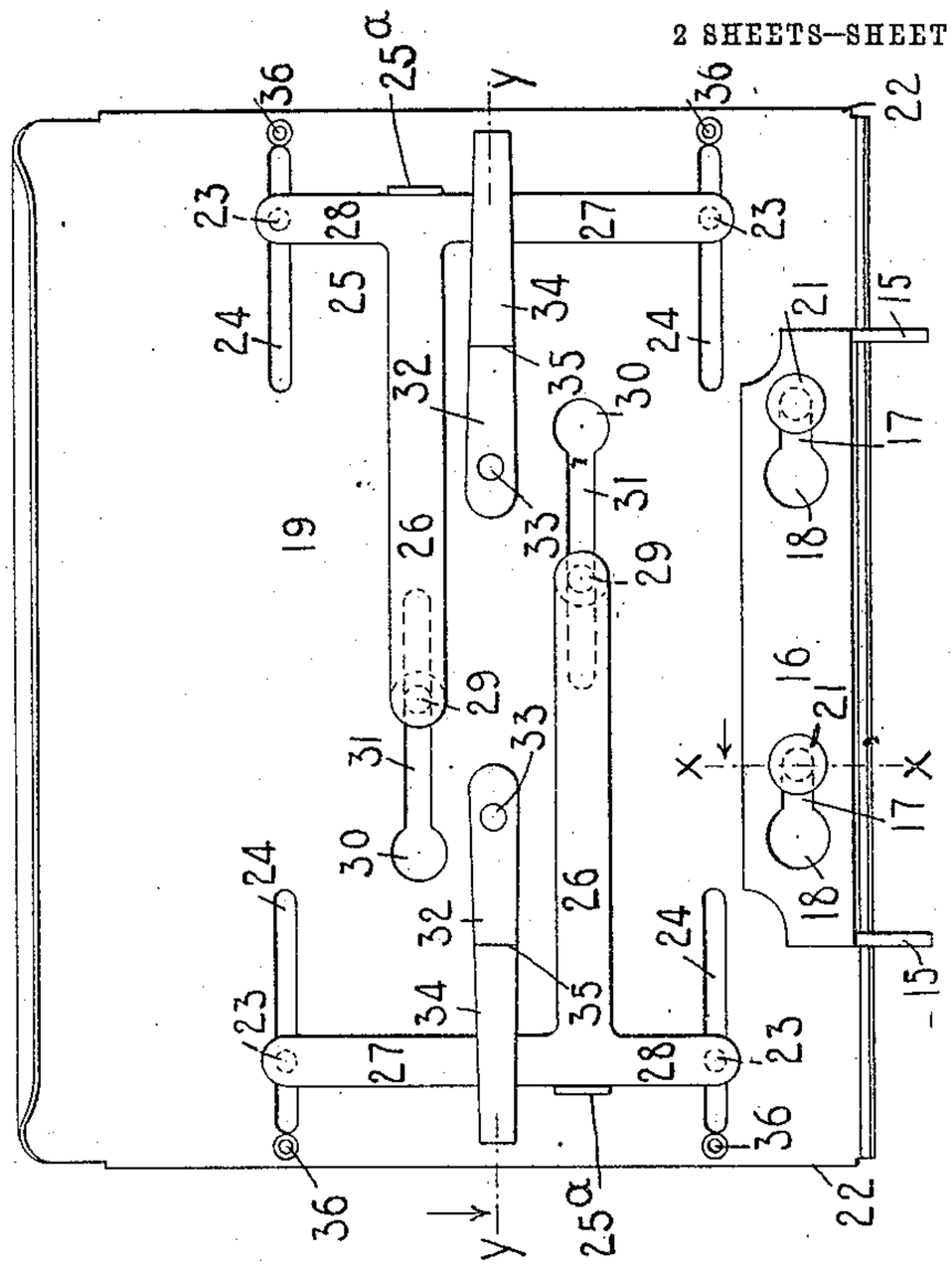

FIG. 2

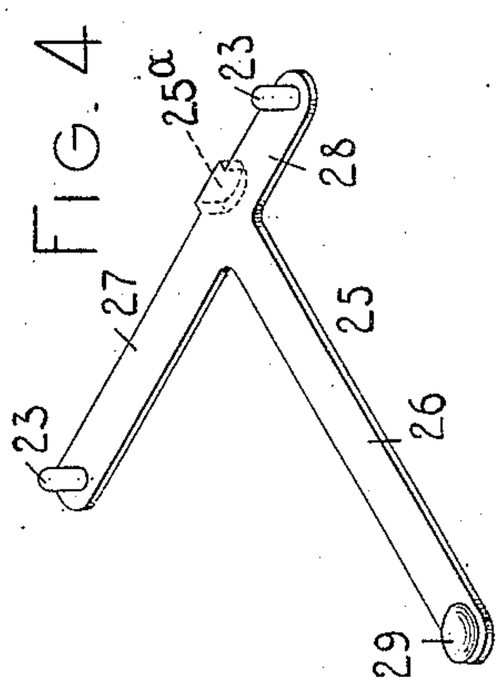

FIG. 4

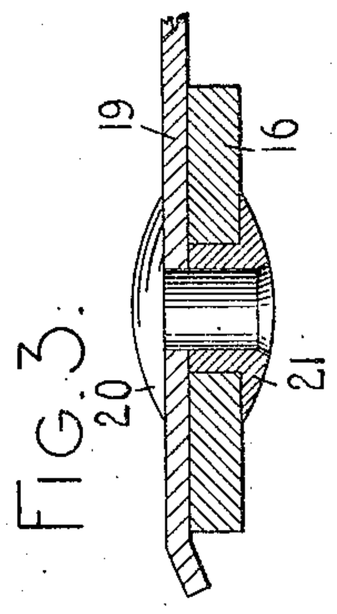

FIG. 3.

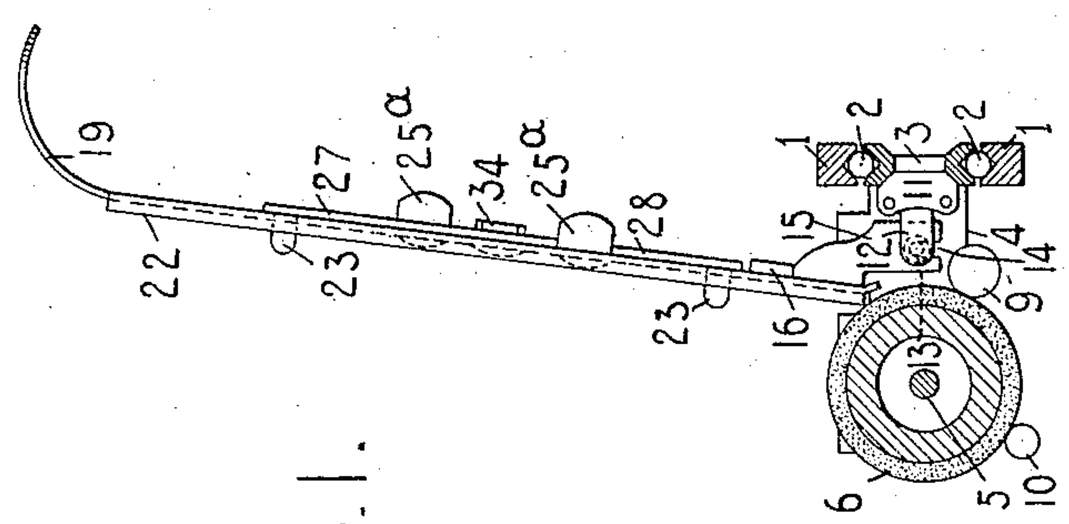

FIG. 1.

WITNESSES.

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2 SHEETS—SHEET 2.

FIG. 5.

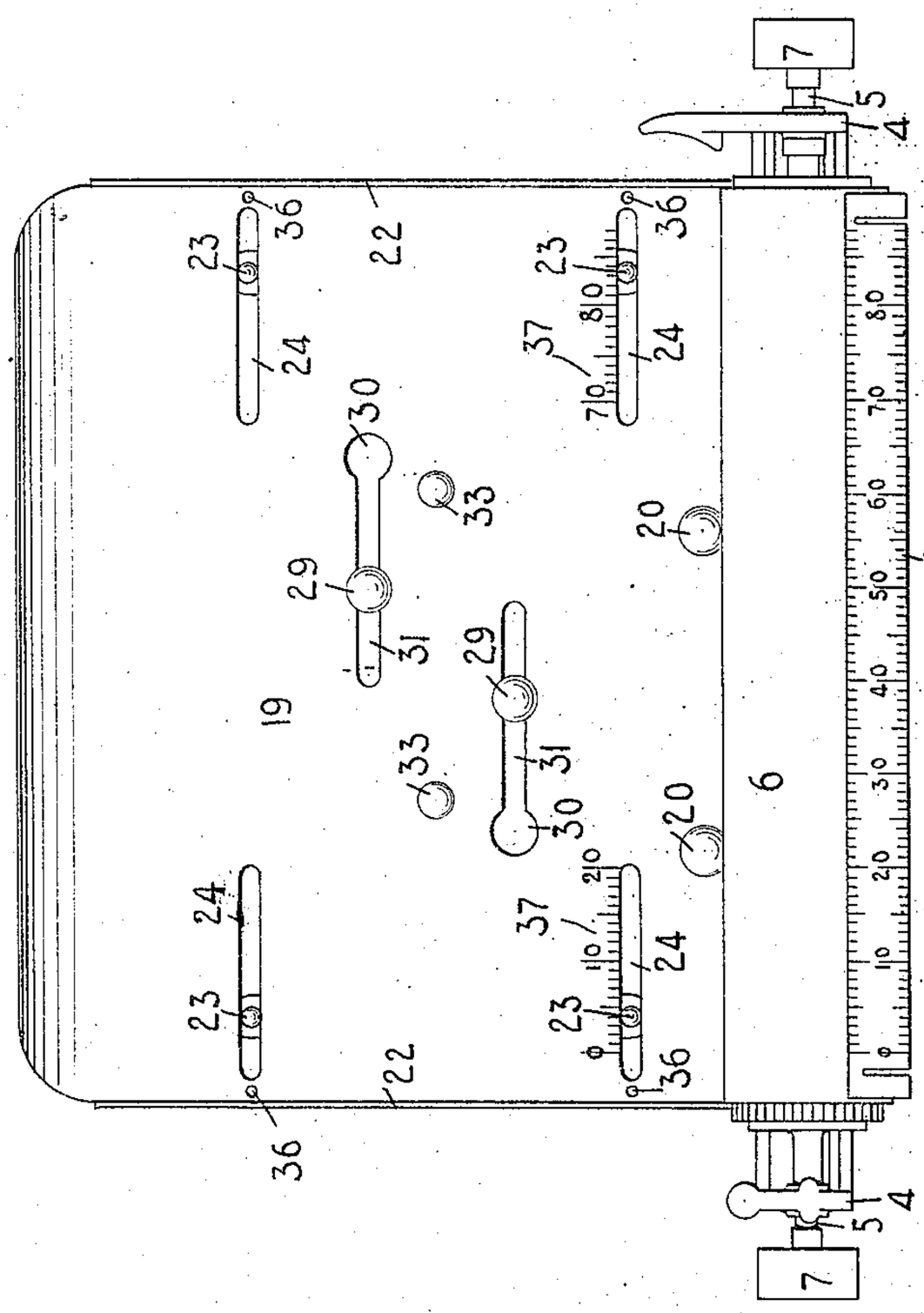
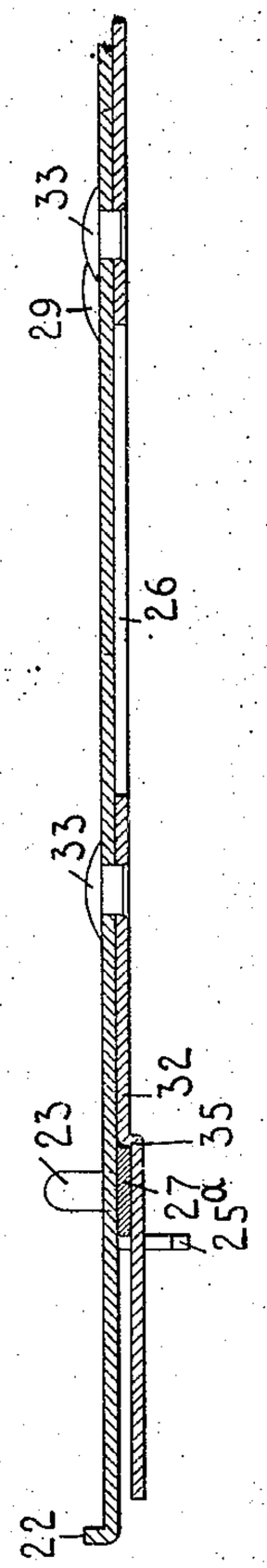


FIG. 6.



WITNESSES.

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UNITED STATES PATENT OFFICE.

HERBERT H. STEELE, OF MARCELLUS, NEW YORK, ASSIGNOR TO THE MONARCH TYPE-WRITER COMPANY, OF SYRACUSE, NEW YORK, A CORPORATION OF NEW YORK.

TYPE-WRITING MACHINE.

983,462. Specification of Letters Patent. **Patented Feb. 7, 1911.**

Application filed October 7, 1909. Serial No. 521,590.

To all whom it may concern:

Be it known that I, HERBERT H. STEELE, a citizen of the United States, and resident of Marcellus, in the county of Onondaga and State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

My invention relates to typewriting machines and more particularly to means co-operative with the side edges of the paper for properly gaging or positioning it with reference to the platen.

One object of my invention is to provide simple and efficient means of the character specified.

A further object of my invention is to provide simple and efficient gages which coöperate with opposite sides of the work sheet and which may be adjusted one independently of another to different positions intermediate the ends of the platen and intermediate the ends of the paper table.

A still further object of my invention is to provide means which enable a gage to be moved at will to a position where it is inoperative to coöperate with the work sheet.

To the above and other ends which will hereinafter appear, my invention consists in the features of construction, arrangements of parts and combinations of devices to be hereinafter described and particularly pointed out in the appended claims.

In the accompanying drawings wherein like reference characters indicate corresponding parts in the various views, Figure 1 is a detail, side elevation partly in section, showing a part of a Monarch typewriting machine embodying my invention. Fig. 2 is a rear elevation of a paper table with side edge guides constructed in accordance with my invention. Fig. 3 is an enlarged, detail, sectional view taken on the line x—x of Fig. 2 and looking in the direction of the arrow at said line, the view showing the means by which the paper table is detachably connected to its supporting bracket. Fig. 4 is a detail, perspective view of one of the side edge gage carriers. Fig. 5 is a front elevation of a paper carriage showing my invention applied thereto. Fig. 6 is a transverse enlarged sectional view taken through the paper table on the line y—y of Fig. 2 and looking in the direction of the arrow at said line.

I have shown my invention in the present instance applied to the carriage of a Monarch machine but it should be understood that the invention may be embodied in various other styles of typewriting machines.

In the drawings 1 represents the fixed guide rails of the carriage secured in the ordinary manner to the top plate of the machine and provided with oppositely grooved faces to receive anti-friction balls or rollers 2 which are likewise received in opposite grooved faces of a guide bar 3 which constitutes the rear cross bar of the carriage. Plates 4 project forwardly from the ends of the guide bar 3 and are provided with bearings for a platen shaft 5 on which a cylindrical rotary platen 6 is mounted, the platen shaft being provided with the usual finger wheels 7. A platen and carriage scale 8 is supported by the usual means (not shown) beneath the printing line. Paper feed rollers 9 and 10, diagrammatically shown in Fig. 1, coöperate with the platen to feed the paper.

Two projections 11 are formed on the rear cross bar 3 of the carriage and each of these projections supports a forwardly extending arm 12 provided with a headed pin 13 adapted to be received in a slot 14 of a depending arm 15 formed as a part of a bracket 16. This bracket is provided with two slots, each having a narrow portion 17 and an enlarged portion 18, the slots extending lengthwise of the bracket 16, and being in the nature of key hole slots.

A paper table 19 is provided with fastening means for detachably connecting the paper table to the bracket 16. These means are best illustrated in Fig. 3 from which it will be seen that a two-part rivet is employed. The part 20 has its enlarged head on the forward face of the paper table and the barrel or stem of the member 20 extends through the sleeve of a companion rivet member 21, the head of which is separate from the paper table to provide a space between said head and the paper table. There

are two of these rivets, as shown in Fig. 2, spaced apart to correspond to the spacing of the enlarged openings 18 in the bracket 16. In order to connect the paper table to the bracket 16 it is merely necessary to insert the projecting heads of the rivets 20–21 through the enlarged openings 18 and then move the paper table to the right as the parts appear in Fig. 2, so that the shanks of the sleeve-like rivet members 21 are introduced into the narrow openings 17 of the bracket, thus detachably connecting the paper table to the bracket 16. This provides means which affords the removal of one paper table and the substitution of another therefor. The right and left-hand edges of the paper table 19 are turned forwardly to form forwardly extending flanges 22 which project at substantially right angles to the plane of the paper table and constitute permanent side edge gages for coöperation with the side edges of the work sheet. It will be understood that these gages 22 are coöperative with the widest sheets which the machine is adapted to receive, the distance between the gages 22 corresponding to the length of the platen.

In addition to the gages 22 I have provided adjustable side edge gages or gage pins 23. These gage pins project through parallel slots 24 which extend longitudinally of the platen and are preferably arranged in two pairs, each pair being received through a pair of parallel slots 24 at one side of the paper table and projecting forwardly beyond the front face thereof. The gage pins 23 of each set are arranged, and are at all times maintained, parallel with the gages 22 and each pair of gage pins is carried by a carrier or slide designated as a whole by the reference numeral 25, and shown in detail in Fig. 4. Each of these flexible or resilient slides is formed from spring metal with three arms 26, 27 and 28, the arms 27 and 28 being alined and carrying a pair of gage pins and the arm 26 being off-set and carrying near its end a button headed rivet 29, the head being spaced apart from the arm to correspond substantially to the thickness of the metal from which the paper table is formed. As hereinbefore stated, the gage pins 23 project through their respective openings 24 in the paper table, whereas the button headed rivets 29 are adapted to be received from the rear through the enlarged openings 30 in the paper table, the heads of the rivets being at the front of the paper table. The stem of each rivet 29 is adapted to be received in a comparatively narrow slot 31 which extends from the enlarged opening through which the head of the rivet 29 is received. The slots 31 are parallel with the slots 24 and the construction therefore is such that each carrier or slide 25 receives a three-point bearing in its slots 24 and 31 so as to accurately guide the slides in their movements longitudinally of the platen and to maintain the gage pins 23 parallel with the gages 22 and in a plane at right angles to the axis of the platen. An adjustment of each carrier 25 effects a simultaneous adjustment of the pair of side edge gages 23 connected therewith. A spring arm or guide member 32 is associated with each of the slides 25 and each spring arm is pivoted at 33 to the paper table. There is sufficient friction between each guide arm and its pivot, and between the arm and the rear face of the paper table against which each arm bears, to maintain the arm in the position to which it was moved around its pivot 33. Each arm has an off-set portion 34 that provides a slight space between the off-set portion of the arm and the rear face of the paper table (see Fig. 6).

When an arm 32 is turned on its pivot to the position shown in Fig. 2 it is adapted to bear with a spring pressure against the rear side of the arm 27 of the associated slide 25 in order to provide frictional means for maintaining the slide against accidental displacement from the position to which it is adjusted. The shoulder 35 formed by the off-set portion of each spring arm 32 (see Fig. 6) limits the inward motion of the associated slide 25 when the spring arm 32 is in the operative position shown in Fig. 2, thus preventing the button headed rivet 29, by which the slide 25 is connected to the paper table, from reaching or registering with the enlarged opening 30 of the companion slot in which the rivet is received. When, however, a spring arm 32 is turned on its pivot 33 to a position at substantially right angles to that shown in Fig. 2 and to a position where it is thrown out of engagement with the coöperating slide, then said slide may be moved inwardly to bring the rivet 29 carried thereby into register with the opening 30, thus affording a removal of the slide as a whole together with the gage pins carried thereby. In this manner the adjustable side edge gages may be detached from the paper table when desired. It will be seen, moreover, that the spring arms 32 constitute means for supporting and guiding the outer ends of the slides and for maintaining the free ends of the slides positioned against the rear face of the paper table so that the gage pins will properly project through the slots 24 in the paper table.

Should the operator desire to temporarily dispense with either or both sets of gage pins 23, it is merely necessary to force the gage pins rearwardly through the slots 24 in which they are situated and then move the slides lengthwise of the platen and outwardly toward the ends of the paper table

until the gage pins 23 are adapted to enter in the countersunk openings 36 in the rear face of the paper table where they are held against spring pressure and may rest until such time as it is found necessary to again bring them into use. They may be again projected through the slots 24 in the paper table by merely moving the slides inwardly. As soon as the slots 24 are reached the pressure of the spring arm 26 of each slide and the pressure of the spring guide arm 32—34 is effective to force the free ends of the slides forwardly to carry the gage pins through the slots to operative position at the front face of the paper table. Finger pieces 25ª are provided on the slides for manipulating them.

In order to facilitate a proper adjustment of the gages 23 I have provided on the face of the paper table adjacent to each of the lower slots 24 an index or scale 37 which corresponds to the platen or carriage scale 8, as will be seen from an inspection of Fig. 5. In other words, the portion of the scale adjacent to each slot 24 registers with a corresponding part of the carriage or platen scale.

From the foregoing description it will be understood that I have provided simple and efficient gage devices coöperative with the side edges of the work sheets, two sets of said devices 22 being permanent and formed on the paper table, whereas the adjustable side edge gages 23 at opposite sides of the paper table are independently adjustable. Moreover the adjustable gages are adapted, when desired, to be moved rearwardly through the guide openings in the paper table to the rear of the paper table where they are out of coöperative relation with the paper or work sheet and may be maintained indefinitely in this position, or these guides may, if desired, be readily detached from the paper table. The use of independently adjustable side gages coöperative with opposite sides of the work sheet is desirable and advantageous over constructions in which an adjustment of a gage at one side of the paper table necessarily results in a corresponding adjustment of the side edge gage at the opposite side of the paper table, because it is sometimes desirable to use paper in a position off-set from the center of the paper table and to use side edge guides to coöperate therewith. The adjustable side edge gages of my present invention are capable of coöperating with the work sheets under such conditions.

It should be understood that various changes may be made without departing from my invention and that certain of the devices may be used without others. Thus, for instance, while I have shown the use of two permanent side edge gages 22 and two sets of adjustable side edge gages 23, it should be understood that it may be found desirable in some instances to employ only one set of gages 23 and only one gage 22.

What I claim as new and desire to secure by Letters Patent, is:—

1. In a typewriting machine, the combination of a paper table, a side edge gage carried by and adjustable along the paper table intermediate its ends, and means which enable the side edge gage to be depressed and thrown out of use while the gage remains on the paper table.

2. In a typewriting machine, the combination of a paper table, a side edge gage carried by and adjustable along the paper table, and means which enable the side edge gage to be moved to and maintained in the rear of the paper table where it is out of coöperative relation with the paper.

3. In a typewriting machine, the combination of a slotted paper table, a side edge gage which projects from the rear of the paper table through the slot therein and which is adjustable along said slot, and means which enable said gage to be moved at will from the front to the rear of the paper table where it is out of coöperative relation with the paper.

4. In a typewriting machine, the combination of a slotted paper table, a side edge gage which projects from the rear of the paper table through the slot therein and which is adjustable along said slot, and spring means for forcing said gage through said slot.

5. In a typewriting machine, the combination of a slotted paper table, a side edge gage which projects from the rear of the paper table through the slot therein and which is adjustable along said slot, and a flexible carrier for said gage, said flexible carrier enabling the gage to be forced rearwardly through said slot to a position where the gage is out of coöperative relation with the paper.

6. In a typewriting machine, the combination of a slotted paper table, a side edge gage which projects from the rear of the paper table through the slot therein and which is adjustable along said slot, and means which enable said gage to be moved at will from the front to the rear of the paper table where it is out of coöperative relation with the paper, and for enabling the gage to bear against the back of the paper table to maintain the gage in the inoperative position.

7. In a typewriting machine, the combination of a paper table, a side edge gage carried by and adjustable along the paper table intermediate its ends, means which enable the side edge gage to be depressed and thrown out of use, and means for affording a detachment of the gage from the paper table.

8. In a typewriting machine, the combination of a paper table, a side edge gage carried by and adjustable along the paper table, means which enable the side edge gage to be moved on its support to and maintained in the rear of the paper table where it is out of coöperative relation with the paper, and means for affording detachment of the gage from the paper table.

9. In a typewriting machine, the combination of a slotted paper table, a side edge gage which projects from the rear of the paper table through the slot therein and which is adjustable along said slot, means which enable said gage to be moved at will from the front to the rear of the paper table where it is out of coöperative relation with the paper, and means for affording detachment of the gage from the paper table.

10. In a typewriting machine, the combination of a slotted paper table, a side edge gage which projects from the rear of the paper table through the slot therein and which is adjustable along said slot, spring means for forcing said gage through said slot, and means for affording detachment of the gage from the paper table.

11. In a typewriting machine, the combination of a slotted paper table, a side edge gage which projects from the rear of the paper table through the slot therein and which is adjustable along said slot, a flexible carrier for said gage, said flexible carrier enabling the gage to be forced rearwardly through said slot to a position where the gage is out of coöperative relation with the paper, and means for affording a detachment of said flexible carrier from the paper table.

12. In a typewriting machine, the combination of a paper table having parallel slots, side edge gage pins which project through said slots, and means for affording a simultaneous adjustment of said gage pins along said slots.

13. In a typewriting machine, the combination of a paper table having parallel slots, side edge gage pins which project through said slots, means for affording a simultaneous adjustment of said gage pins along said slots, and frictional means for retaining the pins in the positions to which they are adjusted along said slots.

14. In a typewriting machine, the combination of a paper table having parallel slots, side edge gage pins which project through said slots, a spring carrier mounted on the paper table for adjustment along it to afford a simultaneous adjustment of the pins along said slots and to afford a displacement of the pins from said slots to render the pins inoperative.

15. In a typewriting machine, the combination of a paper table having a plurality of parallel slots, a carrier at the back of the paper table, said carrier having a plurality of arms, one of said arms having means received within one of said slots for adjustably connecting the carrier to the paper table, and another of said arms having a laterally extending pin which projects through another of said slots in the paper table and which constitutes a side edge gage for the paper.

16. In a typewriting machine, the combination of a paper table having three parallel slots, a carrier at the back of the paper table, said carrier having three arms, one of said arms having means received within one of said slots for adjustably connecting the carrier to the paper table, and the other of said arms having laterally extending pins which project through the other of said slots in the paper table and constitute a side edge gage for the paper, the pins being adjusted simultaneously with the carrier longitudinally of the platen.

17. In a typewriting machine, the combination of a paper table having a plurality of slots, a spring carrier at the back of the paper table, means connected with the carrier and engageable in one of said slots for adjustably connecting the carrier with the paper table, and a gage pin carried by said carrier and projecting through another of said slots to the front of the paper table and adjustable along its slot, the spring carrier enabling the gage pin to be forced through said slot to the rear of the paper table.

18. In a typewriting machine, the combination of a paper table, a side edge gage carried thereby and adjustable thereon, and a pivoted guide coöperative with said gage.

19. In a typewriting machine, the combination of a paper table, a side edge gage carried thereby and adjustable thereon, and a spring guide coöperative with said gage to hold it in working position and affording a movement of the gage out of working position against the pressure of said spring guide.

20. In a typewriting machine, the combination of a paper table, a side edge gage carried thereby and adjustable thereon, and a pivoted spring guide coöperating with said gage to hold it in working position and movable on its pivot into and out of coöperation with said gage and affording a movement of the gage out of working position against the pressure of said guide.

21. In a typewriting machine, the combination of a slotted paper table, a gage which projects through and which is adjustable along said slot, a carrier for said gage, said carrier being situated in the rear of the paper table, and a spring guiding arm pivoted to the rear of the paper table to turn into and out of coöperation with said carrier and exerting a spring pressure against the carrier.

22. In a typewriting machine, the combination of a paper table with a slot having an enlarged opening at one end, a side edge gage, a carrier for said gage, said carrier having a headed pin that moves in said slot to adjust the gage, the carrier being connected with the paper table by inserting the head of the pin through the enlarged opening and sliding the pin along the slot.

23. In a typewriting machine, the combination of a slotted paper table, a side edge gage pin which extends from the rear through and which is adjustable along said slot, and a scale on the face of the paper table adjacent to said slot and with which said gage pin coöperates to determine the setting of the gage pin.

24. In a typewriting machine, the combination of a paper table having a fixed side edge gage formed thereon, a second side edge gage carried by and adjustable along the paper table, and means which enable said adjustable gage to be moved to an inoperative position.

25. In a typewriting machine, the combination of a paper table having a fixed side edge gage formed thereon at each side of the table, two side edge gages carried by and independently adjustable along the paper table intermediate said first mentioned gages, and means which enable either or both of said adjustable gages to be moved to inoperative position.

26. In a typewriting machine, the combination of a paper table having a pair of parallel horizontal slots at each side and a pair of adjustable side edge gages movable along and settable in said slots.

27. In a typewriting machine, the combination of a paper table having a pair of parallel horizontal slots at each side thereof, a pair of gage pins for each pair of slots, connections between each pair of gage pins, and means for moving said pins to varying positions along said slots.

28. In a typewriting machine, the combination of a paper table having a pair of parallel horizontal slots at each side thereof, a three-armed support at each side of the paper table, two arms of each support carrying gage pins and the third arm carrying a guiding device adapted to a horizontal slot in said paper table.

29. In a typewriting machine, the combination with a carriage, of a bracket provided with horizontal key hole slots and a paper table provided with side edge guides and having studs for engagement with said key hole slots whereby the paper table may be readily detachable and substituted by another without removing the bracket from the carriage.

30. In a typewriting machine, the combination of a paper table having a pair of parallel horizontal slots, gage pins which project from the rear of the paper table through said slots, a sliding carrier which carries said gage pins, and additional means for guiding said carrier.

31. In a typewriting machine, the combination of a paper table having a pair of parallel horizontal slots, a three-arm support, two arms of said support carrying gage pins which project through said slots, and guiding means, coöperative with the third arm of said support.

Signed at Syracuse, in the county of Onondaga and State of New York this 5th day of October A. D. 1909.

HERBERT H. STEELE.

Witnesses:
BESSIE G. KETTELL,
ALICE G. GREENE.