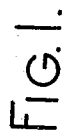


J. F. JUDD.
TYPE WRITING MACHINE.
APPLICATION FILED OCT. 5, 1909.

2 SHEETS--SHEET 1.



E. M. Wells.
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1,043,940.

Patented Nov. 12, 1912.
 2 SHEETS—SHEET 2.

FIG. 4.

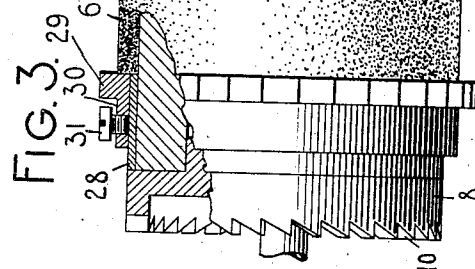
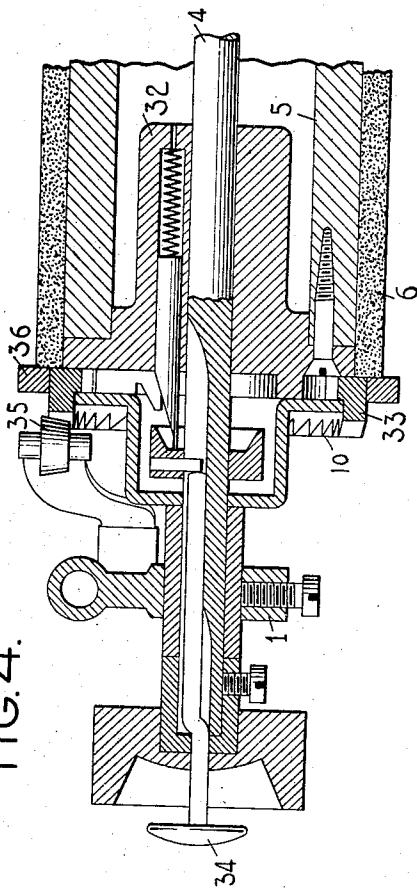
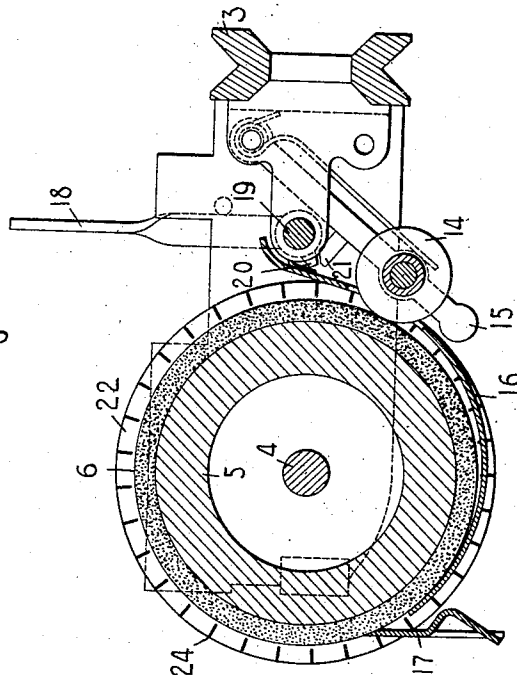


FIG. 3.

FIG. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN F. JUDD, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO THE MONARCH TYPEWRITER COMPANY, OF SYRACUSE, NEW YORK, A CORPORATION OF NEW YORK.

TYPE-WRITING MACHINE.

1,043,940.

Specification of Letters Patent.

Patented Nov. 12, 1912.

Application filed October 5, 1909. Serial No. 521,063.

To all whom it may concern:

Be it known that I, JOHN F. JUDD, citizen of the United States, and resident of Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

My invention relates particularly to paper feeding mechanisms for typewriting machines and has for one of its objects to provide a novel paper guide which coöperates with the side edge of a work sheet to position it lengthwise of the platen and which is also adapted to square the work sheet.

Another object of the invention is to provide a combined guide and line indicator which is highly efficient and of simple construction.

My invention as herein shown embodies a ring or annulus which is secured to the platen near one of its ends and projects from the surface thereof so as to provide an abutment against which the side edge of the paper may be alined. Preferably the annulus is formed with transverse radial slits at letter space intervals and in alinement with the teeth of the usual line space ratchet wheel so that bottoms of lines of writing or the lower boundaries of blank spaces on a printed form may be conveniently brought into alinement with one or another of said slits. In practice the ordinary paper feeding devices are released to permit of such adjustment after which the paper feeding devices are restored and the platen is turned until the line in which writing is to be done is brought to printing position.

The invention will be more fully explained in connection with the accompanying drawings wherein—

Figure 1 is a front elevation of a platen carrier and platen embodying my invention, various parts being omitted and parts being broken away. Fig. 2 is a transverse sectional view of Fig. 1 with parts omitted. Fig. 3 is a fragmentary face view showing one end of a platen embodying a modification of my invention. Fig. 4 is a fragmentary longitudinal sectional view of a platen embodying still another modification of my invention.

Referring first to Figs. 1 and 2, the platen frame or carrier comprises end bars 1 and 2 and a connecting rear bar or slide 3. An

axle 4 is journaled in the end bars and supports a platen comprising a core 5 and an outer sheath 6. Platen heads or end pieces 7 and 8 are secured to the platen core by screws 9. The left-hand platen head is formed with crown ratchet teeth 10 providing a line space ratchet wheel, coöperative with which is a spring mounted roller detent 11. Said ratchet wheel also coöperates with other line spacing devices comprising a pawl 12 controlled through intermediate mechanism by a line spacing arm or handle 13. Paper feeding and controlling devices are associated with the platen, comprising a main feed roller 14 mounted on spring-pressed arms 15 pivoted on the platen frame, also a paper deflector or apron 16 extending partly around the platen; and a front scale or paper plate 17 extending lengthwise of the platen and arranged with its upper edge a short distance below and parallel with the printing line.

The mechanism thus far described is part of the Monarch typewriter. It will be understood that in that machine other paper feeding devices besides those shown are usually provided. Such other paper feeding devices may be employed in the present instance although omitted from the drawings. It will also be understood that various of the paper feeding and controlling devices including the roller 14 and deflector 16 may be moved away from the platen to free or release the paper. The releasing means comprises an arm 18 fixed to a rock shaft 19, said rock shaft being provided with lugs 20 which are adapted to engage lugs 21 projecting from the arms 15.

My invention comprises a ring or annulus 22 composed of a compressed fibrous compound or other suitable material and adapted to fit over the core 5 of the platen near one end thereof. To permit of arranging the ring 22 in this way a portion of the sheath 6 near the left-hand end is removed from the core and is cut down sufficiently to make room for the ring 22, so that when the removed and reduced portion 6^a of the sheath is replaced it will abut against the outer side face of the ring 22 as is shown in Fig. 1. I prefer to secure the ring 22 in place by fitting it tightly over the core and causing the abutting ends of the sheath to press against the side faces of the ring; but it will be understood that if preferred said ring

may be secured in place on the platen in any other suitable way. In the present instance it is necessary to notch the scale plate 17 as indicated at 23 to make room for the ring 22.

Said ring is provided with indicating means or marks which preferably are formed by slitting the ring at line space intervals circumferentially as indicated at 24. The indicating marks or radial slits 24 are arranged in such relationship with the teeth 10 of the line spacing ratchet wheel that one or another of said indicating marks is always in register with the bottom of the printing line while all of the other indicating marks 24 are at one or more units of line space distances from the bottom of said printing line, so that when the platen is turned backward or forward through a complete revolution each of said indicating marks 24 will in turn be brought into register with the bottom of the printing line. The bottom of the printing line in the present instance is two units of line space distance above the top edge of the scale plate 17.

My invention is especially adapted for use with printed blanks or forms which have to be entered in the machine, written upon and removed from time to time, such for example as blanks used by telephone companies for charging calls. A blank of this character is shown in Fig. 1 and indicated by the numeral 25. The usual printed matter is omitted from the face of the blank 25, only a double line 26 being shown for purposes of illustration. It will be understood, however, that the blank 25 is or may be provided at intervals with lines or partial lines of printed matter containing spaces to be filled in on the typewriter, and that the intervals between these lines correspond with the line spacing of typewriting machines.

In making use of my invention in connection with the blank 25 or a work sheet of similar or suitable character, the releasing arm 18 is first pulled forward causing paper controlling devices including the feed roller 14 and deflector 16 to be moved away from the surface of the platen; after which the blank 25 is entered in the machine and advanced over the platen, care being taken to maintain the left-hand edge of the blank in contact with the adjacent side face of the circular guide or ring 22. The line of contact between the guide and the sheet is such when the top of the sheet passes the printing line that the operation serves both to square the sheet and also to maintain it in a predetermined relationship lengthwise of the platen. Assuming that the blank 25 already contains a number of typewritten entries and that it is desired to make an additional entry, the advance of said blank in the machine is continued until the bottom of the line in which the entry is to be made is opposite one of the indicating marks 24 in the vicinity of

the printing line; or until the bottom of one of the lines adjacent to the line to be printed is opposite such indicating mark 24. In the drawing I have shown the double line 26 as having been brought opposite that indicating mark 24 which at the time happens to be in line with the bottom of the printing line. With the blank in the position shown in Fig. 1, it will be understood that when the releasing arm 18 is restored to normal position, then the paper controlling devices will clamp the blank, and the double line 26 will be in line with the printing line. It will further be understood that if the line to be filled in lies one or more spaces above or below the double line 26 it is only necessary to turn the platen backward or forward one or more line space distances by means of one of the usual finger wheels 27 until the desired line is brought to printing position.

It will be observed that the ring 22 with its indicating marks 24 provides a gage or guide which may be employed to square a work sheet and to position it readily and quickly both widthwise and lengthwise, and that this combined side and edge guide is of simple construction and low cost.

Various modifications may be resorted to within the scope of my invention.

Fig. 3 illustrates an example of such modifications, said figure showing a construction providing for an adjustment of the guide lengthwise of the platen. In Fig. 3 the left-hand end portion of the sheath 6 is entirely removed and a thin band 28 of metal or the like is suitably secured to the platen core in place of said sheath. The annular guide or ring 29 is provided with a flange 30 which fits over the band 28 so as to permit movement of the ring relative to the band. The flange 30 is formed with a tapped hole which receives a set screw 31, the point of said set screw abutting against the band 28 when tightened and serving to maintain the ring in fixed relationship with the band. By loosening the screw 31 the guide ring may be adjusted lengthwise of the platen as well as circumferentially thereof and thereafter reset.

Another modification of the invention is shown in Fig. 4. As is well known, platens are commonly provided with releasing devices for enabling the platen and its line spacing ratchet wheel to be disconnected for fractional spacing. In such a case, if the construction of my invention shown in Fig. 2 were employed it will be understood that when the platen and its line spacing ratchet wheel were disconnected and the platen subsequently turned, the proper relationship between the ratchet wheel and the indicating marks on the annular guide or gage would be lost. The Fig. 4 construction obviates this defect by mounting the annular

guide or gage fixedly on the line spacing ratchet wheel instead of on the platen proper. Referring to Fig. 4, the platen is shown provided with a head 32 which is
 5 separate from the line spacing ratchet wheel 33. The ratchet wheel and platen are normally connected by a clutch mechanism of suitable construction, such, for example, as that found in some forms of the Monarch
 10 typewriter and shown in the drawings. It is deemed unnecessary to enter into a detailed description of this platen clutch, it being sufficient to say that when the finger button 34 is pressed inward the platen and
 15 its ratchet wheel 33 will be disconnected through a separation of the clutch parts so that by turning one of the platen finger wheels the platen may be rotated while the ratchet wheel 33 remains quiescent, being
 20 held motionless by the roller detent 35. With such a construction I provide an annular guide or ring 36 preferably of metal and which is formed on its periphery with suitable indicating marks at line space inter-
 25 vals. The guide ring 36 in the present instance is suitably secured to the ratchet wheel 33 and abuts against the end of the platen proper. With the Fig. 4 construction the relationship between the indicating
 30 marks on the periphery of the annular guide 36 and the ratchet teeth of the line spacing wheel 33 is not disturbed when the platen is released and independently rotated.

Various other changes besides those described may be made, and it will also be understood that while I have described my invention in connection with a Monarch typewriter said invention may be readily adapted to various other writing machines.

40 It will be noted that by my present invention I combine with a rotary platen a guide coöperating with the side edge of a work sheet to position the same lengthwise of the platen, said guide being rotatable with the
 45 platen. Further it will be noted that in the present instance said guide is fixed to the platen; that said guide is combined with a guide for the lines of writing; that because of the comparatively great length of the
 50 guide edge against which the side of the paper is adapted to abut said guide not only positions the paper lengthwise of the platen but also squares it; that combined with a rotary platen is a guide mounted thereon
 55 for the side edge of a work sheet; that more generally stated this guide is a paper guide; that a rotary platen is provided with a line finder mounted thereon; that I provide a
 60 cylindrical platen and a line indicator curved to conform to the surface of the platen; that the line indicator is mounted on the platen; that a device is provided for squaring a work sheet, which device is curved to conform to the platen; that said device is
 65 mounted on the platen; that a sheet squar-

ing device is arranged to extend across the printing line; that a line gage integral with said sheet squaring device is provided; that in the present instance said line gage comprises indicating marks on said device; that
 70 the device for squaring the work sheet is at the printing line; that a guide is provided opposite the printing line for positioning a work sheet lengthwise of the platen; that said guide also squares the work sheet; that
 75 a paper gage curved to conform to a cylindrical platen is arranged extending from the introductory side of the platen to the printing line; that line indicating devices are associated with said curved paper guide; 80
 that a curved paper squaring device extends from the point of introduction of the paper to the printing point at the front side of the platen; that a combined sheet squaring device, side guide and line indicator is provided which is mounted on the platen; that
 85 adjusting means for such combined device are provided; that a paper guide is mounted on the platen, which paper guide is associated with means for adjusting it both
 90 lengthwise of and circumferentially of the platen; and that a line indicator is provided which is arranged in a set relationship with the line spacing wheel connected with the platen, said line spacing wheel being in the
 95 present instance a ratchet wheel.

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

1. In a typewriting machine, the combination of a cylindrical platen and a device supported by said platen for squaring a work
 100 sheet, said device being curved to conform to the platen and registering directly with the leading edge of the work sheet to indicate the position of the same circumferentially of the platen. 105

2. In a typewriting machine, the combination of a rotary platen, a device extending across the printing line thereon for squaring the work sheet, and line indicating
 110 means on said device, said indicating means registering directly with the leading edge of the paper and acting as means for indicating the position of the paper in line spacing direction. 115

3. In a typewriting machine, the combination of a rotary platen and a sheet squaring member extending transversely of the printing line, the side edge of the paper being
 120 squared by coöperation with said member, and said member being provided with space indicators which coöperate directly with the paper to indicate the position of the paper in line spacing direction.

4. In a typewriting machine, the combination with a cylindrical platen, of a paper
 125 gage curved to conform to the platen and extending from the introductory side of the platen to the printing line, and space indicators associated with said gage, said in- 130

dicators coöperating directly with the paper to indicate the position thereof in line spacing direction.

5 In a typewriting machine, the combination with a cylindrical platen, of an annular guide mounted on the platen near one end thereof and coöperative with a side edge of a work sheet to square the same and position it lengthwise of the platen, and a line indicator associated with said annular guide, said indicator coöperating directly with the paper to indicate the position of the same in line spacing direction.

10 6. In a typewriting machine, the combination with a platen, of a combined sheet squaring device, side guide and line indicator, said combined device being mounted on the platen, the line indicator coöperating directly with the paper to indicate the position thereof in line spacing direction.

7. In a typewriting machine, the combination with a platen, of a combined sheet squaring device, side guide and line indicator, said combined device being mounted on the platen, and means for affording adjustment of said device relatively to the platen.

8. In a typewriting machine, the combination of a rotary platen, a device for indicating the position of the paper mounted thereon, and means for affording adjustment of said device lengthwise of and circumferentially of the platen.

Signed at Indianapolis in the county of Marion and State of Indiana this 25th day of Sept. A. D. 1909.

JOHN F. JUDD.

Witnesses:

C. R. CLARK,

GEO. P. STEINMETZ.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."