C. ORBELL.

TYPE WRITING MACHINE.

APPLICATION FILED AUG. 26, 1912.

1,069,167.

Patented Aug. 5, 1913.

FIG. 1.

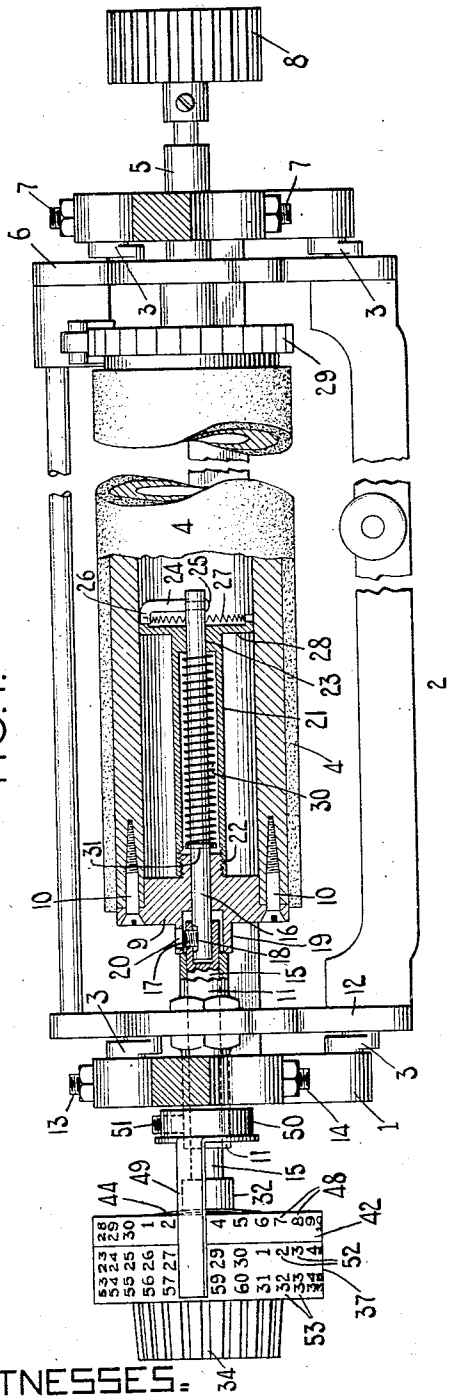


FIG. 3.

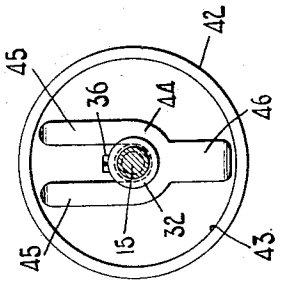
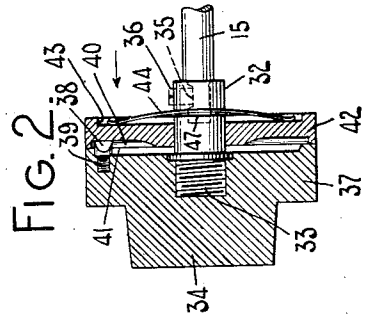


FIG. 2.



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HIS ATTORNEY

UNITED STATES PATENT OFFICE.

CLIFFORD ORBELL, OF NEW YORK, N. Y., ASSIGNOR, BY MESNE ASSIGNMENTS, TO REMINGTON TYPEWRITER COMPANY, OF ILION, NEW YORK, A CORPORATION OF NEW YORK.

TYPE-WRITING MACHINE.

1,069,167. Specification of Letters Patent. Patented Aug. 5, 1913.

Application filed August 26, 1912. Serial No. 717,137.

To all whom it may concern:

Be it known that I, CLIFFORD ORBELL, citizen of the United States, and resident of the borough of Brooklyn, city of New York, in the county of Kings 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 indicating devices associated with the paper feed mechanism.

Regarded from certain aspects, my invention is in the nature of an improvement on the construction disclosed in the patent to D. A. Briggs No. 916,099, dated March 23rd, 1909.

One of the objects of my invention, generally stated, is to improve the construction disclosed in the above-mentioned patent and to provide mechanism which is more effective and capable of a wider range of use.

A further object of my invention, generally stated, is to provide improved line indicating devices which may be used with facility and which have a wide range of utility.

A further object of my invention is to provide an improved construction which may be employed as a line indicator to indicate the number of lines on a sheet as they are successively written, or which may be employed as an indicator for billing work such, for example, as condensed record work.

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 set forth in the following description and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a front elevation with parts in section and parts omitted of a typewriter carriage embodying my invention. Fig. 2 is a detail transverse sectional view taken through the center of the annular scales. Fig. 3 is a side view of the same, looking in the direction of the arrow in Fig. 2.

I have shown my invention in the present instance embodied in a No. 10 Remington machine, only so much of said machine being shown as may be necessary to arrive at an understanding of my invention, and some of the parts being conventionally represented. It should be understood, however, that the invention may be embodied in various characters of writing machines in which a rotative element or platen is employed to control the line feed of the paper.

The carriage comprises a truck section 1 to which a platen is connected by parallel links 3, the platen frame being designated as a whole by the reference numeral 2. A rotative platen 4 is mounted to turn in suitable bearings in the platen frame. Thus the right-hand end of the platen may be assumed to be provided with a spindle which is received in a sleeve or tubular bearing 5 which latter is fixed in an opening in the right-hand end plate 6 of the platen frame. The tubular bearing 5 extends through a vertical slot in the carriage truck 1 and is limited in its case shifting movements by screw stops 7 carried by the truck. A finger wheel 8 is operatively connected with the right-hand end of the platen to turn the same.

The left-hand end of the platen has a platen head 9 connected therewith by screws 10. A tubular bearing or sleeve 11 is fixed in the left-hand end plate 12 of the platen frame and extends on opposite sides thereof. The left-hand portion of this tubular bearing extends through a vertically disposed opening in the truck and coöperates with screw stops 13 and 14 to limit the vertical case shifting movements of the platen and platen frame. A spindle 15 extends through the tubular bearing member 11 and is apertured at the right-hand end thereof to receive a spindle 16 which extends longitudinally of the platen and is guided in a central guide opening in the platen head 9. This spindle 16 is detachably connected with the spindle 15 by a set screw 17 which is received in a tapped opening in the spindle 15 and engages at its inner end against a flattened wall 18 in a recessed portion of the spindle 16, thus locking the two spindles 15 and 16 to turn together and to move together longitudinally of the platen. The platen head 9 is provided with a hub 19 which surrounds the two spindles 15 and 16 at the point of connection between the two. This hub has an opening 20 therein by which access may be had to the screw 17 when the opening 20 is in register therewith. The inner end portion of the spindle 16 is received in a tubular housing 21 contained

within the platen and secured in place on the platen head 9 by being connected to a threaded nipple 22 projecting inwardly from the platen head. The inner end portion of the spindle 16 receives a bearing in a central bearing opening 23 of the housing and extends to the right beyond the housing where a pawl 24 is connected with the spindle at 25. This pawl extends radially from the spindle 16 and is turned at its free end lengthwise of the platen to form an engaging portion 26. The engaging portion of the pawl is adapted to coöperate with crown teeth 27 formed on a disk 28 which is integral with or fixedly connected to the housing 21. There are as many teeth 27 provided as there are teeth on the line spacing ratchet wheel 29. It has been assumed in the present instance that the line spacing ratchet wheel connected with the platen is provided with thirty teeth. It will be understood, therefore, that there are thirty teeth 27 provided on the member 28. A coiled expansion spring 30 surrounds the spindle 16 and is contained within the housing 21. One end of this spring bears against the right-hand end wall of the housing, whereas the other end of the spring bears against a collar 31 fixed to the spindle 16. The pressure of this spring is therefore exerted to force the spindle to the left and maintain an effective engagement between the pawl 24 and the crown teeth 27 in order to positively lock the two to turn together, for purposes which will hereinafter more clearly appear. It will be understood, however, that a movement of the spindle 15 to the right and longitudinally of the platen produces a corresponding movement of the spindle 16, thereby disengaging the pawl 24 from the teeth 27 to enable the spindles to be rotatively adjusted independently of the member 28 and the platen with which said member is fixedly connected.

The left-hand end of the spindle 15 is received in a sleeve or bushing 32 fixed by suitable means, as by a threaded connection 33, with a finger wheel 34, by which the platen may be rotated. The outer end portion of the spindle 15, which is received within the bushing 32, has a flattened face 35 in a recessed portion of the spindle. A set screw 36 is received in a tapped opening in the bushing and bears at its inner end against the flattened portion 35 on the spindle, thus connecting the finger piece and spindle to move together both rotatively and longitudinally of the platen. The finger wheel 34 has fixedly connected therewith a disk-like or cylindrical portion or carrier 37 which is provided with circularly arranged indices on the periphery thereof so as to form an annular scale. In the present instance the finger wheel and annular scale are formed integral, the annular scale being concentric with the platen. Projecting from the right-hand side of the cylindrical portion 37 is a pawl or tooth 38 which has a threaded portion 39 received in the body of the member 37. This pawl is adapted to be received in interdental spaces 40 between radially disposed teeth 41 formed on a disk-like member or carrier 42 which is likewise mounted concentrically with the platen. The teeth 41 are arranged on one side of the member 42 and extend in a complete circle around the same, and there are preferably as many teeth 41 as there are line spacing teeth in the ratchet wheel 29.

The disk-like member or carrier 42 has a circumferential shoulder 43 formed on the side thereof opposite the teeth 41. A bowed leaf spring, designated as a whole by the refrence numeral 44, is shaped, as best shown in Fig. 3, with two parallel arms 45 and an extension 46. The bushing 32 is formed with a circumferential groove 47 therein an dthe spring is adapted to straddle the bushing, the inner edges of the parallel arms 45 and the part by which they are joined being received in the groove 47 to hold the spring in place. The free ends of the spring are received within the shoulder portion 43 on the disk and bear against the right-hand face of the disk to force it bodily toward the member 37 and the pawl or tooth 38 carried thereby. It should be understood that the spring 44 is sprung into place to hold the disk or carrier 42 in position and that the disk itself has a central bearing opening through which the bushing 32 is received and on which bushing the disk may receive a rotative adjustment independently of the member 37. The disk 42 is held against accidental displacement from the position to which it may have been adjusted relative to the annular scale 37 by the engagement of the teeth 41 with the pawl 38, the two being held in engagement by the spring 44. A rotative movement, however, of the disk 42 for the purposes of adjustment is effective to cause the teeth 41 to ride over the pawl 38 against the pressure of the spring 44. So far as the manner of connecting the disk 42 with the finger wheel and annular scale 37 is concerned, the features herein shown are somewhat similar to those disclosed in the Briggs patent hereinbefore referred to and further detail description thereof is deemed unnecessary.

The disk or carrier 42 has a single circularly arranged series of numerical indices 48 on the periphery thereof, such indices being arranged at line space intervals. The number of indices on this second annular scale 42 correspond with the number of line spacing teeth on the line spacing ratchet wheel 29. Thus there being thirty teeth on the ratchet wheel, there are thirty numerical indices on the periphery of the disk 42

and these indices are arranged progressively from "1" to "30"; the indices being so arranged that a forward intermittent rotative movement of the platen will cause the higher numbers to be brought progressively into register with an indicator 49. This indicator is provided with a collar 50, tapped to receive a set screw 51. The collar is adapted to be received on the left-hand end portion of the tubular bearing 11, the collar being secured to the bearing by the set screw 51. The indicator 49 is thus fixed to the platen frame and is adapted to be moved vertically therewith during the case shifting movements of the platen and platen frame, so that the indicator is always in a position to properly co-act with the indices 48. It will be observed that this indicator also extends to the left across the face of the annular scale 37 so as to co-act with the numerical indices inscribed thereon. These indices on the annular scale 37 are preferably arranged in two circularly and progressively arranged series 52 and 53. The indices of each series are situated at line space intervals as they extend around the periphery of the carrier and the indices of the two series are arranged side-by-side. The first series 52, adjacent to the annular scale 42, has a number of numerical indices corresponding to the number of teeth in the line spacing wheel and corresponding to the numerical indices on the annular scale 42. In the present instance the series of numerical indices 52 begins at "1" and ends at "30", such indices being arranged in the same manner as the indices on the annular scale 42. The second series of numerical indices 53 begins where the series 52 leaves off and continues until double value of the indices in the series 52 is indicated. Thus in the present instance the indices 53 begin at "31" and end at "60", the index "31" being one line space position beyond or in advance of the index "30" so that in a forward intermittent line space rotation of the platen, the index numerals "30", "31", "32", etc., will be brought successively into register with the upper edge of the indicator 49. It will be understood, therefore, that the numerical indices 52 and 53 afford a line space indication corresponding to two complete revolutions of the platen, or sixty line spaces.

It will be observed that the pawl 24 is rigidly connected to the finger wheel 34 and constitutes one member of a two-part spring-pressed clutch, the other member 28 of which is loosely connected to the platen. The two-part clutch is thus effective to positively connect the finger wheel 34 and the annular scale 37 with the platen. When, however, the finger wheel 34 is moved to the right longitudinally of the platen, the pawl 24 is disengaged from the companion clutch member to afford a rotative adjustment of the finger wheel and the annular scale 37 independently of the platen. Moreover, it will be understood that the annular scale 42 turns with the annular scale 37, but may receive a rotative adjustment independently thereof, and that the finger wheel 34 and the two annular scales, as well as the indicator 49, are arranged outside of the platen frame or carriage and to the left thereof, where the parts may be readily manipulated, adjusted or detached when desired. These parts are detachably connected so that they may be readily attached to the platen when desired, or the finger wheel 34 and annular scales may be detached from the spindle 15 and replaced by an ordinary finger wheel, such as the finger wheel 8 at the right-hand of the platen.

The devices are such that they may be effectively used merely as line indicating devices to indicate successively the lines written on a sheet, irrespective of what point on the sheet the first line of writing begins. In this particular use of the device a sheet may be introduced into the machine and the platen turned to bring the sheet to a position where the first line of writing is to begin. If, for example, the sheet is in the nature of a letter head so that the first line of writing may begin some distance from the leading edge of the sheet, the sheet will be positioned in the machine in the usual manner to receive the first line of writing. The finger wheel 34 will then be moved to the right to disengage the clutch sections which connects the annular scale 37 with the platen, and the annular scale will then be turned until the index numeral "1" thereon is in register with the upper edge of the indicator 49. The finger wheel 34 may then be released to enable the clutch to be re-engaged and effect a positive connection between the annular scale 37 and the platen. The operator then proceeds with the writing and as successive lines are written, corresponding index numerals will be brought into register with the indicator 49. In this use of the device the annular scale 42 may be eliminated from consideration. It will be understood that the annular scale 37 enables a proper indication to be afforded of the number of lines actually written or occupied in the body of the writing, irrespective of where the writing begins on the sheet. Moreover, such indication is afforded throughout more than a single revolution of the platen, and in fact for two complete revolutions thereof.

I preferably make the two series of numerical indices 52 and 53 on the annular scale 37 in one color and make the numerical indices on the annular scale 42 in a contrasting color. For example, the two series of indices 52 and 53 may be made in red and

the indices 48 may be inscribed in white. This is done to avoid confusion in the use of the device and to facilitate a proper relative adjustment between the two annular scales at the requisite points determined by an inspection of the numerals.

In the use of the indicating devices for condensed record billing work, for example, a relative setting between the annular scales 42 and 37, depending on the depth of the bill head on the invoice sheet, may be attained in the same general manner set forth in the Briggs patent hereinbefore referred to, and which it is deemed unnecessary to repeat herein. The annular scales having been set for the particular character of invoice sheets employed, and an invoice sheet having been written, it is removed from the machine without disturbing the record and carbon sheets. After the written invoice sheet is removed, another invoice sheet may be introduced in the following manner. The index numeral on the annular scale 42, which is in register with the pointer, is observed by the operator and the platen is turned backward until the corresponding numeral on the annular scale 37 is in register with the indicator. For example, if after removal of the first invoice sheet the numeral "23" on the annular scale 42 is in register with the indicator, then the platen is turned backward until the numeral "23" on the annular scale 37 is in register with the indicator, the second invoice sheet is then introduced and the platen is turned forward until the numeral "23" on the annular scale 42 is again in register with the fixed indicator. The platen is then rotated forwardly, say, four additional spaces. This will bring the invoice sheet to a position where the first line to be written thereon is at the printing line and the record sheet will have been fed forward four line spaces from the position it occupied when the last line of the preceding record was reproduced thereon. This second invoice is then written in the usual manner and is removed from the machine as before, and so on.

It will be seen that the indicating devices of my invention may be used at will either as a mere line indicator, and as such may be used to accurately indicate the number of lines, irrespective of where the writing begins on the sheet, or may be used for condensed record and other billing work, as may be desired.

It will be understood that if there is no occasion to use the indicating devices for billing work, but it is intended to employ them merely as line indicating devices, the annular scale 42 may, if desired, be dispensed with, using only the annular scale 37, or the two series of numerical indices 52 and 53, which are circularly and progressively arranged, and arranged side by side in fixed relation, as shown. I prefer, however, to employ the construction in the manner shown so that it may be readily used at will either as a mere line indicating mechanism or as billing mechanism.

While I have referred to the use of the indicating devices for condensed record billing work, it will be undertstood that they may be employed for various other uses, such for example, as filling in blanks or partly printed forms where insertions are to be made at given lines in the body of the blank.

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

1. In a typewriting machine, the combination of a rotative platen, a rotative carrier having circularly arranged indices thereon, a finger wheel to which said carrier is fixedly connected and by which the platen may be turned, means for connecting said finger wheel and platen to turn together and for disconnecting them when desired to afford a rotative adjustment of said finger wheel and carrier independently of the platen, and an indicator with which the indices on the carrier are adapted to register.

2. In a typewriting machine, the combination of a rotative platen, a rotative carrier having circularly arranged indices thereon, a finger wheel to which said carrier is fixedly connected and by which the platen may be turned, a clutch for connecting said finger wheel and platen to turn together, means for releasing said clutch to afford a rotative movement of the finger wheel and a corresponding rotative adjustment of the carrier independently of the platen, and an indicator with which the indices on the carrier are adapted to register.

3. In a typewriting machine, the combination of a rotative platen, a rotative carrier having circularly arranged indices thereon, a finger wheel to which said carrier is fixedly connected and by which the platen may be turned, a clutch for connecting said finger wheel and platen to turn together, means under control of said finger wheel for releasing said clutch to afford a rotative movement of the finger wheel and a corresponding rotative adjustment of the carrier independently of the platen, a movement of said finger wheel longitudinally of the platen effecting a release of the platen, and an indicator with which the indices on the carrier are adapted to register.

4. In a typewriting machine, the combination of a rotative platen, a rotative carrier having circularly arranged indices which extend in more than one complete circle around said carrier to indicate more than one complete rotation of the platen, a finger wheel to which said carrier is fixedly connected and by which the platen may be

turned, means for connecting the finger wheel and platen to turn together and for disconnecting them when desired to afford a rotative adjustment of said finger wheel and carrier independently of the platen, and a relatively fixed indicator with which said indices are brought successively into register as the platen rotates.

5. In a typewriting machine, the combination of a rotative platen, a rotative disk-like carrier arranged concentrically with the platen and having on the periphery thereof circularly arranged numerical indices which extend progressively in more than one complete circle around said carrier to indicate more than a complete rotation of the platen, a finger wheel to which said carrier is fixedly connected and by which the platen may be turned, means for connecting the finger wheel and platen to turn together and for disconnecting them when desired to afford a rotative adjustment of said finger wheel and carrier independently of the platen, and a relatively fixed indicator with which said indices are brought successively into register as the platen rotates.

6. In a typewriting machine, the combination of a rotative platen, a rotative disk-like carrier arranged concentrically with the platen and having on the periphery thereof circularly arranged numerical indices which extend progressively in more than one complete circle around said carrier to indicate more than a complete rotation of the platen, a finger wheel to which said carrier is fixedly connected and by which the platen may be turned, a clutch which connects the finger wheel and platen, means controlled by said finger wheel for disconnecting said clutch to afford a rotative adjustment of the finger wheel and indicator independently of the platen, and a relatively fixed indicator with which said indices are brought successively into register as the platen rotates.

7. In a typewriting machine, the combination of a rotative platen, a rotative carrier having circularly arranged indices which extend in more than one complete circle around said carrier to indicate more than one complete rotation of the platen, a finger wheel to which said carrier is fixedly connected and by which the platen may be turned, said finger wheel and indicator being arranged outside of the platen frame and detachably connected with the platen, means for connecting the finger wheel and platen to turn together and for disconnecting them when desired to afford a rotative adjustment of said finger wheel and carrier independently of the platen, and a relatively fixed indicator with which said indices are brought successively into register as the platen rotates.

8. In a typewriting machine, the combination of a rotative platen, a rotative disk-like carrier arranged concentrically with the platen and having on the periphery thereof circularly arranged numerical indices which extend progressively in more than one complete circle around said carrier to indicate more than a complete rotation of the platen, a finger wheel to which said carrier is fixedly connected and by which the platen may be turned, said finger wheel being arranged outside of the platen frame and detachably connected with the platen, a clutch which connects the finger wheel and platen to turn together, means for releasing said clutch to enable the finger wheel and carrier to receive a rotative adjustment independently of the platen, and an indicator with which the indices on the carrier are brought successively into register during the rotation of the platen.

9. In a typewriting machine, the combination of a rotative platen, a carrier arranged concentrically with the platen and outside of the platen frame and having two circular series of numerical indices arranged side by side, the numerical indices of the two series being progressively arranged on the periphery of the carrier and fixed relatively to each other on the carrier, a clutch which normally connects the carrier and platen to turn together, means for releasing said clutch to enable the carrier to be rotatively adjusted independently of the platen, and an indicator with which said indices are adapted to register.

10. In a typewriting machine, the combination of a rotative platen, a carrier arranged concentrically with the platen and outside of the platen frame and having two circular series of numerical indices arranged side by side, the numerical indices of the two series being progressively arranged on the periphery of the carrier and fixed relatively to each other on the carrier, a spring pressed clutch which normally positively connects the carrier and platen to turn together, means controlled by a movement of said carrier longitudinally of the platen for releasing said clutch to enable the carrier to be rotatively adjusted independently of the platen, and an indicator with which said indices are adapted to register.

11. In a typewriting machine, the combination of a rotative platen, a carrier arranged concentrically with the platen and having circularly and progressively arranged numerical indices that extend in more than one complete circle around the periphery of said carrier to indicate the lines for more than one complete rotation of the platen, said indices being fixed relatively to one another on the carrier, a clutch contained within the platen for normally connecting the platen and carrier to rotate together, means for releasing said clutch to enable the carrier to be rotatively adjusted

independently of the platen, and an indicator with which the indices on the carrier are adapted to register.

12. In a typewriting machine, the combination of a rotative platen, a carrier arranged concentrically with the platen and outside of the platen frame and having two circular series of numerical indices arranged side-by-side, the numerical indices of the two series being progressively arranged on the periphery of the carrier and fixed relatively to each other, a finger wheel with which said carrier is fixedly connected, a clutch which normally connects said finger wheel carrier and platen to turn together and which enables said finger wheel to turn the platen, means for releasing said clutch to enable the finger wheel and carrier to be rotatively adjusted independently of the platen, and an indicator with which said indices are adapted to register.

13. In a typewriting machine, the combination of a rotative platen, a carrier arranged concentrically with the platen and outside of the platen frame and having two circular series of numerical indices arranged side-by-side, the numerical indices of the two series being progressively arranged on the periphery of the carrier and fixed relatively to each other, a finger wheel with which said carrier is fixedly connected, a spring pressed clutch which normally positively connects said finger wheel carrier and platen to turn together and which enables said finger wheel to turn the platen, means controlled by a movement of said finger wheel and carrier longitudinally of the platen for releasing said clutch to enable the finger wheel and carrier to be rotatively adjusted independently of the platen, and an indicator with which said indices are adapted to register.

14. In a typewriting machine, the combination of a rotative platen, a carrier arranged concentrically with the platen and having circularly and progressively arranged numerical indices that extend in more than one complete circle around the periphery of said carrier to indicate the lines for more than one complete rotation of the platen, said indices being fixed relatively to one another on the carrier, a finger wheel fixedly connected with said carrier, the finger wheel and carrier being arranged outside of the platen frame, a clutch contained within the platen for normally connecting the platen, finger wheel and carrier to rotate together, means for releasing said clutch to enable the finger wheel and carrier to be rotatively adjusted independently of the platen, and an indicator with which the indices on the carrier are adapted to register.

15. In a typewriting machine, the combination of a rotative platen, two rotative carriers each provided with circularly arranged indices, means for operatively connecting the two carriers so that they may rotate together and so that one of the carriers may receive a rotative adjustment independently of the other, means for positively connecting one of the carriers with the platen so that both carriers may rotate therewith and may receive a rotative adjustment together independently of the platen, and an indicator with which said indices are adapted to register.

16. In a typewriting machine, the combination of a rotative platen, two relatively adjustable annular scales, means for connecting one of said scales with the platen so that it may be fixedly connected to turn therewith or both of said scales may receive a rotative adjustment together independently of the platen, separate means for operatively connecting said scales to turn together, and an indicator with which the indices on said scales are adapted to register.

17. In a typewriting machine, the combination of a rotative platen, two relatively adjustable annular scales, a releasable positively acting clutch between the platen and one of said scales so that the last mentioned scale may be positively connected to turn with the platen or may be freed therefrom for rotative adjustment independently of the platen, separate means for operatively connecting said scales to turn together, and an indicator with which the indices on said scales are adapted to register.

18. In a typewriting machine, the combination of a rotative platen, two relatively adjustable annular scales, a releasable positively-acting clutch between the platen and one of said scales so that the last mentioned scale may be positively connected to turn with the platen or may be freed therefrom in order that both of said scales may receive a rotative adjustment together independently of the platen, a release of the clutch being effected by a movement of said clutch connected scale longitudinally of the platen, separate means for operatively connecting said scales to turn together, and an indicator with which the indices on said scales are adapted to register.

19. In a typewriting machine, the combination of a rotative platen, two relatively rotatively adjustable annular scales one of which is formed as a part of a finger wheel by which the platen may be turned, means for fixedly connecting said last mentioned scale and finger wheel to turn with the platen and for freeing said scale and finger wheel to enable a rotative adjustment thereof independently of the platen to be effected, and an indicator with which the indices on said scales are adapted to register.

20. In a typewriting machine, the combination of a rotative platen, two relatively

rotatively adjustable annular scales one of which is formed as a part of a finger wheel by which the platen may be turned, a positively acting spring pressed clutch between said platen and finger wheel to positively connect said finger wheel and platen to turn together or to enable said finger wheel and scales to be rotatively adjusted independently of the platen, and an indicator with which the indices on said scales are adapted to register.

21. In a typewriting machine, the combination of a rotative platen, two relatively rotatively adjustable annular scales one of which is formed as a part of a finger wheel by which the platen may be turned, a positively acting spring pressed clutch between said platen and finger wheel to positively connect said finger wheel and platen to turn together or to enable said finger wheel and scales to be rotatively adjusted independently of the platen, a release of the clutch being effected by a movement of said finger wheel longitudinally of the platen, and an indicator with which the indices on said scales are adapted to register.

22. In a typewriting machine, the combination of a rotative platen, two rotative carriers each provided with circularly arranged indices, the indices on one of said carriers being progressively arranged numerical indices which extend around said carrier in more than one complete circle, means for operatively connecting the two carriers so that they may rotate together and so that one of the carriers may receive a rotative adjustment independently of the other, means for operatively connecting the carriers with the platen so that they may rotate therewith and may receive a rotative adjustment independently thereof, and an indicator with which said indices are adapted to register.

23. In a typewriting machine, the combination of a rotative platen, two relatively adjustable annular scales, the indices on one of said scales being progressively and circularly arranged indices which extend around the scale more than one complete circle so as to indicate more than one complete rotation of the platen, means for connecting one of said scales with the platen so that it may be fixedly connected to turn therewith or may receive a rotative adjustment independently of the platen, and an indicator with which the indices on said scales are adapted to register.

24. In a typewriting machine, the combination of a rotative platen, two relatively rotatively adjustable annular scales one of which is formed as a part of a finger wheel by which the platen may be turned, the annular scale which is formed as a part of the finger wheel having circularly and progressively arranged numerical indices which extend around said scale for more than one complete circle so as to indicate more than one complete rotation of the platen, means for fixedly connecting said last mentioned scale and finger wheel to turn with the platen and for freeing said scale and finger wheel to enable a rotative adjustment thereof independently of the platen to be effected, and an indicator with which the indices on said scales are adapted to register.

25. In a typewriting machine, the combination of a rotative platen, a rotative carrier having circularly arranged indices thereon, a finger wheel to which said carrier is fixedly connected and by which the platen may be turned, means for connecting said finger wheel and platen to turn together and for disconnecting them when desired to afford a rotative adjustment of said finger wheel and carrier independently of the platen, a second carrier having circularly arranged indices thereon and which is mounted to turn with and to receive a rotative adjustment independently of said first mentioned carrier, and an indicator with which the indices on said carriers are adapted to register.

26. In a typewriting machine, the combination of a rotative platen, a rotative disk-like carrier arranged concentrically with the platen and having on the periphery thereof circularly arranged numerical indices which extend progressively in more than one complete circle around said carrier to indicate more than a complete rotation of the platen, means for connecting said carrier and the platen to turn together and for disconnecting them when desired to afford a rotative adjustment of said carrier independently of the platen, a second carrier having circularly arranged indices thereon and which is mounted to turn with and to receive a rotative adjustment independently of said first mentioned carrier, and an indicator with which the indices on said carriers are adapted to register.

27. In a typewriting machine, the combination of a rotative platen, a carrier arranged concentrically with the platen and outside of the platen frame and having two circular series of numerical indices arranged side-by-side, the numerical indices of the two series being progressively arranged on the periphery of the carrier and fixed relatively to each other, a clutch which normally connects the carrier and platen to turn together, means for releasing said clutch to enable the carrier to be rotatively adjusted independently of the platen, a second carrier having circularly arranged indices thereon and which is mounted to turn with and to receive a rotative adjustment independently of said first mentioned carrier, and an indicator with which the indices on said carriers are adapted to register.

28. In a typewriting machine, the combi-

nation of a rotative platen, a carrier arranged concentrically with the platen and outside of the platen frame and having two circular series of numerical indices arranged side by side, the numerical indices of the two series being progressively arranged on the periphery of the carrier and fixed relatively to each other, a finger wheel with which said carrier is fixedly connected, a spring-pressed clutch which normally positively connects said finger wheel carrier and platen to turn together and which enables said finger wheel to turn the platen, means controlled by a movement of said finger wheel and carrier longitudinally of the platen for releasing said clutch to enable the finger wheel and carrier to be rotatively adjusted independently of the platen, a second carrier having circularly arranged indices thereon and which is mounted to turn with and to receive a rotative adjustment independently of said first mentioned carrier, and an indicator with which the indices on said carriers are adapted to register.

29. In a typewriting machine, the combination of a rotative platen, a rotative carrier mounted concentrically with the platen and having two series of circularly and progressively arranged numerical indices extending around the periphery thereof, the numerical indices of the two series being arranged side by side and one beginning where the other leaves off and the numerical series next to the platen beginning with "1," means for connecting the carrier and platen to turn together and for freeing the carrier from the platen to enable it to be rotatively adjusted independently of the platen, a second carrier having a circular series of progressively arranged numerical indices corresponding to that circular series of indices on the other carrier which begins with "1," the second carrier being arranged next to that side of the first carrier on which the corresponding indices are inscribed, means whereby said second carrier may be rotatively adjusted independently of the first mentioned carrier, and an indicator with which said indices are adapted to register.

Signed at the borough of Manhattan, city of New York, in the county of New York and State of New York, this 24th day of August A. D. 1912.

CLIFFORD ORBELL.

Witnesses:
E. M. WELLS,
CHARLES E. SMITH.