

916,099.

2 SHEETS—SHEET 1.



206

INVENTOR

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TYPE WRITING MACHINE.
 APPLICATION FILED OCT. 25, 1904.

916,099.

Patented Mar. 23, 1909.

2 SHEETS—SHEET 2.

FIG. 3.

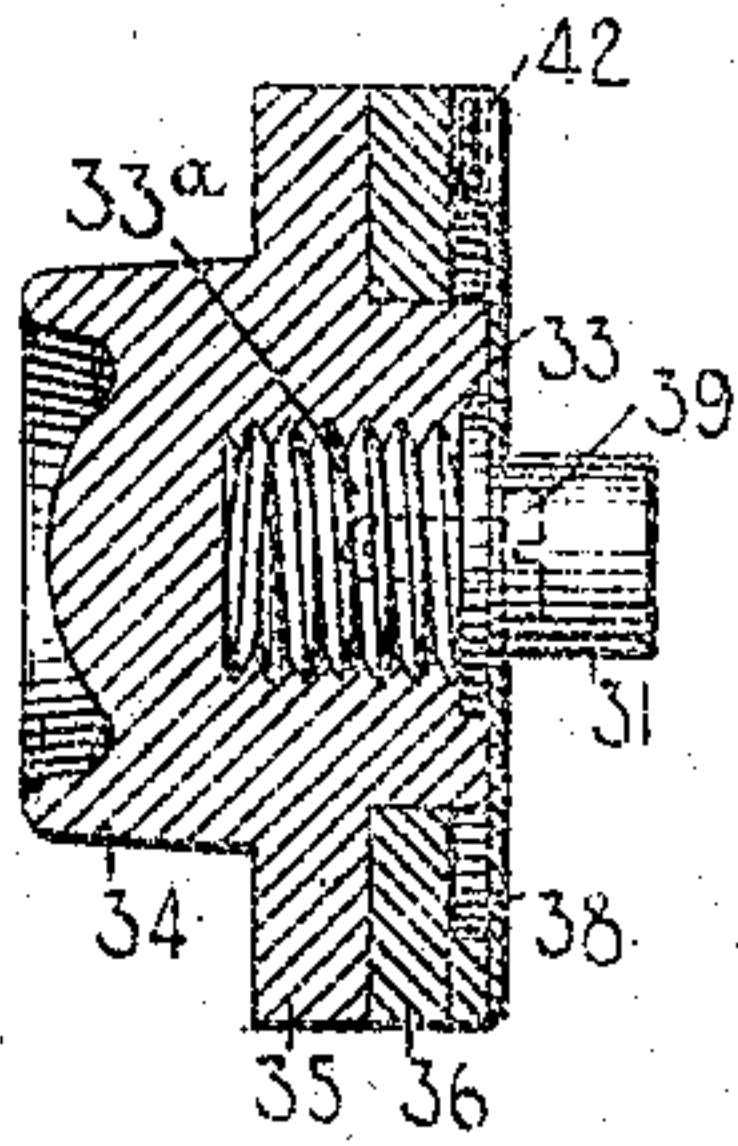


FIG. 4.

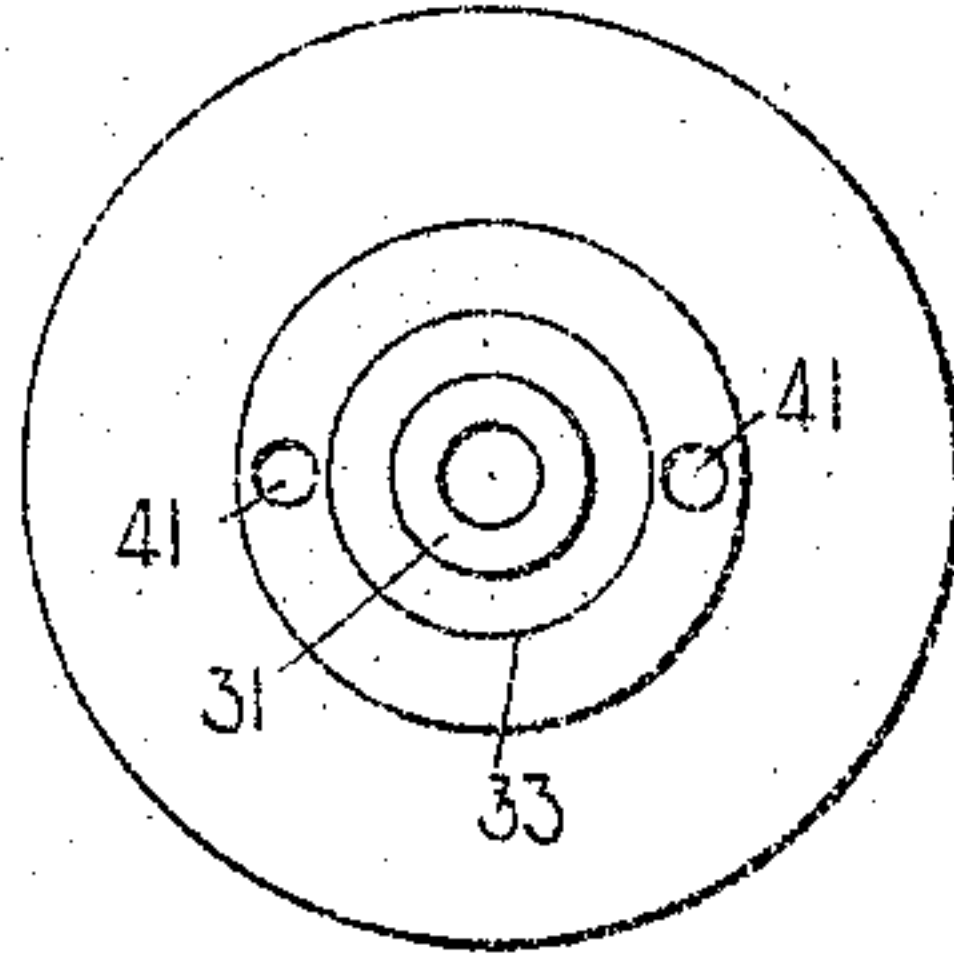


FIG. 5.

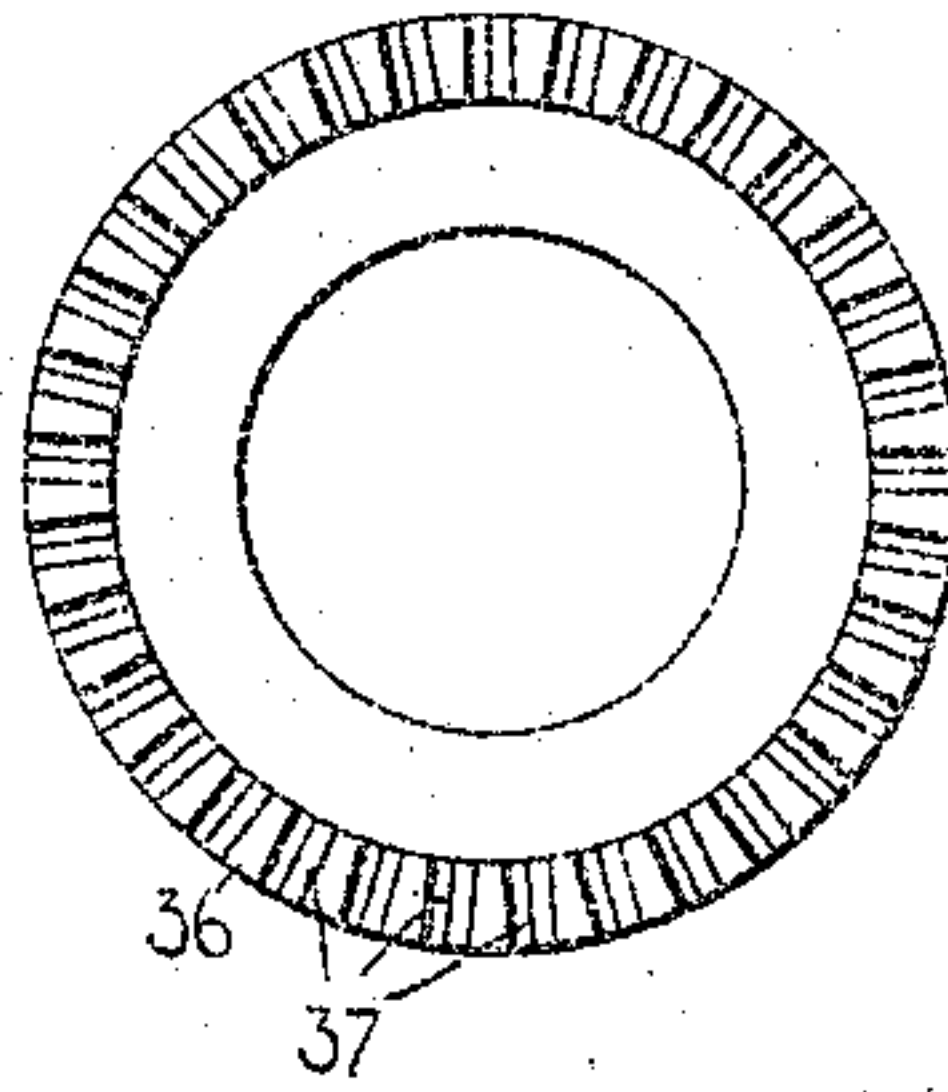


FIG. 6.

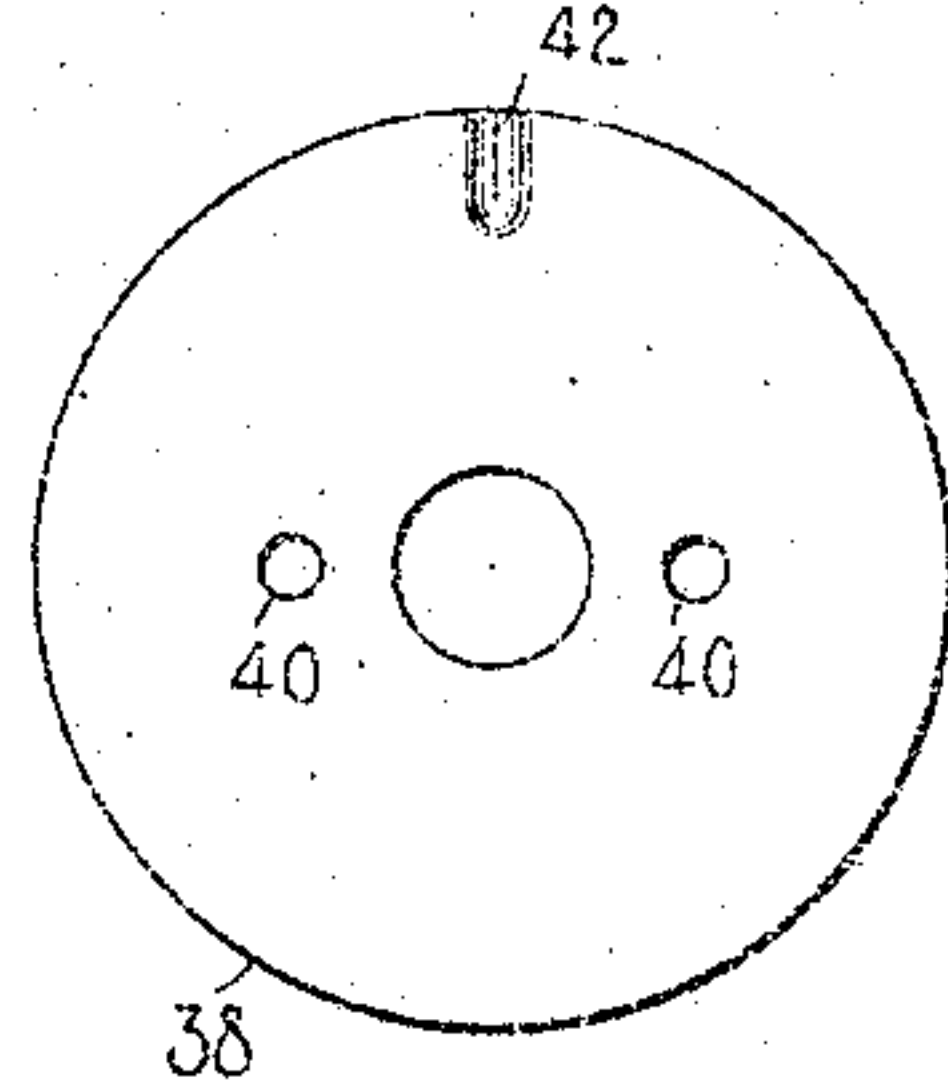


FIG. 7.

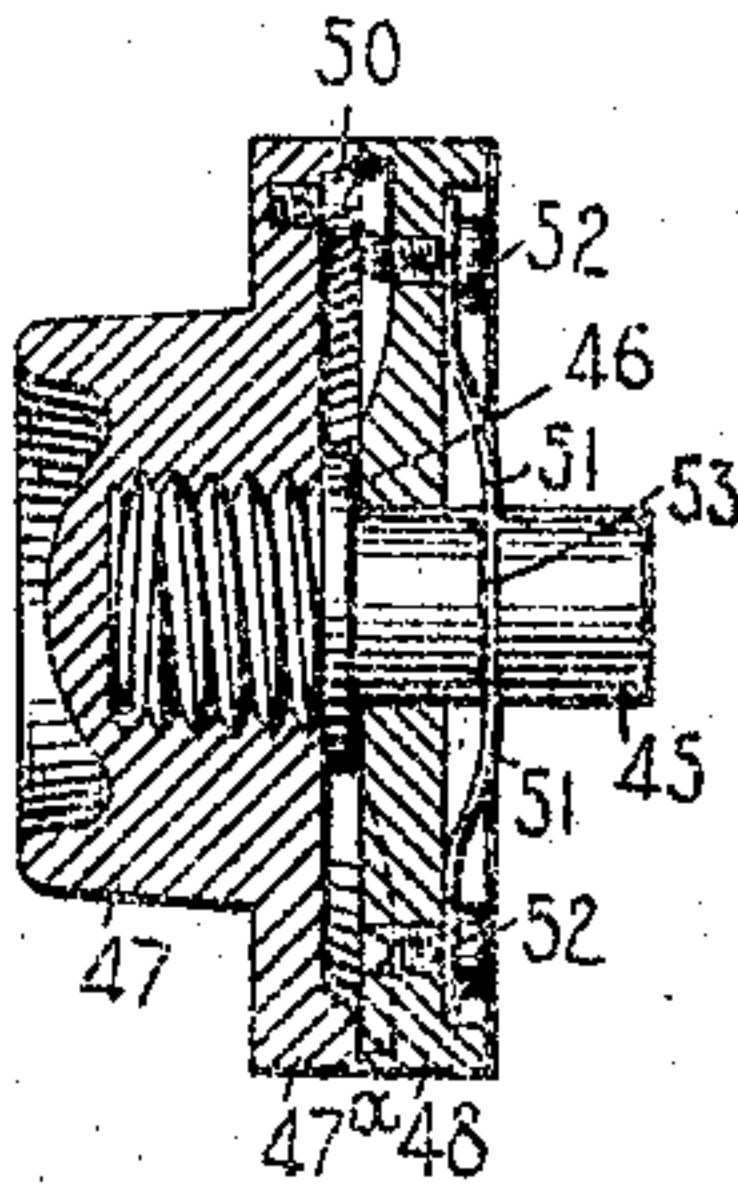


FIG. 8.

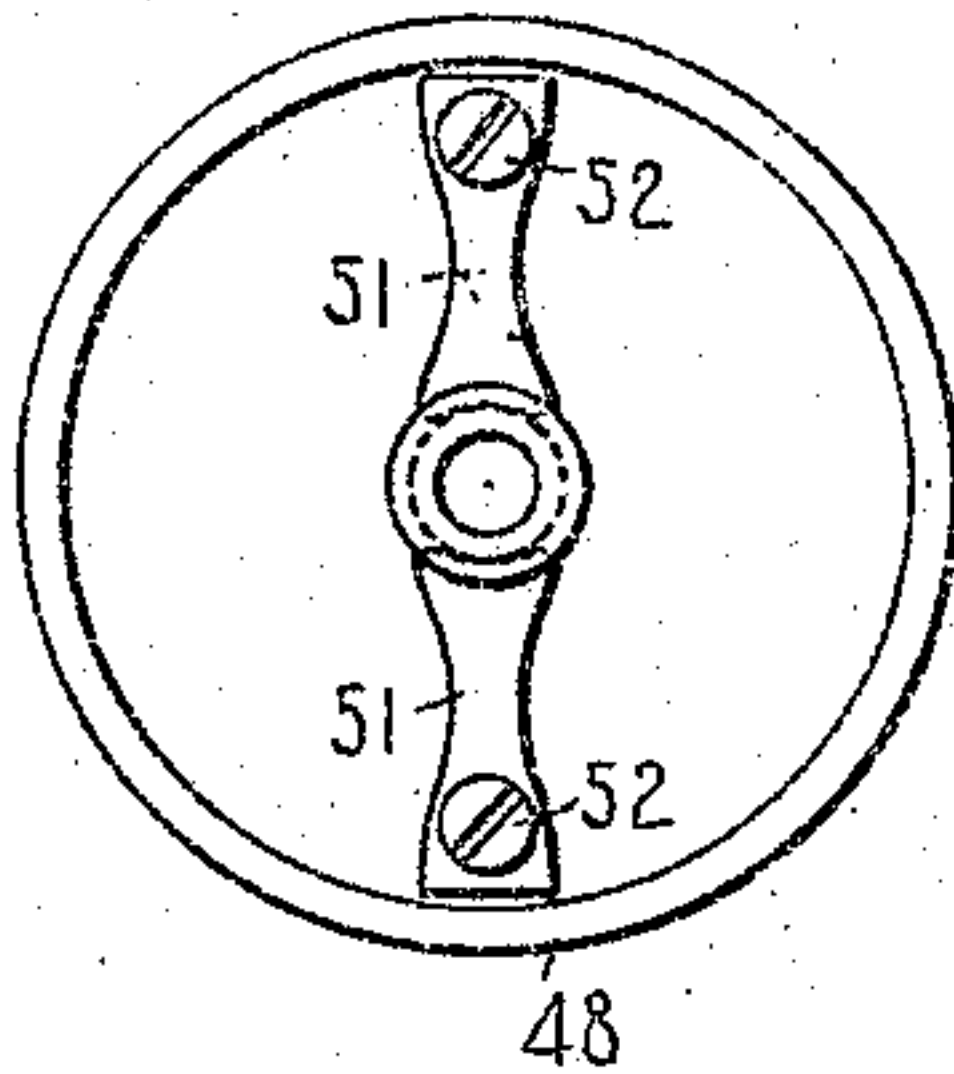


FIG. 9.

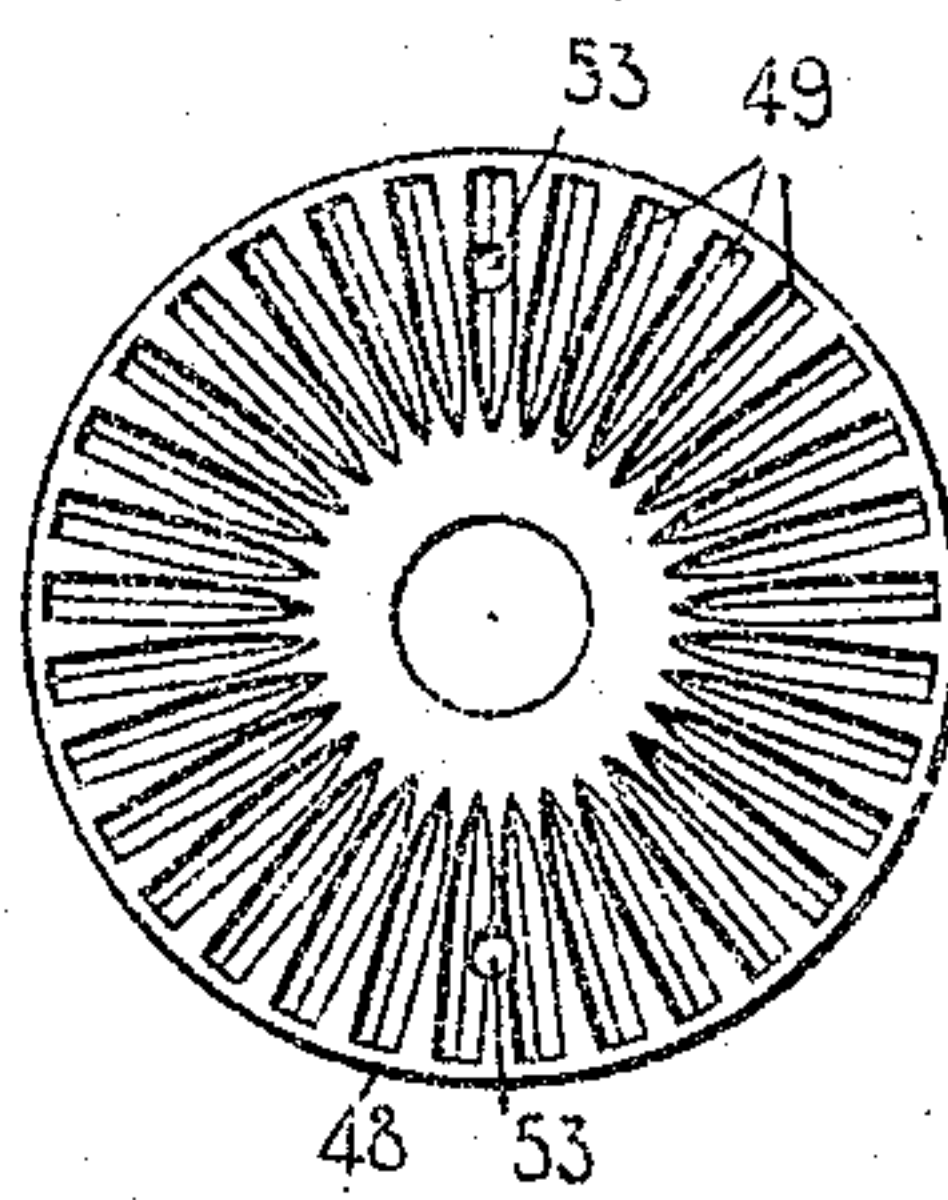
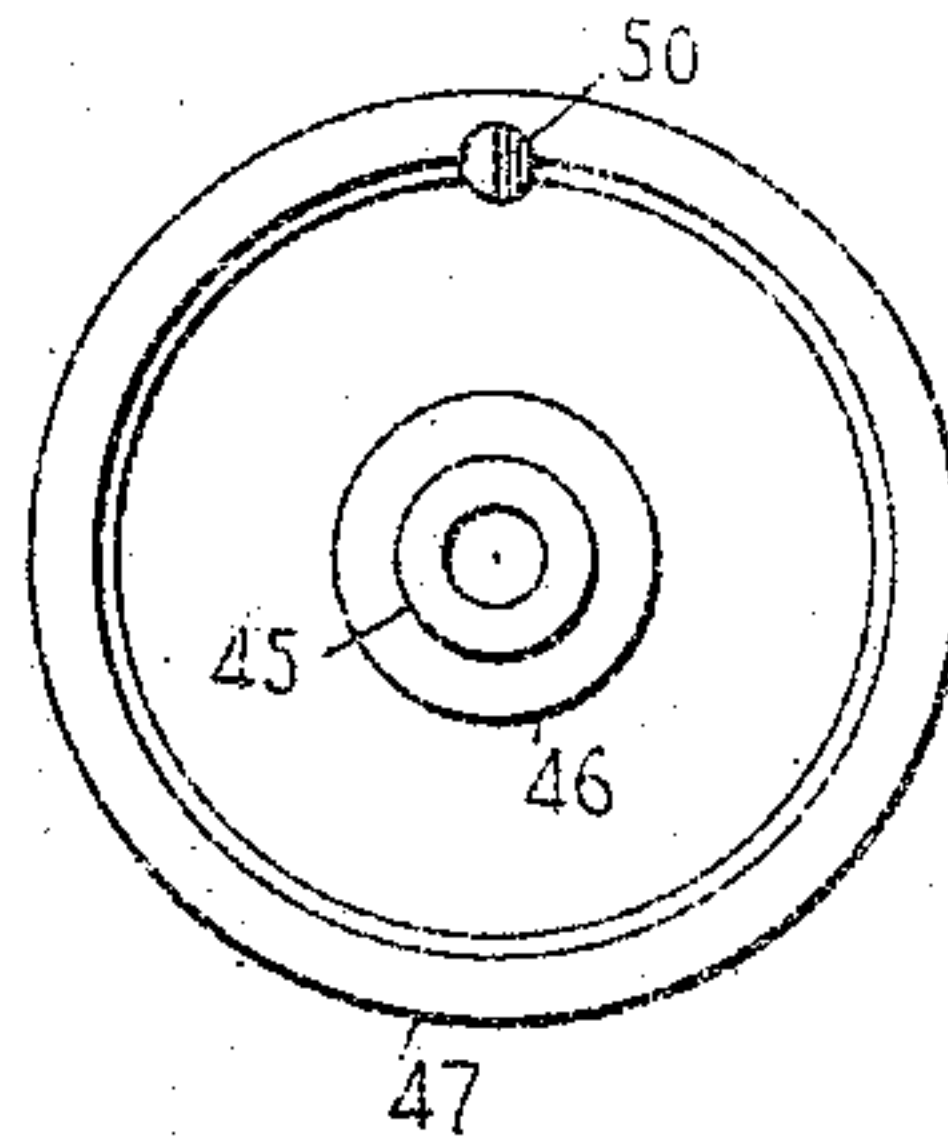


FIG. 10.



WITNESSES:

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UNITED STATES PATENT OFFICE.

DANIEL BRIGGS, OF BROOKLYN, NEW YORK, ASSIGNOR TO WYCKOFF, SEAMANS & BENEDICT,
OF ILION, NEW YORK, A CORPORATION OF NEW YORK.

TYPE-WRITING MACHINE.

No. 916,099.

Specification of Letters Patent.

Patented March 23, 1909.

Application filed October 25, 1904. Serial No. 229,951.

To all whom it may concern:

Be it known that I, DANIEL BRIGGS, citizen of the United States, and resident of Brooklyn, 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 especially to line space scales for such machines or to means for facilitating the employment of the machine for what is known as "bill and charge" or "condensed record" work.

My invention consists in certain features of construction and combinations and arrangements of parts which will be fully set forth hereinafter and particularly pointed out in the claims.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a top plan view of a portion of a typewriting machine with devices embodying one form of my invention applied thereto; Fig. 2 is a left-hand end view of the same, partly in section, the section being taken on the line $x-x$ of Fig. 1, and looking in the direction of the arrow at said line; Fig. 3 is a detail longitudinal sectional view of my attachment shown in Figs. 1 and 2. Fig. 4 is an end view of the same looking toward the left in Fig. 3, certain parts being removed; Fig. 5 is a detail face view of the adjustable ring having a scale on its periphery; Fig. 6 is a detail face view of a spring plate; and Figs. 7, 8, 9 and 10 are views of another form of construction embodying my invention; Fig. 7 being a longitudinal sectional view; Fig. 8, a right hand face view of the same; Fig. 9, a left-hand detail face view of the adjustable ring and Fig. 10, a right-hand face view of the construction shown in Fig. 7 with certain parts removed.

I have shown my invention applied to a Remington No. 6 typewriter, but it should be understood that it may be applied to any typewriter or other printing machine in which a roller platen is employed.

The machine shown in the present instance comprises a truck 1 which is supported by rollers 2 which travel on a stationary track or rail 3 mounted on the top plate of the ma-

chine. A platen frame 4 is supported at its rear side by the truck 1 by means of links 5 and at its front side by means of a roller 6 (Fig. 2) which travels on a shift rail 7 in a manner well known in the art. The platen frame has, as usual, the outline of a rectangle within which the roller platen 8 is mounted, said platen having a shaft 9 (Fig. 2) rigidly secured thereto and which is journaled in the end bars of the platen frame. Said platen frame comprises a bar 10 to which are pivoted hangers 11 which support the shaft 12 of the usual feed roller or feed rollers 13. Springs 15 secured to the hangers 11 by screws 16 engage arms 17 which project from the bar 10, and said springs normally press the feed rollers into engagement with the platen. Said feed rollers may be disengaged from the platen by means of a finger piece 18 consisting of the end of a crank arm which is rigidly mounted on a rock shaft 19 pivoted in the platen frame. Said rock shaft is provided with arms or projections 20 which engage the hangers 11. The construction is such that if the finger piece 18 be pressed toward the back of the machine the feed rollers will be pressed by the arms 20 away from the platen against the tension of the springs 15. The machine is or may be provided with the other usual or any suitable paper feeding devices.

On the right-hand end of the platen roller there is mounted a line spacing ratchet wheel 21 and a feed dog or pawl 22 is adapted to engage said ratchet to impart line space feed to the platen in the usual way. The pawl 22 is pivotally mounted on an arm 23 which is pivoted to the platen frame at 24 and which is integral with the usual carriage returning and line spacing lever 25. The shaft of the platen projects through the platen frame at both ends and the projecting right-hand end of said shaft has mounted thereon the usual finger wheel 26 which has a hub 27. This finger wheel is secured to the shaft by a set screw 28 which is threaded through the hub and engages the shaft in the usual manner. It is obvious that the finger wheel may be readily detached from the shaft by loosening the set screw 28. The present machine is provided with the usual handle or arm 29 secured to the front bar of the platen frame by a screw 30, and which is used for lifting the

platen in order to inspect the writing or for other reasons.

My line space scale is in the nature of an attachment to be secured to the left-hand end of the platen shaft in place of the usual removable finger wheel, and I also provide, for cooperation with the scale, a pointer which can be readily attached to the machine without making any changes therein. The scale attachment is provided with a hub 31 which is secured upon the left-hand end of the platen shaft by a set screw 32 in the same manner as the hub of the finger wheel by its set screw 28. As shown in Fig. 3, the hub 31 has an annular flange 33. A drum or block 34 of hard rubber or other suitable material is internally threaded to receive a screw 33^a that projects from the left-hand end of the hub, and the drum is screwed up tight against the flange 33, thus securing the drum rigidly on the hub. The left-hand portion of this drum is formed to serve as a finger wheel. The middle portion 35 thereof is made of larger diameter and has the numerals of a circular line space scale imprinted on its periphery, said numerals corresponding in number to the teeth of the line spacing ratchet wheel 21, which is usually thirty-three. The right-hand portion of said block or drum is made of reduced diameter and serves as a bearing for a ring wheel, or disk 36 which is preferably of the same diameter as the part 35, and which has marked upon its periphery the numerals of a second circular line space scale that corresponds to the scale on the part 35. The ring 36 has formed in its right-hand face a series of radial notches or serrations 37. A disk or plate 38 of resilient material is secured to the right-hand end of the block 34 by headed screws 39, the stems of which pass through openings 40 in the disk 38 and are threaded into openings 41 in the drum. The disk 38 has a tooth 42 which is adapted to spring into the notches 37 of the ring 36. In the present instance the tooth 42 is stamped in the disk 38. The engagement of said tooth with said notches is such as to normally retain the ring 36 in any position to which it may be set, but such as to permit the ring to be turned by hand relatively to the drum. In the present instance the line space ratchet wheel 21 has thirty-three teeth and each of the scales 35 and 36 is accordingly divided into thirty-three spaces bearing the numerals "1" to "33" progressively arranged and the ring 36 is formed with thirty-three notches which correspond to the divisions of the scales. The construction is such that when the tooth 42 is in one of the notches each numeral of the scale 36 is in register with one of the numerals of the scale 35. The scales 35 and 36 may have their numerals printed in different colors—for example, the scale 35 may have red and the scale 36 white numerals, so that while the scales are

of the same character they are in distinctive colors or have different characteristics to readily distinguish them. A pointer 43 consists of an arm forming part of a piece of sheet metal which lies on the top of the front bar and the end bar of the platen frame, and which, as shown in the present case, is secured in position by the screw 30 which holds the arm 29. Said piece of sheet metal is formed with depending ears 44 which embrace the two sides of the front bar and prevent any motion of the pointer about the screw 30 as a pivot. It will be perceived that this finger can be readily attached to the machine by removing the screw 30 and arm 29, then placing the finger in position and replacing the arm 29 on top of the finger and inserting and tightening the screw 30.

My line space scale may be used for a variety of purposes, but it is more especially designed for what is commonly known as "condensed record" or "bill and charge" work. Bills or invoices are made out on separate sheets of paper which are usually comparatively short and which are usually printed forms having a suitable space at the top devoted to printed matter or the bill head. It is desirable while making out these invoices to make carbon copies of the typewritten parts of a number of said invoices on a single "condensed record" sheet which is usually longer than the individual bill sheets.

For the sake of compactness and uniformity, it is desirable that the writing on the record sheet shall begin nearer the top of said sheet than the first line of writing on the invoice sheet, (the latter as above pointed out usually having a printed heading), and that several invoices may be duplicated on one record sheet with a uniform and comparatively short space between the several invoices. Several rules for using these scales for this purpose have been worked out, of which the following may be taken as an example. The platen is turned until the numeral "1" on the red scale 35 stands opposite the pointer, an invoice blank is then inserted in the machine, its forward or leading edge being pushed down to the point where it is arrested by the feed roller 13 in the present case or by whatever means may be provided in other cases for arresting the leading edge of the sheet of paper. The platen is then turned until the first line to be written upon is at the printing point or line. This will bring to the pointer a numeral on the red scale depending upon the distance of the first written line from the top of the invoice sheet. If this distance is twenty spaces, for example, the numeral "21" will be found at the pointer. Assuming that it is desired to leave four line spaces between the consecutive records on the record sheet, the platen will be held stationary and the white scale 36 will be turned until the nu-

numeral "5" thereon stands at the pointer in register with the numeral "21" on the red scale. The platen is then turned backward a distance depending on the amount of space it is desired to leave at the top of the record sheet. In the present instance it may be given as part of the rule that the platen is to be turned back until the numeral "25" on the white scale is at the pointer. The record sheet and carbon sheet are then inserted between the bill sheet and platen, being pushed down until the leading edge of the record sheet is arrested by the feed roller, and the platen is then turned forward until "5" on the white scale is again at the pointer, thus bringing the first line to be written on the invoice sheet to the printing line and the top edge of the condensed record sheet will be forward of the printing line. The invoice is then written and is duplicated on the record sheet through the interposed carbon sheet. The invoice sheet is then removed from the machine without disturbing the record sheet and carbon sheet. This may be done by pressing back the finger piece 18 to release the paper feeding devices, and, if necessary, pressing the record and carbon sheets against the platen with the thumb. After the invoice sheet is removed the finger piece 18 is released and another invoice sheet may then be inserted as follows:—The numeral on the white scale which stands at the pointer is noted and the platen is then turned backward until the corresponding numeral on the red scale is at the pointer. For example, if after the removal of the first invoice sheet the numeral "15" of the white scale is at the pointer, then the platen is turned backward until the numeral "15" of the red scale is at the pointer. The second invoice sheet is then inserted and the platen is turned forward until the numeral "15" of the white scale is again at the pointer and is then moved forward four additional spaces. This will bring the first line to be written on the invoice sheet to the printing line and the record sheet will have been fed forward four spaces from the bottom of the preceding record. The second invoice is then written in the usual manner and the second invoice sheet is removed from the machine as before. The numeral of the white scale then standing at the pointer is again noted and the platen is turned backward until the corresponding numeral of the red scale is at the pointer, when a third invoice sheet may be inserted as before; and this operation is repeated until the record sheet is filled. A new record sheet may be started in the machine as follows:—The relative adjustment of the two scales being left as before, the platen is turned until the numeral "1" of the red scale is at the pointer. An invoice sheet is inserted and the platen is turned for-

ward until the numeral "25" of the white scale is at the pointer, when the record sheet and carbon sheet are inserted and the platen is turned forward until the numeral "5" of the white scale is at the pointer. The first line to be written on the invoice sheet will then be at the printing line and the record sheet will be in proper position to begin a new record. The second record sheet is filled in the same manner as the first. For any particular form of invoice blank the white scale is set relatively to the red scale once for all, but the adjustment of one scale relative to the other would be different for invoice sheets having different depths of heading. The adjustment would also be different for different widths of spacing between the copies of the different invoices on the record sheet. For example, if it is desired to leave only three spaces between records, the numeral "4" on the white scale would be set opposite the numeral "21" of the red scale in the instance above given instead of the numeral "5". If six spaces are desired, the numeral "7" of the white scale would be set opposite the numeral "21" of the red scale instead of the numeral "5" but in nearly every case the use of the numeral "5" as an arbitrary number will be found to suffice to give the requisite spaces between records of invoices on the record sheet.

I have illustrated another form of construction embodying my invention in Figs. 7, 8, 9 and 10. This construction comprises a hub 45 which is adapted to be secured to the end of the platen shaft by a set screw in the same manner as the hub 31 above described. The hub 45 has a flange 46 and a screw threaded end portion similar to the corresponding parts of the other form of the invention, and a block 47 is screwed on to the end of the hub in the same manner as before. The left-hand portion of this block forms a finger wheel and said block has a portion 47^a of greater diameter than said finger wheel and this enlarged portion has the numerals from "1" to "33" on its periphery, thus forming a circular scale which corresponds to the scale 35. A ring, wheel or disk 48 is loosely mounted on the hub 45 to the right of the flange 46 and this ring has the numerals of a line space scale on its periphery, said scale corresponding to the scale 36. The left hand face of the disk 48 is shown in Fig. 9. This face of said disk has a series of radial depressions 49 formed therein, one of said depressions corresponding to each numeral of the scale. A detent 50 projects from the right-hand face of the block 47 in position to engage one or another of the depressions 49. In the present instance this detent is shown as the head of a screw which is formed with two oblique faces to fit into the V-shaped grooves 49. The disk 48 is yieldingly pressed toward the block 47 to cause the detent to

engage in one or another of the grooves 49, by two plate springs 51 which are secured to the right-hand face of the disk 48 by screws 52 which pass through holes in said plates 5 and are threaded into openings 53 in the disk. The spring plates 51 are radially disposed and their free ends lie in a peripheral groove 53 formed in the hub 45. The construction is such that the disk 48 is normally held by the detent 50 in such position that each of the numerals thereon is in register with a numeral of the scale 47, but the disk 48 may be readily adjusted so as to bring any one of the numerals thereon in register with any one of the numerals on the other scale. The manner of using this form of the invention is the same as that of using the other form.

From the foregoing description it will be understood that the devices embodying my invention can be made at small cost, can be readily applied to various existing forms of typewriting machines without modifying the structural features of such machines and that they do not occupy any of the space ordinarily employed as a part of the platen, as is the case with some devices used heretofore.

It is obvious that the details of the device may be varied in other ways than in those shown.

The device herein described may be used for condensed record work without operating the release lever to remove the several bill sheets from the machine. In order to do this the record sheet and the first bill sheet may be inserted in the machine. After the first bill has been written the platen may be turned backward an appropriate distance and a second bill sheet may then be inserted and turned forward until the first writing line thereon is at the printing point. This bill may be written and a third bill inserted in the same way. In using the machine in this manner there may be two bill sheets in the machine at one time and these may overlap one another, but this will do no harm as the writing is done only on the last bill sheet inserted, and as there is but one carbon sheet the matter written on the last bill sheet will be duplicated only on the record sheet. As the sheets are fed along the bill sheet first inserted will run out of the machine of itself. The following is given as an example of a rule for using the device in this way. In order to

set the scales, the red scale is first set at "1". A bill is then inserted and turned forward to the writing line, the platen is then held stationary and the white scale is turned and set at "1". The two scales will then be set so that corresponding numbers on them will be a distance apart equal to the distance from the top of the bill sheet to the first writing line. Having set the scales the writing is done as follows:—The red scale is set at "1" and a bill is inserted. The platen is then

turned to "20" on the white scale. The record sheet is then inserted and the platen turned to "1" on the white scale. The bill is then written, after which the platen is turned forward a distance of four line spaces. The number on the white scale is then noted and the platen is turned backward to the same number on the red scale. A new bill is then inserted and the platen is then turned forward to the same number on the white scale. When this bill is written, the same operation is repeated and a third bill inserted and so on until the record sheet is filled.

It will be obvious that numerous other rules may be worked out, but the two examples given will serve to illustrate the manner in which my invention is used.

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

1. In a typewriting machine, the combination with a roller platen and platen frame, of an attachment adapted to be connected with or disconnected from said platen as an entirety while the platen remains in normal position in the machine, said attachment comprising a finger wheel situated outside of the platen frame and a line space scale.

2. In a typewriting machine, the combination with a roller platen having a shaft, of an attachment adapted to be mounted on said shaft or removed therefrom as an entirety while the platen remains in normal position in the machine, said attachment comprising a finger wheel mounted on one end of the platen shaft for turning the platen and a line space scale provided with numerical indices.

3. In a typewriting machine, the combination of a roller platen having a shaft, of an attachment adapted to be mounted on and to be removed from said shaft as an entirety while the platen remains in normal position in the machine, said attachment comprising a finger wheel secured to the shaft at one end thereof for turning the platen, a line space scale rigidly connected with said finger wheel, and a second line space scale adjustable with relation to the first mentioned line space scale.

4. In a typewriting machine, the combination with a roller platen having a shaft, of an attachment adapted to be mounted on one end of said shaft or to be removed therefrom as an entirety while the platen remains in normal position in the machine, said attachment comprising a finger wheel for turning the platen and two line space scales, one of said scales being adjustable with relation to the other.

5. In a typewriting machine, the combination of a platen frame, a roller platen having a shaft which is journaled in and which projects beyond said platen frame, and an attachment adapted to be mounted on a projecting end of said shaft and to be de-

tached therefrom as an entirety, said attachment comprising two line space scales one of which is adjustable with relation to the other.

5 6. In a typewriting machine, the combination of a platen frame, a roller platen having a shaft which is journaled in and which projects beyond said platen frame, and an attachment adapted to be mounted
10 on a projecting end of said shaft and to be detached therefrom as an entirety, said attachment comprising a finger wheel and two line space scales one of which is adjustable with relation to the other.

15 7. In a typewriting machine, the combination with a roller platen having a shaft, of a drum fixed on an end of said shaft; said drum being adapted to serve as a finger wheel for turning the platen and carrying
20 a line space scale; and a second line space scale mounted on said shaft and adapted to be adjusted with relation to the first mentioned scale.

25 8. In a typewriting machine, the combination of a platen frame; a roller platen having a shaft which projects beyond said platen frame; a hub detachably mounted on said shaft outside of the platen frame; a
30 drum rigid with said hub and carrying a line space scale; a disk or drum adjustably mounted on said hub and carrying a second line space scale; and a detent for said adjustable disk or drum.

35 9. In a typewriting machine, the combination with a roller platen and platen frame, of a detachable drum carrying a line space scale, said drum being situated outside of the platen frame; a disk having a notched
40 face adjustably mounted by the side of said drum and carrying a second line space scale; and a spring detent engaging the notches of said disk.

45 10. In a typewriting machine, the combination with a roller platen having a shaft, of a hub mounted on said shaft; a drum threaded on said hub, said drum having one portion constituting a finger wheel and another portion constituting a line space scale;
50 a second line space scale adjustably mounted beside the first line space scale and having a notched face; and a spring plate secured to said drum and having a projection to engage the notches in said disk.

55 11. In a typewriting machine, the combination with a roller platen, of a finger wheel rigidly connected therewith for turning the platen and having a circular line scale, a
60 cooperating circular line scale arranged beside the scale on the finger wheel and between the finger wheel and platen, and a relatively fixed pointer cooperating with said scales.

65 12. In a typewriting machine, the combination of a roller platen, a shaft therefor, a wheel fixedly mounted on one end of said

shaft and having a circular line scale, a cooperating wheel arranged beside the first mentioned wheel and adjustable relatively thereto and having a circular line scale that
70 cooperates with the first mentioned circular scale, spring pressed means for forcing said wheels toward each other, a circular series of serrations in one of said wheels, a detent that cooperates therewith, so as to maintain the adjustable wheel against accidental dis-
75 placement, and a relatively fixed pointer that cooperates with both of said scales.

13. In a typewriting machine, the combination of a platen, a finger wheel therefor, a carrier bearing against said finger wheel and
80 adjustable relatively thereto, circularly arranged indices on said carrier, and means for forming an operative connection between said finger wheel and carrier.

14. In a typewriting machine, the combination of a platen, a platen shaft, a finger
85 wheel secured to the platen shaft, an indicating wheel that is free to turn around the platen shaft, and a spring plate which is fixed against movement longitudinally of said shaft and bears against the indicating
90 wheel and forces it into contact with the finger wheel.

15. In a typewriting machine, the combination of a platen, a platen shaft, a finger
95 wheel detachably secured to the platen shaft, an indicating wheel that is free to turn around the platen shaft and is removable therefrom, and a spring plate which is fixed against movement longitudinally of said shaft and
100 bears against the indicating wheel and forces it into contact with the finger wheel.

16. In a typewriting machine, the combination of a platen, a finger wheel therefor, a
105 carrier bearing against said finger wheel and adjustable relatively thereto, circularly arranged indices on said carrier, and friction means for forming an operative connection between said finger wheel and carrier.

17. In a typewriting machine, the combination of a platen, a platen shaft, a finger
110 wheel with a sleeve that has a circumferential groove therein, a friction plate that is seated in said groove, and an indicating wheel which is adapted to turn on said sleeve
115 and against which the friction plate bears.

18. In a typewriting machine, the combination of a platen, a platen shaft, a finger
120 wheel secured to the platen shaft, an indicating wheel that is free to turn around the platen shaft, and a friction plate which is fixed against movement longitudinally of said shaft and bears against the indicating
125 wheel and forces it into contact with the finger wheel.

19. In a typewriting machine, the combination of a platen, a platen shaft, a finger
wheel detachably secured to the platen shaft, an indicating wheel that is free to turn
130 around the platen shaft and is removable

therefrom, and a detachable friction plate which is fixed against movement longitudinally of said shaft and bears against the indicating wheel and forces it into contact with the finger wheel.

Signed at the borough of Manhattan, city of New York, in the county of New York

and State of New York, this 22nd day of October A. D. 1904.

DANIEL BRIGGS.

Witnesses:

CHARLES E. SMITH,
E. M. WELLS.