

APPLICATION FILED NOV. 18, 1905.

2 SHEETS—SHEET 1.



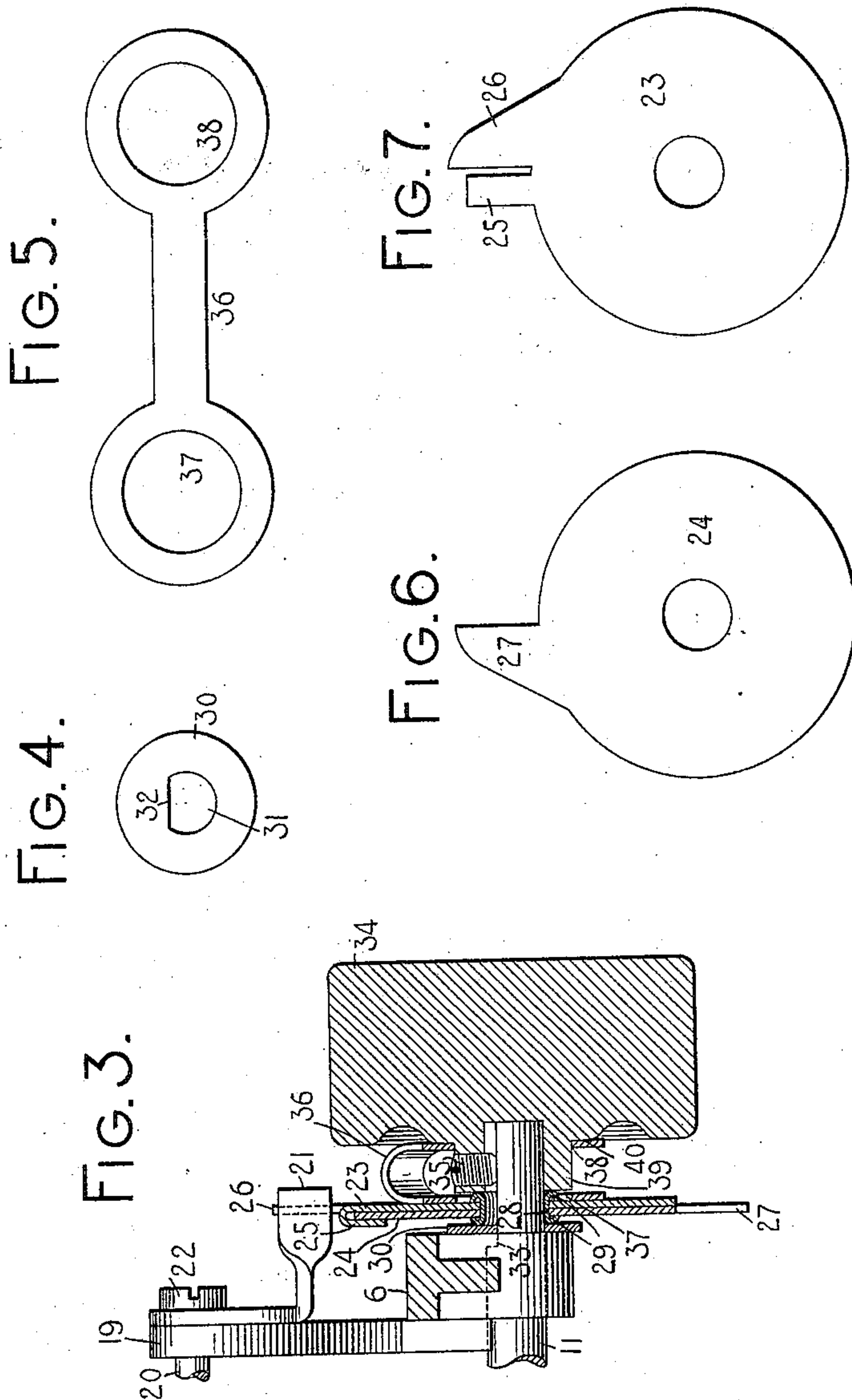
INVENTOR:

HIS ATTORNEY

D. BRIGGS.
TYPE WRITING MACHINE.
APPLICATION FILED NOV. 18, 1905.

916,990.

Patented Apr. 6, 1909.
2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

DANIEL BRIGGS, OF NEW YORK, N. Y., ASSIGNOR TO WYCKOFF, SEAMANS & BENEDICT, OF
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TYPE-WRITING MACHINE.

No. 916,990.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed November 18, 1905. Serial No. 287,960.

To all whom it may concern:

Be it known that I, DANIEL BRIGGS, 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 billing mechanism therefor.

One of the objects of my invention is to provide simple, cheap and efficient mechanism of the character specified.

Another object of my invention is to provide stop devices for determining the extent of backward and forward rotation to be given the platen for the introduction and proper positioning of each new invoice sheet in billing work.

A further object of my invention is to provide devices which are in the nature of billing attachments that may be applied to existing forms of typewriting machines without the necessity of changing the structural features interfering with the ordinary operation of said machines for general work and by the use of which billing attachments "condensed record" billing work may be readily done on the machine.

A still further object of my invention is to provide devices of the character specified which are adapted for use, without modification or change, to machines employing line spacing ratchet wheels having teeth which are spaced different distances apart.

Another object of my invention is to provide devices of the character specified which may be employed for billing purposes without taxing the mind of the operator in setting and operating the device.

To the above and other ends which will be hereinafter more fully described my invention consists of the features of construction, arrangements of parts and combinations of devices to be hereinafter described and claimed.

In the accompanying drawings wherein like reference characters indicate corresponding parts in the different views, Figure 1 is a fragmentary side elevation with parts sectioned away showing the upper portion of one form of typewriting machine with my invention applied thereto. Fig. 2 is a frag-

mentary top plan view of the same. Fig. 3 is an enlarged, detail, fragmentary, vertical, sectional view showing the billing attachments. Figs. 4, 5, 6 and 7 are detail face views of different parts of the billing device; Fig. 5 showing the friction device before it is bent up into the shape in which it is employed in the machine.

I have shown my invention applied to a No. 6 Remington typewriting machine though it should be understood that the invention is capable of general application and may be employed in other styles of machines and in fact is readily adapted to various forms of typewriting machines employing cylindrical platens.

The top plate 1 of the machine is provided with upwardly extending posts 2 which support a traverse rod 3 with which supporting and guide rollers 4 cooperate; the rollers being carried by a carriage truck 5 of the usual construction employed in the No. 6 Remington machine. The rear of a platen frame 6 is pivoted at 7 to links 8 which in turn are pivoted at 9 to the truck, whereas, the front of the platen frame carries a roller 4^a that operates with a shift rail in the usual manner. The platen frame supports the usual cylindrical or rotary platen 10 provided with a platen shaft 11 which is secured thereto in the usual manner and is supported in bearing openings in the side bars of the platen frame and projects through said bearings beyond the frame, as indicated in Fig. 3. The platen is provided at the right-hand end thereof with the usual line spacing ratchet wheel 12 and a cooperating line spacing pawl 13 pivoted at 14 to an upright arm 15 of a line spacing lever 16 pivoted at 17 to a bracket arm 18 secured to the platen frame. The platen frame carries the usual standard or upwardly projecting lug 19 which constitutes a support for the inwardly projecting stop pin 20 with which the line spacing pawl cooperates to prevent an overthrow of the platen. A stop 21 which is in the form of an angular arm is secured to the upright bracket or lug 19 by a screw 22 that forms part of the stop pin 20. The engaging portion of the stop 21 projects to the right of the platen frame, as shown in Fig. 3, where it extends into the path of cooperating stops, as will hereinafter more clearly appear.

Two disks 23, 24 are co-extensive in size

and are arranged side by side and secured in clamping or frictional engagement by a finger 25 formed integral with the disk or plate 23 and bent over the contiguous plate 24 so as to cooperate therewith and to clamp the two plates in frictional engagement. The disk 23 is provided with an integral stop 26 which projects from the periphery thereof. A like stop 27 projects from the periphery of the disk 24 and both of these stops are adapted to cooperate with the fixed stop 21 carried by the platen frame and which extends into the path of the stops 26 and 27. A sheet metal thimble 28 is seated in central openings in the disks 23 and 24 and constitutes a bearing for said disks. The thimble is preferably turned in at its edges 29 toward the disks so as to maintain them properly seated on the thimble and to exert a clamping pressure thereon. The bore of the sleeve itself corresponds substantially to the diameter of the platen shaft 11 and is seated loosely thereon outside of the platen frame. A washer 30 is interposed between the sleeve 28 and the outside of the platen frame to form a bearing for one side of the sleeve. This washer is shown in detail in Fig. 4, from which it will be seen that the bore 31 thereof has a flattened side wall 32 which cooperates with a corresponding flattened wall 33 on the platen shaft in order to lock the washer to turn with the platen shaft.

A finger wheel 34 is secured by a set screw 35 to the right-hand end of the platen shaft and interposed between the finger wheel and the disk 23 is a spring friction device 36 preferably formed of a single piece of spring metal and bent into U-shape in cross-section with an opening 37 which receives the platen shaft and also an opening 38 that receives the stem 39 on the finger wheel 34. The construction of this spring is such that it exerts an outward pressure against a portion 40 on the finger wheel and an inward pressure against the disk 23. The effect of this friction device is to cause the disks 23 and 24 with the stops carried thereby to turn with the platen and to afford an independent rotation of the platen when either of the stops 26 and 27 is brought into cooperation with the fixed stop 21. The friction exerted by the device 36, is, however, insufficient to overcome the greater friction maintained between the two disks 23 and 24, so that the disks and the stops carried thereby will be maintained in the relative positions to which they are adjusted in setting the stops. In other words, the rotation of the platen will turn the disks 23 and 24 with the stops carried thereby in either a forward or backward direction without affecting the relative adjustment of the stops 26 and 27 and when either of these stops is brought into contact with the fixed stop 21, the disks will be held against further movement in the direction in

which the platen is being turned, while the platen may be turned independently of the stop devices.

Under one mode of operating the devices for "condensed record" work the stop 26 will first be adjusted to a position where it is brought into contact with the fixed stop 21. The invoice, "condensed record" sheet and carbon are then introduced, with the leading edges thereof together, at or within the bight between the main feed rollers 41 and the platen and the platen will be turned in the direction of its line feed movement by one of the finger wheels of the platen until the point on the invoice where the first line of writing is to appear is brought to the printing line. This may be determined in the first instance by the operator turning back the platen frame and observing when the point on the invoice sheet where the first line of writing is to appear reaches the printing line. During this turning movement of the platen the stop 26 will be turned with the platen, through the friction device 36, from the position shown in Fig. 1 where it engages the fixed stop 21, to a position which it may be assumed corresponds substantially to the position of the stop 27 in Fig. 1. With the stop 26 held by the operator in the position to which it has been automatically moved by the platen during the feed movement just described, an adjustment of the stop 27 in the direction of the arrow in Fig. 1 relatively to the stop 26 is effected to bring the stop 27 into contact with the fixed stop 21. Such relative adjustment between the stops would, it may be assumed, leave them in the relation shown in Fig. 1, the difference being that the stop 27 will be in contact with the fixed stop 21 and the stop 26 will be in a position corresponding substantially to the position of the stop 27 shown in said figure. The stops having been set in the manner stated, the operator may fill in the invoice and as the invoice is being written and the platen is rotated in the direction of its line feed movement, the stop 27 will be maintained in contact with the fixed stop 21 through the frictional connection between the stop devices and the platen. When the operator has written the invoice, say two line space movements of the platen may be given in order to produce a space between the last line of the invoice just reproduced on the "condensed record" sheet and the first line of the next invoice to be reproduced through the carbon on the "condensed record" sheet. When this line spacing movement has been effected the operator will turn the platen backwardly carrying the stops 26 and 27 with it until the stop 26 has, through the frictional devices, been brought into contact with the fixed stop 21, as shown in Fig. 1, the operator ceasing the turning movement when the contact takes

place. This backward rotation of the platen from a position where the stop 27 contacts with the fixed stop to a position where the stop 26 is brought into contact with the fixed stop determines or defines the extent of backward rotation to be given to the platen in order to insert a new invoice. This is done without removing from the machine the invoice sheet which has just been written. The second invoice sheet being inserted as before described, the platen is rotated forwardly until the stop 27 is again brought into contact with the fixed stop 21 and the second invoice sheet will be in proper position to receive the first line of writing, and this line will be reproduced on the "condensed record" sheet two line spaces from the last line written or reproduced from the previously written invoice on the "condensed record" sheet. The imprint on the "condensed" record sheet is produced through the two bill sheets and the carbon sheet. When the second invoice has been written, two line space movements will be given to the platen. The platen will then be turned back until the stop 26 is brought into contact with the fixed stop 21 when a third invoice may be inserted as before and the platen turned forward until the stop 27 is brought into contact with the fixed stop 21, when this third invoice may be written and reproduced on the "condensed record" sheet as before and any number of invoices on bill sheets of a given size may be written by following the operation described. By the time the third invoice has been completed, where invoice sheets of ordinary size are used, the first written invoice sheet will be fed out of the machine or be fed to a position where it can be readily removed from the machine without disturbing the other invoice sheets, the "condensed record" sheet, or the carbon sheet. When the "condensed record" sheet has been filled it is merely necessary to introduce a new "condensed record" sheet, carbon sheet and invoice sheet into the machine, when the stop 26 is located in contact with the fixed stop 21 and to turn the platen forwardly until the first printing line is reached, as determined by the contact of the stop 27 with the fixed stop 21 as before. A single setting of the stops 26 and 27 with relation to each other answers indefinitely for bill or invoice sheets of a given size and a further setting of these parts is unnecessary until bill or invoice sheets of different size are to be employed.

If desired, a "lead" of the first invoice sheet introduced with each carbon and record sheet may be given in order that the first line written on the first invoice sheet may be reproduced through the carbon as near the leading edge of the record sheet as may be desired, and if desired each bill sheet may be removed from the machine after it is

written without disturbing the carbon or record sheet.

It will be seen from the foregoing description that the operation of the machine for "condensed record" work, after the stops 26 and 27 have been set, merely consists in a forward and backward rotation of the platen to given extents as determined by the contact of the stops 26 and 27 with the fixed stop 21 and by effecting a two line space movement of the platen before each backward rotation thereof; that the stops 26 and 27 are combined with means such as the friction device 36 for effecting a movement of said stops relatively to the stop 21 by a backward and forward rotation of the platen; that, nevertheless, said means afford a rotation of the platen independently of the stops 26 and 27; and that the extent of each backward and forward rotation of the platen, for the introduction and proper positioning of a new invoice, is determined by the stops 21, 26 and 27. It will be understood, furthermore, that there is no burden on the mind of the operator in operating the device and that no mental calculations are required to effect a setting of the parts or to effect "condensed record" work with the aid of these billing attachments. Furthermore, it will be understood that the stops 26 and 27 are capable of being set by their frictional connecting means to correspond to any line space position that may be attained, irrespective of the character of the spacing of the teeth of the line spacing ratchet wheel. Then, again, it will be seen that by locating the stop devices outside of the platen frame I am enabled to readily apply them to existing forms of typewriting machines without modifying the structural features of such machines, and that by my invention I have provided simple, cheap and efficient billing devices which are easy of operation and cannot become easily deranged or broken.

During ordinary operation of the machine the stop devices do not interfere with the backward and forward rotation of the platen. The additional friction which may be exerted by the stop devices against the turning movement of the platen is so slight as to not be appreciable in the ordinary operation of the machine.

Various changes may be made without departing from the spirit of my invention.

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

1. In a typewriting machine and billing mechanism, the combination of a rotary platen, cooperating stops which aid in determining the extent of backward rotation of the platen, and means whereby the platen may be rotated an unlimited extent after said stops have been brought into cooperation.

2. In a typewriting machine and billing

mechanism, the combination of a rotary platen, cooperating stops which aid in determining the extent of backward and forward rotation of the platen, and means for
5 affording a rotation of the platen independently of said stops.

3. In a typewriting machine, the combination of a platen, two relatively adjustable stops, means for causing said relatively adjustable stops to turn with the platen and for
10 affording a rotation of the platen independently of said stops, and a cooperating relatively fixed stop.

4. In a typewriting machine, the combination of a platen, two relatively adjustable stops, a cooperating stop, and means for causing the relation of the two relatively adjustable stops and the cooperating stop to be
15 changed by the backward and forward rotation of the platen and for affording a rotation of the platen independently of said stops, the stops aiding in determining the extent of backward and forward rotation of the platen for each new invoice introduced into the
20 machine.

5. In a typewriting machine, the combination of a platen, two frictionally connected stops, a cooperating fixed stop, and frictional means for causing said frictionally connected
25 stops to turn with the platen.

6. In a typewriting machine, the combination of a platen, two stops that are adapted to be adjusted relatively to each other, frictional means for causing said stops to rotate
30 with the platen, and a cooperating relatively fixed stop.

7. In a typewriting machine, the combination of a platen, two plates arranged side-by-side, frictional means for connecting said
35 plates, means for frictionally connecting said plates to turn with the platen, a stop on each of said plates, and a relatively fixed stop.

8. In a typewriting machine, the combination of a platen, a platen shaft, two stops
40 mounted on said platen shaft to turn with and to afford an independent rotation of the platen, means for affording a relative adjustment of said stops, and a cooperating fixed stop.

9. In a typewriting machine, the combination of a platen, a platen shaft, a platen frame, two stops mounted on said platen shaft, frictional means for causing said stops to turn with and to afford a rotation of the
45 platen independently of said stops, means for affording a relative adjustment of said stops, and a cooperating fixed stop carried by the platen frame.

10. In a typewriting machine, the combination of a platen, a platen frame, a platen shaft, two plates arranged side-by-side and mounted on said platen shaft, frictional means for affording a relative adjustment between said plates, a stop carried by each
50 of said plates, frictional means for causing

the plates to turn with the platen and to afford a rotation of the platen independently of said plates, and a relatively fixed cooperating stop carried by the platen frame.

11. In a typewriting machine, the combination of a platen, two frictionally connected stops, a cooperating fixed stop, and frictional means for causing said frictionally connected stops to turn with the platen, the friction connecting the frictionally connected
55 stops being greater than the friction exerted to cause the stops to rotate with the platen.

12. In a typewriting machine, the combination of a platen, two stops that are adapted to be adjusted relatively to each other, frictional means for causing said stops to rotate with the platen without affecting the adjustment between the relatively adjustable stops, and a cooperating relatively fixed stop.
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13. In a typewriting machine, the combination of a platen, a platen frame, a platen shaft, two plates arranged side-by-side and mounted on said platen shaft, frictional means for affording a relative adjustment between said plates, a stop carried by each
65 of said plates, frictional means for causing the plates to turn with the platen and to afford a rotation of the platen independently of said plates, the friction connecting the plates being greater than the friction exerted to cause said plates to rotate with the platen, and a relatively fixed cooperating stop carried by the platen frame.

14. In a typewriting machine, the combination of a platen, a platen frame, relatively adjustable stops located outside of the platen frame and connected to turn with the platen and to afford a rotation of the platen independently of said stops, and a fixed stop with which said relatively adjustable stops co-
70 operate.

15. In a typewriting machine, the combination of a platen, a platen frame, stops located outside of the platen frame, frictional means for causing said stops to turn with the
75 platen and to afford a rotation of the platen independently of said stops, and a fixed stop with which said relatively adjustable stops cooperate.

16. In a typewriting machine, the combination of a platen, a platen frame, stops located outside of the platen frame, frictional means for affording a relative adjustment between said stops and for maintaining them in their adjusted relation, means for connecting said stops to turn with the platen and to afford a rotation of the platen independently of said stops, and a fixed stop with which said relatively adjustable stops co-
80 operate.

17. In a typewriting machine, the combination of a platen, a platen shaft, two disks clamped together frictionally and mounted on the platen shaft, a stop carried by each of said disks, frictional means for operatively
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connecting the disks to turn with the platen without affecting the relative adjustment between the stops, and a relatively fixed stop with which the stops on the disks cooperate.

18. In a typewriting machine, the combination of a platen, a finger wheel therefor, relatively adjustable stops, a friction spring between said stops and the finger wheel to cause the stops to turn with the finger wheel and platen and to afford a rotation of the platen and finger wheel independently of said stops, and a relatively fixed stop which cooperates with said adjustable stops.

19. In a typewriting machine, the combination of a platen, a platen shaft, a platen frame, a finger wheel secured to the platen shaft, two stops mounted to rotate on the platen shaft and situated between the platen frame and finger wheel, means for affording a relative adjustment between said stops, frictional means for causing the stops to rotate with the platen and to afford a rotation of the platen independently of said stops, and a relatively fixed stop cooperating with said adjustable stops.

20. In a typewriting machine, the combination of a platen, a platen shaft, a platen frame, a finger wheel secured to the platen shaft, two stops mounted to rotate on the platen shaft and situated between the platen frame and finger wheel, frictional means for affording a relative adjustment between said stops, a frictional device interposed between said finger wheel and said stops for causing the stops to rotate with the platen and to afford a rotation of the platen independently of said stops, and a relatively fixed stop cooperating with said adjustable stops.

21. In a typewriting machine, the combination of a platen, a platen shaft, two disks, a thimble that turns on the platen shaft and constitutes a bearing for said disks, a stop on each disk, frictional means for causing said disks to turn with the platen, and a relatively fixed stop that cooperates with the stops on said disks.

22. In a typewriting machine, the combination of a platen, a platen shaft, a platen frame, two relatively adjustable disks arranged side-by-side outside of the platen frame and mounted on the platen shaft, means for causing said disks to rotate with the platen and to afford a movement of the platen shaft independently of the disks, a stop carried by each disk, and a cooperating stop carried by the platen frame.

23. In a typewriting machine, the combination of a platen, a platen shaft, a platen frame, a finger wheel secured to the platen

shaft, two frictionally connected relatively adjustable disks mounted on the platen shaft between the platen frame and finger wheel, means for causing said disks to turn with and to afford a rotation of the finger wheel and platen shaft independently of said disks, a stop carried by each of said frictionally connected disks, and a relatively fixed stop carried by the platen frame and cooperating with the stops on said frictionally connected disks.

24. In a typewriting machine, the combination of a platen, a platen shaft, a platen frame, a thimble mounted in the platen shaft outside of the platen frame, two frictionally connected relatively adjustable disks mounted side-by-side on said thimble and adapted to turn relatively thereto, means for causing said disks to turn with and to afford a rotation of the platen shaft independently of said disks, a stop carried by each of said frictionally connected disks, and a relatively fixed stop carried by the platen frame and cooperating with the stops on said frictionally connected disks.

25. In a typewriting machine and billing mechanism, the combination of a rotative platen, cooperating billing stops which aid in determining the extent of backward and forward rotation of the platen, and means which enable a rotation of the platen to take place after said stops are brought into cooperative relation.

26. In a typewriting machine and billing mechanism, the combination of a rotative platen, and cooperating stop members to aid in predetermining the extent of forward and backward rotation of the platen but which do not prevent the rotation of the platen in either direction after such predetermined forward or backward rotation has been accomplished.

27. In a typewriting machine and billing mechanism, the combination of a rotative platen, and cooperating stop members, one or more of said stop members being connected to rotate with the platen and one or more of said stop members being attached to the platen frame, the construction affording a further rotation of the platen after the stops are brought into cooperation.

Signed at the borough of Manhattan, city of New York, in the county of New York, and State of New York, this 16th day of November, A. D. 1905.

DANIEL BRIGGS.

Witnesses:

E. M. WELLS,
J. B. DEEVES.