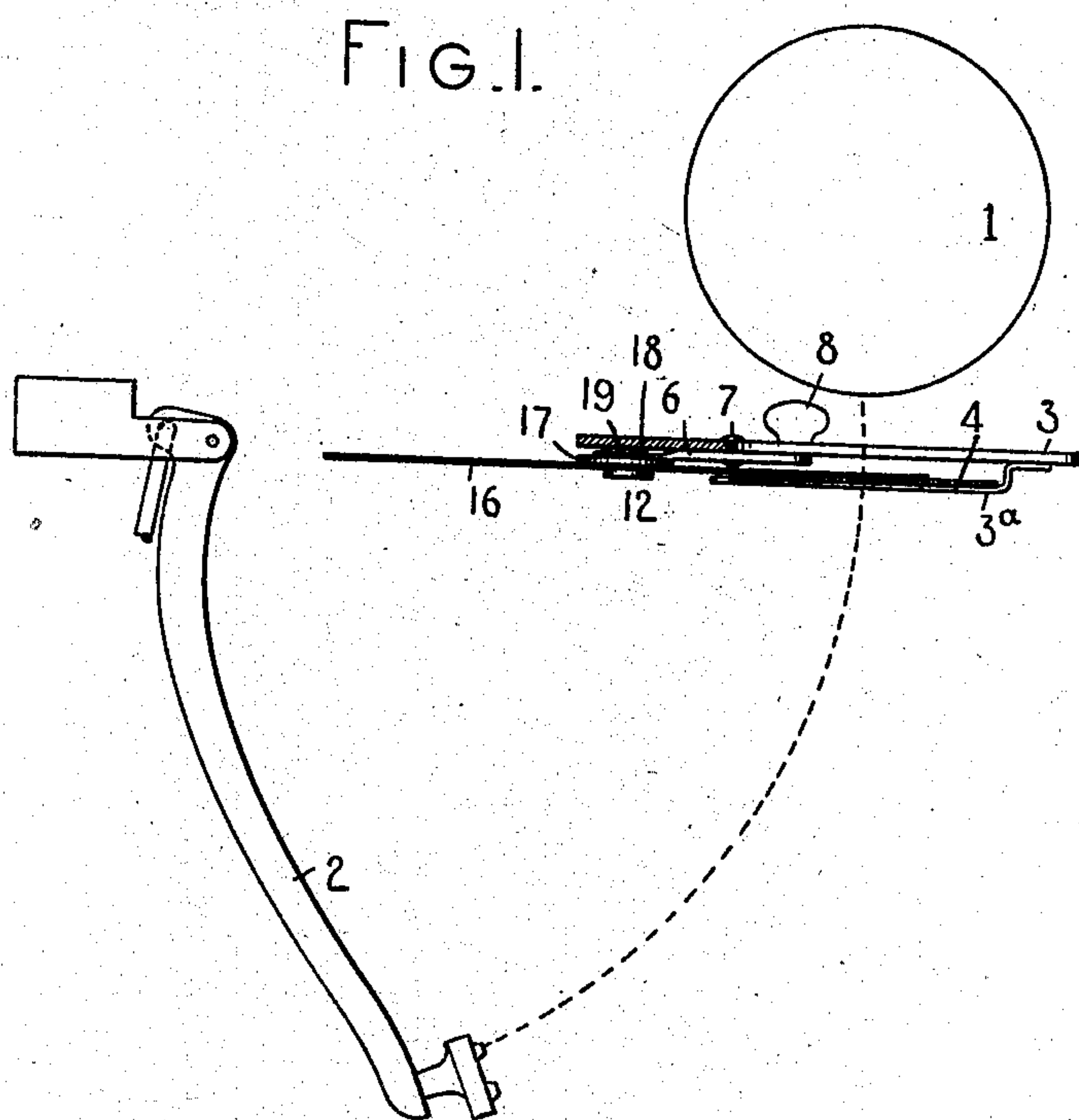


No. 885,764.

PATENTED APR. 28, 1908.

C. S. LABOFISH.
TYPE WRITING MACHINE.
APPLICATION FILED JULY 18, 1905.

3 SHEETS—SHEET 1.



WITNESSES.

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INVENTOR.

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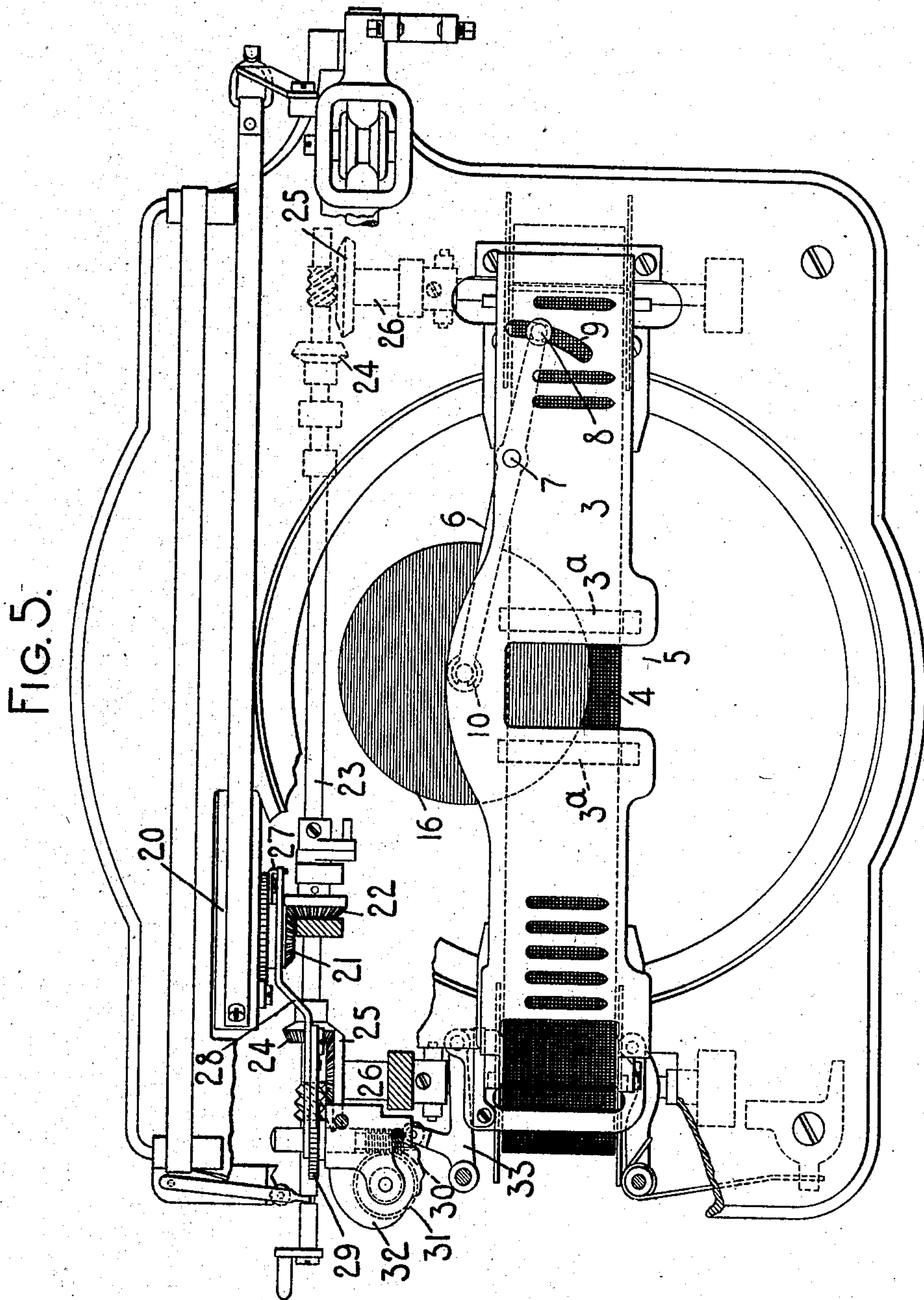
HIS ATTORNEY

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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

CHARLES S. LABOFISH, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR TO WYCKOFF, SEAMANS & BENEDICT, OF ILION, NEW YORK, A CORPORATION OF NEW YORK.

TYPE-WRITING MACHINE.

No. 885,764.

Specification of Letters Patent.

Patented April 28, 1908.

Application filed July 18, 1905. Serial No. 270,274.

To all whom it may concern:

Be it known that CHARLES S. LABOFISH, citizen of the United States, and resident of Washington, District of Columbia, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

My invention relates to ribbon mechanism for typewriting machines and one of the objects of said invention is to provide a simple, cheap, and efficient polychrome ribbon mechanism or mechanism for writing with inks having different characteristics.

A further object of my invention is to provide a simple, cheap and efficient device which is in the nature of an attachment that can be readily applied to existing forms of typewriting machines without changing the structural features of such machines and by means of which different colors or different characters of inks or inking surfaces, such as "copying" or "record" ribbons or inking surfaces, can be employed and any one of which may be readily brought into operation without loss of time in changing from one to another.

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

In the drawings, Figure 1 is a diagrammatic vertical front to rear sectional view of sufficient number of parts of a typewriting machine to illustrate the features of my invention and their application thereto. Fig. 2 is a fragmentary detail top plan view of certain of the parts of the machine, showing the features of my invention applied thereto. Fig. 3 is an enlarged detail transverse sectional view taken on the line $x-x$ of Fig. 2. Fig. 4 is a detail front elevation of the parts shown in Fig. 2. Fig. 5 is a fragmentary plan view showing parts of a No. 6 Remington machine with the devices of my invention applied thereto.

I have shown my invention applied in the present instance to a No. 6 Remington machine, though it is obvious that the invention may be applied to other forms of typewriting machines.

The platen 1 is diagrammatically illustrated in Fig. 1; the type bars or printing instrumentalities 2 being actuated and co-

operating with the platen in the usual manner. The ordinary ribbon guide 3 employed in the No. 6 Remington machine co-operates in the usual manner with the inking ribbon 4 to guide it in its longitudinal feed movement from one spool to another, the ribbon passing across an opening 5 in the ribbon guide, through which the types are adapted to impact against the platen or the paper thereon. In the longitudinal feed of the ribbon it is guided by fingers 3^a each supported at its forward end on the guide plate and opening at the rear to receive the ribbon as shown in Fig. 1. Pivoted at a suitable point, preferably upon the ribbon guide 3, is a carrier 6 which is preferably in the nature of a lever pivoted at 7 to the guide and provided with a finger piece or handle 8 which extends from the under side of the guide plate where the lever is situated through a segmental slot 9 in the ribbon guide plate to the upper side thereof, as indicated in Figs. 2 and 4. The inner end of the lever is bifurcated at 10 for coöperation with a circumferential groove 11 in a pivot stud 12. The grooved portion 11 of the stud has two oppositely disposed flattened walls 13 with which the forked or bifurcated end of the lever is adapted to coöperate in order to connect the pivot stud to the lever and to prevent the stud from turning on the lever. There is sufficient frictional contact between the stud and the seat in the lever to hold the stud in place against accidental displacement from the lever, but the stud may be withdrawn from the forked end of the lever when desired.

The pivot stud has a cylindrical bearing portion 14 with a head 15 at the lower end thereof. The bearing portion of the stud is adapted to be projected through a central bearing opening in an inking disk 16 that is reinforced by a washer 17 which is connected thereto and is likewise apertured to receive the stud and is adapted to be seated with the disk on the bearing stud so as to give a greater rigidity to the disk and to afford a better bearing therefor on the stud. When the stud is seated in the forked end of the lever the disk is locked on the stud and cannot be removed except by removing the stud from its seat in the lever.

From an examination of Fig. 4 it will be seen that the bifurcated end of the lever 6 is thinner, as shown at 18, than the body por-

tion of the lever, in order that the head 19 of the pivot stud, when seated in the bifurcated portion of the lever, will not interfere with the movement of the lever on its pivot 7 and so that the inking disk 16 may be maintained close to the ribbon guide plate 3. It will be observed that the inking disk 16 is located above the ribbon or main inking device 4 and is adapted to be interposed between the ribbon 4 and the platen and in the path of the printing instrumentalities. It will also be seen that when the inking disk is in the operative position illustrated in full lines in Fig. 2 and in Fig. 5, one side of the disk is maintained in contact with the inking ribbon 4 (see Fig. 4) and that the automatic longitudinal feed of the ribbon effected in the usual manner from the spring drum 20 through the parts 21, 22, 23, 24, 25 and 26 will rotate the disk on its pivot. The ribbon guides 3^a assist in maintaining this contact between the ribbon and inking disk to insure a rotary movement being transmitted to the disk from the inking ribbon. When the ribbon guide 3 is automatically moved back and forth in a transverse direction during the longitudinal feed of the ribbon, as in the No. 6 Remington machine by the parts 27 to 33 inclusive, the disk will receive an automatic feed radially of its pivot as well as a rotary feed effected by reason of its contact with the inking ribbon, thereby utilizing practically the entire inking surface on the disk.

When the disk is moved by its lever 6 to the dotted line position in Fig. 2 it is carried out of contact with the ribbon 4 and is maintained in position where it will not be interposed in the path of the printing instrumentalities. The auxiliary inking device or disk 16 may be red, or of a distinctive color or characteristic from the main inking device or ribbon 4. Thus, the ribbon 4 may be "record" ribbon and the inking disk may be "copying" ribbon or an inking surface carrying copying ink.

When it is desired to change the color or characteristic of the imprint from that produced by the coöperation of the printing instrumentalities with the ribbon 4 it is merely necessary to shift the lever 6 from the dotted line position to that indicated by the full lines in Fig. 2. When the inking disk 16 is interposed in the path of the printing instrumentalities, the types will impact in the first instance on the ribbon 4 and the impression will be made through the disk 16 which, being next to the paper, will produce the writing in accordance with the characteristic of the ink on the disk 16.

When a fixed ribbon guide is employed different radial portions of the disk may be used by moving the handle or finger piece 8 by hand so as to bring the points of impact of the types at different distances from the pivotal center of the disk, so that the im-

pacts may take place in different concentric circles as the disk is automatically rotated around its pivotal stud 12. It will be understood that there is sufficient frictional contact between the lever and the ribbon guide plate 3 to maintain the lever in any position to which it is moved, so that the adjustment of the disk to different radial positions by means of the lever 6 can be readily effected.

From the foregoing description it will be seen that I am enabled to provide a simple, inexpensive and efficient auxiliary inking device that may be readily applied to existing forms of typewriting machines, such as the No. 6 Remington, without changing the structural features of such machine, and that the ordinary feed mechanisms employed in such machines for feeding the ribbon may be employed to effect an automatic rotation and a radial feed of the auxiliary inking disk of my invention.

Various changes in the details of construction may be made without departing from the spirit of the invention.

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

1. In a typewriting machine, the combination of an inking disk, hand actuated means for moving said disk into and out of operative position, and means for automatically turning said disk when it is in the operative position.

2. In a typewriting machine, the combination with any suitable inking ribbon and means for actuating it, of an auxiliary inking disk, and hand actuated means for interposing said disk between the inking ribbon and the platen or the paper thereon and for removing the disk from such position at will.

3. In a typewriting machine, the combination with any suitable inking ribbon and means for actuating it, of an auxiliary inking disk, hand actuated means for interposing said disk between the inking ribbon and the platen or the paper thereon and for removing the disk from such position at will, and means for automatically turning said disk when it is in the interposed position.

4. In a typewriting machine, the combination with any suitable inking ribbon and means for actuating it, of an auxiliary inking disk, hand actuated means for interposing said disk between the inking ribbon and the platen or the paper thereon and for removing the disk from such position at will, the disk contacting with the ordinary inking ribbon when the disk is in the operative position so as to afford a turning of the disk by a feed movement of the ribbon.

5. In a typewriting machine, the combination of an inking ribbon, and an independent auxiliary inking device that is fed by the main inking ribbon.

6. In a typewriting machine, the combination of an inking ribbon, and an independent

auxiliary inking device which is adapted to be interposed between the inking ribbon and the platen or the paper thereon and which is fed by the main inking ribbon.

5 7. In a typewriting machine, the combination of an inking ribbon, means for feeding said ribbon, and an independent auxiliary inking device which is adapted to be interposed between the inking ribbon and the
10 platen or the paper thereon and which is fed by the main inking ribbon by contact therewith.

8. In a typewriting machine, the combination of a platen, printing instrumentalities,
15 an inking ribbon, an auxiliary inking disk, hand actuated means for interposing said disk in the paths of the printing instrumentalities and between the inking ribbon and platen and for bringing the disk into contact
20 with the ribbon to effect a rotation of the disk by the feed of the ribbon.

9. In a typewriting machine, the combination of a platen, printing instrumentalities, an inking ribbon, a guide therefor, a support
25 movably connected to said guide, and an auxiliary inking device carried by said movable support and adapted to be moved into and out of the paths of the printing instrumentalities and between the inking ribbon
30 and the platen.

10. In a typewriting machine, the combination of a platen, printing instrumentalities, an inking ribbon, a guide therefor, a support
35 movably connected to said guide, and an auxiliary inking device carried by said movable support and adapted to be moved into and out of the paths of the printing instrumentalities and between the inking ribbon and the
40 platen and for affording a feed movement of the auxiliary inking device by a feed movement of the inking ribbon.

11. In a typewriting machine, the combination of a platen, printing instrumentalities, an inking ribbon, a guide therefor, an adjustable support pivoted to said guide and
45 adapted to remain in the position to which it is moved, and an auxiliary inking disk pivoted to said adjustable support and adapted to be moved into and out of the paths of the printing
50 instrumentalities and between the inking ribbon and the platen.

12. In a typewriting machine, the combination of a platen, printing instrumentalities, an inking ribbon, a guide therefor, a support
55 pivoted to said guide and adapted to remain in the position to which it is moved on said guide, and an auxiliary inking disk pivoted to said pivoted support and adapted to be moved into and out of the paths of the printing
60 instrumentalities and between the inking ribbon and the platen, and for effecting a contact between the inking ribbon and the auxiliary disk, whereby a feed movement of the ribbon will effect a turning of the disk on its
65 support.

13. In a typewriting machine, the combination of printing instrumentalities, a hand actuated lever, and an auxiliary inking disk pivoted on said lever and adapted to be moved by the lever into and out of the paths
70 of the printing instrumentalities and to remain in either of such positions when so moved.

14. In a typewriting machine, the combination of a platen, printing instrumentalities,
75 an inking ribbon, a guide therefor, a lever carried by and pivoted to said guide, and an auxiliary inking disk pivoted on said lever and adapted to be moved by the lever into and out of the paths of the printing instru-
80 mentalities, and between the inking ribbon and platen and into contact with the ribbon, so as to be automatically rotated when the ribbon is fed longitudinally.

15. In a typewriting machine, the combination of a platen, printing instrumentalities,
85 an inking ribbon that receives a feed in the direction of its length, a lever, an inking disk pivoted to said lever and adapted to be moved thereby into and out of the paths of
90 the printing instrumentalities and to be interposed between the inking ribbon and the platen and to be held in contact with said inking ribbon when the disk is in the operative position, whereby the longitudinal feed
95 of the ribbon will automatically effect a rotation of the disk to present new portions thereof to the successive impacts of the printing instrumentalities.

16. In a typewriting machine, the combination of an inking disk, and means for moving
100 said inking disk into and out of operative position and for automatically rotating said disk when it is in the operative position.

17. In a typewriting machine, the combination of printing instrumentalities, an inking
105 disk, and means for moving said inking disk into and out of operative position, and means for bringing different radial and concentric portions of said disk into cooperation
110 with the printing instrumentalities.

18. In a typewriting machine, the combination of printing instrumentalities, an inking
115 ribbon, an auxiliary inking disk, means for moving said inking disk into and out of operative position and for bringing the disk into contact with the inking ribbon to automatically rotate said disk when it is in the operative position, and means for bringing different radial portions of said disk into coop-
120 eration with the printing instrumentalities.

19. In a typewriting machine, the combination of an inking ribbon, an auxiliary inking
125 disk, means for automatically rotating the disk, and means for effecting an automatic radial feed of the disk.

20. In a typewriting machine, the combination of an inking ribbon that automatically receives a longitudinal and transverse
130 feed, an auxiliary inking disk, means for au-

tomatically rotating the disk by the longitudinal feed of the ribbon, and means for effecting an automatic radial feed of the disk by a transverse feed of the ribbon.

5 21. In a typewriting machine, the combination of an inking ribbon, a ribbon guide co-operating therewith and which receives an automatic transverse movement to effect a transverse feed movement of the ribbon, said ribbon receiving an automatic feed in a longitudinal direction, and an auxiliary rotary inking disk carried by the ribbon guide.

15 22. In a typewriting machine, the combination of an inking ribbon, a ribbon guide co-operating therewith and which receives an automatic transverse movement to effect a transverse feed movement of the ribbon, said ribbon being also fed automatically in a longitudinal direction, and an auxiliary rotary inking disk carried by the ribbon guide and adapted to be rotated by the longitudinal feed of the ribbon and to receive a radial feed during the transverse movement of the ribbon guide.

20 23. In a typewriting machine, the combination of an inking ribbon, a ribbon guide co-operating therewith and which receives an automatic transverse movement to effect a transverse feed movement of the ribbon, said

ribbon being also fed automatically in a longitudinal direction, an auxiliary rotary inking disk carried by the ribbon guide and adapted to be rotated by the longitudinal feed of the ribbon and to receive a radial feed during the transverse movement of the ribbon guide, and hand actuated means for moving said disk into and out of operative position and to interpose it between the inking ribbon and platen.

24. In a typewriting machine, the combination with a traveling inking ribbon for normal use, of an inking pad for special use normally out of operative position, and a movable support for said pad operative to carry the pad from inoperative to operative position and back again to normal position.

25. In a typewriting machine, the combination with a traveling inking ribbon, of a rotatory inking pad normally in the inoperative position, and means for shifting the pad in front of and in contact with the traveling inking ribbon.

Signed at Washington, in the District of Columbia, this 14th day of July, A. D. 1905.

CHAS. S. LABOFISH.

Witnesses:

ROLAND C. BOOTH,
JOHN R. FARNUM.