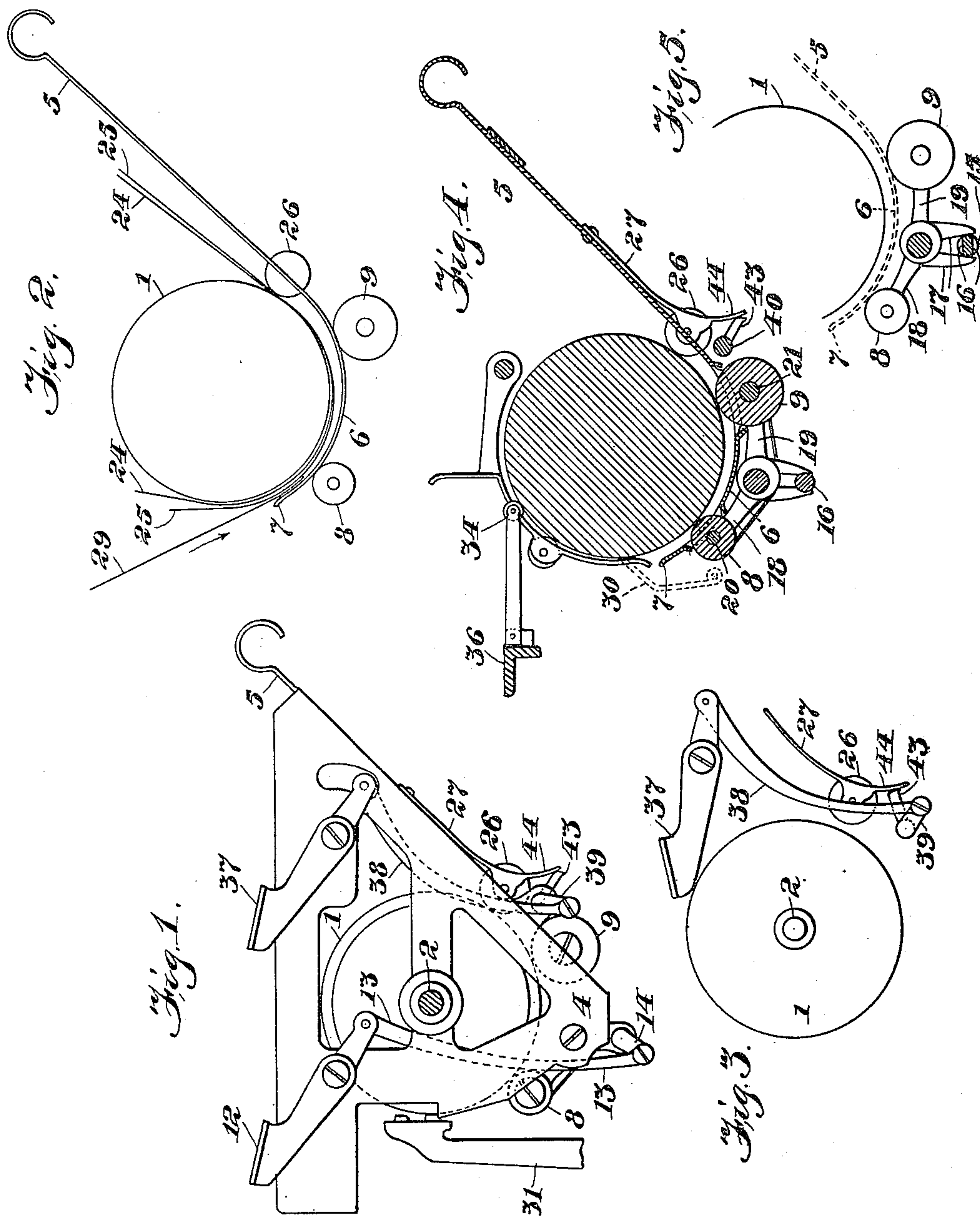


No. 816,585.

PATENTED APR. 3, 1906.

E. F. KUNATH.  
TYPE WRITING MACHINE.  
APPLICATION FILED OCT. 26, 1904.

3 SHEETS—SHEET 1.



WITNESSES:  
*Robert Head*  
*Wm. C. MacLean*

INVENTOR  
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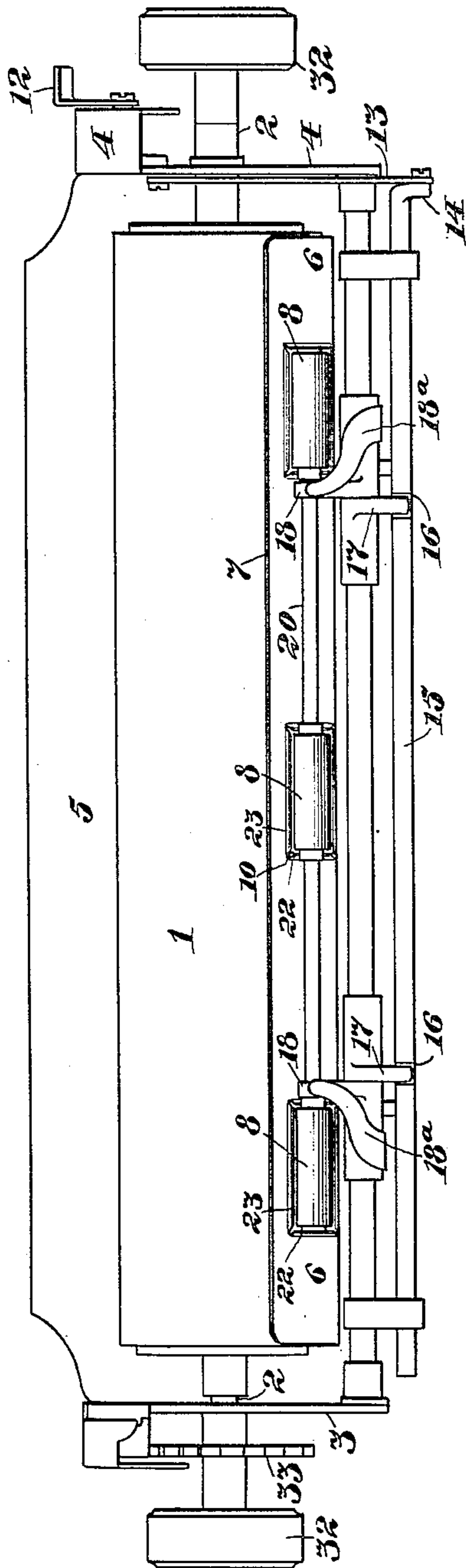
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3 SHEETS—SHEET 2.

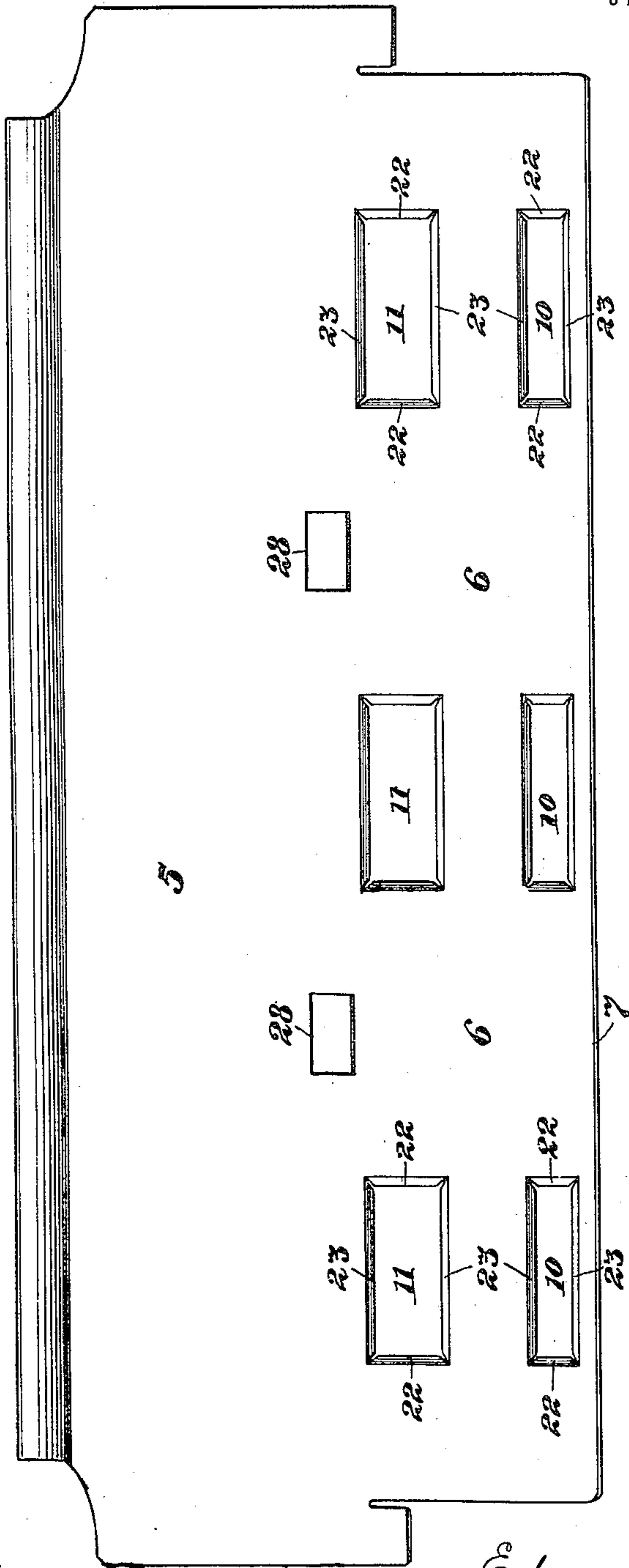
Fig. 6.



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3 SHEETS—SHEET 3.

*Fig. 3.*



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# UNITED STATES PATENT OFFICE.

EDWARD F. KUNATH, OF JERSEY CITY, NEW JERSEY, ASSIGNOR TO  
UNDERWOOD TYPEWRITER COMPANY, OF NEW YORK, N. Y., A  
CORPORATION OF NEW JERSEY.

## TYPE-WRITING MACHINE.

No. 816,585.

Specification of Letters Patent.

Patented April 3, 1906.

Application filed October 26, 1904. Serial No. 230,080.

*To all whom it may concern:*

Be it known that I, EDWARD F. KUNATH, a citizen of the United States, residing in Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention relates to type-writing machines, and particularly to those of the "front-strike" class, in which the paper is rolled around a cylindrical platen in position to receive the blows of the types upon the front of the platen. My improvements relate to means for adjusting, guiding, and feeding the paper around the platen.

In some classes of work it is frequently desired to write only upon the bottom portion of a page, and heretofore it has been necessary in order to do this to insert the sheet in the rear of the platen and then turn the latter forwardly until the bottom portion of the page is brought to the printing-point. This operation not only consumes much time and labor, but it is also found difficult to adjust the paper accurately in the machine whenever the bottom edge thereof is approaching the printing-point, owing to the impracticability of pushing the paper backward and to other obstacles, the usual paper-deflector, which is mounted beneath the platen, being usually constructed to press directly against the platen, and hence permitting the paper only to be pulled and not pushed around the platen when the latter is stationary. These difficulties are accentuated in many instances where it is not only desired to write near the bottom edge of a sheet, but also to make a carbon copy upon a record-sheet which is already in the machine, and especially if the sheets are of different lengths or different widths, or both. It has heretofore in cylindrical platen machines been found impracticable to write upon a small sheet and make a carbon copy of the writing upon a much larger sheet where the latter is both much longer and much wider than the former, particularly if it is desired to have the carbon copy written in a particular spot upon the large sheet. It is also inconvenient to insert in the machine two sheets of the same size where it is desired to write upon one of them in one spot and make a carbon copy upon the

other of them in an entirely different spot. In "condensed billing" too it is necessary to insert bills successively in the machine and write upon them in such a manner that carbon copies will be written one after another upon a single long record-sheet, which it is impracticable to do without the aid of complicated devices that involve the turning back of the platen to receive a new bill without removing the record and carbon sheets and then turning the platen forward again until the sill is brought to position for the first line to be written thereon.

The objects of my invention are to make it practicable to insert a sheet readily into the machine so as to write either upon the bottom edge or other portion thereof, even if another sheet or sheets are already in the machine, and without disturbing the latter, and to do this, even if the new sheet is different in length, breadth, or position from the sheets already inserted, and also to make it practicable to insert sheets of greatly different sizes in such a manner that one may be written and a carbon copy thereof made upon a predetermined spot upon the other, and also to make it practicable to make records of successive bills upon a single record-sheet without the necessity of the complicated backward and forward rotation of the platen heretofore found necessary.

In carrying out my invention in its present form, which is shown embodied in the well-known "Underwood" machine, I alter the usual deflector-plate, which curves around beneath the platen and contacts therewith, so that it is separated from the platen, and preferably so that a clear space of about three thirty-seconds of an inch intervenes between the platen and the deflector-plate at all points. The usual forward and rear sets of pressure-rollers are depressed at will by the usual release-key, so that they stand away from the platen and preferably below the contour of the deflector-plate, and hence it becomes practicable to insert a sheet backwardly by introducing it between the platen and the front edge of the deflector-plate, which curves up a short distance in front of the platen and preferably has a flaring lip to facilitate the introduction of the paper, and after introduction the sheet may be slipped backwardly as far as desired and



freely adjusted sidewise until the required spot upon the sheet is opposite the printing-point. Then the release-key may be restored to its normal position, permitting the pressure-rolls to bear against the paper, and the latter may then be fed by means of the rotation of the platen in the usual manner. If another sheet is already in the machine or, say, a record-sheet and a carbon-sheet, when it is desired to introduce a new sheet backwardly provision is made for holding said record and carbon sheets against the platen during such introduction of the new sheet, so that the former are not disturbed by the backward or lateral movements of the latter, even though the pressure-rolls are cast off.

Other features and advantages will hereinafter appear.

In the accompanying drawings, Figure 1 is a side elevation of the right-hand end of the platen-frame of an Underwood type-writing machine modified in accordance with my improvements. Fig. 2 is a diagram illustrating the manner of introducing a sheet backwardly into the machine without disturbing a carbon and a record sheet that were previously inserted from the rear. Fig. 3 is a diagram illustrating the auxiliary pressure-roller cast off and mechanically maintained out of contact with the platen. Fig. 4 is a cross-section of the platen, rolls, and paper-shelf and deflector. Fig. 5 is a diagram illustrating the main pressure-rolls cast off and mechanically maintained out of engagement with the platen. Fig. 6 is a front view, and Fig. 7 a rear view, of the platen and platen-frame. Fig. 8 is a plan of the paper-shelf and deflector.

The usual cylindrical platen 1 is journaled by its axle 2 in ends 3 4 of the platen-frame, said ends being joined by a plate 5, which inclines forwardly and downwardly and forms a paper-shelf. This plate curves forwardly beneath the platen and up in front thereof, forming a deflector 6, which is preferably yielding, and, as will be seen at Fig. 4, stands about three thirty-seconds of an inch away from the platen at all points to permit free movement of the paper backwardly and sidewise when inserted from the front, the plate being bent or flared outwardly at its front edge to form a lip 7 to facilitate the introduction of the edge of the paper. Forward and rear sets of main pressure-rolls 8 and 9 project up through rectangular perforations 10 and 11, formed in the deflector 6, which underlies at least the principal portion of the platen and preferably the whole thereof, as seen at Fig. 6. These pressure-rolls are releasable by means of a depressible key 12, pivoted upon the right-hand end 4 of the platen-frame and connected by link 13 to crank 14 upon release-shaft 15, the latter having flats 16 or recesses occupied by arms 17, fixed upon or projecting from pressure-arms 18 19, which respectively bear upon the

shafts or axles 20 21 of the forward and rear rolls. When the key 12 is depressed, the shaft 15 is rocked, causing said arms to vibrate, so that the rolls fall away from the platen, preferably lying below the contour of the deflector-plate 6, as at Fig. 5, the shaft 15 being of sufficient diameter to give the arms the requisite throw for this purpose. When shaft 15 is turned, the arms 17 are cammed out of the recesses and bear against the cylindrical sides of the shaft, and hence are locked, so that the rolls are mechanically maintained away from the platen, and the hands of the operator are free to use in adjusting the rearwardly-inserted sheet both lengthwise and sidewise. The pressure of the rolls is produced by the usual springs 18<sup>a</sup> and 19<sup>a</sup>. The sides of the apertures 10 11 are formed with short or shallow downwardly-inclined lips 22, so that the side edges of the paper while being adjusted sidewise may not catch upon the side edges of the apertures, and both front and rear edges of said apertures are provided with similar lips 23 to prevent the leading or rear edge of the paper from catching.

From the foregoing it will be understood that when the rolls are thrown off a sheet may be readily inserted backwardly into the machine and pushed back as far as may be desired. This is of advantage in many ways—as, for instance, when it is desired merely to write near the bottom edge of the sheet or to number a page or to write upon a sheet which is already bound up with other sheets at its top. In case it is desired to insert a sheet backwardly when one or more other sheets are already in the machine—as, for instance, a record-sheet 24 and carbon-sheet 25, Fig. 2—there is brought into use a pair of auxiliary rolls 26, (although more or less than two may be employed,) which are pivoted upon flexible arms 27, secured to the back of the paper-shelf 5 and project through openings 28 in said paper-shelf and bear against the platen. By means of these auxiliary rolls the sheets 24 and 25 are securely held while the new sheet 29 is being inserted and pushed back beneath the platen. Said auxiliary rolls are in rear of the main rolls and bear against the rear side of the platen at a considerable distance back of the printing-point, so as to permit a considerable portion of the new sheet to lie back of the printing-point or between the latter and the auxiliary rolls 26. When the new sheet 29 is inserted, it is adjusted freely to the right or left, as desired, and the line thereon to be written upon is adjusted to the usual scale 30 in front of the platen. Then the release-key 12 is restored to normal position, permitting the rolls 8 9 to bear against the sheets, and writing proceeds in the usual way, one of the type-bars being seen at 31, Fig. 1, striking against the front of the platen. All of the sheets turn with



the platen either forwardly or backwardly, the platen being rotated by the usual hand-wheels 32 or line-space mechanism of which the line-space wheel 33 is seen at Figs. 6 and 7.

5 The sheets are guided up in front and back over the platen by the usual guiding-fingers 34, and in case the sheet 29 is much narrower than the other sheets, so as not to be caught by the fingers 34, the usual guard-finger 35, mounted upon the front bar 36 of the carriage, Fig. 4, may be brought into play to hold the narrow sheet to the platen and direct it rearwardly over the same.

It will be seen that great freedom of adjustment of all of the sheets is permitted, so that it is practicable to write in a certain spot upon one sheet and have the record appear at any desired spot upon another sheet by adjusting the several sheets in proper relation sidewise and longitudinally before writing thereon.

In condensed billing the short bill-head may be inserted together with carbon and long record-sheets and the bill written, the rolls 8 9 released, and the bill withdrawn, and thereupon a fresh bill may be inserted backwardly in the manner already described, while the platen and record-sheet remain stationary. Then said bill may be written and withdrawn, another inserted, and so on, so that it is rendered unnecessary to rotate the platen backwardly in order to take in a fresh bill at the rear, as heretofore.

For ordinary purposes the auxiliary rolls may be cast off, so that single sheets or associated sheets may be inserted at the rear of the platen in the usual manner, although it is not essential that these auxiliary rolls be cast off in all cases, as they do not interfere necessarily with the insertion or feeding of a sheet, but tend rather to insure the accurate feeding thereof. For casting them off I provide a release-key 37, connected by a link 38 to a crank 39 of a release-shaft 40, the latter journaled in bearings 41 and 42, provided upon the rear side of the paper-shelf 5, and the shaft being provided with projections 43, adapted to work upon cams 44, provided upon the lower ends of spring-arms 27, so as to cam the rolls 26 back out of the way, as seen at Fig. 3, in which position the cams or spring-arms bear against the ends of the projections in a direction radial to the shaft 40, so that the spring-arms are locked away from the platen and the rolls 26 hence mechanically maintained out of engagement with the platen.

The rolls 26, it will be noted, are well separated from each other, so as to bear upon the carbon and record sheets at widely-separated points to prevent the sheets from becoming skewed upon the platen if accidentally pressed sidewise during manipulation of the sheet introduced from the front.

65 The scale 30, as usual, is pivoted upon a

part of the framework (not shown) of the machine, and usually bears lightly against the platen; but in order to introduce a sheet or sheets between said scale and the platen it is only necessary to depress the usual shift-key, (not shown,) whereby the platen-frame is lifted up, and the lip 7 of the deflector-plate 6 engages the under side of the scale 30 and tilts the same forwardly away from the platen sufficiently to make an opening for the introduction of the paper.

Variations may be resorted to within the scope of my invention, which is also applicable to machines in which only one main pressure-roll or one set of main pressure-rolls is employed, and portions of my improvements may be used without others.

Having thus described my invention, I claim—

1. In a type-writing machine, the combination with a revoluble platen, and types mounted to strike upon the front thereof, of a releasable main pressure-roll for feeding the paper forwardly under the platen, a deflector curving around the under side of the platen in such relation thereto that a sheet may readily be inserted in front of the platen and pushed back around the under side of the platen between said deflector and the platen, while the latter remains stationary, said deflector extending longitudinally of the platen and out of contact therewith, and an auxiliary roll in rear of the platen for holding sheets against the same while said main pressure-roll is released to permit the backward insertion of a sheet.

2. In a type-writing machine, the combination with a revoluble platen and types mounted to strike upon the front thereof, of releasable means beneath the platen for holding paper against the same so as to cause the paper to turn with the platen, independent means for holding paper against the rear side of the platen while said releasable means are released, and a deflector extending along the platen and curving beneath the same but separate therefrom.

3. In a type-writing machine, the combination with a revoluble platen and types mounted to strike upon the front thereof, of means beneath the platen and including a releasable main pressure-roll, for feeding and guiding paper around the under side of the platen, said feeding and guiding means being so constructed as to form with the platen substantially throughout its length a continuous open passage, such as to permit a sheet to be inserted backwardly at the front of the platen and pushed down and mechanically guided back beneath the platen while the latter is stationary, and an independently-releasable auxiliary device mounted to bear against the rear side of the platen in rear of said main roll.

4. In a type-writing machine, the combi-



nation with a revoluble platen, of forward and rear main pressure-rolls beneath the platen, means for releasing said pressure-rolls, an auxiliary roll bearing against the platen in rear of said main rolls, and independent means for releasing said auxiliary roll.

5. In a type-writing machine, the combination with a frame of a platen journaled therein, forward and rear main pressure-rolls beneath the platen, means, including a key mounted upon said frame, for releasing said pressure-rolls, an auxiliary roll bearing against the platen in rear of said main rolls, and means, including an independent key also mounted upon said frame, for releasing said auxiliary roll.

6. In a type-writing machine, the combination with a frame of a platen journaled therein, a release-key mounted upon said frame, means beneath the platen and controlled by said release-key, for holding paper against the platen so as to cause the paper to turn with the platen, independent means for holding paper against the rear side of the platen while said releasable means are released, and a key or lever for releasing said independent means.

7. In a type-writing machine, the combination with a revoluble platen, of a deflector curving beneath and up in front of the platen and underlying substantially the entire platen, said deflector being well separated from said platen so as to permit ready insertion of a sheet backwardly at the front of the platen and the free backward movement of the sheet around the under side of the platen while the latter is stationary, releasable means projecting up through said deflector for holding the paper against the platen, and a device pressing against the rear side of the platen for holding paper against the same while said releasable means is released.

8. In a type-writing machine, the combination with a revoluble platen, of a deflector curving beneath and up in front of the platen and underlying the principal portion of the platen, said deflector being mounted away from said platen so as to form therewith an open passage for substantially the length of the platen, to permit ready insertion of a sheet backwardly at the front of the platen and the free backward movement of the sheet around the under side of the platen while the latter is stationary, pressure-rolls projecting up through said deflector, and means for holding said pressure-rolls mechanically away from the platen so as to leave both hands of the operator free to introduce and adjust a sheet backwardly beneath the platen; said passage terminating in an unobstructed entrance for the backward insertion of paper between the platen and the deflector just below the printing-line.

9. In a type-writing machine, the combi-

nation with a revoluble platen, of a deflector curving beneath and up in front of the platen and underlying the principal portion of the platen, said deflector being mounted away from said platen to permit ready introduction and backward adjustment of a sheet from the front side of the platen, pressure-rolls projecting up through said deflector, means for holding said pressure-rolls mechanically away from the platen, and means bearing against the rear side of the platen in rear of said pressure-rolls for holding paper thereagainst during such backward introduction and adjustment.

10. In a type-writing machine, the combination with a revoluble platen, of a deflector curving beneath and up in front of the platen and underlying the principal portion of the platen, said deflector being mounted away from said platen to permit ready introduction and backward adjustment of a sheet from the front side of the platen, forward and rear sets of main pressure-rolls projecting up through said deflector, means for holding said pressure-rolls mechanically away from the platen, and releasable means bearing against the rear side of the platen in rear of said pressure-rolls for holding paper thereagainst during such backward introduction and adjustment.

11. In a type-writing machine, the combination with a revoluble platen and types mounted to strike upon a visible side thereof, of a deflector curving beneath and up in front of the platen nearly to the printing-line thereon, said deflector being mounted away from said platen so as to form therewith an open passage for substantially the length of the platen, to permit ready introduction and backward adjustment of a sheet from the front side of the platen, main pressure-rolls projecting up through said deflector, means for releasing said pressure-rolls, an auxiliary roll bearing against the rear side of the platen in rear of said main rolls, and means for mechanically holding said auxiliary roll away from the platen.

12. In a type-writing machine, the combination with a revoluble platen and types mounted to strike on a visible side thereof, of a deflector-plate curving beneath and up in front of the platen and terminating at its front edge just below the printing-line in a forwardly bent or flaring lip, said deflector being mounted away from said platen, releasable pressure-rolls projecting up through said deflector against the under side of the platen; said deflector and platen cooperating to make an open continuous passage which terminates in an unobstructed entrance for the introduction of paper backwardly between the platen and the deflector; and means for holding another sheet stationary in position upon the platen during such backward introduction.



13. In a type-writing machine, the combination with a revoluble platen and types mounted to strike on a visible side thereof, of a deflector-plate curving beneath and up in front of the platen and provided with openings, both the sides and ends of said openings being formed with downwardly-inclined lips, and releasable pressure-rolls projecting up through said openings; said plate standing far away from the platen throughout, and an unobstructed entrance being provided for the insertion of sheets backwardly between the platen and said deflector just below the printing line.

14. In a type-writing machine, the combination with a revoluble platen, of a deflector-plate curving beneath and up in front of the platen and provided with openings, both the sides and ends of said openings being formed with downwardly-inclined lips, pressure-rolls projecting up through said openings against the platen, means for mechanically holding said pressure-rolls away from the platen, and a paper-holding device bearing against the platen in rear of said pressure-rolls; said plate standing far away from the platen throughout, and an unobstructed entrance being provided for the insertion of sheets backwardly between the platen and said deflector just below the printing-point.

15. In a type-writing machine, the combination with a revoluble platen, of a deflector-plate curving beneath and up in front of the platen and provided with openings, both the sides and ends of said openings being formed with downwardly-inclined lips, forward and rear sets of pressure-rolls projecting up through said openings against the platen, means for mechanically holding said pressure-rolls away from the platen, and means in rear of said pressure-rolls for holding the paper against the platen when said rolls are released.

16. In a type-writing machine, the combination with a revoluble platen, of a deflector-plate curving beneath and up in front of the platen and also extending upwardly and rearwardly from the platen to form a paper-shelf, said plate underlying the principal portion of the platen, and its front edge being bent forwardly to form a lip, and said plate being mounted away from the platen so as to permit the introduction and backward adjustment of a sheet from the front of the platen while the latter is stationary, openings being provided in said plate beneath the platen and having both their ends and sides formed with downwardly-inclined lips, forward and rear sets of pressure-rolls projecting up through said openings against the platen, key-controlled means for moving said rolls away from the platen and mechanically holding them there, and means in rear of said pressure-rolls for holding paper against the platen when said rolls are released.

17. In a type-writing machine, the combination with a revoluble platen, of main releasable pressure-rolls beneath the platen, a deflector-plate beneath the platen and separated therefrom, a plurality of auxiliary rolls for bearing against the rear side of the platen when said main rolls are released, and a single key or lever provided with means for releasing both of said auxiliary rolls independently of said main rolls.

18. In a type-writing machine, the combination with a revoluble platen, of main releasable pressure-rolls beneath the platen, a deflector-plate beneath the platen and separated therefrom throughout, said deflector-plate forming with the platen an open passage extending downwardly and rearwardly, a plurality of auxiliary rolls for bearing against the rear side of the platen when said main rolls are released, and a single device provided with means for holding both of said auxiliary rolls mechanically away from the platen; said passage terminating in an unobstructed entrance for the backward insertion of the paper between said platen and said deflector.

19. In a type-writing machine, the combination with a revoluble platen, of a curved deflector-plate beneath the platen and separated therefrom throughout, said deflector-plate forming with the platen an open passage extending downwardly and rearwardly, releasable pressure - rolls projecting up through said deflector-plate, and separate pressure devices in rear of said rolls and bearing against the rear side of the platen at widely-separated points, for holding sheets from skewing after the pressure-rolls are released and during the insertion of a sheet backwardly between the platen and deflector-plate; said passage terminating in an unobstructed entrance for the backward insertion of the paper between said platen and said deflector.

20. In a type-writing machine, the combination with a platen and types mounted to strike upon a visible side thereof, of means beneath the platen and standing well away therefrom, to form therewith a commodious passage for guiding rearwardly around beneath the platen sheets which are inserted downwardly in front of the platen, releasable means for pressing the sheets against the platen to cause the paper to turn therewith, and means for holding one sheet stationary in position upon the platen while another sheet is thrust back through said passage.

21. In a type-writing machine, the combination with a platen and types mounted to strike upon a visible side thereof, of means beneath the platen and standing away therefrom, for guiding rearwardly around beneath the platen sheets which are inserted downwardly in front of the platen, releasable rolls for pressing the sheets against the platen to



cause the paper to turn therewith, and means mounted in rear of the platen for holding one sheet stationary in position upon the platen while another sheet is thrust back through said passage.

22. In a type-writing machine, the combination with a platen and types mounted to strike upon a visible side thereof, of means beneath the platen and standing away therefrom, for guiding rearwardly around beneath the platen sheets which are inserted downwardly in front of the platen, and releasable means for pressing the sheets against the platen to cause the paper to turn therewith; and means independent of said rolls for retaining previously-inserted sheets in proper relation to the platen during the insertion of fresh sheets and the adjustment thereof around the stationary platen.

23. In a type-writing machine, the combination with a revoluble platen and types mounted to strike upon the front or other visible side thereof, of a deflector extending along the platen and curving beneath the same but well out of contact therewith so as to cooperate therewith to form a commodious passage such that a sheet may readily be inserted in front of the platen and pushed back around the under side of the platen between the deflector and the platen while the latter remains stationary, and means mounted in rear of the platen for holding one sheet stationary in position upon the platen while another sheet is thrust back through said passage.

24. In a type-writing machine, the combination with a revoluble platen and types mounted to strike upon the front or other visible side thereof, of a releasable pressure roll or rolls for feeding the paper forwardly around the platen, and a deflector extending along the platen and curving beneath the same but out of contact therewith, and so constructed that the sheet may readily be inserted in front of the platen and pushed back around the under side of the platen between the deflector and the platen while the latter remains stationary; and means independent of said deflector for retaining a previously-inserted sheet or sheets against the platen during the insertion and adjustment of a sheet by means of said deflector while the platen remains stationary.

25. In a type-writing machine, the combination with a revoluble platen and types mounted to strike upon a visible side thereof, of a deflector extending along the under side of the platen and curving beneath and up in front of the platen, said deflector being well separated from said platen so as to permit ready insertion of a sheet backwardly at the front of the platen and the free backward movement of the sheet around the under side of the platen while the latter is stationary, and means for detaining a previously-in-

serted sheet against accidental displacement while a sheet is being inserted around the platen outside of said previously-inserted sheet.

26. In a type-writing machine, the combination with a revoluble platen and types mounted to strike upon a visible side thereof, of a deflector extending along the under side of the platen and curving beneath and up in front of the platen, said deflector being well separated from said platen so as to permit ready insertion of a sheet backwardly at the front of the platen and the free backward movement of the sheet around the under side of the platen while the latter is stationary, and means for detaining a previously-inserted sheet against accidental displacement while a sheet is being inserted around the platen outside of said previously-inserted sheet; and releasable pressure-rolls mounted in position to press both sheets against the platen to cause them to turn with the platen.

27. In a type-writing machine, the combination with a revoluble platen and types mounted to strike upon the front thereof, of a deflector extending along the platen and curving beneath and up in front of the same, said deflector being mounted away from said platen so as to permit ready insertion of a sheet backwardly at the front of the platen and the free backward movement of the sheet around the under side of the platen while the latter is stationary, there being an unobstructed entrance for the backward insertion of the paper between the platen and the deflector just below the printing-line, and releasable rolls for pressing the paper against the platen.

28. In a type-writing machine, the combination with a revoluble platen and types mounted to strike upon the front thereof, of a deflector extending along the platen and curving beneath and up in front of the same, said deflector being mounted away from said platen so as to permit ready insertion of a sheet backwardly at the front of the platen and the free backward movement of the sheet around the under side of the platen while the latter is stationary, there being an unobstructed entrance for the backward insertion of the paper between the platen and the deflector just below the printing-line, and releasable rolls for pressing the paper against the platen; and means for preventing accidental displacement of a previously-inserted sheet while another sheet is being inserted around the platen outside of said previously-inserted sheet.

29. In a type-writing machine, the combination with a revoluble platen and types mounted to strike upon the front side thereof, of a deflector-plate extending along the platen and curving beneath and up in front of the platen and terminating at its front edge just below the printing-line in a for-



wardly bent or flaring lip, said deflector being mounted away from said platen throughout its extent, and releasable rolls for pressing paper against the platen.

5 30. In a type-writing machine, the combination with a revoluble platen and types mounted to strike upon the front side thereof, of a deflector-plate extending along the platen and curving beneath and up in front  
10 of the platen and terminating at its front edge just below the printing-line in a forwardly bent or flaring lip, said deflector be-

ing mounted away from said platen throughout its extent, and releasable rolls for pressing paper against the platen; and means independent of said pressure-rolls for preventing accidental displacement of a previously-inserted sheet during the insertion of another sheet around the platen outside of said sheet.

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Witnesses:

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WM. N. MACLEAN.