Jan. 8, 1929. 1,698,426

H. O. BLAISDELL

TYPEWRITING MACHINE

Filed Dec. 19, 1925 3 Sheets-Sheet 1

Fig. 1.

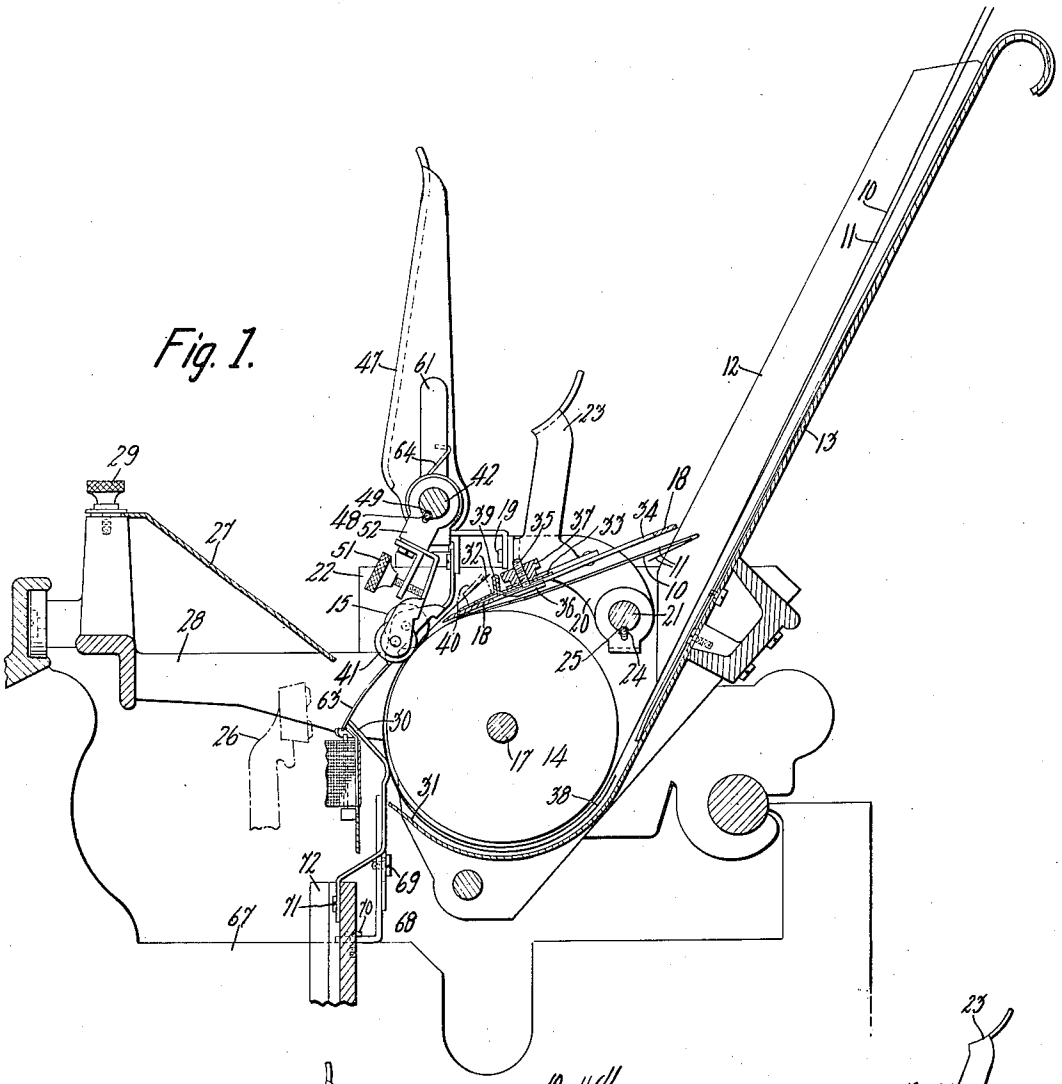


Fig. 2.

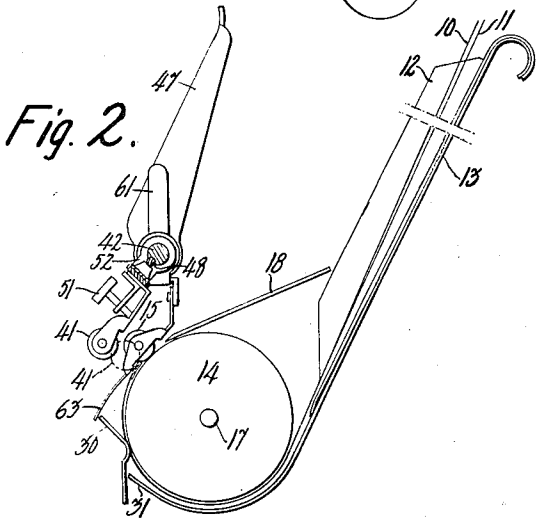
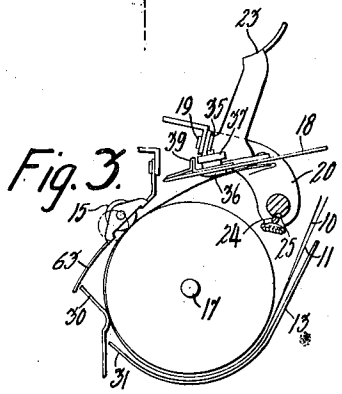


Fig. 3.



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TYPEWRITING MACHINE

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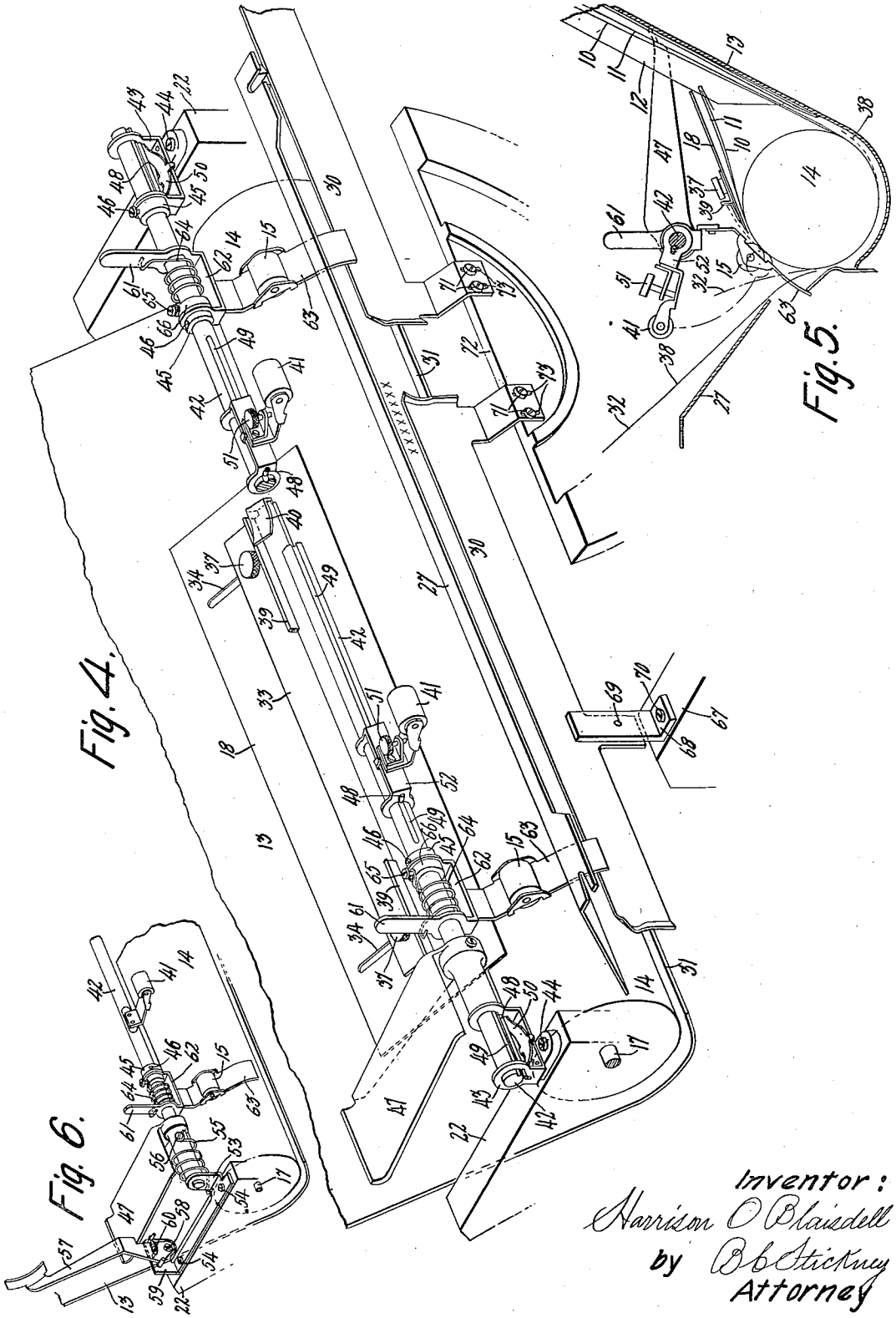


Fig. 4.

Fig. 5.

Fig. 6.

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TYPEWRITING MACHINE

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3 Sheets-Sheet 3

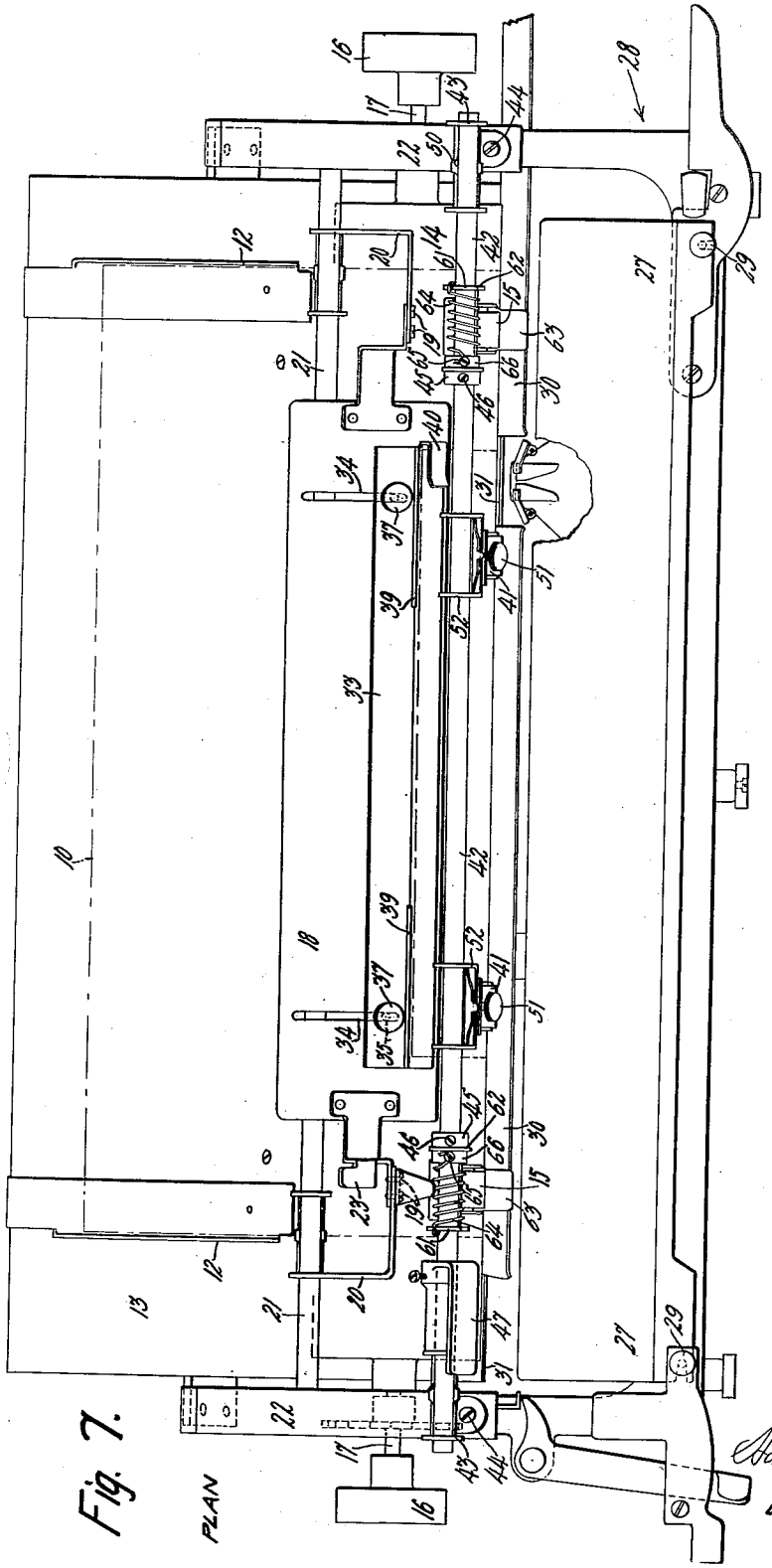


Fig. 7. PLAN

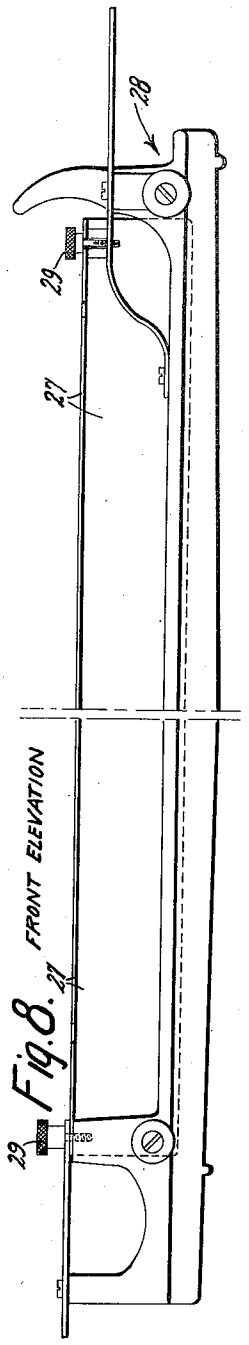


Fig. 8. FRONT ELEVATION

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Patented Jan. 8, 1929. 1,698,426

UNITED STATES PATENT OFFICE.

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TYPEWRITING MACHINE.

Application filed December 19, 1925. Serial No. 76,382.

This invention relates to means for facilitating the manipulation of work-sheets in typewriting machines, whereby a series of narrow work-sheets may be successively and quickly collated with a wide work-sheet, upon which is manifolded in condensed form the matter typed individually upon the series of narrow work-sheets.

In making entries upon a succession of separate gas, electric, telephone or other bills, the latter are usually inserted around the platen of the machine in front of a ledger-sheet, which is permanently left in the machine. When the amount of typewritten matter on each bill is small, most of the time is consumed in the manipulation of the work-sheets, especially in placing each bill in registration with the corresponding blank line on the ledger-sheet. The object of the invention is to provide means for efficiently and expeditiously handling such class of work.

In accordance with the present invention, in order to facilitate the operations above referred to, there is provided a rear paper-table extending below the platen and to the front thereof, where a front plate is provided, having its upper end bent outwardly to enable a sheet to be readily inserted in the front of the machine, the lower ends of a set of outer paper-fingers carrying pressure-rolls extending downwardly adjacent the ends of the platen, whereby the rear paper-table, the front plate and the paper-fingers form a continuous chute for the insertion of a record-sheet, together with a sheet of carbon, at the rear of the machine, down around the platen and up to the front thereof to the rolls on the paper-fingers. The regular feed-rolls are omitted, there being no cutouts in the portion of the paper-table or apron extending below the platen to cause interference, and this apron is spaced from the platen sufficiently to give ample room under the platen for the insertion of work-sheets from both the rear and the front thereof. The top edge of the ribbon-guide is flared outwardly, so as not to interfere with the insertion of work-sheets from the platen, and the front end of the paper-table or apron is also flared outwardly from the platen to facilitate the introduction of the work-sheets between the apron and the platen.

The record-sheet is inserted along a side-edge guide on the rear paper-table, and is forced therearound past the printing point to the rolls on the front paper-fingers, which may also act to align the record-sheet. Then an intermediate set of feed-rolls, extending lower than the paper-finger-rolls, may be swung against the platen and the record-sheet fed by means of these rolls up under the rolls of the paper-fingers, which will then also act to feed the record-sheet. After engaging the leading edge of the ledger-sheet between the pressure-rolls on the paper-fingers and the platen, the same is rotated and the sheet is guided behind a collating table, which overlies the platen. Said collating table is swingable out of the way to permit the insertion of the leading edge of the sheet thereunder and then the collating table is drawn back to its normal position, and the record-sheet is positioned for the first line of typing.

After the typing of the heading on the record-sheet and positioning the sheet for the first line of bill-entries, a bill-sheet may be inserted into the machine at the front thereof, there being a chute provided on the front rail of the typewriter-carriage, extending downwardly towards the platen and terminating just above the outer bent edge of the front plate, so that the bill-sheet may slide down the front chute and into the paper-apron extending around under the platen, after which it is pulled up and aligned against the top and side-edge gages adjustably mounted on the collating table. The end pressure-rolls of the paper-fingers hold the record-sheet at the side edges during the front insertion and collation of the bill-sheets, which are narrower than the distance between said pressure-rolls. The intermediate feed-rolls may then be thrown on and the bill-sheet typed, which will manifold the data on the record-sheet. Both the record-sheet and bill-sheet may be fed by means of the intermediate feed-rolls. After the typing of the bill-sheet is completed, the sheet may be line-spaced, the intermediate rolls may be released and the bill-sheet withdrawn, and another bill-sheet inserted and aligned against the gages, to collate it with the underlying record-sheet and the intermediate rolls again thrown on.

The feed-rolls and the pressure-rolls are mounted on a cross-shaft overlying the platen and rotatably mounted upon the platen-

frame. The pressure-rolls are rotatably mounted on the shaft and are positioned thereon against longitudinal displacement, while the feed-rolls are slidably mounted on the shaft and may be swung into and out of engagement by rotating the shaft, which may be operated by means of a palm-key.

According to another form of the invention, the feed-rolls are fast to the shaft instead of being slidably mounted thereon, and the palm-key may be locked by means of a latch, so as to hold the feed-rolls in their ineffective position, and thus facilitate the restoring of the feed-rolls to normal position by simply releasing the latch.

Other features and advantages will hereinafter appear.

In the accompanying drawings,

Figure 1 is a partial cross-sectional view, in elevation, through the center of an Underwood typewriting machine having my invention applied thereto, and shows the work-sheets in typing position.

Figure 2 is a diagrammatic view, showing how the record-sheet is inserted around the platen from the rear thereof to be engaged by the pressure-rolls.

Figure 3 is a diagrammatic view, showing how the front table may be swung away from the platen to permit the insertion of the ledger-sheet thereunder.

Figure 4 is a perspective view, showing the platen-frame of an Underwood typewriting machine having the invention applied thereto, the feed-rolls being shown in ineffective position.

Figure 5 is a diagrammatic view, showing the insertion of the statement-sheet, the center feed-rolls being shown in their ineffective position.

Figure 6 is a modification of the invention, showing means for latching the center feed-rolls in ineffective position, so as to permit the insertion of the statement-sheet.

Figure 7 is a plan view of the carriage of the Underwood typewriting machine having the invention applied thereto, and shows all the parts in the position corresponding to that shown in Figure 1.

Figure 8 is a front elevation, showing the means for attaching the front insertion plate to the carriage of the machine.

According to the method of handling the work in this invention, a ledger-sheet or record-sheet 10 having a superposed sheet of carbon 11, is laterally guided between side gages 12, which are slidably mounted on a rear table 13, and is forced downwardly under and around a platen 14 past the printing point and under pressure-rolls 15, which engage the edges of the record-sheet to feed the same around the platen. The platen is then rotated by means of finger-pieces 16 fast to a platen-axle 17, and the record-sheet is inserted under a table 18, as shown in Figure 3. Said table is fast to end brackets 20 by means of screws 19, the brackets being rockably mounted on a cross-shaft 21 fast to end plates 22 of the platen-frame.

The table 18 may be swung away from the platen, as shown in Figure 3, or to its normal position, as shown in Figure 1, by means of a handle 23, and is held in either position by means of rollers 24 engaging with a slot 25 in the shaft 21. The platen is again rotated to bring the first blank line on the ledger-sheet to printing position in front of a type-bar 26.

In order to facilitate the front insertion of a bill-sheet or statement-sheet 38 into registering position with the blank line on the ledger-sheet, which has already been positioned to the printing line, novel means are provided, which include a front table 27 extending the full width of the platen and fast to the carriage frame 28 by means of screws 29. The bill is positioned on the table 27 and is forced downwardly, so that the bottom edge thereof will strike the platen, and then will be guided therearound by means of guiding plates 30, which are designed to overlap the front edge 31 of the rear table 13, which front edge is flared away from the platen to provide a wide opening for the insertion of the bill-sheets, and the apron has no cutouts for feed-rolls to cause any interference. It will be noted that by means of the table 27 and the plate 30, an uninterrupted passageway is provided in front of the platen for the quick insertion of the bill, which is positioned in line-space direction by engaging its leading edge 32 against an element of a leading-edge gage unit 33.

The gage 33 is adjustably mounted on the table 18, so as to facilitate the adjustment of the bill-sheet in relation to its leading edge. To this end, the table 18 is provided with elongated slots 34 for receiving studs 35 having heads 36 under the table, which engage with the slots 34 and prevent the rotation of the studs when finger-pieces 37 are rotated to clamp the gage 33 against the table. According to the disclosed embodiment of this invention, the gage 33 is made out of a thin piece of sheet-metal, which is folded forming a rib 39, against which is abutted the leading edge of the bill-sheet. Said rib extends substantially the full length of the gage. In order to provide a better alignment, however, it may be desirable to cut the rib 39 at the center, as shown in Figure 7.

The gage 33 serves also as a means for laterally locating the bill-sheet, and is provided with a projection 40 at the end thereof, which may be an extension of the rib 39, said projection 40 being folded upon itself, and is flared outwardly to permit the quick location of the sheet.

In order to locate the bill-sheet and to feed it around the platen, there is provided a pair of feed-rolls 41, which are slidably

mounted on a cross-shaft 42, the shaft being rotatably mounted on supporting brackets 43 fast to the end plates 22 by means of screws 44. The shaft is located against longitudinal displacement by means of collars 45, which are secured to the shaft by means of screws 46.

Since it is desirable to temporarily release the feed-rolls 41 in order to permit the insertion of the bill-sheet thereunder, there is provided a palm-key 47 fast to the shaft 42, which is normally held in its effective position by means of rollers 48 engaging with grooves 49 in the shaft, the rollers being held in engagement with the grooves by means of springs 50. It will be noted that the rollers 48 are also effective to hold the shaft in its ineffective position, and, in order to restore the feed-rolls to their effective position, it is only necessary to draw on the palm-key. The feed-rolls 41 are individually adjustable by means of screws 51 in order to even their pressure upon the platen.

In order to simplify the construction of this device, it is proposed to mount the feed-rolls 41 on the shaft 42 by means of brackets 52, which are held in engagement with the shaft 42 in a manner similar to the brackets 43, which support the shaft. The resilient means which permit the sliding of the feed-rolls 41 on the shaft, include the same springs and rollers used at the ends of the shaft, and are similarly numbered.

According to another form of the invention, which is illustrated in Figure 6, the shaft 42 is rotatably mounted on brackets 53 fast to the end plates 22 by means of screws 54, and is held normally in its effective position by means of a spring 55, which may be hooked on a screw 56 holding the palm-key 47 fast to the shaft. The feed-rolls 41, according to this form of the invention, are riveted to the shaft 42 or otherwise secured thereto. According to this form of the invention, when it is desired to release the center feed-rolls the palm-key is pushed back and is engaged by a latch 57, which is pivotally mounted at 58 on an extension 59 of the bracket 53, said latch being held in its normal position by means of a spring 60. In order to restore the feed-rolls to normal position it is only necessary to swing the latch 57 away from the palm-key 47, thus permitting the spring 55 to actuate and rotate the shaft 42. The pressure-rolls 15 are mounted on the shaft 42 exactly the same as in the preferred form, and all the parts are similarly numbered.

The pressure-rolls 15 are laterally movable along and are rotatably mounted on the shaft 42, and may be swung to ineffective position, away from the platen, by means of finger pieces 61 which form an integral part of a supporting bail 62 to which pressure fingers 63 are secured. The pressure-rolls are held in their normal or effective position by means of springs 64 wound around the shaft and actuating between the finger pieces 61 and screws 65, the latter serving as means for securing locating collars 66 to the shaft 42.

In order to provide an uninterrupted passageway for the record-sheet, it is proposed to extend the fingers 63 downwardly in a manner to overlap the guiding plates 30 as shown in Figure 2, in which the record-sheet is shown being inserted around the platen from the rear thereof.

The guiding plates 30 are made in two sections, one at each side of the printing point, as shown in Figure 4. Each section is secured to the frame 67 of the machine by means of reinforcing brackets 68, the latter being screwed to the plates at 69 and secured to the frame by means of screws 70. The inner ends of the plates 30 are secured by means of screws 71 to the type-bar sector 72 which is in turn fixed to the frame 67. In order to provide a slight adjustment for the plates 30, there are provided elongated slots 73 through which the screws 71 are passed to fasten the plates to the sector.

Variations may be resorted to within the scope of the invention, and portions of the improvements may be used without others.

Having thus described my invention, I claim:

1. The combination, in a typewriting machine, of a revoluble platen, a platen frame therefor, a cross-shaft overlying the platen and borne by said frame, pressure-rolls rotatably mounted on said shaft and running on the ends of the platen to hold a wide record-sheet therearound, intermediate feed-rolls slidably mounted on said shaft for holding a narrower statement-sheet in registration with said wide record-sheet, and means whereby said intermediate feed-rolls may be moved independently of the pressure-rolls away from the platen as a unit without releasing the hold of said pressure-rolls on said record-sheet.

2. The combination, in a typewriting machine, of a revoluble platen, a platen frame therefor, a cross-shaft overlying the platen and borne by said frame, pressure-rolls rotatably mounted on said shaft and running on the ends of the platen to hold a wide record-sheet therearound, intermediate feed-rolls slidably mounted on said shaft for holding a narrower statement-sheet in registration with said wide record-sheet, gages for positioning said statement-sheet in line-space and letter-space direction relatively to the printing point, said feed-rolls being movable away from said platen as a unit without releasing the hold of said pressure rolls on said record-sheet, and means whereby said intermediate feed-rolls may be moved independently of the pressure-rolls away from the platen as a unit without releasing the hold of said pressure-rolls on said record-sheet.

3. The combination, in a typewriting machine, of a revoluble platen, a platen frame therefor, a cross-shaft overlying the platen and borne by said frame, pressure-rolls rotatably mounted on said shaft and running on the ends of the platen to hold a wide record-sheet therearound, intermediate feed-rolls slidably mounted on said shaft for holding the side edges of a narrower statement-sheet in registration with said wide record-sheet, means for swinging the feed-rolls upwardly about said shaft, as a unit, independently of said pressure-rolls, so as to permit the positioning of the narrower sheet in line-space and letter-space direction, and spring-actuated means for maintaining said pressure rolls in effective engagement with said record-sheet while said feed-rolls are in a released condition.

4. The combination, in a typewriting machine, of a revoluble platen, a table at the introductory side of the platen and extending imperforate around the under side of the platen for conducting a wide record-sheet therearound and for facilitating the insertion of a narrower statement-sheet at the front of the platen, pressure-rolls running on the platen above the printing line for engaging the borders of the wide record-sheet intermediate, feed-rolls for feeding the narrower statement-sheet, and a leading-edge gage at the delivery side of the platen for positioning the statement-sheet relatively to the printing line, thereby collating it with the underlying record-sheet.

5. The combination, in a typewriting machine, of a revoluble platen, a table at the introductory side of the platen and extending imperforate around the under side of the platen for conducting a wide record-sheet therearound, pressure-rolls running on the platen above the printing line for engaging the borders of the sheet, intermediate feed-rolls for feeding a narrower statement-sheet, and a leading-edge gage at the delivery side of the platen for positioning the statement-sheet relatively to the printing line, said gage being slidably mounted on a rockably mounted table in a manner to permit the adjustment of the gage towards and away from the table, and to permit the swinging of the table away from the platen to permit the insertion of the record-sheet thereunder.

6. The combination, in a typewriting machine, of a revoluble platen, a table at the introductory side of the platen for conducting a wide record-sheet to the platen, feed-rolls running on the platen above the printing line for engaging the borders of the sheet, center feed-rolls for feeding a narrower statement-sheet, a leading-edge gage at the introductory side of the platen for positioning the statement-sheet in line-space direction, a rotatable cross-shaft for supporting the feed-rolls, means for resiliently holding the feed-rolls on said shaft, and means for swinging the center feed-rolls independently of the outer feed-rolls to either effective or ineffective position as a unit without disengaging the outer feed-rolls from said record-sheet.

7. The combination, in a typewriting machine, of a revoluble platen, a rear table having side gages adjustably mounted thereon for laterally locating a ledger-sheet, said table extending imperforate under and around the platen in close proximity to the periphery thereof, being spaced therefrom sufficiently to give ample room for the insertion of work-sheets from both the front and rear of the platen, means in front of the platen for guiding the leading edge of the ledger-sheet past the printing line, feed-rolls running on the platen to feed the ledger-sheet around, and means for guiding the leading edge of said ledger-sheet between said feed-rolls and said platen, so as to be operatively engaged by said feed-rolls and said platen.

8. The combination, in a typewriting machine, of a revoluble platen, a rear table having side gages adjustably mounted thereon for laterally locating a ledger-sheet, said table extending under and around the platen in close proximity to the periphery thereof, means in front of the platen for guiding the leading edge of the ledger-sheet past the printing line, feed-rolls running on the platen to feed the ledger-sheet therearound, and means adjacent the lower side of the platen for guiding the bottom edge of a work-sheet into engagement with said platen just above the front edge of said table, said last-mentioned means including a stationary downwardly-inclined front table, and a forwardly-inclined inserting plate lower than said table, the inserting plate overlapping the front edge of the rear table.

9. The combination, in a typewriting machine, of a revoluble platen, side gages at the introductory side thereof for laterally locating a wide record-sheet, a chute for guiding the sheet between the gages, under and around the platen past the printing line, pressure-rolls running on the platen for engaging the borders of the record-sheet, means at the introductory side of the platen for conducting a narrower statement-sheet around the platen, means for squaring and laterally positioning the statement-sheet, and releasable feed-rolls for engaging the borders of the narrower sheet to feed the two sheets around the platen, the pressure-rolls and the feed-rolls being mounted on a common shaft fixed relatively to the platen and overlying the same.

10. The combination, in a typewriting machine, of a revoluble platen, a platen frame therefor, a shaft overlying said frame and borne thereby, center feed-rolls slidably mounted on said shaft and running on the

platen, outer feed-rolls rotatably mounted on said shaft and resiliently held bearing on the platen, and means whereby the center feed-rolls may be swung upwardly away from the platen without interfering with the normal operation of the outer feed-rolls.

11. The combination, in a typewriting machine, of a revoluble platen, a platen frame therefor, a shaft overlying said frame and borne thereby, center feed-rolls slidably mounted on said shaft and running on the platen, outer feed-rolls rotatably mounted on said shaft and resiliently held bearing on the platen, means whereby the center feed-rolls may be swung upwardly away from the platen without interfering with the normal operation of the outer feed-rolls, and individual means whereby the outer feed-rolls may be temporarily swung away from the periphery of the platen.

12. The combination, in a typewriting machine, of a revoluble platen, a platen frame therefor, a shaft overlying said frame and borne thereby, center feed-rolls slidably mounted on said shaft and running on the platen, outer feed-rolls rotatably mounted on said shaft and resiliently held bearing on the platen, and means whereby the center feed-rolls may be swung upwardly away from the platen without interfering with the normal operation of the outer feed-rolls, said swinging means including a palm-key fast to the shaft, and resilient means for locking the shaft in either effective or ineffective position.

13. The combination, in a typewriting machine, of a revoluble platen, a platen frame therefor, a shaft overlying said frame and borne thereby, center feed-rolls fast on said shaft and running on the platen, outer feed-rolls rotatably mounted on said shaft and resiliently held bearing on the platen, means whereby the center feed-rolls may be swung upwardly away from the platen without interfering with the normal operation of the outer feed-rolls, said swinging means including a palm-key fast to the shaft and means including a pivotally mounted latch for engaging said palm-key, to lock the center feed-rolls in their ineffective position.

14. The combination, in a typewriting machine of a revoluble platen, side gages at the introductory side thereof for laterally locating a wide record-sheet, a chute for guiding the sheet between the gages, under and around the platen past the printing line, pressure-rolls above the printing line and running on the platen for engaging the borders of the record-sheet, means at the introductory side of the platen for conducting a narrower statement-sheet around the platen, feed-rolls engaging with the side edges of the statement-sheet for feeding the same and the record-sheet in line-space direction, means for releasing the feed-rolls independently of the pressure feed-rolls, and a leading-edge gage associated with a side-edge gage for positioning the statement-sheet laterally and in line-space direction.

15. The combination, in a typewriting machine, of a revoluble platen, a platen frame therefor, a shaft overlying said frame and borne thereby, center feed-rolls slidably mounted on said shaft and running on the platen, outer feed-rolls rotatably mounted on said shaft and running on the platen, and means for swinging the center feed-rolls independently of the outer feed-rolls, said means including a palm-key fast to the shaft, fixed supports in which the shaft is rotatably mounted, and detents on said supports engaging with notches in the shaft for positioning the center feed-rolls in their effective position and to hold the shaft in its ineffective position.

16. The combination, in a typewriting machine, of a rear table, side gages thereon for laterally positioning a wide sheet, pressure-rolls at the delivery side of the platen for feeding the wide sheet, and means at the delivery side of the platen for permitting the front insertion of a narrower sheet, said means including a fixed plate extending the full width of the platen and in close proximity therewith at the printing line and having a cut-away portion at the printing point to clear the type-bars, the upper edge of the plate being bent outwardly to provide a bell-mouthed entrance for the bottom edge of the narrower sheet.

17. The combination, in a typewriting machine, of a rear table, adjustable side gages thereon for laterally positioning a wide sheet, an imperforate apron extending around the under side of the platen and ending below the printing line thereof for conducting work-sheets therearound inserted at the rear and the front of the platen, laterally-adjustable pressure-rolls at the delivery side of the platen for feeding the side edges of the wide sheet, means for guiding the edges of said sheet from the apron to said pressure-rolls, means at the delivery side of the platen for facilitating the front insertion of a narrower sheet, leading and side edge gages for positioning the narrower sheet, and feed-rolls disposed at the delivery side of said platen between said pressure-rolls for simultaneously line-spacing both the wide and the narrower sheets, said feed-rolls being releasable together at a single operation independently of the pressure-rolls, whereby the latter may retain control of said wide sheet during the gaging of said narrower sheet.

18. In a typewriting machine, in combination, a revoluble platen, a platen-frame therefor, a cross-rod overlying the platen, brackets on the ends of said platen-frame for rotatably supporting said rod, laterally adjustable feed-rolls mounted on said rod to rotate

therewith for holding a statement-sheet on said platen, a pressure-roll disposed on each side of said statement-sheet and carried by said cross-rod for holding on said platen a record-sheet underlying said statement-sheet and extending outwardly beyond each side edge thereof, means co-operating with said rod to normally hold said feed-rolls against the platen, said means being effective to permit rearward rotation of said cross-rod to raise said feed-rolls independently of the pressure-rolls for inserting said statement-sheet, and springs mounted on said rod under initial tension for holding said pressure-rolls in effective engagement with said record-sheet while said rod is rearwardly rotated to disengage said feed-rolls for manipulating said statement-sheet.

19. In a typewriting machine, in combination, a revoluble platen, a platen-frame therefor, a cross-rod overlying the platen, brackets on the ends of said platen-frame for rotatably supporting said rod, laterally adjustable feed-rolls mounted on said rod to rotate therewith for holding a statement-sheet on said platen, a pressure-roll disposed on each side of said statement-sheet and carried by said cross-rod for holding on said platen a record-sheet underlying said statement-sheet and extending outwardly beyond each side edge thereof, means co-operating with said rod to normally hold said feed-rolls against the platen, said means being effective to permit rearward rotation of said cross-rod to raise said feed-rolls independently of the pressure-rolls for inserting said statement-sheet, springs mounted on said rod under initial tension for holding said pressure-rolls in effective engagement with said record-sheet while said rod is rearwardly rotated to disengage said feed-rolls for manipulating said statement-sheet, and means for separately adjusting the pressure of each of said feed-rolls.

20. In a typewriting machine, in combination, a platen, a rod disposed above said platen and parallel thereto, two feed-rolls mounted on said rod for operatively engaging the side edges of a record-sheet against said platen, intermediate feed-rolls mounted on said rod for operatively engaging against said platen a statement-sheet which is narrower than said record-sheet and overlies the latter between said record-sheet-feed-rolls, and means for disengaging said statement-sheet-feed-rolls as a unit from said platen independently of the pressure-rolls, to permit insertion or removal of said statement-sheet without displacing said record-sheet.

21. In a typewriting machine, the combination with a platen around which a work-sheet may be passed from the rear, a platen-frame for said platen, a rear paper-table having a forwardly extending imperforate apron under said platen to a position in front thereof, and ending below the printing line of the platen, and a type-bar segment, of a rod on said platen-frame parallel with said platen, two fingers on said rod, one disposed over each side edge of said work-sheet, a feed-roll carried by each of said fingers for operatively engaging said work-sheet against said platen, and two upwardly-extending guide-plates mounted on said segment, one on each side of the printing point of said machine, said plates being arranged to guide said work-sheet up from the front end of the paper-table and past the printing line of the platen, said fingers extending past said feed-rolls and overlapping the edges of said guide-plates, whereby to provide continuous guiding instrumentalities for conducting said work-sheet into engagement with said feed-rolls.

22. In a typewriting machine, the combination of a platen, a platen-frame therefor, and a cross-rod between the ends of said platen-frame and in the rear of said platen, a collating-table mounted for rearward rotation about said rod to permit a work-sheet to be passed under said table, the front end of said collating-table being disposed substantially tangent to said platen above the printing line thereof, a line-space gage on said collating-table adjustable toward and away from the printing line for collating a second work-sheet which overlies said first-named work-sheet, to the position of the first typing line thereon, and a lateral gage on said collating-table for said second-named work-sheet, to bring said sheet to the proper lateral position, thereby collating the second sheet with the underlying first sheet, to receive the first line of typing.

23. In a typewriting machine, in combination, a platen, a platen-frame therefor, a cross-rod extending between the ends of said platen-frame in the rear of said platen and above the latter, a cross-rod extending between the ends of said platen-frame and being disposed forwardly from the first-named cross-rod, feed-rolls carried by said last-named cross-rod for engaging a work-sheet above the printing line, and a collating-table mounted on said first-named cross-rod and having its front end disposed substantially tangent to said platen in the rear of said feed-rolls, said collating-table being swingable upwardly and rearwardly to provide a passageway for said work-sheet upon being inserted around said platen.

24. The combination, in a typewriting machine including a rotatable platen, of means for collating a series of individual narrow statement-sheets successively with a wide record-sheet upon which is manifolded all the items typed individually upon the series of individual statement-sheets, said means including a rear paper-table and gaging devices for the rear insertion and guiding of said record-sheet around the platen, collating and

guiding means at the front of the platen to facilitate the front insertion of said statement-sheets including a front table directed toward the platen to provide a chute for directing the front insertion of the statement-sheets around the platen, and gage means for collating said statement-sheets successively with said record-sheet, means for holding the record-sheet at the side margins thereof beyond the side edges of the statement-sheets during the insertion and collation of the statement-sheets therewith, and means co-operating with the platen for feeding the record-sheet and overlying statement-sheets when the platen is rotated.

25. The combination, in a typewriting machine including a platen-carriage and a rotatable platen, of means for collating a series of individual narrow statement-sheets successively with a wide record-sheet upon which is manifolded all the items typed individually upon the series of individual statement-sheets, said means including a rear paper-table and gaging devices for the rear insertion and guiding of said record-sheet around the platen, collating and guiding means at the front of the platen to facilitate the front insertion of said statement-sheets including a front table mounted on the platen-carriage and directed toward the platen to provide a chute for directing the front-insertion of the statement-sheets around the platen and a second front table mounted so as to overlie the record-sheet and having a gage thereon for collating said statement-sheets successively with said record-sheet, means for holding the record-sheet at the side margins thereof beyond the side edges of the statement-sheets during the insertion and collation of the statement-sheets therewith, and means co-operating with the platen for feeding the record-sheet and overlying statement-sheets when the platen is rotated.

26. The combination, in a typewriting machine including a rotatable platen, of means for facilitating the front insertion of work-sheets around the platen, including a front table directed toward the platen to provide a chute for directing the front insertion of the work-sheets, a rear paper-table extending downwardly under and around the platen, being spaced therefrom sufficiently to give ample room for the free passage of work-sheets around the platen and having the front end thereof flaring away from the platen so as to facilitate the front introduction of work-sheets around the platen as they pass downwardly from the front paper-table, and feed-rolls co-operating with the platen above the printing line thereof for feeding the work-sheets after they have been properly positioned with respect to the printing line of the platen.

27. The combination, in a typewriting machine including a rotatable platen, of means for facilitating the front insertion of work-sheets around the platen, including a front table directed toward the platen to provide a chute for directing the front insertion of the work-sheets, a rear paper-table extending downwardly and having its lower forward end formed into an apron extending under and around the platen, being spaced therefrom sufficiently to give ample room for the free passage of work-sheets between the apron and the platen and having the front end of the apron flaring away from the platen so as to facilitate the front introduction of work-sheets between the apron and the platen as they pass downwardly from the front paper-table, feed-rolls co-operating with the platen above the printing line thereof for feeding the work-sheets after they have been properly positioned with respect to the printing line of the platen, and a palm-key operable to displace said feed-rolls during the positioning of said work-sheets around the platen.

28. The combination, in a typewriting machine including a platen-carriage and a rotatable platen, of means for facilitating the front insertion of work-sheets around the platen, including a front table mounted on the platen-carriage directed toward the platen above the printing line thereof to provide a chute for directing the front insertion of the work-sheets, a rear paper-table extending downwardly, and formed into an apron extending under and around the platen and ending below the printing line thereof, being spaced from the platen sufficiently to give ample room for the free passage of work-sheets between the apron and the platen and having the front end of the apron flaring away from the platen, so as to facilitate the front introduction of work-sheets between the apron and the platen as they pass downwardly from the front paper-table, guide means between said front table and the forward end of the apron for guiding the work-sheets downwardly into said forward end of the apron, and feed-rolls co-operating with the platen above the printing line thereof after the work-sheets have been properly positioned with respect thereto for feeding the work-sheets.

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