Dec. 17, 1929. J. MUGGLI 1,739,729

TYPEWRITING MACHINE

Filed Sept. 17, 1926 2 Sheets-Sheet . 1

Fig. 1.

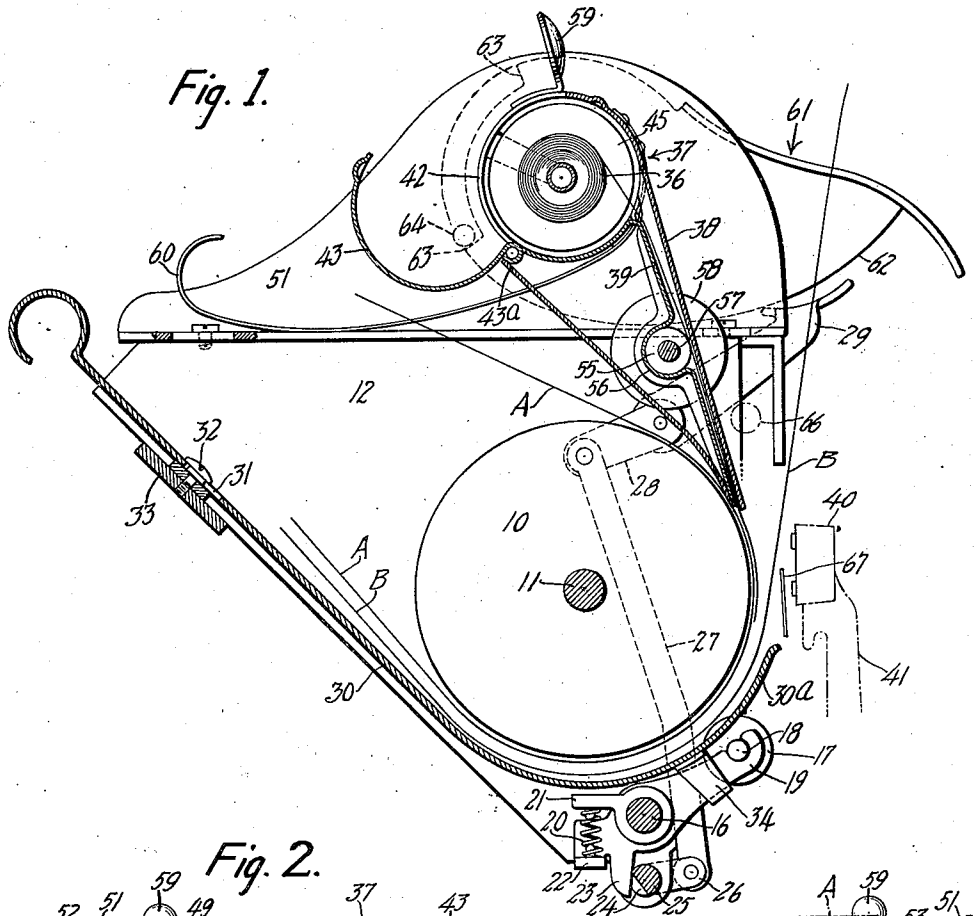


Fig. 2.

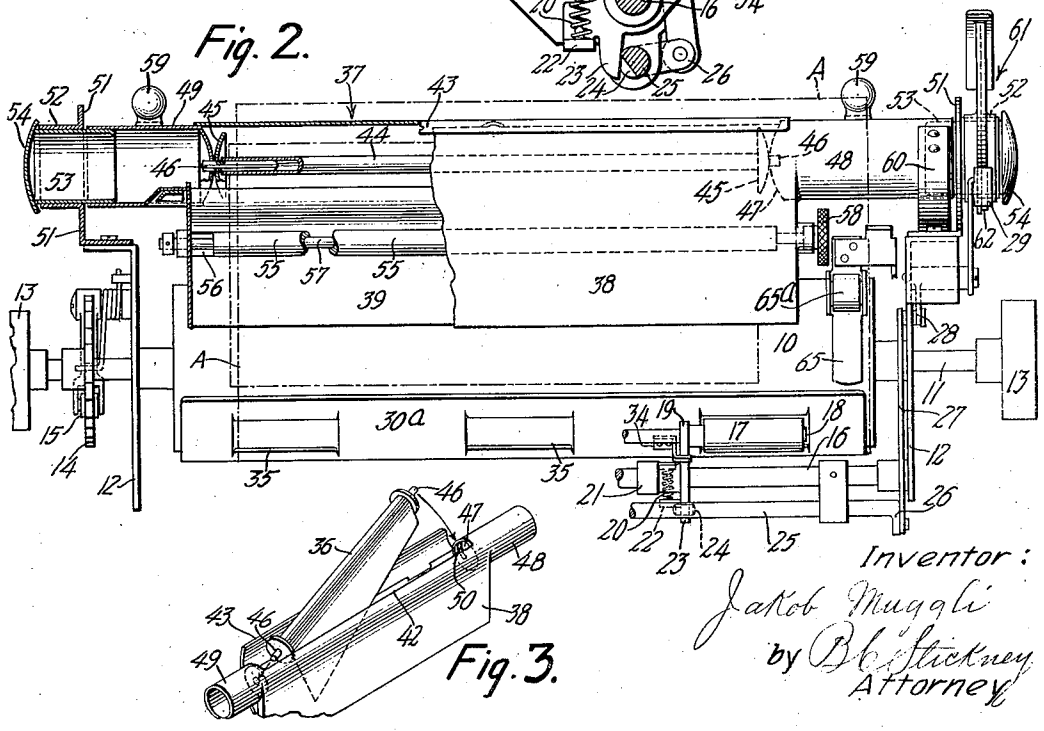


Fig. 3.

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TYPEWRITING MACHINE

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Fig. 4.

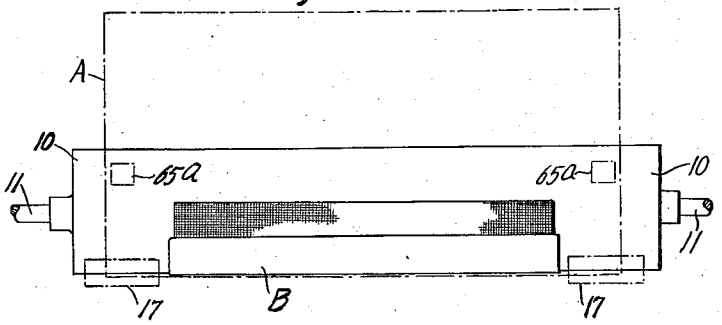


Fig. 5.

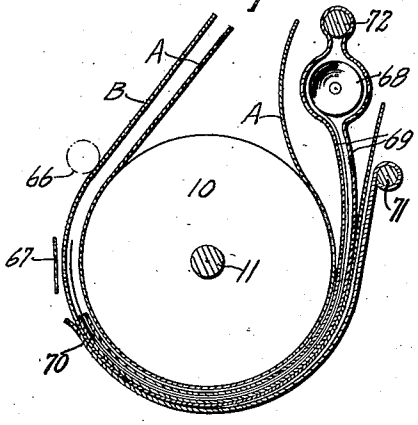


Fig. 6.

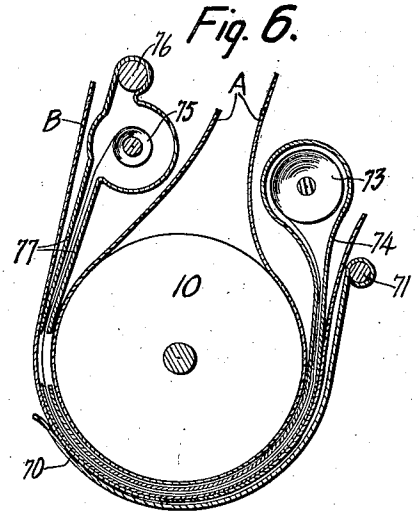
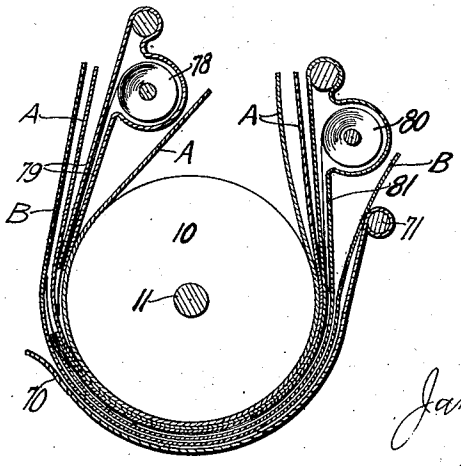


Fig. 7.



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UNITED STATES PATENT OFFICE

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TYPEWRITING MACHINE

Application filed September 17, 1926, Serial No. 136,108, and in Switzerland October 15, 1925.

The present invention relates to billing attachments for typewriting machines where a condensed record-sheet or a ledger-sheet may be fed around the platen from the rear and line-spaced forwardly step by step through the printing position, with an outer sheet to be introduced around the platen from the front and over the record-sheet to receive the usual bill and charge single line-space entries.

A feature of the invention is the provision for a carbon-transfer element between the outer statement-sheet and the underlying record sheet or sheets that includes an encased carbon-supply roll suspended from the platen-frame and above the front of the platen, where the free end of the carbon-web is directed by a chute to hang pendent therefrom to cover the printing zone of the types and remain undisturbed during the feeding movement of the record-sheets, or during the adjustment of several statement-sheets; the carbon-web having manually operated feeding means to renew the carbon surface when exhausted, or the narrow exhausted strip may be severed from the web and a new section fed from the supply roll. This arrangement of supplying a carbon-transfer at the front of the platen to hang pendent across the printing position and with only a narrow end section exposed to cover the typing position provides for a very economical use of carbon paper, and the crocking or fouling of the under record-sheet by the overlying carbon-face in line-spacing said record-sheet or during the insertion of a statement-sheet is entirely eliminated because at no time is the exposed carbon area under pressure in any form from paper-feeding or paper-holding devices.

Another feature provides that the carbon-roll and its carrier may be readily removed from the carriage-frame as a unit when it is desirable to employ the machine for typing other than statement or bill and charge work.

Other features and advantages will hereinafter appear.

In the accompanying drawings:

Figure 1 is an enlarged vertical cross-section through the platen showing only such parts that are required to illustrate the co-operation of the invention with the existing parts of the typewriting machine.

Figure 2 is a reduced front elevation with certain parts broken away and other parts shown in section to illustrate detail constructions.

Figure 3 is a reduced diagrammatic view in perspective to illustrate the manner of assembling a new supply roll to the carbon-supply roll container.

Figure 4 is a diagrammatic view looking toward the front of the platen showing the relative positions of the two work-sheets, the carbon-inlay and the paper-holding and paper-feeding elements.

Figure 5 shows a modified construction where the carbon-supply roll is positioned at the rear of the platen, and a chute provided to direct the carbon around the platen to a point below the typing line, the carbon emerging from the chute to stand upright over the typing line instead of being pendent thereto, as shown in the preferred form of Figure 1.

Figure 6 is a further modified construction where a carbon-supply roll is at the rear of the platen and a winding up spool at the front of the platen, the carbon passing through chutes and fed across the typing position by the winding up of the exhausted carbon-web instead of severing the exhausted section.

Figure 7 is another modification where a carbon-supply roll is positioned at both the rear and the front of the platen, so as to permit typing upon one sheet and transferring through separate carbons to two separate condensed record-sheets.

The standard Underwood typewriting machine has a platen 10 mounted upon a platen-shaft 11, which is revolubly mounted within carriage ends 12. The free ends of said shaft are provided with finger-knobs 13 to rotate the shaft and platen line-space distances in either direction, the line-spacing position being determined by the teeth of a ratchet-wheel 14 engaging with a detent roller 15 which is stationary with the frame and spring pressed into engagement with said wheel. The usual Underwood machine also provides

a suitable line-spacing lever (not shown) to co-operate with said wheel 14.

It has been customary to provide the Underwood machine with two series of feed-rolls, hung at either side of a stationary rod 16, and which rod serves also as a tie-rod between the carriage ends 12, but, for the purpose of the present invention, a single series of feed-rolls 17 are employed, as shown, to bear against the work-sheets at the under front side of the platen. These rolls consist of a series of three rolls, each roll being provided with a pivot-rod 18 having reduced ends to take bearing within open seats at the free ends of a pair of arms 19 hung upon the tie-rod 16, and each arm being controlled in a direction toward the platen by a spring 20 compressed between an arm 21 fast to the rod 16 and an ear 22 forming a part of each arm 19. To jointly shift all three rolls 17 to a released or inoperative position, each arm 19 is formed with a lug 23 arranged to normally rest within a slot 24 in a rock-shaft 25 having end bearings in the two carriage ends 12. One end of said shaft has a crank-arm 26 secured thereto and connected by a link 27 to a crank-arm 28 fulcrumed at the outer face of one carriage end and provided with a finger-piece 29, which comprises a feed-roll release lever of the usual Underwood form, which, when depressed, rocks the shaft 25 to cam the whole series of lugs 23 and move the feed-rolls 17 out of contact with the platen-face; said shaft usually making a quarter turn so that each lug 23 will press against the corner formed by the slot 24, and the rock-shaft becomes self-locking to prevent the return of the rolls 17 to the platen. For the purpose of the present invention, it is desirable that the shaft 25 only moves to the position shown at Figure 1, where the pressure of the spring 20 ordinarily would cause the lugs 23 to restore the shaft 25 and the rolls 17 to operative positions, were it not for other means presently to be described which hold the position of the feed-rolls as shown.

It is also a feature of the present invention that the usual paper-deflector of the platen be removed and that a paper-table 30 be continued downwardly, under and around the platen. To this end, the paper-table 30 may be provided with a sliding movement, as with slots 31 engaging with shoulder-studs 32 secured to an ear 33 at each carriage end, and the forward end of the table under the platen may be loosely secured by a bracket 34 to one of the arms 19. In this manner, the paper-table is slidable upon the two studs 32 and movable with the arm 19, and hence when the rolls 17 are released or restored by the finger-piece 29 the paper-table will have a corresponding sliding movement in unison therewith and in a substantially straight line.

In a combined paper-table and deflector of this character, clearance holes 35 for the feed-rolls may be close fitting, and a non-mutilated front edge for the deflector-section provides that the leading-in edge of the work-sheet may be readily inserted between said deflector and the platen-face, and forced around and under the platen without the usual annoyance of having a corner of the sheet catching in the clearance openings formed in the deflector, as heretofore.

The carbon-supply roll 36 may be suspended above the platen and in the rear of the printing position, so that the line of carbon-feed will pass tangent to the platen-face at a point above the printing position to insure the best results from the free end of the web which will hang pendent over the printing position. The supply roll may be encased in a metal casing 37, which comprises a front plate 38 and a back plate 39 slightly separated to form a chute which tapers to a point above the printing line to clear the type-heads 40 of the type-bars 41. The upper free ends of both plates 38 and 39 take a cylindrical form with a roll-inserting opening 42 at the rear, which may be closed by a lid 43 hinged to the edge of one plate to close over the edge of the other plate, and, when so closed, the lid forms with the two plates 38 and 39 a hollow cylindrical casing within which the carbon-supply roll is enclosed.

A carbon-spool may comprise a tube 44 to which is secured at each end heads 45, one head having a pivot-pin 46 to take a bearing within a head 47 in a tubular section 48, forming a continuation of the cylindrical section formed by the two plates 38 and 39, and the other head 45 having a similar pivot-pin 46 which takes a bearing within a head of a tubular section 49 at the opposite end of the casing. To adjust the carbon-roll within the casing 37, the lid 43 is thrown back against a stop 43^a, as shown at Figure 1, one pivot-pin 46 being inserted into a bearing hole in one head 47, as illustrated in Figure 3, and the opposite end being then swung downwardly, and the pin 46 at the opposite end of the spool entering a slot 50 which terminates in a bearing hole within the head 47 of the section 48. To guide the free end of the carbon-web from the spool into the narrow chute, formed between the two plates 38 and 39, the end of the web may be cut on the bias, as shown at Figure 3.

It will be understood that the tubular sections 48 and 49 form an integral part of the carbon-supply roll casing, and the sections extend to the right and left of said casing a distance predetermined by the length of the typewriter-carriage, and each section takes an endwise bearing against the face of brackets 51 mounted upon the carriage ends 12. To suspend each section 48 and 49, each bracket 51 may be formed with a tubular hub

52 having approximately the same diameter as sections 48 and 49, and within each hub a sliding sleeve 53 may be assembled to enter the open end of the tubular sections 48 and 49, and thus provide a means to suspend the ribbon-web casing as a unit in position and also to provide for a rotary movement of the casing about the two sleeves 53 for purposes presently to appear. To facilitate the sliding movement of the sleeves 53, each sleeve may be provided with a head 54, which has a diameter larger than its hub 52 to provide for a finger grip.

Means are provided for feeding the carbon-web through the chute and toward the printing position to renew an exhausted line section thereon at will, said feeding means in the present invention being a roller 55 positioned to bear against the inner face of the plate 38 and enclosed at the rear by a suitable formation 56 in the rear plate 39. The ends of the two plates 38 and 39 may be closed to provide bearing walls for a roller-driving shaft 57, one end of which may have a finger-knob 58 to turn the enclosed roller 55 to feed the carbon-web. The roller 55 may be formed of soft pliable rubber to engage with the carbon-face of the web without injuring the surface of the carbon. The carbon-web is introduced between the roller 55 and the face of the plate 38, and may be then fed downwardly to cover the typing position on the platen, and, as the carbon remains stationary during the typing operation, a typing line area across the web is soon exhausted, and it is desirable to feed the web downwardly to bring a new surface area into position to type, and this feeding of the carbon-web may be repeated until the free end of the web interferes with the insertion of the work-sheet under the deflector, when the carbon may be drawn back into the chute until the exhausted section is aligned to the lower edge thereof, when a sharp knife may be drawn along the edge of the chute to sever the carbon, or the carbon may be torn across the end of the chute, and the web then restored to cover the typing position of the platen.

To facilitate the severing of the exhausted carbon-section, the tubular sections 48 and 49 may be provided with a finger-piece 59, which, when pressed rearwardly by the finger, causes the casing 37 as a unit to rotate upon the two sleeves 53 so as to raise the lower edge of the carbon-directing chute away from the platen, and, in this position, the carbon may be readily severed. Upon the release of the finger-piece 59, the casing may be restored to normal position with the chute against the platen-face by a suitable spring 60 secured to one section as 48 to coil around and under the section and bear against the flat face of the carriage ends 12 under tension.

It will be remembered that the casting off or releasing movement of the finger-piece 29 in the Underwood machine is self-locking through the formation of the rock-shaft 25. Where the combined paper-table and deflector is movable with and by the feed-rolls 17, this normal locking movement of the finger-piece 29 is excessive to obtain the necessary sheet-entering gap between the platen-face and the feed-rolls 17 and the deflector 30^a, and, rather than change the standard equipment of the feed-roll camming and locking means, other locking means may be provided to bear upon the finger-piece 29 in such a manner as to only semi-depress said finger-piece and hold the finger-piece depressed at any desired position. To this end, the tubular hub 52 at the right-hand end of the carriage provides a bearing for a cam-lever 61 formed with an eccentric shoe 62 to bear upon the finger-piece 29. This lever 61 may rock between fixed stop positions, indicated by the recessed faces 63 therein which engage with a stop-pin 64 stationary with the platen-frame. In this manner the finger-piece 29 may be semi-depressed and held in its depressed state against the action of the spring 20 and against the camming effect of the slots 24, to variably determine the sheet-inserting gap between the platen-face and the deflector 30^a.

In the adjustment of the work-sheets, as shown in Figure 4, the condensed record-sheet A is the widest and may come under the control of the usual paper-fingers 65, positioned at each side of the casing 37. The feed-rolls 17 are first released by the depression of the cam-lever 61 to the position shown at Figure 1. The record-sheet may be adjusted around the platen from the rear and under the paper-fingers at each side edge, and under the chute of the carbon-casing 37 to the first line thereon to receive typed carbon-transfers, the carbon-casing being raised slightly for the passage of the work-sheet, and the two paper-finger rolls 65^a serve as holding means to prevent displacement of the sheet. The carbon-web is then fed down to just cover the typing line. The statement-sheet B may now be introduced cornerwise between the platen and the deflector 30^a, straightened out and aligned to the typing position, the feed-rolls 17 released to bear against the sheet B, and the usual center roll 66 swung into position to direct the sheet above the printing position towards the carbon-chute. In typing the single line entry, usually employed on statement-sheet records, the types print through a ribbon 67 to the sheet B and transfer through the carbon-web to the record-sheet A. When a line entry is completed, the platen may be line-spaced by the finger-knob 13, or by the usual line-spacing mechanism, to feed both work-sheets forwardly a line-space distance above the printing line of the platen. The lever 61 is depressed to cast off the rolls 17 and shift the deflector 30^a away from the

platen, when the sheet B may be withdrawn at the front of the platen and a new sheet introduced as before. The exposed carbon remains stationary during this operation, and the types during the next succeeding operation tracking through the same line area on the carbon web.

In the modified form shown at Figure 5, the carbon-roll 68 is encased above the rear of the platen and provided with a chute or guide 69 that passes downwardly to the rear of the platen and then curves under the platen to terminate at the front side thereof adjacent to the end of a deflector 70, which in this view fulcrums upon the usual rod 71. The free end of the carbon-web emerges upwardly from the end of the chute 69 to cover the typing line. With the roll 68 hanging pendent from its supporting rod 71, and the chute having a curvature that is concentric to the platen-face, there is formed thereby an open space between the platen and the chute for the free insertion of the record-sheet A around the platen from the rear when the deflector 70 is released by means similar to those already described, and a clear space is maintained between the front end of the chute 69 and the front end of the deflector 70 for the front insertion of the sheet B. The carbon-web in this instance is fed upwardly to renew an exhausted line section, and the exhausted end of the web may be severed across the end of the chute when required.

In Figure 6 a further modification is shown where the carbon-supply roll 73 is positioned at the rear of the platen and formed with a chute 74 that passes under the platen to a position similar to that of Figure 5. Above the front of the platen a receiving spool 75 is enclosed with a casing hanging pendent from a rod 76 and formed with the chute 74 to receive the exhausted carbon-web. Instead of continually severing a narrow exhausted section from the continuous carbon-web, the carbon is drawn from the spool 73 through the chute 74 across the printing line, and thence through the chute 77 to the winding up web-feeding spool 75. The two work-sheets A and B are inserted in the same manner as described in Figure 5.

The arrangement shown in Figure 7 provides for a carbon-supply roll 78 at the front of the platen where the free end passes downwardly through a chute 79 to hang pendent therefrom over the printing line, and a second supply roll 80 at the rear of the platen is provided with a chute 81 that directs the web around and under the platen to also cover the printing line of the platen. In this manner two record-sheets, such as A, may be adjusted from the rear to pass between the platen and the chute 81, and at the point where the sheet emerges from behind the chute 81 the sheets are separated, one sheet passing to the rear of the chute 79 and the other sheet passing in front of the chute. In this manner provision is made that the carbon-sections emerging from the chute 79 will transfer a carbon-record to the sheet A next to the platen, while the carbon-section emerging from the chute 81 will transfer a carbon-record to the front sheet A, and hence the line entry typed through the ribbon for the statement-sheet B will simultantously transfer in carbon to two separate condensed record-sheets. It is obvious from the preceding description that both carbon-webs shown in this figure may be individually fed and the exhausted sections individually severed from their webs from time to time in a manner already described.

It will be noted that the invention provides for a carbon-faced web in the form of a roll suspended over the platen and having a chute or guide to direct the web toward the printing line of the platen, and that at the printing line a free end of the carbon hangs pendent from the chute across the typing position; that the pendent carbon-section is not disturbed by the line-spacing movement of the typed work-sheets or by the introduction of the work-sheets to the platen; that carbon-webs are directed through a chute which removes all frictional or abrasive contact between the web and the surface of the work-sheets to a point which is only slightly above or below the typing line; that a continuous web of carbon may be protected by chutes between a rear supply roll and a front receiving or winding up spool, except for a working type-clearing gap between the chutes and where the carbon-web is exposed for typing; and that while the carbon-web has been described as being fed forwardly to renew an exhausted section, it is obvious that the carbon may be withdrawn within the chute, at will, should the character of the typing require a ribbon-inked record on one sheet and that no carbon-transfer of certain line records be recorded upon the associated under sheet.

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. In a front-strike typewriting machine having a platen, typing elements and a ribbon for typing upon an outer work-sheet, manifolding means for an under work-sheet, including a supply-roll of carbon, a carbon-delivering chute and a carbon feed-roll all mounted above the platen and between the two work-sheets, the chute tapering from the supply-roll to a point adjacent the typing line with the carbon hanging pendent therefrom between the two work-sheets across the typing line.

2. In a front-strike typewriting machine having a platen, typing elements and a rib-

bon for typing upon an outer work-sheet, manifolding means for an under work-sheet, including a supply-roll of carbon encased within a housing suspended above the typing line and provided with a chute tapering towards the typing line where the free end of said carbon will emerge from the chute close to the typing line and hang pendent from the chute by its own weight across the typing line.

3. In a front-strike typewriting machine having a platen, a carriage, a pair of work-sheets, and manifolding means including a roll of carbon paper, a casing for the carbon roll suspended above the platen and between the work-sheets by means on the carriage, and provided with a chute tapering to a point above the typing line to direct the carbon web across the typing line, and web-feeding means mounted within the chute and operative to feed the exposed end of the web across the typing line of the platen in either direction between the work-sheets.

4. In a front strike typewriting machine having a platen, a carriage, and a roll of carbon paper, a casing for the carbon roll suspended by means on the carriage to overhang the platen, said casing including a chute to direct the carbon web towards the typing line of the platen, and web-feeding means including a roller within the chute to feed the web and force the free end of the web across the typing line of the platen.

5. In a front strike typewriting machine having a platen, a carriage, and a roll of carbon-paper, a casing for the carbon-roll rotatably suspended from means on the carriage to overhang the carriage, said casing including a cylindrical section to receive the carbon-roll, a hinged lid to enclose the assembled carbon-roll, a chute to direct the carbon-web from the roll to the platen, a feed-roller to feed the web through the chute, and a spring to normally hold the casing with the chute pressed toward the platen.

6. In a billing attachment for a typewriting machine having a carriage, a platen having feed-rolls, a deflector, a lever to cast off both feed-rolls and deflector to promote the adjustment of work-sheets around the platen, a condensed record-sheet next to the platen, paper-fingers to hold the record-sheet in its adjusted position upon the platen, a statement-sheet adjustable over the record-sheet from the front of the platen and held in adjusted position when the feed-rolls and deflector are restored, and an inking ribbon for the statement-sheet, a carbon-transfer element for the record-sheet including a supply roll provided with a casing having a chute operative to deliver the web from the roll to a point close to the typing line, from which point the end of the web hangs pendent to cover the typing position of the record-sheet under the statement-sheet.

7. In a billing atachment for a typewriting machine having a carriage, a platen having feed-rolls, a deflector, a lever to cast off both feed-rolls and deflector to promote the adjustment of work-sheets around the platen, a condensed record-sheet next to the platen, paper-fingers to hold the record-sheet in its adjusted position upon the platen, a statement-sheet adjustable over the record-sheet from the front of the platen and held in adjusted position when the feed-rolls and deflector are restored, and an inking ribbon for the statement-sheet, a carbon-transfer element for the record-sheet including a carbon-supply roll enclosed within a casing suspended above the platen and provided with a web enclosing and web directing chute to deliver the web from the roll to a point over the typing line where the end of the web emerges from the chute to hang pendent over the typing position of the record-sheet, and means carried by the chute to feed the web through the casing.

8. In a billing attachment for a typewriting machine having a carriage, a platen having feed-rolls, a deflector, a self-restoring lever to cast off both feed-rolls and deflector to promote the adjustment of work-sheets around the platen to the typing position, an eccentric on the carriage to engage and hold said lever in a semi-released position, a condensed record-sheet next to the platen, paper-fingers to hold the record-sheet in its adjusted relation to the typing position, and a statement-sheet adjustable over the record-sheet from the front of the platen and back of the released deflector and held in adjusted position when the eccentric releases the feed-rolls and deflector, a carbon-transfer element for the record-sheet including a carbon-supply roll enclosed within a casing that is supported over the platen and between the adjusted work-sheets by means secured to the carriage and provided with a web enclosing and web directing chute to deliver the web from the roll to a point above the typing line, where the end of the web emerges from the chute to hang pendent over the typing position of the record-sheet, and web feeding means carried by the chute to advance the web or withdraw the web within the chute at will.

9. In a front-strike typewriting machine having a platen, typing elements and a ribbon for typing upon an outer work-sheet, means for manifolding an under work-sheet, including a supply of transfer element above the platen, means to guide the transfer element from said supply downwardly, said guiding means to terminate above the printing line, and means between the supply and the platen engaging the carbon and movable manually to feed the carbon downwardly, the lower edge portion of the transfer element hanging pendent across the typing line between the work-sheets with the lower edge

just below the printing line for manifolding a line upon the work-sheets.

10. In a front-strike typewriting machine having a platen, typing elements and a ribbon for typing upon an outer work-sheet, manifolding means for an under work-sheet, including a supply-roll of carbon, manually-operated feed-rolls therefor and a carbon-delivering chute, all mounted above the platen, said chute terminating above the printing line and said carbon hanging pendent from the end of the chute with its edge just below the typing line and between the two work-sheets.

11. In a front-strike typewriting machine having a carriage, a platen and a spool to supply carbon-paper to the platen to manifold work-sheets fed by said platen, a casing suspended over the platen for enclosing the spool of carbon, said casing including a chute for directing the carbon from the spool to the platen, and pivotal end supports for the casing whereby the chute may be swung towards or from the platen at will, said chute normally in position to terminate above the typing line, said carbon hanging pendent from the chute with its edge just below the typing line to manifold a line upon the work-sheets.

12. In a front-strike typewriting machine having a carriage, a platen and a spool to supply carbon-paper to the platen, a casing suspended over the platen for enclosing the spool of carbon, said casing including a chute for directing the carbon from the spool to the platen, a tubular section at each end of the casing aligned to the longitudinal axis of the spool, and a sleeve at each end of the carriage to engage the tubular sections and support the casing.

13. In a front-strike typewriting machine having a carriage, a platen and a spool to supply carbon-paper to the platen to manifold work-sheets fed by said platen, a casing suspended over the platen for enclosing the spool of carbon, said casing including a chute for directing the carbon from the spool to the platen, and a feed-roller rotatable within the casing to feed the carbon through the chute, said chute terminating above the printing line, said carbon hanging pendent from said chute with its edge just below the typing line and between the work-sheets for manifolding a line thereon.

14. In a front-strike typewriting machine having a carriage, a platen and a spool to supply carbon-paper to the platen to manifold work-sheets fed by said platen, a casing suspended over the platen for enclosing the spool of carbon, said casing including a chute for directing the carbon from the spool to the platen, said chute terminating with a long narrow carbon-delivering slot above the typing line of the platen, the carbon descending from said chute to occupy a position with its edge just below the printing line for manifolding a line upon the work-sheets, said chute being separated from the platen to make passage for the out-feeding work-sheet between the platen and the chute.

15. In a front-strike typewriting machine having a carriage, a platen and a spool to supply carbon-paper to the platen, a casing suspended over the platen for enclosing the spool of carbon, said casing including a chute for directing the carbon from the spool to the platen, said chute tapering from the spool to terminate with a long narrow carbon-delivering slot above the typing line of the platen and provided with a carbon-severing edge, and a carbon-feeding roller enclosed within the casing.

16. In a front-strike typewriting machine having a carriage, a platen and a carbon-supplying spool, a casing pivotally supported by the carriage above the platen, said casing having a spool-enclosing chamber, a carbon-directing and carbon-enclosing chute and manually-operated, a carbon-feeding roller mounted within the chute, said chute swingable to or from the platen above the typing line.

17. In a front-strike typewriting machine having a carriage, a platen and a carbon-supplying spool, a casing detachably supported by the carriage and having a cylindrical section for enclosing the spool of carbon, said section having closed-up ends and a longitudinal spool-receiving opening closed by a hinged lid, said spool having heads with projecting pivot-pins that take bearings within the ends of the cylindrical section, said spool-heads and the cylinder-ends having convex co-operative faces that promote an initial oblique assembly of the pivot of one spool-head into one cylinder-end before dropping the opposite end of the spool into the cylinder.

18. In a front-strike typewriting machine, the combination with a platen and a supply of carbon above the platen to manifold work-sheets fed by said platen, of a chute for the carbon, extending from said supply down to the platen and terminating above the printing line, the carbon descending from said chute to occupy a position with its edge just below the printing line for manifolding a line upon the work-sheets, said chute being separated from the platen to make a passage for the out-feeding work-sheet between the platen and the chute.

19. In a front-strike typewriting machine, the combination with a platen and a supply of carbon above the platen to manifold work-sheets fed by said platen, of a chute for the carbon extending from said supply down to the platen and terminating above the printing line, the carbon descending from said chute to occupy a position with its edge just below the printing line for manifolding a

line upon the work-sheets, said chute being separated from the platen to make a passage for the out-feeding work-sheet between the platen and the chute, and means between the supply and the platen engaging the carbon and movable manually to feed the carbon down through the chute.

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