Aug. 7, 1923. 1,464,122

J. WALDHEIM

TYPEWRITING MACHINE

Filed May 24, 1922

Fig. 1.

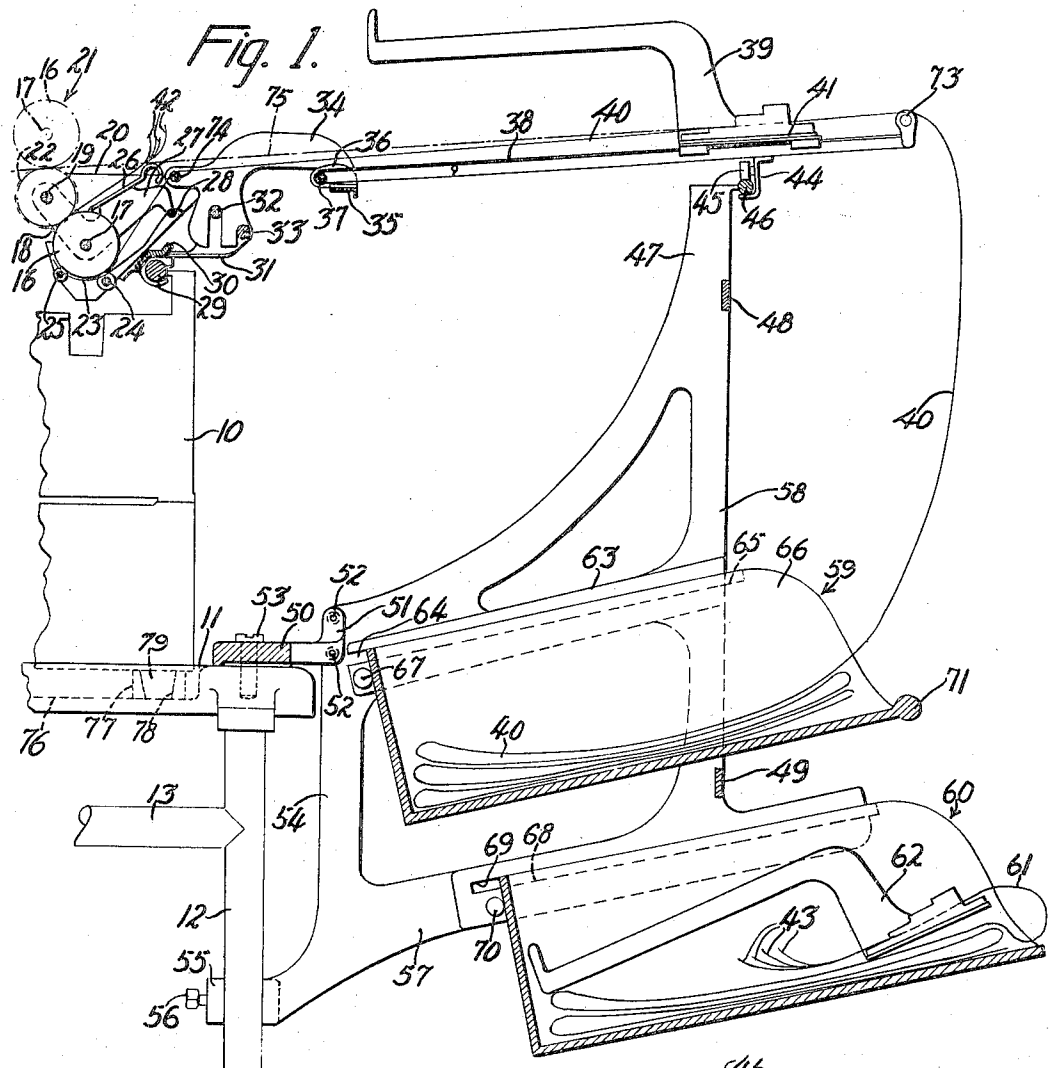
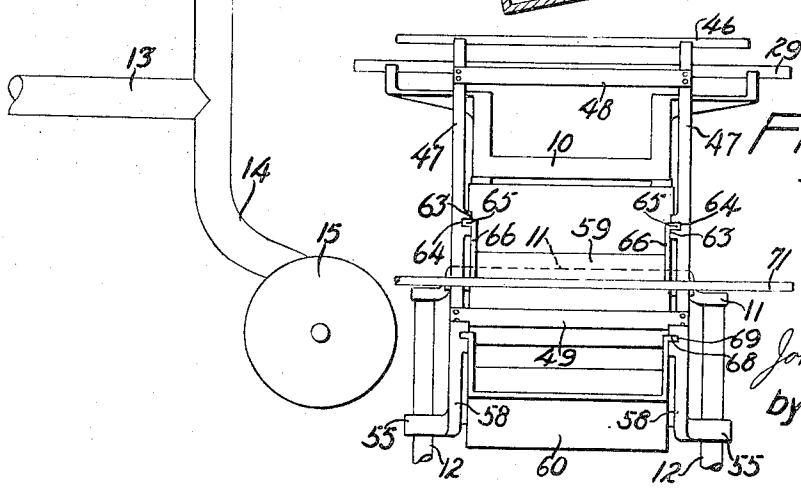


Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN WALDHEIM, OF ELIZABETH, NEW JERSEY, ASSIGNOR TO UNDERWOOD TYPEWRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF DELAWARE.

TYPEWRITING MACHINE.

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To all whom it may concern:

Be it known that I, JOHN WALDHEIM, a citizen of the United States, residing in Elizabeth, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Typewriting Machines, of which the following is a specification.

The present invention relates to an improved web or work-sheet cabinet to be used in connection with continuous billing typewriting machines, one form of which is shown in the patent to Wernery and Smith, No. 1,132,055, granted March 16, 1915.

In a machine of this type, work-sheets or webs are used in several layers or plies, each provided with printed forms constituting one piece of work, which, when completed, may be torn from the continuous web. Carbon-sheets interleaved between the webs or plies are mounted on a carbon-carriage, so as to advance with the web toward the platen while typewriting, and so as to be drawn back by the carbon-carriage into the succeeding form-section of the web after the leading form-section has been typed, and prior to detachment from the web of such leading form-section.

To save time and trouble in substituting a work-web of one style for that of another, the carbon-sheets, as shown in United States Letters Patent to Fortin, No. 1,238,319, granted August 21, 1917, are not directly attached to the carbon-carriage in the machine, but are attached to a plate or holder which is detachably secured to the carbon-carriage so that a carbon-sheet-holding plate for any set of webs, with the carbon-sheets interleaved therewith, may be removed as a unit from the carbon-carriage, and another carbon-sheet-holding plate, with carbon-sheets already interleaved with the plies of the desired set of webs, substituted therefor. Containers or cabinets for the several webs and their respective carbon-sheet-holding plates and interleaved carbon-sheets have heretofore been devised to provide for a feed of the web from its container to the carbon-carriage of the typewriting machine, when the sheet-holder shall have been placed on the latter.

The present invention has particular reference to an equipment which comprises the above-mentioned continuous billing apparatus as applied to a bookkeeping typewriting machine; and which involves a support, other than the machine frame itself, for the carbon-carrier-table, in order to allow clearance for, and access to, certain attachments commonly present on the rear of bookkeeping machines. Such other support for the carbon-carrier-table in turn involves means for determining a fixed relation of the same to the machine, so that the carbon-carrier-table may properly connect to the platen-carriage of the machine, and may move with the latter in letter-feed and return directions without binding. Because of the size of bookkeeping machines, a special stand therefor, easily rolled from place to place, is commonly employed; and, by providing the stand with centering means for the machine and for the auxiliary carbon-carrier-table-support, the correct relations of these may be assured. It will be understood, however, that the invention is not confined to use in connection with a bookkeeping machine or with a machine stand of any special type.

An object of the invention is the provision of a combined holder or support for the carbon-carrier-table, and holder or cabinet for the work-sheet web-containers; which holder is itself supported otherwise than by the machine frame, although fixable in relation to the latter, and movable as a unit therewith from place to place.

A feature of the invention is a combined holder and cabinet of the character mentioned, not part of a typewriting machine stand, but which is attachable to and detachable from the stand.

A further feature of the invention is a holder, for the purposes described, having a support for a carbon-carrier-table, and a cabinet-frame for web-containers in fixed relation to such table-support; so that, for correct feed of the webs from the containers to the carbon-carrier-table, no placement or adjustment of the cabinet is required preliminary to use of the same.

Still another feature of the invention, in its preferred form, is a construction of the combined holder, which, while providing ample clearance for any attachments at the rear of a bookkeeping machine, has its web-cabinet accessibly and compactly set in un-

der the carbon-carrier-table in such manner that the whole occupies but little space.

Other features and advantages will hereinafter appear.

In the accompanying drawings,

Figure 1 is a view, in side elevation, partly cross-sectional, showing the rear of an Underwood bookkeeping machine, with continuous billing attachment and stand therefor, and with the combined work-box and carbon-carrier table-support of the present invention connected to the stand-support.

Figure 2 is a view, in rear elevation and in reduced scale, of the apparatus shown in Figure 1.

The frame 10 of a bookkeeping machine is shown as supported on a platform 11 of a stand having uprights 12 and cross-braces 13, and having the feet 14 thereof provided with rollers 15, to permit the stand with the machine and associated parts to be wheeled from place to place.

The platen 16 is revolubly mounted on an axle 17, carried by arms 18, forming part of a swinging frame, pivoted at 19 to the carriage-frame 20. The normal position of the platen is its full-line, Figure 1 position, but it may be swung to the dotted position indicated at 21, to permit the fan-fold webs to be advanced in the usual manner, for detachment of the leading written section and for placement of a succeeding section thereof. A gear (not shown) on the platen-axle meshes with a gear 22, in turn in mesh with a gear (not shown), but which is in alignment with the axle 17 in the normal position of the latter and connects to a line-space mechanism (not shown), so that line-space movement of the platen may be effected in both the full and dotted line positions of the latter.

The carriage-frame 20 carries the usual paper guide or apron 23 and rear and front pressure-rolls 24 and 25, respectively. The swinging frame 20 carries a paper-table 26 and is extended as at 27 to the rear of the platen, and, in its normal position, rests upon a cross-piece 28 on the carriage-frame. The carriage runs on a rod 29, carried by the main frame 10.

The usual cross-piece 30 on the carriage supports brackets 31, which are connected by rods 32 and 33. Supported on the rods 32 and 33, and also screwed or pinned to the brackets 31, are brackets 34, for supporting the forward end of the carbon-carrier-table 38. The brackets 34 are connected by a cross-piece 35, having other brackets or ears 36 thereon; and the ears 36 carry the bar 37, which defines the front of the table 38.

On the table 38 is a carbon holder and carrier 39, adapted to move with the carbons (not shown), and with the web 40, toward the platen as the carbons and webs have their line-feed movements around the platen, and which is adapted to be moved backward with the carbons, independently of the web, to draw the carbons into a succeeding web-section after the leading web-section is passed around the platen. It is unnecessary here to describe in detail the entire construction of the table and associated parts, reference being made to the aforesaid United States Letters Patent to Fortin, No. 1,237,319, for such description thereof as may be desired. Suffice here to say that the carbon-holder of the Fortin patent comprises a plate 41, having secured thereto a number of clips (not shown), each of which clips engages and holds the rear end of a carbon-sheet, the several clips being stepped up one from another more conveniently to enter and slide between the superposed web-plies.

In the Fortin patent, a single fan-fold web is shown; the superposed fan-folded sheets or strips forming the web each being composed of detachable units bearing the same individual form or blank. Instead of a single web comprised of fan-folded superposed strips or sheets, several single strips or webs, as indicated at 42 above the platen and at 43 in the lower web-box, may be employed; each of the superposed webs being composed of detachable units.

The fan-fold table 38, near the rear thereof, has a pair of depending brackets 44, each of which carries a roller 45, which rides on a rail 46, supported on brackets 47. The brackets 47 thus support the rear of the fan-fold table, and the latter, by reason of the rolls 45 riding on the rail 46, is free to have letter-feed and return movements with the typewriting machine-carriage, to which it is connected at its forward end. The right and left hand brackets 47 are connected at the rear by cross-ties 48, 49, and at the front are connected by a bar 50, carried by arms 51, secured by screws 52 to the brackets. The bar 50 serves as a front support for the brackets 47 on the platform of the stand 11, and is secured to the platform of the stand 11 by screws 53. Each of the brackets 47 has also a front vertical reach 54, the lower end of which is turned outward laterally, as shown at 55, in Figure 2, and is curled in the shape of a U around the corresponding rear upright 12 of the machine-stand 11. By means of set-screws 56, the U-shaped offsets 55 and brackets 47 are fixed to the uprights 12 of the machine-stand.

In assembling the brackets on the stand 11, the bar 50 is first positioned and screwed into place. The brackets 47 are then separately brought to position against the outside faces of the arms 51 of the bar 50, with their U-shaped extensions 55 embracing the legs 12 of the stand. The screws 52 are then applied to secure the brackets to the bar 50. The rear cross-ties 48 and 49 are then set and secured in place and the set-screws 56 tight-

ened to fix the lower front portions of the brackets to the legs of the stand. The setting of the bar 50 by the screws 53 determines the proper setting of the rail 46, so that the same may be parallel to the path of movement of the machine-carriage.

The brackets 47 have rearwardly-extending reaches 57 which connect with the rear vertical reaches 58 of the brackets to form a work-box support or cabinet for the webs. In the drawing, two work-boxes 59 and 60 are shown as supported by the brackets 47. The web 40 is shown as being fed from the upper work-box 59; and, as above noted, the carbon-holder 39 for that web is shown as positioned on the fan-fold table. Another web 61, with a carbon-holder 62 therefor, is shown as held, out of use, in the box 60. It is old in the art to provide a plurality of individual web-holders and webs, so that a web comprised of individual forms of one character may be readily substituted in the machine, at will, for a web comprised of individual forms of another character. It is also old to provide separate carbon-holders for the several webs of different character, so that, in substituting one web for another, the trouble of interleaving the carbons with the plies of the web and of attaching the carbons to their holder may be avoided. To substitute the web 61 for the web 40 in the machine, it is simply necessary to disconnect the carbon-holder 39 and place it in the box 59, and thereupon position the carbon-holder 62 on the table 38. Furthermore, boxes containing other webs may be substituted for the boxes 59 and 60; and the boxes 59 and 60 are readily removable and placeable in the support or cabinet formed by the brackets 47.

A cross-rib 63, extending from the forward reach 54 to the rear reach 58 of each of the brackets 47, is grooved, as indicated at 64, in Figure 2, to form a slideway for a flange 65 on the corresponding side wall 66 of the box 59. The box 59 is thus supported on the brackets by means of the flanges 65 and slideways 64; and the box may be slid into place or withdrawn at will. A pin 67 on the bracket 47, by engagement with the rear of the box, serves as a stop to determine the proper position of the latter. The slideways 64 are shown as inclined downward, from rear to front; thus causing the boxes to remain in place against accidental outward movement. The box 60 is supported in the same manner as the box 59; having flanges 68 thereon in engagement with slideways 69 on the lower reaches 57 of the brackets 47. A stop-pin 70 on one of the bracket-arms 57 serves, in the same manner as the stop 67, to determine the proper setting of the box. It will be noted that the box 60 is set back farther than the box 59, to prevent fouling of the web 61 on the upper box. As further assurance against fouling of the web 61, the outer rear edge of the upper box 59 is provided with a rounded bead 71, over which the web 61 may smoothly pass.

In Figure 1, the web 40 is shown as being fed out of the box 59, over a rod or roller 73, supported on the rear of the table 38; thence forward over the table 38 and over a rod 74, carried by the brackets 34 at the rear of the platen. From the rod 74, the web is led downward, around the platen, and thence up across the front table 26. When the platen 16 is swung to dotted-line position for placement of a new section of the web, the web assumes the position 75, indicated in dotted lines.

To determine the correct position of the machine on its stand 11, in order that the path of movement of the carriage thereof may be parallel to the rail 46, on which the carbon-table travels, and in order that the table 38 may properly connect to the brackets 34, the top of the stand 11 is shown as recessed at 76 and as having bosses 77 therein, which bosses have tapered holes 78 therein, to receive correspondingly tapered pegs or positioning feet 79 on the base of the machine-frame.

It will be noted that, in supporting the carbon-carrier-table on the brackets 47, instead of on the machine-frame, and in so shaping the brackets 47 as to provide considerable clearance between the same and the machine-frame, ample space is allowed for the attachments (not shown), but usually present on the rear of the bookkeeping machine, and ample provision is made for easy access to such attachments.

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 with a typewriting machine, of a holder for a web-work-piece, means for guiding the web from the holder to the platen, a carbon-sheet-holder, a table on which the carbon-holder may move with the carbon-sheets along the web, brackets for supporting the carbon-holder-table, and means on the brackets for supporting the web-holder.

2. The combination with a typewriting machine, of a holder for a web-work-piece, means for guiding the web from the holder to the platen, a carbon-sheet-holder, a table on which the carbon-holder may move with the carbon-sheets along the web, brackets for supporting the carbon-holder-table, means on the brackets for supporting the web-holder, a stand for the typewriting machine, and means for supporting the aforesaid brackets on the stand.

3. The combination with a stand for a typewriting machine, of brackets carried by

the stand, a web-holder carried by the brackets, and a carbon-holder-table supported on the brackets.

4. The combination with a stand for a typewriting machine, of brackets carried by the stand, a web-holder carried by the brackets, a carbon-holder-table, means for connecting the carbon-holder-table to the carriage of a typewriting machine on the stand, and a rail on which the table for the carbon-holder may move with the typewriter-carriage on the brackets which support the web-holder.

5. The combination with a stand for a typewriting machine, of brackets carried by the stand, a web-holder carried by the brackets, and a carbon-holder-table supported on the brackets, the web-holder being a receptacle having lateral flanges slidable in ears formed on the brackets.

6. The combination with a stand for a typewriting machine, of brackets carried by the stand, a web-holder carried by the brackets, a carbon-holder-table supported on the brackets, the web-holder being a receptacle having lateral flanges slidable in ears formed on the brackets, and a stop on the brackets for determining the correct position of the web-holder with respect to the carbon-holder-table on the brackets.

7. The combination with a stand for a typewriting machine, of brackets carried by the stand, a web-holder carried by the brackets, and a carbon-holder-table supported on the brackets, above the web-holder, for reciprocation on the brackets with the carriage of the machine on the stand.

8. The combination with a stand for a typewriting machine, of brackets secured to the stand, a carbon-holder-table supported on the brackets, and a web-holder removably supported on the brackets below the carbon-holder-table.

9. The combination with a stand for a typewriting machine, of brackets secured to the stand, a carbon-holder-table supported on the brackets, and a web-holder removably supported on the brackets below the carbon-holder-table, the brackets having ribs which provide slides for the web-holder.

10. The combination with a stand for a typewriting machine, of brackets secured to the stand, a carbon-holder-table supported on the brackets, and a plurality of web-holders removably supported on the brackets below the carbon-holder-table, the brackets having arms or ribs inclined rearward and upward from the machine-stand, one above the other, to serve as ways on which the several web-holders are respectively supported and slid into and out of position.

11. The combination with a stand for a typewriting machine, of brackets secured to the rear thereof, said brackets having rearward extending arms or ribs formed thereon, a web-holder carried by said arms or ribs, arms forming part of said brackets above the web-holder, and a carbon-carrier-table supported by the bracket-arms above the web-holder.

12. The combination with a stand for a typewriting machine, of brackets secured to the rear thereof, said brackets having rearward extending arms or ribs formed thereon, a web-holder carried by said arms or ribs, arms forming part of said brackets above the web-holder, a rail carried by said bracket-arms above the web-holder, and a carbon-holder-table supported upon the rail for reciprocation with the carriage of the typewriting machine upon the stand.

13. The combination with a stand for a typewriting machine, of brackets secured to the rear thereof, said brackets having rearward extending arms or ribs formed thereon, a web-holder carried by said arms or ribs, arms forming part of said brackets above the web-holder, a rail carried by said bracket-arms above the web-holder, a carbon-holder-table supported upon the rail for reciprocation with the carriage of the typewriting machine upon the stand, and means for guiding the web from the holder, to the rear of, and thence forward along, the carbon-holder-table.

14. The combination with a typewriter-stand having legs at the rear thereof, of brackets engaging the legs and supported in part on a platform of the stand, a web-holder supported by the brackets, and a carbon-holder-table supported by the brackets, above the web-holder.

15. The combination with a typewriter-stand, of brackets supported thereon at the rear thereof, a web-holder supported on the brackets, a carbon-holder-table supported on the brackets above the web-holder, and means at the forward end of the carbon-holder-table for connecting the same with the carriage of a typewriting machine on the stand.

16. The combination with a typewriter-stand, of brackets supported thereon at the rear thereof, a web-holder supported on the brackets, a carbon-holder-table supported on the brackets above the web-holder, and means at the forward end of the carbon-holder-table for connecting the same with the carriage of a typewriting machine on the stand, the carbon-holder-table being adapted to reciprocate with the carriage of the typewriting machine, above the web-holder.

17. The combination with a stand for a typewriting machine, of a typewriting machine on the stand, means for centering the machine on the stand, brackets, means for centering the brackets on the stand with respect to the machine-centering means, a carbon-carrier-table supported for recipro-

cation on the brackets, means connecting the carbon-carrier-table to the carriage of the typewriting machine, and a web-holder carried by the brackets under the carbon-carrier-table.

18. The combination with a stand for a typewriting machine, of a bookkeeping typewriting machine on the stand, brackets secured to the stand below the platform thereof, and extending rearwardly and upwardly to provide clearance for attachments on the rear of the bookkeeping machine, a carbon-carrier-table supported for reciprocation on the rear upper ends of the brackets and connected to the carriage of the typewriting machine, and a web-holder carried by the brackets under the aforesaid rearward extension thereof.

19. The combination with a stand for a typewriting machine comprising a platen and a carriage, of brackets mounted on said stand and independent of said machine, a table over which continuous work-sheets may extend to the platen, said table being supported by said brackets, and a work-sheet container supported on said brackets.

20. The combination with a stand for a typewriting machine comprising a platen and a carriage, of extensions projecting rearwardly and upwardly from said stand, a table over which continuous work-sheets may extend to the platen, said table being connected to said carriage and supported by said extensions, and a work-sheet container connected to said extensions.

21. The combination with a stand for a typewriting machine comprising a platen and a carriage, of a table over which continuous work-sheets may extend to the platen, brackets to support said table, said brackets being mounted on said stand and independent of said machine, and a plurality of detachable work-sheet containers supported on said brackets.

22. The combination with a portable stand for a typewriting machine, said machine comprising a carriage and a rearward extension on said carriage, of means to support the rear end of said rearward extension, and a work-sheet container located in back of said stand and from which a continuous work-sheet may extend to the rearward extension, the container being connected with said stand so that said container may be moved about with said stand.

JOHN WALDHEIM.

Witnesses:
EDITH B. LIBBEY,
CATHERINE R. NEWELL.