Dec. 23, 1947. L. A. V. ROZAS 2,433,159

COPYHOLDER FOR HOLDING BOOKS OR SHEETS

Filed Nov. 9, 1944 4 Sheets-Sheet 1

Fig. 1.

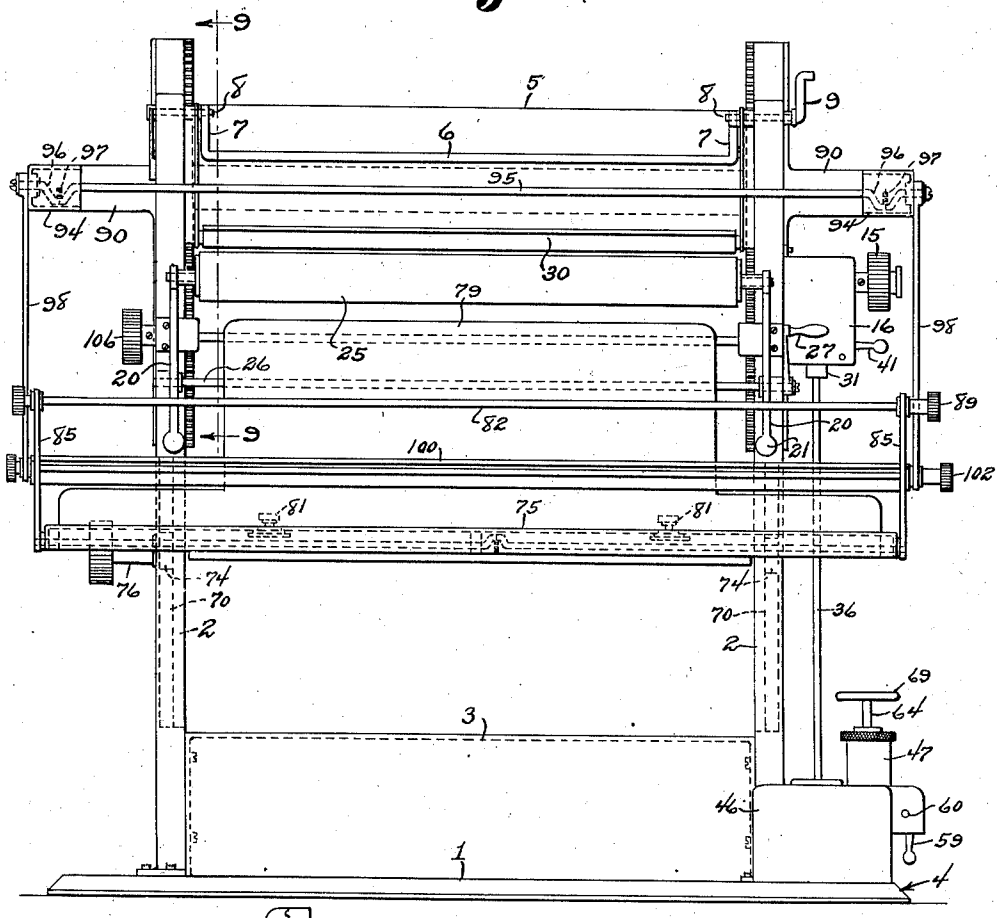
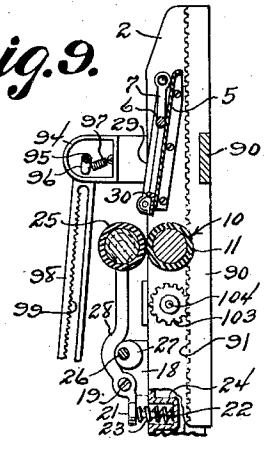


Fig. 9.



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COPYHOLDER FOR HOLDING BOOKS OR SHEETS

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Fig. 7.

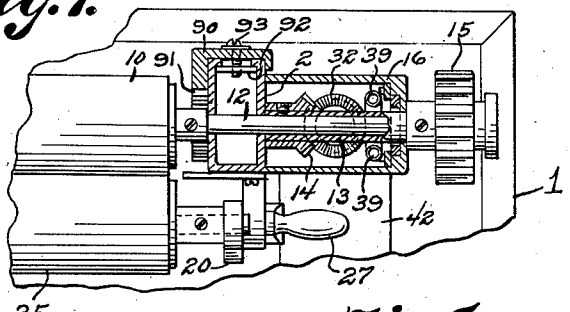


Fig. 5.

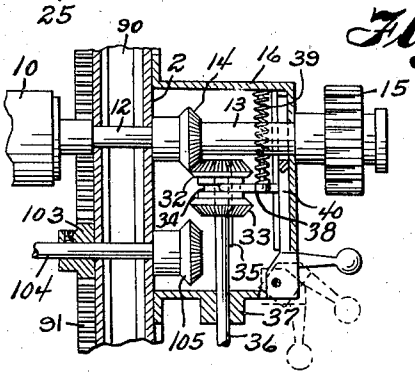
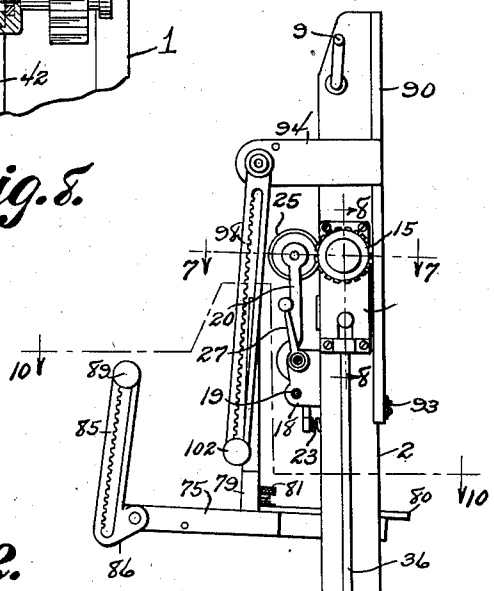
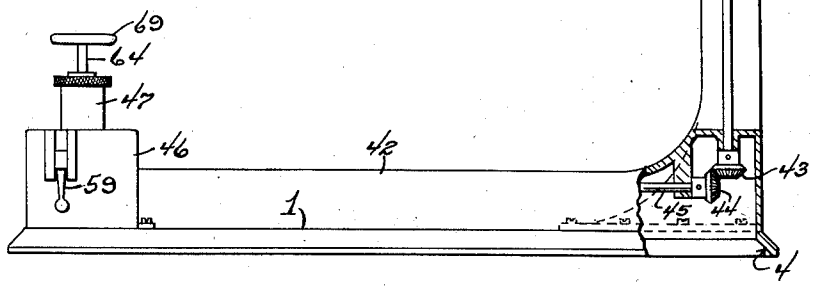


Fig. 2.





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COPYHOLDER FOR HOLDING BOOKS OR SHEETS

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Fig. 3.

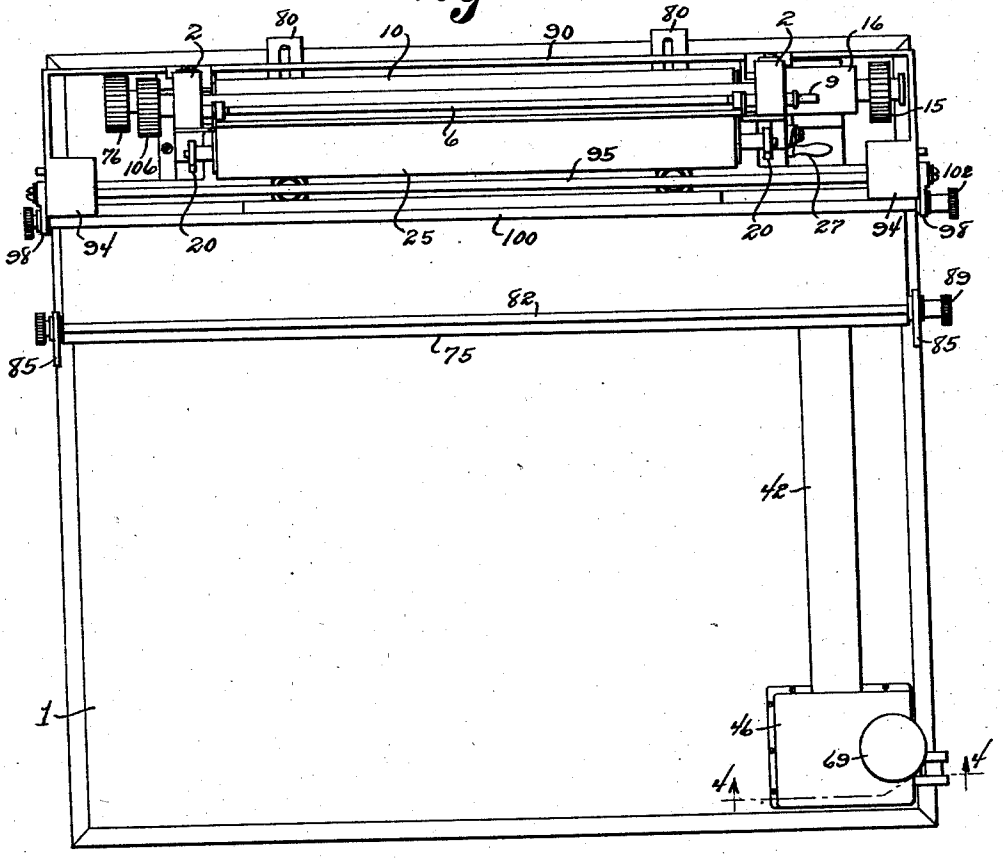


Fig. 4.

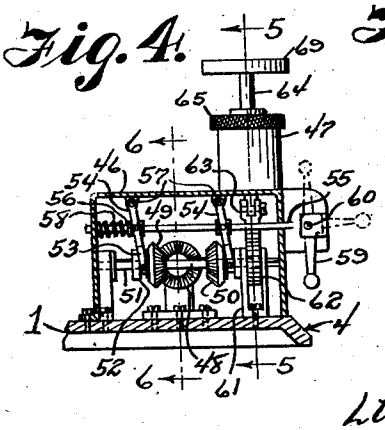


Fig. 5.

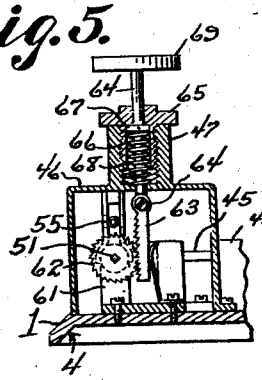
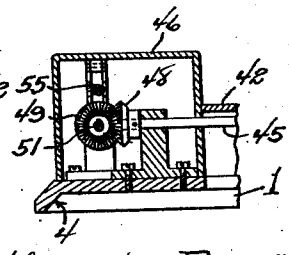


Fig. 6.



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COPYHOLDER FOR HOLDING BOOKS OR SHEETS

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Fig. 10.

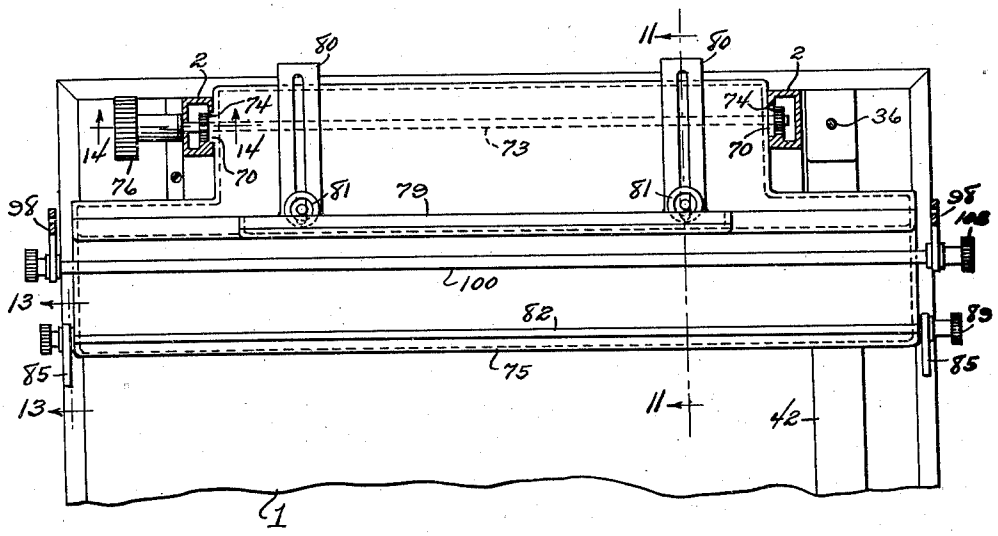


Fig. 11.

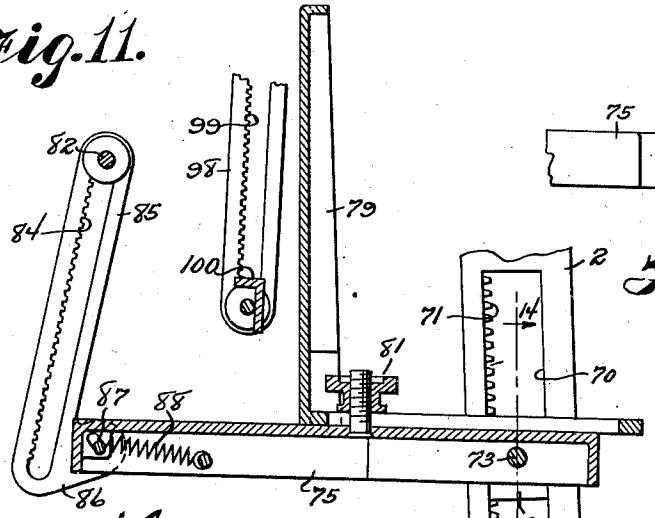


Fig. 12.

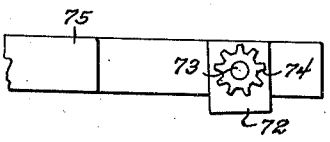


Fig. 13.

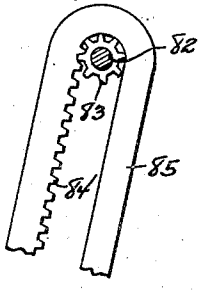
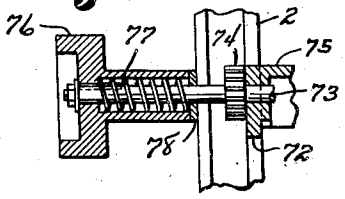


Fig. 14.



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UNITED STATES PATENT OFFICE

2,433,159

COPYHOLDER FOR HOLDING BOOKS OR SHEETS

Luis Alberto Villafuerte Rozas, Cuzco, Peru

Application November 9, 1944, Serial No. 562,631

9 Claims. (Cl. 120—29)

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My present invention, in its broad aspect, has to do with copy holders for typewriters and the like, and more particularly, it is my purpose to provide a device of this general character which has adjustable means for supporting a book, bound manuscript, or other comparatively bulky subject matter, in proper position to be copied, with a line guide having means for initially adjusting the same, and constantly adjusting the line guide thereafter during the operation of copying, and also to provide adjustable means for supporting a sheet, or loose sheet copy material and the like, in proper position for copying, and to provide in connection therewith means for feeding the sheet to a line guide having means for initially adjusting the position of the sheet, and constantly adjusting the same to the guide thereafter during the process of copying. Furthermore, my copy holder is constructed and arranged to support thereon a typewriter or the like, and there is provided a handily located operating key to an operating mechanism for continuously adjusting both the book guide and the sheet feed to its line guide, with means for adjusting the same to different line spaces; which key is disposed adjacent to the typewriter keyboard.

Another important object of my invention is to provide means whereby the book guide may be adjusted for different book sizes, and wherein means are provided to hold the book open with the pages extended and relatively flat and arranged at a proper angle for copying. In conjunction with the page holder, I provide unique and improved means for supporting the page at the back as it is presented for copying, and means for retaining it in a flat position.

In connection with both the book holder and the sheet holder, and the respective line guiding means therefor, I provide means for manually effecting initial adjustments, and in connection with the means for effecting continuous line-by-line adjustment of the book line guide and making continuous line feeding adjustments of the sheet to its line guide during copying, I have provided novel and improved clutch means formed to have three positions; one position being to actuate the sheet with reference to its line guide; another to actuate the book line guide; and a neutral position when either the sheet may be adjusted or the book line guide may be adjusted manually, or initially positioned. Furthermore, in connection with the means (including the operating key or button) adjacent the typewriter keyboard for actuating the sheet with reference

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to its line guide and book line guide, I have provided reversing mechanism so that the direction of line feed may be reversed if desired, and the clutch device embodied therein for accomplishing these ends has three positions; one for normal line feeding operations; one for reverse feeding, and a neutral position, all this in addition to adjusting the operation of the line guiding means to lines having different spacing.

Other objects and advantages of my invention may be briefly noted as follows: (1) to provide a stand or support wherein the copy holder is arranged back of a typewriter on the stand or support, in the most convenient position to obtain a clear and unobstructed view of a sheet or book to be copied, (2) to provide the book or sheet as mounted for copying without discomfort to the operator and wherein guiding means for the lines may be actuated without inconvenience or delay; (3) to provide means for insuring smooth, effective and positive actuation of the several parts and at the same time reduce the number of operating parts to a minimum, and (4) to provide a copy holder which may be used with all conventional forms of typewriters and the like, and which will not be in the way of, nor encumber, a typewriter stand or table, and which will properly support a typewriter thereon.

With these and other objects and advantages in view, my invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawings, which disclose the preferred embodiment of the invention, and pointed out in the claims hereunto appended.

In the accompanying drawings:

Figure 1 is a front elevation of the stand constructed in accordance with the invention.

Figure 2 is a side elevation partly broken away.

Figure 3 is a top plan view.

Figure 4 is a fragmentary sectional view taken on the line 4—4 of Figure 3, looking in the direction of the arrows.

Figure 5 is a sectional view taken on the line 5—5 of Figure 4 looking in the direction of the arrows.

Figure 6 is a sectional view taken on the line 6—6 of Figure 4 looking in the direction of the arrows.

Figure 7 is a sectional view taken on the line 7—7 of Figure 2 looking in the direction of the arrows.

Figure 8 is a sectional view on the line 8—8 of Figure 2 looking in the direction of the arrows.

Figure 9 is a sectional view taken on the line 9—9 of Figure 1 looking in the direction of the arrows.

Figure 10 is a sectional view taken on the line 10—10 of Figure 2 looking in the direction of the arrows.

Figure 11 is a sectional view taken on the line 11—11 of Figure 10 looking in the direction of the arrows.

Figure 12 is an elevation of a portion of the book support platform.

Figure 13 is a sectional view taken on the line 13—13 of Figure 10 looking in the direction of the arrows.

Figure 14 is a sectional view taken on the line 14—14 of Figure 10 looking in the direction of the arrows.

In the drawings wherein like characters of reference are used to designate like or similar parts throughout the several views:

The numeral 1 designates a stand, support or platform which is of a size and shape to support a conventional typewriter (not shown) on an ordinary typewriter table or desk (not shown). Adjacent to but spaced inwardly from the rear corners of the support 1 are vertical posts 2 which are substantially U-shaped in cross section, with their open faces directed inwardly, and connecting the posts 2 is a back plate or web 3. The base of the support 1 is flanged downwardly and outwardly as at 4 to give a proper footing on a table, desk or the like (not shown). Attached to the posts 2 near the top thereof, and sloping forwardly and downwardly, is a plate or sheet guide or rest 5, and pivotally mounted on and between the posts is transverse line guide bar 6 having upwardly bent ends 7 respectively engaged and mounted on the short shafts 8 and having a lever 9 to raise and lower the same.

Sheet support and line guide

Journaled in the posts 2 is a roller or platen 10, which may be rubber or composition covered as at 11. The platen 10 has a shaft 12 on which is mounted a fixed sleeve 13 carrying a beveled pinion 14 bearing against the outer face of the post 2 (see Figure 7); and a manual operating knob 15. Between the knob 15 and the post 2 is a housing 16, carrying a bearing 17 for the shaft and sleeve. Pivoted on brackets 18 on posts 2 as at 19 are vertically extending arms 20 having enlarged finger engaging tabs 21 carrying pins 22 about which are compression springs 23 in depressions 24 to normally hold arms 20 in the position shown in Figures 2, 3 and 9. Mounted on the upper free ends of arms 20 is a roller or platen 25 similar to platen or roller 10 and normally bearing against roller 10 under the influence of springs 23. Also mounted in brackets 18 above the pivot points 19 of arms 20 is a shaft 26 having cam disks 27 bearing against semicircular parts 28 formed in arms 20. To the shaft 26 is fixed a hand operating lever 27, so that to swing-out or separate platen 25 from platen 10, either lever 27 may be operated or the finger tabs 21 pressed. Mounted on shafts 8 are depending arms 29 carrying a rubber small diameter roller 30 serving as a guide roller and engaging the sheet guide or rest 5—see Figures 1 and 9. A sheet of paper is fed upwardly between rollers 10 and 25 and between roller 30 and guide plate or rest 5 beneath line guide 6. Roller 10 is the active roller and is turned by knob 15 to feed the sheet in the manner described. By these means a sheet is initially positioned for copying; the line guide 6 disposed beneath the first line to be copied.

To feed the sheet upward line by line successively, I provide in housing 16 a twin beveled gear clutch element, one gear 32 of which is positioned to mesh with beveled gear 14 of roller 10 on shaft 12. Gear 32 together with companion beveled gear 33 on grooved sleeve 34 are keyed as at 35 to a vertical shaft 36 journaled as at 37 in the housing and extending downwardly alongside of post 2. A clutch arm 38 engages grooved sleeve 34 and is held in a normal position with gear 32 engaging gear 14 by springs 39. The clutch arm is mounted on a slidable support 40 engaged by operating lever 41 to be moved into and out of engagement with gear 14.

Referring to Figure 2, it will be noted that the lower end of vertical shaft 36 is journaled in an elongated housing element 42 and carries a beveled gear 43, meshing with a beveled gear 44 on a horizontal shaft 45 in housing element 42 extending to the front of platform or support 1. Communicating with housing element 42 at the front of platform or support 1 is a second housing 46 having an upward internally threaded tubular extension 47. Shaft 45 enters housing 46 and carries a beveled gear 48. Adapted to mesh with gear 48 are companion but reversed gears 49 and 50 on stub shaft 51 in the housing 46. Each gear 49 and 50 has a grooved sleeve 52, and are engaged by the forked ends 53 of a lever 54 pivoted on shaft 55 intermediate their ends as at 56 and to fixed pivots 57 on the housing at their upper ends. The shaft 55 is engaged by a spring 58 to be normally urged in a direction to engage gear 49 with gear 48 as shown in Figure 4. A hand-operating lever 59 is engaged with the end of shaft 55 and is pivoted as at 60 to housing 46. A bifurcated support 61 engages the shaft 55 and on the shaft between the bifurcations of support 61 is a ratchet wheel 62 engaged by a vertical rack 63 pivoted to the lower end of a rod 64 in cylindrical extension 47 and journaled in the cap 65. Cap 65 has a threaded sleeve 66 engaging the threads of extension 47. A collar 67 is pinned to rod 64 and a spring 68 engages collar 67 to normally hold the collar against the cap. The rod 64 extends through cap 65 and has a key or finger button 69 on the end to be engaged by the finger to press the rod down against the pressure of spring 68 to move rack 63 to rotate the ratchet wheel 62 to rotate shaft 55 which in turn rotates gears 49 and 50—see Figures 4, 5 and 6.

By adjusting the cap 65 the length of the stroke of rack 63 can be regulated and accordingly the extent of rotation of shaft 55 upon one stroke downward of rod 64.

In operation, assuming a sheet of material to be copied is in the initial position previously described and gears 14 and 32 are in mesh as in Figure 8, and gears 49 and 48 are in mesh as in Figure 4, pressure on key or button 69 will rotate shafts 45 and 36 through gears 43 and 44 to the extent of the stroke of rack 63. This will rotate roller 10 to move the sheet upward one line. If the lines of the sheet are spaced a greater or lesser degree than the normal setting, the cap 65 is adjusted to vary the stroke of the rack to conform to the spacing of the lines. By moving lever 59 gear 49 can be disengaged from gear 45 and gear 50 engaged with gear 45 which will reverse the feeding or rotation of roller 10 and reverse the movement of the copy sheet. By setting the lever 59 and lever 41 in the neutral positions manual adjustments may be made, and the

copy sheet set in its initial position. Accordingly, I have provided means for (1) initially setting a copy sheet with respect to the line guide **6**; (2) means adjacent the typewriter keyboard for moving the sheet line by line; (3) means for reversing the movement of the sheet, and (4) means for adjusting the line spacing.

Book support and line guide

Carried by posts **2** are slotted plates **70** having racks or tooth edges **71**. Mounted to slide in the slots of plates **70** are blocks **72**, and journaled in the blocks is a shaft **73** carrying gears **74** in mesh with racks or toothed edges **71**. Fixed to blocks **72** is a book support platform **75**. Mounted on the end of shaft **73** is a hand operating knob **76** having a spring **77** pressing on friction collar **78** which engages post **2**, so that by turning the knob **76**—see Figure 14—the shaft **73** and gears **74** are rotated to travel up and down the racks **71** to position the book support platform **75**. Inadvertent movement of the platform is prevented by the friction collar **78**. A book back support **79**, having a slotted base part **80** is adjustably mounted on platform **75** by thumb screw **81**. In order that a book (not shown) on platform **75** may be properly supported in open position with the pages reasonably flat, I provide a book clamping rod **82**, having gears **83** at the ends meshing with teeth **84** in the slotted supporting arms **85** which have angular slotted extensions or ears **86** at their bottom ends engaged by pins **87** in the platform to pivotally mount said arms about said pins. There are springs **88** which normally urge the arms and rod **82** against the book. The rod **82** is adjusted on the arms by knobs **89** to properly engage a book. These knobs may be of a construction similar to knob **76** to be frictionally held against inadvertent movement.

Slidably mounted on posts **2** are flanged plates **90** having racks **91** and held in place on the posts by plates **92** and screws **93**—see Figures 2, 7 and 8. Each plate has a forwardly extending bracket member **94**. Pivoted between the brackets is a rod **95** having bent portions **96** forming levers engaged by springs **97** to normally urge the rod to maintain a normal position. Fixed to the ends of the rod **95** are slotted arms **98** having toothed inner edges or racks **99**. Adjustably supported on arms **98** is a book line guide **100**, there being gears **101** meshing with racks **99** and operating knobs **102**, of a type similar to knob **76**. Line guide **100** is normally urged against the face of the book by springs **97** operating on rod **95**. Initial adjustment of the book line guide **100** is made by turning knobs **102**.

Continuous adjustment of the book line guide to designate successive lines for copying is obtained through sliding movement of racks **91** on plate **90** by means of gears **103** on shaft **104**. Gears **103** mesh with racks **91** and shaft **104** is journaled in posts **2** and has a beveled gear **105**—see Figure 8—on the end thereof which meshes with beveled gear **33** of clutch element **31** in the second active position of the clutch element **31** to rotate gears **103** and move racks **91** to move the book line guide **100** from line to line through the instrumentality of shafts **36** and **45** and key **69** and the direct and reversing clutch and actuating mechanism in housing **46**, previously described. The extent of movement line-for-line being adjusted through cap **65** as affecting the stroke of rack **63** on ratchet **62** as previously described with reference to the sheet line guide—see Figures 4, 5 and 6. It will therefore be seen

that I accomplish the following purposes in connection with my book support and line guide: (1) the support platform is adjustable to accommodate different sizes of books; (2) the book back support is adjustable; (3) adjustable means are provided for holding the book in open position and the pages thereof relatively flat; (4) my line guide is manually adjustable to an initial position, and (5) successive adjustment of the line guide is affected from an actuating mechanism adjacent the typewriter keyboard and through a common clutch and reversing mechanism with the sheet line guide.

Furthermore, since clutch **31** has a neutral position as previously described, I provide a knob **106** on shaft **104** for affecting further manual adjustment of the line guide.

From the foregoing, it is believed that the operation and advantages of my invention will be apparent, but changes in form, size, shape, construction, arrangement, and operation may be made to meet practical requirements of practice provided such changes fall within the purview of my broad inventive concept and the scope of what is claimed.

What is claimed is:

1. A combined book and sheet copy support, comprising a pair of supporting posts, a feed roller, a pair of slidable rack members, gears meshing with the rack members, a pinion associated with the gears, a pinion associated with the feed roller, a clutch device selectively engaging the respective pinions to actuate either the feed roller or the racks, a spring tensioned roller cooperating with the feed roller to receive a sheet, a line guide for the sheet, a book support, a line guide for the book support associated with the racks, drive mechanism associated with the clutch, and means for reversing the drive mechanism.

2. A combined book and sheet copy support, comprising a pair of supporting posts, a feed roller, a pair of rack members slidably mounted on the posts, gears meshing with the rack members, a pinion associated with the gears, a pinion associated with the feed roller, drive mechanism, a clutch associated with the drive mechanism and having pinions selectively meshing with the first two pinions to drive the feed roller or slide the racks, a spring tensioned roller associated with the feed roller for retaining a sheet therebetween, means for manually adjusting said rollers, an adjustable line guide for said sheet, an adjustable book support, an adjustable book back support on the book support, adjustable means for retaining a book in open position, a book line guide on the racks, means for reversing the drive mechanism, means for adjusting the line spacing of the drive mechanism, and means for manually adjusting the book line guide.

3. The invention as defined in claim 2 wherein the reversing drive mechanism includes a clutch device, a drive shaft, a ratchet on the drive shaft, a rack engaging the ratchet, means for actuating the rack, and adjusting means for regulating the extent of actuation of the rack, said actuating means including a key, and said adjusting means including a screw-threaded sleeve limiting the movement of the key and the rack.

4. The invention as defined in claim 2 wherein the book line guide includes slotted arms having racks, a plate to which said arms are pivoted and which carries slidable racks engaged by drive gears, and means engaging the first racks to manually adjust the line guide.

5. The invention as defined in claim 2 wherein the book support includes slotted plates, blocks carrying the book support slidably mounted in the slots of the plates, racks on the plates, and means engaging the racks to manually adjust the book support.

6. The invention as defined in claim 2 wherein the clutch mechanism for driving the feed roller, and the racks of the book line guide, has a neutral position to permit manual adjustment of the feed roller, and book line guide, and wherein the clutch mechanism for the reversing drive has a neutral position to permit manual adjustment of the device.

7. The invention as defined in claim 2 wherein a sheet supporting plate is provided with spring-tensioned means for holding the sheet on the plate, and wherein dual manual adjusting means are provided for the spring-tensioned roller, one comprising finger tabs on supporting arms for the roller and the other cams on a rotatable shaft engaging said arms.

8. The invention as defined in claim 2 wherein the means for holding a book in open position is spring-tensioned to press against the face of the book, and is adjustable to different sizes of books.

9. The invention as defined in claim 1, with a substantially rectangular base to support a typewriter and said posts rising from the rear corners of the base, control means for said drive mechanism and said reversing means extending to the forward side of said base, and a housing extending along a side edge of said base for said control means.

LUIS ALBERTO VILLAFUERTE ROZAS.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
980,278	Ireland	Jan. 3, 1911
999,181	Peetz	July 25, 1911
1,042,373	Horne	Oct. 22, 1912
1,227,436	Hendrix	May 22, 1917
1,345,986	Blume	July 6, 1920
2,273,486	Glassey	Feb. 17, 1942