

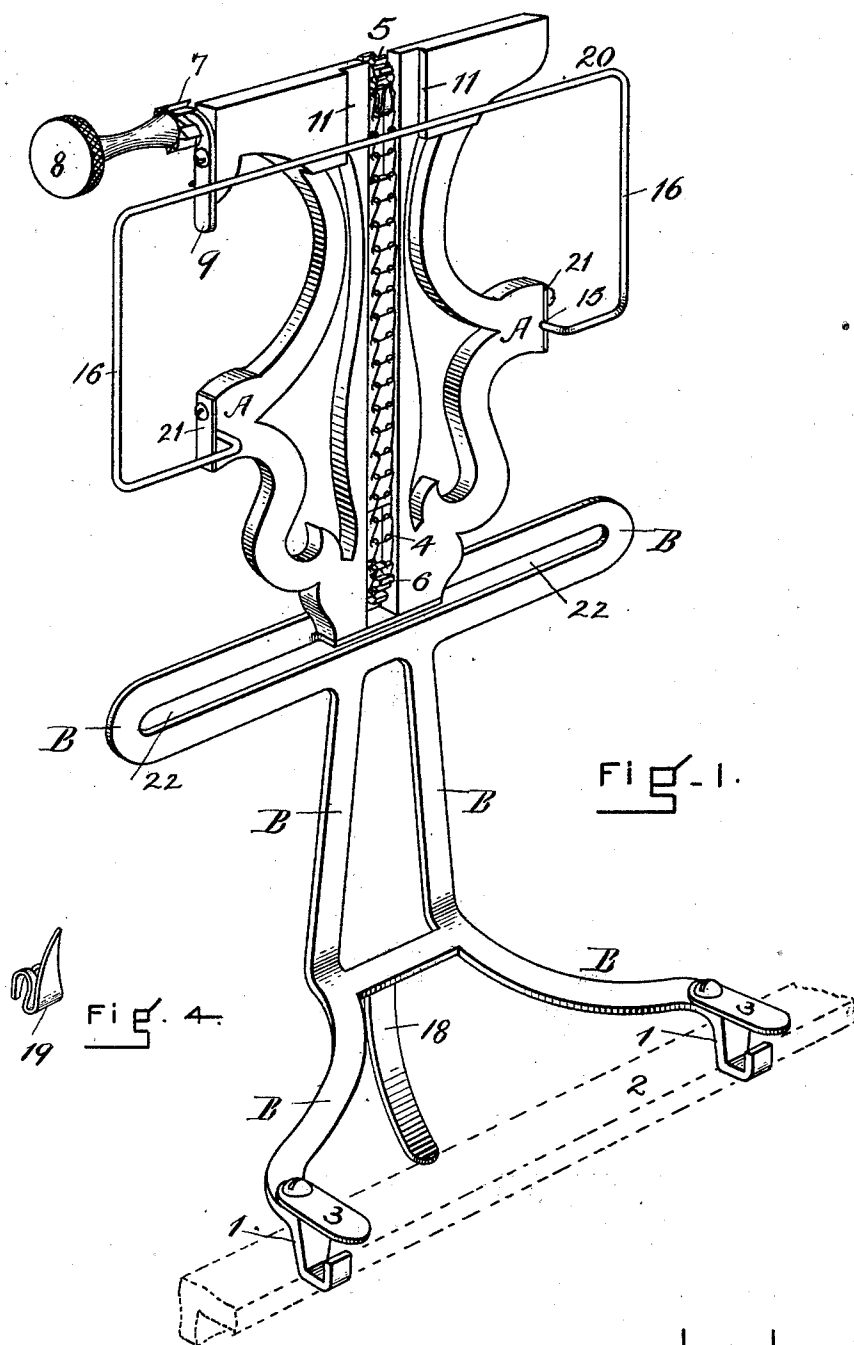
(No Model.)

2 Sheets—Sheet 1.

W. DUCHEMIN.
COPY GUIDE.

No. 519,762.

Patented May 15, 1894.



WITNESSES

Frank G. Parker.
William S. Parry.

INVENTOR

William Duchemin

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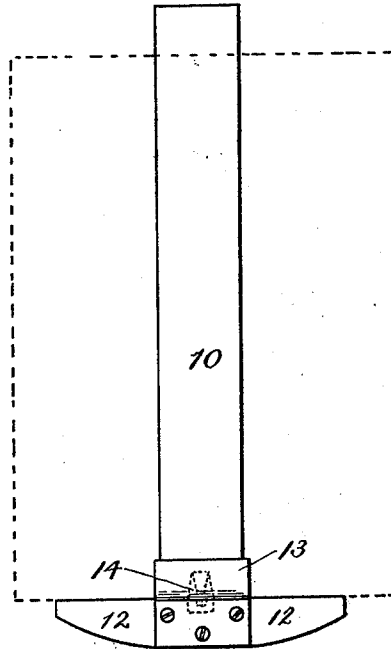
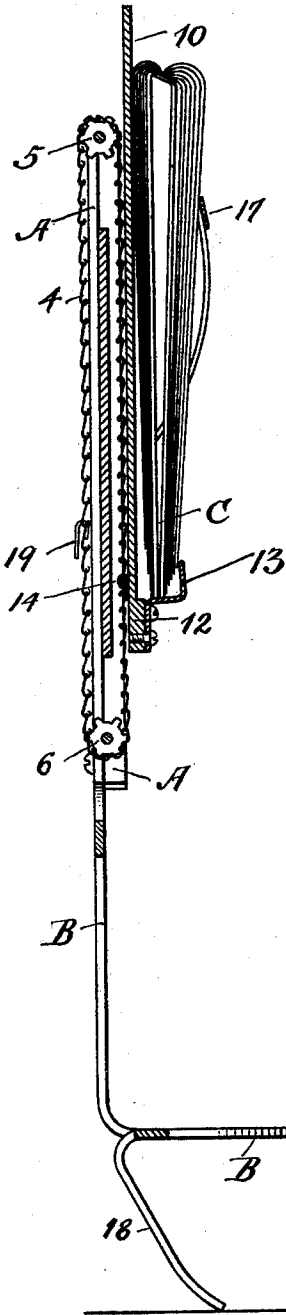


FIG. 3.

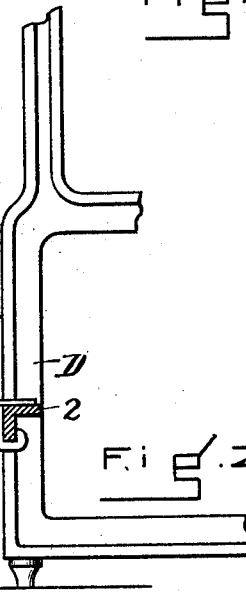


FIG. 2.

WITNESSES

Frank G. Parker.
William H. Parry.

INVENTOR

William Duchemin

UNITED STATES PATENT OFFICE.

WILLIAM DUCHEMIN, OF NEWBURYPORT, ASSIGNOR TO JOHN W. DREW,
OF BOSTON, MASSACHUSETTS.

COPY-GUIDE.

SPECIFICATION forming part of Letters Patent No. 519,762, dated May 15, 1894.

Application filed January 3, 1894. Serial No. 495,493. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM DUCHEMIN, a subject of the Queen of Great Britain, and a resident of Newburyport, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Copy-Guides, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to improvements in copy-guides to be used in connection with type-writing machines, and for accountant purposes for which it is necessary to have the matter to be copied presented to the sight in a manner that will prevent mistakes caused by re-writing, or omitting words or figures when copying the same; and the objects of my improvements are, to supply a duplex copy-guide that is a copy-guide fitted with detachable devices whereby the matter to be copied whether written in a book, or on separate sheets of paper, may be moved forward by the operator the required distance for copying, and is held in position therefor by means of a detachable self adjusting pressure bar with equal precision and ease, and in such position that the copy will be directly in front of the operator at such a distance that the article to be copied will not interfere with the rear side of the type-writing machine; and that will be of such peculiar construction that it can be readily secured to, or detached from the type-writing machine at any time to suit the convenience of the operator when placing the machine in its cabinet, or placing a cover thereon, or for any other necessary purpose the copy-guide being held rigidly in position while so secured. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my duplex copy-guide, having the copy-book carrier removed, in order to show the position of the lifting-chain, and the general construction and arrangement of the principal parts, and the manner of securing the same to the cross-bar of the frame of the type-writer. Fig. 2 is a vertical section of my duplex copy-guide secured in position on the type-writer and having the book-carrier attached, and the book in position thereon, also the manner of

attaching the book-carrier to the lifting-chain, and of holding the copy-book in position. Fig. 3 is an elevation of the book-carrier for reference. Fig. 4 is a perspective view of the paper-holder detached, showing its construction when intended to be removed from the lifting-chain.

Similar letters and figures refer to similar parts throughout the several views.

The copy-guide A, Fig. 1, which is made of a single piece of wood or any other suitable material, is secured by means of screws to the upper end of the base frame B, and is secured to, and held in position on the said frame D, of the type-writer by the frame B, the lower extreme ends 1 of which are fitted with transverse grooves which fit onto the under margin of the rear cross-bar 2 of the frame D of the type-writer, and are secured thereto by the action of the latches 3 which are passed over the upper surface of the cross-bar 2 shown in Figs. 1 and 2.

Extending along the vertically longitudinal center of the copy-guide A, is an endless lifting chain 4 which passes over and embraces the chain-wheels 5 and 6 (see Fig. 2). The working hand shaft of the chain-wheel 5 is fitted to revolve a trifle below, and parallel with the upper surface, and extends beyond the side surface of the copy-guide A, and is provided at the outer end with a ratchet-wheel 7 and a thumb-knob 8; the chain-wheel 6 which is simply a leading wheel for the lifting chain 4 is fitted in the lower end of the copy-guide A, in such a manner that it is subject to the action of the chain-wheel 5, the chain-wheels being placed in such relative positions that the endless chain 4 is kept taut (see Fig. 2).

In practice, when the thumb-knob 8 of the working shaft is revolved to the left, the front part of the endless or lifting chain 4 is by the action of the actuating chain wheel 5 moved upward in a vertical line and is prevented from a retrograde movement, and also held in any desired position by the action of the pawl 9 against the ratchet wheel 7, as shown in Fig. 1, for a purpose that will be explained farther on.

The book-carrier 10 (Fig. 3) consists of a thin parallel strip of wood which is fitted so

that it will move smoothly up and down between the bearings 11 which project outward from the front surface at the upper end of the copy-guide A (see Fig. 1) the lower end terminates in a cross piece 12, on the front surface of which is secured an elastic-clutch 13 which in practice holds the lower end of the copy-book C (see Fig. 2) and near the lower end on the rear surface is secured a small hook 14 (shown in dotted lines in Fig. 3) that passes into and engages with the horizontal bar of a link of the lifting chain 4; (see 14 Fig. 2.)

About midlength in the side surfaces of the copy-guide A, are transverse slots 15 in which are secured in such a manner as will permit of their being readily removed the extreme ends of the elastic arms 16 of a parallel pressure bar 17 (see Fig. 2) which reaches in a horizontal line across its face surface and by the action of the elastic arms 16 is made to press against it with sufficient force to keep the book-carrier 10 in position between the bearings 11, and also to retain the front surface of the article to be copied in the proper condition therefor.

In practice, the self adjusting parallel bar 17 presses against, and retains in its proper position for copying the face of the exposed page of the copy-book C, as shown in Fig. 2, and also serves as a line of sight for the operator as will be explained presently. The parallel pressure bar 17 by reason of the elastic nature of its arms 16 is self adjusting and will hold thick or thin articles in the desired manner for copying and, it might be secured to the guide permanently but that it is necessary at times to replace it by another pressure bar more suitable to the width of the article to be copied, the arms 16 being so formed as to guide the lateral movement of the same.

The mechanism just described is my device for holding and guiding heavy copy-books, and is placed in position and operated as follows: The ends 1 of the copy-guide base frame B, are hooked on to the lower margin of the rear cross-bar 2 of the type-writer frame D, and there secured by the action of the latches 3 which are passed over its upper surface as shown in Fig. 2, the arms 1 being held in position horizontally by the action of a rear standard or leg 18 as shown at 18 Fig. 1, the point of the hook 14 of the book-carrier 10 is then passed over the horizontal bar of a link of the lifting chain 4 (see 14, Fig. 2) and its upper end adjusted between the bearings 11 of the copy-guide A, and the ends of the elastic arms 16 of the parallel pressure bar 17 passed into the side slots 15 where they are held in position laterally by the latches 21 which are pivoted to its side surfaces as shown at 21 Fig. 1; the copy-book C, is then passed downward between the book-carrier 10 and the parallel pressure bar 17 and its lower end passed into the spring clutch 13 of the book-carrier 10 in the position shown in Fig. 2, the thumb-knob 8 is then

turned to the left when by the action of the lifting chain 4, the book-carrier 10 and copy-book C, are moved upward until the first line of the matter to be copied is placed in sight above the pressure parallel bar 17, in which position it is held by the action of the pawl 9 against the ratchet wheel 7 until the line has been copied at which time the second line is lifted and held in same manner, and so on to the end of the page; at which time the operator by pressing with the left hand on the lower end of the pawl 9 releases the ratchet wheel 7 from its action and with the pressure of the right, sends the book-carrier 10 and copy-book C to their normal position; the page that has been copied however, is held stationary by the pressure of the parallel bar 17 until it is released and turned over to the back of the copy-book C by the operator, which action brings the second page in sight and so on to the end of the book.

As before stated the foregoing combination is intended for the use of operators who are compelled by the nature of their copying to use a copy-book; for guiding copying matter that is written on separate sheets of paper the book-carrier 10 and the parallel bar 17 are removed and a paper-holder 19 (see Fig. 4) and a suitably longer pressure bar 20 substituted therefor. The pressure bars 17 and 20 are essentially the same, operate in the same manner, and are placed in the same position, the only difference being, that the pressure bar 20 is proportionally longer and is of one piece of round bar metal.

The copy holder 19 which is made in the form substantially as shown at 19 Fig. 4, is provided at the rear with a hook that is fitted to engage with a link of the lifting chain 4 its front terminates in a sharp point that pierces through the copy, which is then held between the inside surfaces of the said copy holder with sufficient firmness to guide or draw it up, around, and down under the base of the copy-guide, in the manner that will be explained presently, this copy holder 19 is also made detachable and is placed on, and taken off from the lifting-chain 4 in the same manner as the book-carrier 10.

In practice the sheet of copy is passed up between the pressure bar 20 and the front surface of the projecting bearings 11 that is on the upper end of the copy-guide A, and its upper margin secured on the point of the paper-holder 19 and is then fed upward as before explained. The paper being drawn between the self adjusting pressure bar 20 and the front surface of the said bearings 11. The action of these devices differ inasmuch as that the action of the copy-book carrier 10 is limited to the distance between the chain-wheels 5 and 6, while the sheet of paper can by the action of the paper-holder 19 be drawn upward from the front up over the upper surface of the copy-guide, then down the rear through the slot 22 in the upper end of the frame B, around the under surface, and up

again to the starting point in front, continuously, thus enabling the operator to copy sheets of paper of extra length as readily as short pieces; nor is the ratchet-wheel 7 or pawl 9 of any material benefit for this class of copy because the paper is of such little weight that the pressure of the bar 20 is quite sufficient to hold the copy in the position in which it is placed.

It will be understood that, while I do not claim a copy-guide broadly, but simply as herein described and named I do not confine myself to the exact arrangement and construction of the parts composing the same as hereinbefore named, for the reason, that for copying from books containing stenographic characters the book-carrier 10 may be removed and the clutch and paper holder secured to the lifting chain 4; also the guide A may be made of any kind of suitable metal and the lower ends 1 of the arms of the frame B, may be so adapted as to be placed on the frames of school, or office desks or any other such like positions wherein it is necessary to save room, and at certain times to remove the guide. All these changes being simply modifications of my device, and as such are intended for specific purposes, and for this reason I prefer the foregoing described mechanism which is peculiarly adapted for general purposes of the description named, and can be advantageously used in copying matter from books without reference to their size or weight, (the book-carrier 10 being intended for lifting and holding books of extra length in a vertical position when raised to the highest point,) and from sheets of manuscript irrespective of the differences in their length or width; the gist of my invention residing principally, in the adaptation of the endless lifting chain 4, the detachable devices 10 and 19 therefor and the manner of connecting them thereto whereby the operator can place the different kinds of copying whether thick, or thin, in the position to be copied, the construction of the self adjusting pressure bar and manner of attaching the same to the copy-guide, the devices for moving the lifting chain forward, and preventing retrograde movement thereof in such a manner that the article to be copied can be advanced the proper distance for copying whether the written or printed lines are far apart, close together, or irregular, as, the operator being the moving power of the mechanism, can place the lines that have to be copied in any desired position, by simply moving the thumb-knob 8 a trifle more or less; and especially in the form and construction of the base frame B, of the copy-guide A, in the slot 22 in the upper end thereof, made for the passage of the paper therethrough, and in the means and manner of securing the said frame B to the rear cross bar of the frame of the type-writing machine and in the means and manner of retaining the same longitudinal position.

It will be noted that the copying matter which is written on strips of paper is not

lifted but is drawn forward, up, and around the copy-guide in the manner and form of an oblong scroll, consequently copying matter, that is written, continuously, from end to end on double sheets of legal cap, and such like, can be copied more speedily than matter that is written on ordinary sheets of paper, as the time of placing on, and taking off is saved. It will be also noted, that when the arms of the base frame B, are secured on the cross bar of the frame of the type-writing machine, they are held in position in a firm unyielding manner without straining the said cross bar, and, that by the action of the rear standard or leg 18 which rests on the upper surface of the table or cabinet on which the type-writer is secured, thus releasing the machine, as also the frame, from the strain caused by the weight of the guide, and of the matter thereon.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A duplex copy-guide for type-writing machines, constructed as herein described, consisting of an endless lifting chain, embracing, and actuated by a chain wheel secured on a working hand shaft, fitted with suitable bearings in the said guide and provided with the means to prevent a retrogressive movement thereof, in combination, and working connection with detachable devices, whereby the different kinds of articles to be copied are lifted, in the manner described, for that purpose, a self adjusting pressure bar, whereby the said articles are retained in position while being copied, and, the means described for placing and holding the copy-guide in position on the lower cross-bar of the frame of the machine, arranged and adapted substantially as shown and described.

2. In a duplex copy-guide for type-writing machines, the combination of an endless lifting chain, moved by a working hand shaft, the chain wheels whereby the endless lifting chain is held in working position, the working hand-shaft, provided with the means described for moving, and presenting a retrogressive movement thereof, and a detachable copy holder of the form described, the detachable hook on the rear thereof engaged with a link on the endless lifting chain, the point on the front thereof, whereby, the article to be copied is pierced through and drawn up, around, and down under the copy-guide, the self adjusting pressure bar, the base frame, the slot therein for the passage of the article to be copied, and means substantially as described for securing the same to the lower rear bar of the frame of a type-writing machine, substantially as shown and described.

3. In a duplex copy-guide for type-writing machines, in combination, the endless lifting chain, embracing the actuating chain-wheel, secured on the working hand-shaft, the working hand-shaft, means substantially as described for moving the same forward, and pre-

venting a retrogressive movement thereof, the detachable devices whereby the articles to be copied are held in the desired manner to be moved forward therefor, the self adjusting pressure bar, by the action of which the said articles are retained in position while being copied, the base frame, the slot therein, for the passage of the article to be copied, the transverse grooves in the ends of the arms thereof, fitted for, and clutching the lower margin of the rear cross-bar of a type-writing machine, the latches pivoted therefo, fitted for, and passing over the upper surface of the said cross-bar whereby the copy-guide

is secured rigidly thereto, and, the rear leg or standard, by means of which the copy-guide is secured in position vertically, constructed and adapted substantially as described for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 28th day of December, A. D. 1893.

WILLIAM DUCHEMIN.

Witnesses:

FRANK G. PARKER,
WILLIAM H. PARRY.