Sept. 28, 1943. E. L. ELLIOTT 2,330,776

COPY HOLDER

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Fig. 1.

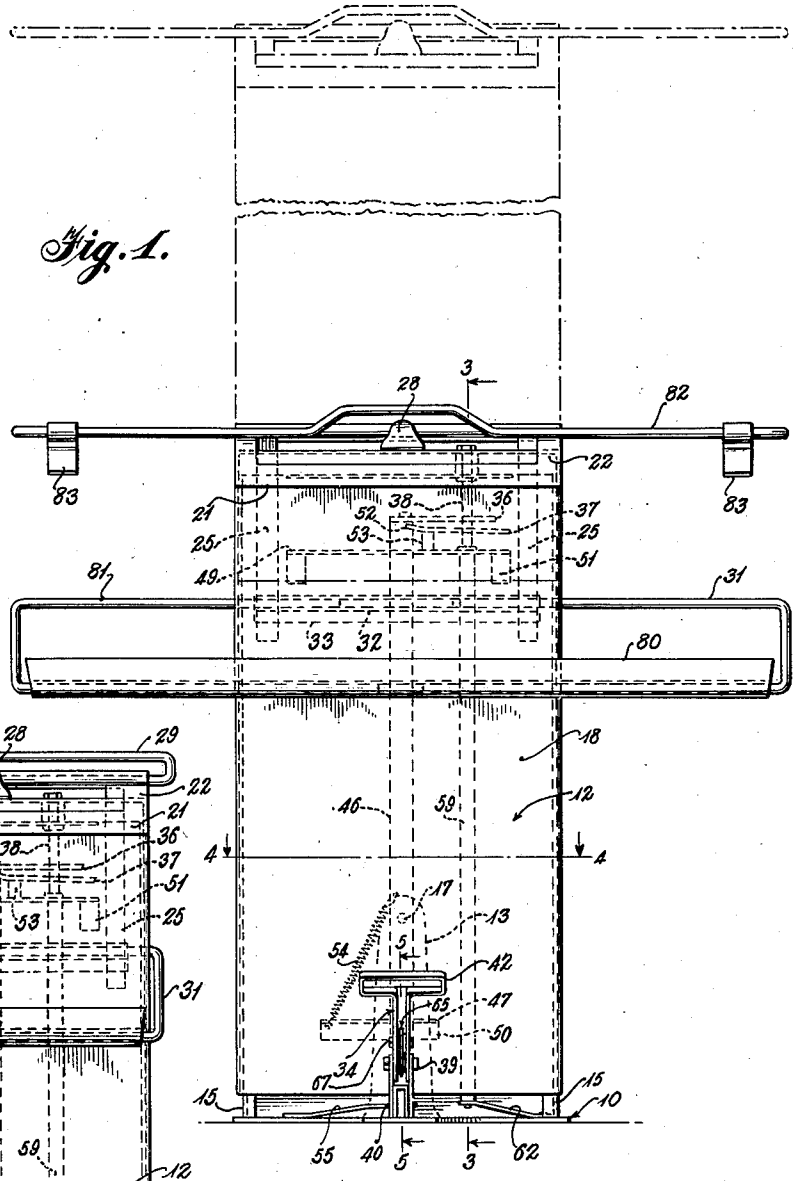


Fig. 2.

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Fig. 4.

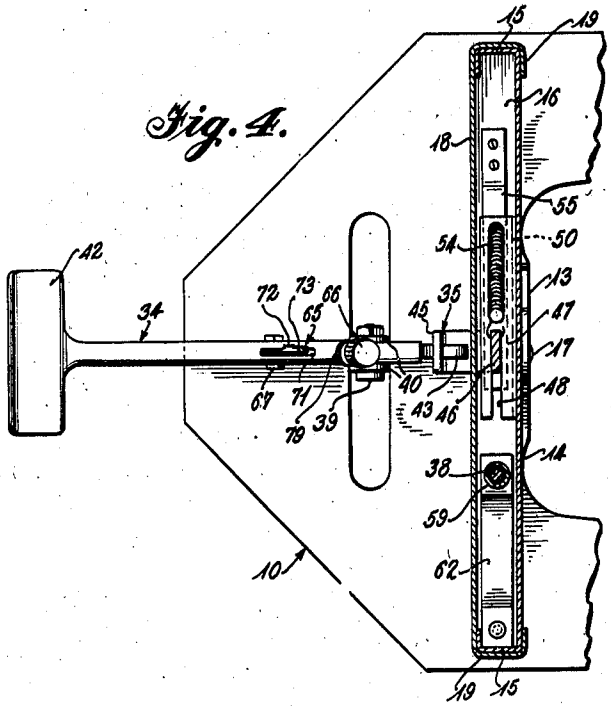


Fig. 3.

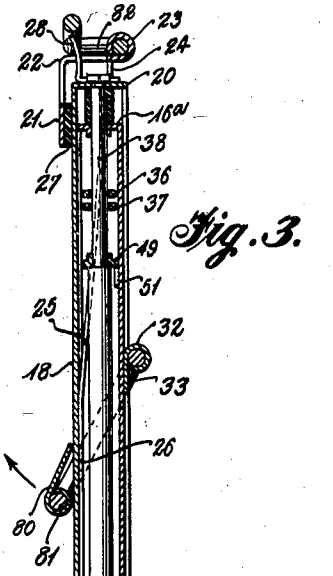


Fig. 5.

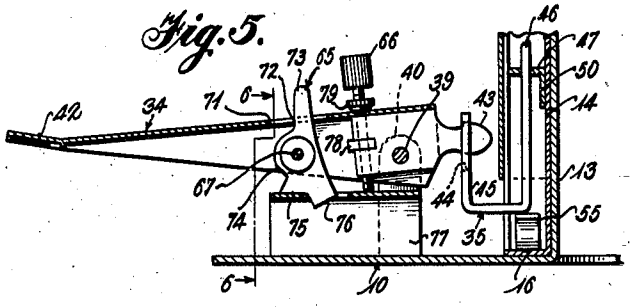
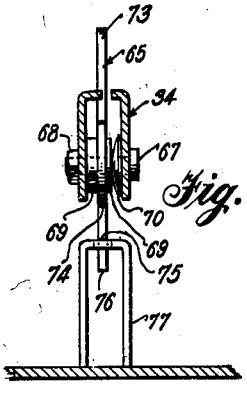
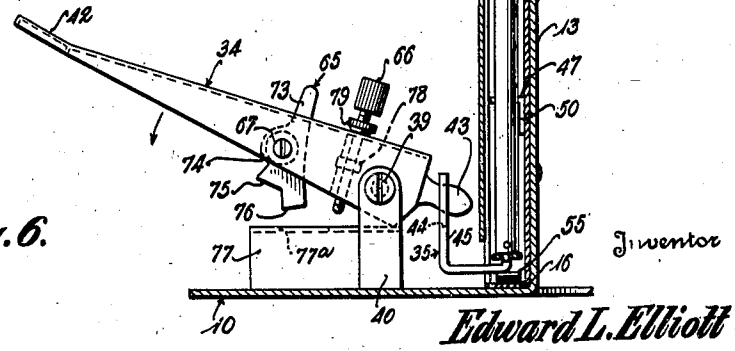


Fig. 6.





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Fig. 7.

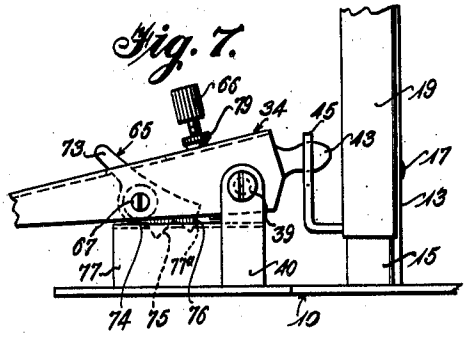
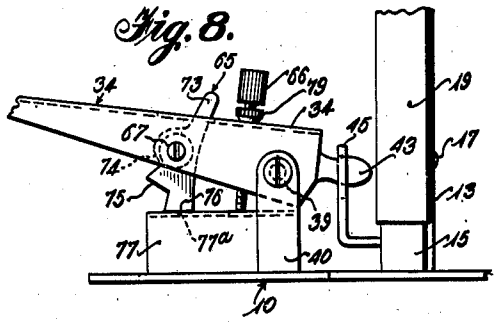


Fig. 8.



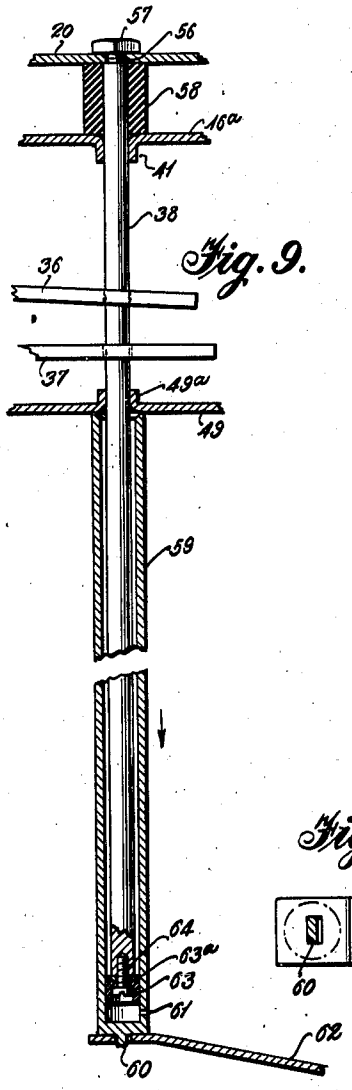


Fig. 9.

Fig. 10.

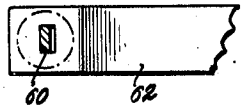


Fig. 11.

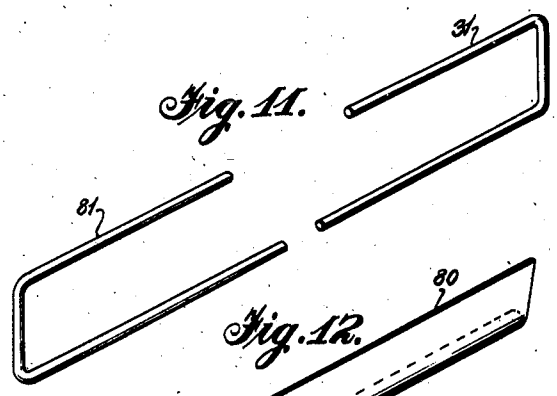


Fig. 12.

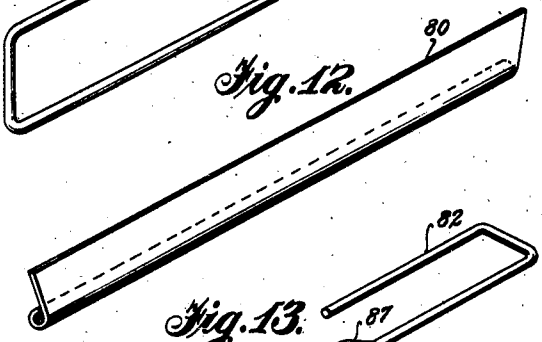


Fig. 13.

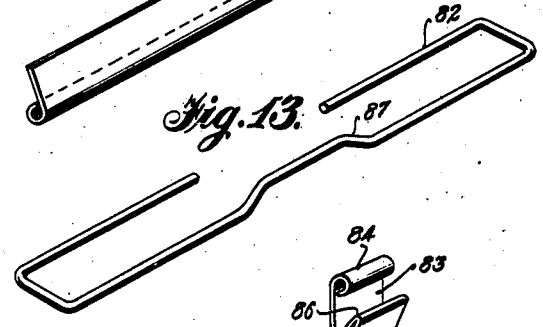


Fig. 14.

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2,330,776

UNITED STATES PATENT OFFICE

2,330,776

COPYHOLDER

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Application November 20, 1940, Serial No. 366,463

6 Claims. (Cl. 120—29)

This invention relates to copy holders and more particularly to devices of that character in whch succeeding lines of written text material are successively designated in a step-by-step manner.

In the art to which this invention appertains there are, generally speaking, two types of construction; one in which the material to be copied is bodily moved under the control of an operator to present succeeding lines thereof to a stationary line designating guide, and another in which a designating means is shifted with respect to copy held in a stationary position. This invention is primarily directed to improvement of the first mentioned type of construction although certain features thereof are of wide adaptability to all types of copy holding apparatus.

Although copy holders are subject to a variety of uses in a number of operations incident to the preparation of written text material, the most extensive commercial application of these devices is in conjunction with the ordinary typewriter and as an adjunct to type setting machinery. In either case, the copyist is continually confronted with succeeding sheets of copy material of varying characteristics. Of these, the important differences encountered are usually in the size of the paper on which the material to be copied is written and in the spacing between adjacent lines of text material. As a consequence of this, sucecssive copying operations may involve substantial changes in the requirements of the copy holder employed, both from the standpoint of size of copy to be supported, and as regards spacing between adjacent written lines.

In an effort to render copy holders susceptible to adjustment to accommodate a wide variety of copy material, it is now the practice to associate some adjustable limiting means with the actuating means for the movable portion of the copy holder, so that differences in relative movement between the copy and its associated line designating guide may be adjusted to correspond to the spacing of the lines of copy material.

While some of the constructions now known for effecting the adjustments mentioned above are successful insofar as the accuracy of the adjustment is concerned, the means for effecting adjustment is such that manipulation thereof to secure the desired adjustment is a time consuming operation which, to a large extent, defeats the very purpose of the copy holder itself, namely, increased speed in the preparation of copied written matter with improvement of accuracy. Other known devices for adjusting copy holders, so that the relative movement between the line designating guide and the copy itself may correspond to a wide variety of line spacings, are susceptible to quick and easy operation but are of such construction that vibration of the copy holding apparatus incident to its normal use will impair the accuracy of the adjustment. In some cases, these quick adjusting means are not only not resistant to vibration but also do not provide for an accurate adjustment in the first instance.

Another problem encountered in conjunction with the commercial use of copy holders is that most of the apparatus now in use will accommodate only copy of a width either equal to or less than the width of the copy supporting panel. Thus, if it is necessary to copy from a sheet or sheets of printed matter which are wider than the supporting panel of the copy holder, those margins of the sheet extending beyond the copy holder are unsupported. The result of this is that the unsupported portions of the copy are never subjected to an initial alignment and are subject to distortion by air currents and as a result of curling normal to paper of slight thickness. Of course, misalignment of any portion of the copy will render inaccurate the designations of the line guide, thereby increasing the likelihood of the occurrence of errors and reducing the efficiency of the copy holder to such an extent that its use for wide copy is hardly feasible.

A few attempts have been made to provide for the support of copy wider than the supporting panel of the copy holding device. These attempts have been characterized by failure to provide apparatus whereby rapid and accurate location of the paper is possible consistent with firm support during any normal copying operation.

It is therefore an object of this invention to overcome all of the foregoing disadvantages and to provide a copy holder which is adjustable to accommodate sheets of copy of a wide variety of sizes and which may be adjusted to permit step-by-step designation of lines spaced apart any distance within the normal range of hand-written, typewritten or printed matter.

According to this invention, it is contemplated that sheets of copy wider than the copy supporting panel may be accurately aligned and firmly held in a position to permit clear designation by a line guide, while the adjustment of the relative movement between the copy supporting panel and the line guide may be quickly and easily effected and is substantially resistant to displacement by vibration.

It is a further object of this invention to provide a copy holder which is quiet in operation, may be readily transported from place to place and is quickly and easily assembled and repaired.

Other objects and advantages of this invention will be apparent from a consideration of

the following detailed description of a preferred embodiment thereof in conjunction with the annexed drawings wherein:

Figure 1 is a view in front elevation of a copy holder constructed according to this invention, the new detachable wide copy gripping apparatus being shown in operative position;

Figure 2 is a view in front elevation of the copy holder of Figure 1 with the wide copy gripping apparatus replaced by a U-bar;

Figure 3 is a view in vertical section taken along the line 3—3 of Figure 1;

Figure 4 is a view in horizontal section taken along the line 4—4 of Figure 1;

Figure 5 is a fragmentary view in section taken along the line 5—5 of Figure 1, showing the details of the operating lever and the position assumed upon complete depression thereof when adjusted for an amplitude of movement intermediate the maximum and minimum;

Figure 6 is a view in section taken along the line 6—6 of Figure 5;

Figure 7 is a fragmentary view in side elevation showing the operating lever in fully depressed position when adjusted for maximum amplitude of movement;

Figure 8 is a fragmentary view in side elevation showing the operating lever in fully depressed position when adjusted for minimum amplitude of movement;

Figure 9 is a detail view illustrating an embodiment of the novel method of mounting the cylinder in which the copy support lifting rod operates;

Figure 10 is a detail view illustrating the detachable connection between the cylinder shown in Figure 9 and its holding spring;

Figure 11 is a perspective view of the supporting bars for a wide line guide;

Figure 12 is a perspective view of the wide line guide normally mounted on the bars shown in Figure 11;

Figure 13 is a perspective view of the supporting bar for the wide copy grippers; and

Figure 14 is a perspective view of one of the grippers used on the bar shown in Figure 13.

Referring in greater detail to the drawings, and particularly to Figures 1 to 4 thereof, the copy holder shown consists of a base 10, a vertical standard or guide 11 attached thereto, and a copy supporting member 12 slidably mounted for telescoping movement on standard 11.

Base 10 includes a flat portion adapted to contact a desk, table or the like and a vertical tongue 13 to which standard 11 is affixed. It will be noted that the flat portion of base 10 extends for a considerable distance on either side of tongue 13 to insure the maintenance of the device in vertical position under all normal operating conditions without the necessity for fastening to any permanent resting place. It will be understood that this construction enhances the utility of the device as a whole, ready portability being a highly desirable characteristic since a single copy holder may be used at different times and in different locations by several stenographers.

Standard 11 consists of a rear plate 14, guides 15 along the opposite vertical edges thereof, a bottom plate 16, and a top plate 16a. Bottom plate 16 rests on a portion of the flat upper surface of base 10 forward of tongue 13 to which rear plate 14 is affixed at 17.

Copy supporting member 12 consists of a front plate 18 slightly wider than plate 14 of standard 11, provided with guides 19 along its vertical edges. Guides 19 are adapted to overlie and slide vertically upon guides 15 of the standard. A top wall 20 extends rearwardly of plate 18 for a distance about equal to the width of guides 19.

A copy gripping device is attacched to supporting member 12 and serves to hold sheets of paper or other copy thereon. This device comprises primarily a flat bar 21 extending for the full width of front plate 18 of copy support 12 and a pair of L-shaped flat strips 22, one shank of which extends upwardly from either end of flat bar 21, while the other shank extends rearwardly across the top 20 of supporting member 12 in a plane at right angles to the plane of bar 21. Strips 22, at their ends remote from bar 21, are connected by a barrel 23 which includes two downwardly projecting tabs 24. Each tab 24 is attached to a leaf spring 25 which in turn is attached at 26 to the rear face of plate 18. Springs 25 are so adjusted that they normally tend to hold bar 21 against the front face of plate 18. It will be readily understood that in constructing the copy gripper device bar 21, strips 22, barrel 23 and tabs 24 may be stamped from a single blank and may thereafter be bent into the form shown in Figure 3. The flat surface of bar 21 which faces the front of plate 18 is provided with a continuous strip of resilient gripping material 27 which conveniently may be made of sponge rubber. A thumb rest 28 is attached to the center of top wall 20 of member 12.

In the construction shown in Figure 2, barrel 23 has detachably received therein one arm of a U-bar 29. U-bar 29 is mounted for pivotal movement about barrel 23 as an axis, the free arm thereof extending rearwardly of plate 14 of standard 11.

When copy is to be held on supporting member 12 in reading position, the operator may grasp barrel 23 and thumb grip 28 with this fingers and press them toward one another. This will result in compression of springs 25 and the forward movement of strips 22 and bar 21 carried thereby. Thus bar 21 will be moved away from the face of plate 18. Once gripping strip 27 and the front face of plate 18 are spaced apart sufficiently to accommodate a sheet or sheets of copy therebetween, such copy is inserted and an edge thereof is pushed up until it comes to rest against the lower surface of the shanks of strips 22 which are at right angles to the long axis of the plate 18 and hence to the paper held thereagainst. These shanks of strips 22 serve to align the paper on the supporting member 12 for the reason that they lie in a plane parallel to its top 20. Once the paper is in position, thumb grip 28 and barrel 23 are released. Springs 25 then move to normal position (as shown in Figure 3) thereby compressing the sheet or sheets of copy between gripping strip 27 and the front face of plate 18. Since gripping strip 27 is continuous for the full length of bar 21, the copy will be held firmly in aligned position during the ordinary manipulation of the copy holder.

If material is to be copied from a sheet of a bound volume, such as a stenographer's notebook, the top edge of bar 21 is used as a sight line to align the copy while pages not in use may be thrown back over top 20 and held against back plate 14 of standard 11 by the free arm of U-member 29. Since U-member 29 is mounted for pivotal movement in barrel 23, the distance of the free arm thereof from plate 14 may be adjusted to accommodate any number of sheets up

to a cumulative thickness equal to the length of the radial arm of the U-member.

Since the material to be copied is held between gripping strip 27 and the front plate 18 of the copy supporting member, it will hang downwardly parallel to the front face of plate 18. In order to designate a particular line to be read, a line designating guide 30, shown only in Figure 2, is ordinarily employed. Guide 30 is mounted to extend across the face of plate 18 in spaced relation with respect thereto. Guide 30 consists of a flat strip having a barrel along one of its long edges. One shank of a U-bar 31 is mounted in this barrel while the other shank is pivotally mounted in a barrel 32 attached at 33 to the rear face of plate 14 of the supporting standard. When copy is being attached to the copy support plate 12 and it is desirable to have line designating guide 30 out of the way, U-bar 31 is moved about its axis in barrel 32 until the radial arm thereof is substantially at right angles to the long axis of plate 18. This will leave ample space between plate 18 and the line designating guide to permit easy adjustment of the paper in the manner heretofore described.

As has been stated, the copy holding member 12 is mounted for movement on standard 11. The purpose of this movement is to lift the copy held against plate 18 so that successive lines thereof may be presented to the line designating guide 30.

The actuation of copy support 12 is effected by manual operation of a lever 34 which raises a U-shaped lifting bar 35, which in turn lifts cramping bar 36 which acts on a rod 38 attached to the copy support 12.

Operating lever 34 is pivotally attached at 39 to support arms 40 which extend upwardly from base 10. These arms are cut from base 10 and bent to position as will be seen upon consideration of Figure 4. One end of lever 34 is widened out to form a striking surface 42, while the other end of the lever is provided with a tongue 43. Tongue 43 is pivotally connected to the short shank 45 of lifting bar 35 by extension into a slot at 44 in that bar. The long shank 46 of lifting bar 35 extends upwardly within vertical standard 11. This long shank is guided in bearings supported from rear plate 14 of the standard. One of these bearings consists of a shelf 47 extending outwardly from plate 14 of standard 11 in a plane parallel to bottom plate 16 thereof. Shelf 47 is provided at 48 (see Figure 4) with a slot for the reception of shank 46. At a point above shelf 47 located so as to be near the end of shank 46 there is another shelf 49, this shelf being also provided with a guide slot. Shelf 47 has a vertical portion 50 which is welded or otherwise suitably attached to plate 14, while vertical portions 51 of shelf 49 are of similar construction and function.

The free end of shank 46 has pivotally attached thereto cramping bar 36. The end of cramping bar 36 remote from the point of pivotal attachment to shank 46 is provided with a round aperture of a diameter slightly in excess of the diameter of rod 38, and rod 38 is passed through this aperture. Another cramping bar 37 is located just below cramping bar 36 and is provided with a forked end 52 through which a portion of shank 46 may freely reciprocate. The forked portion 52 of cramping bar 37 defines with the remainder of the cramping bar an obtuse angle. Cramping bar 37 is held by a support 53 which extends upwardly from shelf 49 at a point between the angle in the bar and an aperture thereof through which rod 38 passes. The aperture adjacent the free end of cramping bar 37 is similar in diameter to the corresponding aperture in cramping bar 36. These two bars function to lift and hold the copy support 12 in adjusted position. When lever 34 is depressed in the direction of the arrow in Figure 3, tongue 43 will be raised. This motion will be imparted to U-bar 35 which in turn will lift cramping bar 36. Cramping bar 37, however, will not be lifted since the fork 52 thereof overlies, but is not connected to shank 46. If cramping bar 36 is lifted from one end, the free end thereof will tend to remain in its original position. Thus, the axis of the aperture through cramping bar 36 will move from a position coincident with the axis of rod 38, to a position at an angle thereto as shown in Figure 9. Thus, the edges of the cramping bar defining the aperture will be caused to frictionally engage rod 38 and move the same upwardly for a distance dependent upon the amplitude of movement of U-bar 25. If, at this time, operating lever 34 is released, lifting bar 35 and cramping bar 36 will fall to its starting position as shown in Figure 1 while the cramping bar 37 will retain rod 38 in the position to which it was moved by cramping bar 36, bar 37 being normally biased to holding position by gravity. In order to accelerate the return of lifting bar 35 to starting position, a spring 54 is attached to shank 46 thereof and extends between a portion of said shank and a portion of shelf 47. When it is desired to restore the copy support 12 to its original fully retracted position as shown in Figure 3 from an extended position such as that shown in broken lines in Figure 1, operating lever 34 is moved in a direction opposite to the arrow shown in Figure 3. This movement will result in the compression of a leaf spring 55 which is attached at one end to base plate 16 of standard 11, the free end underlying shank 46 of lifting bar 35 and normally serving to limit the downward movement thereof. Upon compression of spring 55, shank 46 will move downwardly thus causing pivotally attached cramping bar 36 to move downwardly and to strike the ends of the fork 52 of the cramping bar 37. Cramping bar 37 is thus caused to move to a position at right angles to the axis of rod 38 by movement about point 53 as a fulcrum. Once cramping bar 37 extends at right angles to the axis of rod 38 the axis of the aperture in rod 38 will be coincident with the axis of the aperture in cramping bar 37. Thus, rod 38 will no longer be held and the entire copy holder 12 will fall downwardly by gravity being guided because of the inter-engagement of guides 15 and 19.

It will be understood that the restoration of copy support 12 to the position shown in Figure 3 from the position shown in the broken lines in Figure 1 would normally be quite rapid and noisy. According to this invention means are provided to cushion the fall of copy support 12.

Referring again to Figure 9, it will be seen that rod 38 is provided with a threaded end 56 which is passed through a small aperture in the top plate 20 of copy support 12. A nut 57 serves to maintain the connection. Located on the underside of top 20 there is a cylindrical sleeve 58 which may be constructed of rubber or other resilient material. Sleeve 58 serves to space top 20 of copy support 12 from top plate 16a of standard 11 when support 12 is in fully retracted position.

Since rod 38 is attached to top 20 of copy support 12 it is evident that the rod and copy sup-

port will move together as a unit with respect to standard 11. Copy support 12 is guided in its movement with respect to standard 11 by the overlapping engagement of members 15 and 19. The guiding of rod 38, however, is accomplished by employment of bearings 41 and 49 and a cylinder 59 which is supported from standard 11. As will be seen upon further reference to Figure 9, and to Figure 10, cylinder 59 is open at one end while the other end is closed and has extending axially therefrom a pin 60 of rectangular cross-section. In the cylindrical wall of cylinder 59 near the closed end of the cylinder an air escape aperture 61 is provided. The cylinder is arranged to rest against the underside of shelf 49 and to be resiliently held in that position. To this end a leaf spring 62 extends from bottom plate 16 of standard 11 to which one end of it is attached. The other end of spring 62 is provided with a rectangular aperture for the reception of pin 60 on the closed end of cylinder 59, the thrust of spring 62 being of a character to urge cylinder 59 upwardly against the lower surface of shelf 49. Rod 38 may be inserted into the free end of cylinder 59 through the bearing apertures 41 and 49*a* in shelves 16*a* and 49 respectively. The bearing apertures are of a size sufficient to closely surround and act as a guide for rod 38. On the other hand, cylinder 59 is of an internal diameter somewhat in excess of the diameters of the apertures of bearings 41 and 49*a* and the diameter of rod 38. Thus, the free end of cylinder 59 may rest around the defining edges of the bearing aperture 49*a* in shelf 49 in such a way that the long axis of the cylinder coincides with the axis of rod 38. A washer 63, functioning as a piston, is attached to the free end of rod 38 by a screw 64 as well as an annular metal washer 63*a*. It will be noted that washers 63 and 63*a* are of a diameter in excess of the diameter of rod 38 but of a size to be closely received for sliding movement within cylinder 59. Each of the washers has a separate function. When copy support 12 is being moved upwardly in response to the operation of lever 34, the upper washer 63*a* will eventually strike against the thickened portion of the shelf 49 which serves as a bearing for rod 38. This will prevent copy support 12 and standard 11 from becoming completely disengaged since the diameter of washer 63*a* is too great to permit of the passage thereof through the aperture in shelf 49. On the other hand, when operating lever 34 is moved in a direction opposite to the direction of the arrow of Figure 3 thereby adjusting the cramping bars so that copy support 12 may fall by gravity to the position shown in Figure 3, piston 63 will compress the air in the lower part of cylinder 59 as copy support 12 descends. The escape of air from the lower portion of the cylinder is, of course, restricted by the size of aperture 61 so that the piston 63 and cylinder 59 will act as a pneumatic dashpot to cushion the fall of copy support 12. A further cushioning effect results upon contact of resilient cylindrical sleeve 58 with top plate 16*a* of standard 11.

After a considerable period of use, it may be necessary to replace the washer 63. This may be done in an easy and convenient manner. First, copy support 12 is moved to fully extended position, as shown in the broken lines of Figure 1. At this time, the upper edge of washer 63*a* will rest against the lower surface of shelf 49; thereupon cylinder 59 may be grasped by the hand of the operator and moved in the direction of the arrow in Figure 9. This will result in compression of spring 62 and sufficient downward movement of cylinder 59 to permit the free end thereof to lie below the lower edges of washer 63. When this condition exists, the free end of cylinder 59 may be swung out of axial alignment with shaft 33 and its piston 63, whereupon the entire cylinder may be removed from the machine by simply lifting pin 60 out of the aperture in leaf spring 62. This permits ready access to screw 64 which holds piston 63 in position. As a consequence, piston 63 may be readily replaced. When cylinder 59 is again restored to normal position, pin 60 is passed through the aperture in spring 62. The leaf spring is then fully compressed and the free end of cylinder 59 is passed into axial alignment with rod 38, thereupon the cylinder is released thus permitting spring 62 to force the same upwardly so that its free end abuts the lower surface of shelf 49 in the manner shown in Figure 9.

As has been stated before, the extent of movement of copy support 12 upon depression of operating lever 34 depends upon the amplitude of movement of lifting bar 35 which, of course, controls the extent of lift imparted to cramping bar 36. Since lifting bar 35 is under the control of the operating lever, it is evident that adjustment of amplitude of movement of tongue 33 will determine the amount of movement of copy support 12. It is evident that it is desirable that lines of material being copied be presented in succession for reading above line designating guide 30, and since various types of printing, typewriting and handwriting involve lines spaced apart for different distances, it is highly desirable that convenient means be provided for controlling the amount of movement of copy support 12 upon any single depression of lever 34. In other words, each depression of lever 34 should bring the next succeeding line into view just above copy designating guide 30. To facilitate the adjustment of the amplitude of movement of lever 34 to control the movement of copy support 12 so that successive lines of substantially any type of printing, typewriting or the like may be brought into view, a limiting lever 65 and a micrometer screw 66 are mounted on and move with operating lever 34. Upon reference to Figure 5, it will be seen that the operating lever 34 is generally U-shaped in cross-section and that lever 65 is pivotally attached between the two downwardly extending shanks. The pivotal attachment is effected by a screw 67 and a nut 68. Washers 69 are located on either side of the levers while a spring washer 70 normally urges the lever to the left as viewed in Figure 6. The top or transverse portion of the U-shaped lever is slotted at 71 (see Figure 4) for the reception of the lever. A reentrant slot 72 is provided midway of slot 71 on the side toward which lever 65 is urged by spring washer 70.

Lever 65 consists of a handle 73 and three members 74, 75 and 76, each presenting a chordwise flat edge. Each of these edges is adapted to cooperate with and rest upon a portion of the top of a support 77, which extends upwardly from base 10. Support 77 is provided with a slot at 77*a* through which member 76 (see Figure 5) or both member 76 and member 75 (see Figure 7) may pass. The flat edges of members 74, 75, and 76 of lever 65 are usually adjusted so that they will permit movement of lever 34 to an extent sufficient to cause movement of copy support 12 to an extent equal to tripple, double and

single spaced typing respectively. Of course, any three or more spacings desired are attainable by slight modification of the illustrated construction. It will be seen that lever 34 may have maximum amplitude of movement when lever 73 is adjusted as shown in Figure 7; while in Figure 8 the lever 34 will have a minimum amplitude of movement. The intermediate adjustment is shown in Figure 5.

It will be understood that once an adjustment of lever 65 is made such lever will act as a stop limiting the movement of lever 34 about its axis at 39. The adjustment of lever 65 is maintained by the action of spring washer 70 and by the edges of slots 71 and 72. In the position shown in Figure 7, the chordwise edge 74 of lever 65 is so disposed with respect to the axis of screw 67 that, despite pressure on lever 34, handle 73 will be maintained against one end of slot 71. On the other hand, when lever 65 is in the position shown in Figure 8, handle 73 will be maintained against the other edge of slot 71. In the intermediate position where the limiting surface is edge 75, spring washer 70 tends to move the lever 65 to the left causing handle 73 to be accommodated in reentrant slot 72, from which it can move in neither direction. To release lever 65 from the intermediate adjustment, it is necessary to move the lever to the right as viewed in Figure 6, thereby compressing spring washer 70.

Although adjustment of lever 65 may be effected rapidly so as to accommodate single, double and triple space typewriting, it is evident that some types of copy material may not conform to any standard. For this reason, a micrometer screw 66 is provided. The shank of this screw passes through a nut 78 attached between the shanks of handle 34. A lock nut 79 serves to lock any adjustment against displacement by vibration. It will be seen that the free end of screw 66 can be moved to strike against a portion of the upper surface of support 77 on that side of slot 77a opposite the side on which the various edges of members 74, 75 and 76 cooperate with a surface of support 77. By adjustment of micrometer screw 66, it is possible to produce movement of copy support 12 to any extent between a maximum defined by the edge of member 74 and a minimum controlled entirely by screw 66.

When material is being supported on plate 18 of copy support 12 for movement past line designating guide 30, it is normally held solely by bar 21, the construction and operation of which has already been described. It will be noted that bar 21 is coextensive in width with front plate 18 of copy support 12. Normally, copy support 12 will be of a width to accommodate at least ordinary paper, i. e., eight and one-half inches. According to this invention, however, it is possible to support copy of a width considerably in excess of normal. To this end the wide line designating guide and wide copy holder shown in Figures 1, 3 and 11 to 14, inclusive, are employed. As has been stated, line designating guide 30 is mounted on a U-shaped bar 31, one shank of the U-bar being inserted in a barrel provided on the line guide, while the other shank extends into barrel 32 attached to rear plate 14 on standard 11. When lines of copy of a width in excess of the width of copy holder 12 are to be placed in the machine, the shank of U-bar 31, located in the barrel of line designating guide 30, is separated therefrom and the barrel of a wide line designating guide 80 is passed thereover. Another U-bar 81, similar in construction to U-bar 31, ih also employed. One shank of U-bar 81 is placed within the barrel of wide line designating guide 80, at the end opposite the end in which a shank of U-bar 31 is received, and then the free shank thereof is inserted in barrel 32. The separate U-bars are shown in Figure 11, the separate wide line designating guide in Figure 12, while the assembled unit is shown in Figure 1. During such periods as wide line designating guide 30 is employed, the guide 30 may be placed in storage.

While it is evident upon consideration of Figure 2 that bar 21 would serve at least to a certain extent to align and hold copy on front plate 18 of copy support 12, it is also evident that when the copy is of a width such that it extends considerably beyond plate 18 on either side, the edges of the copy not held by bar 21 will not maintain their aligned position since the paper will not be sufficiently stiff to maintain its upper edge on a straight line. The action of gravity as well as the action of air currents will normally cause the free ends of the copy to fall below the horizontal plane designated by the lower edge of the horizontal shanks of strips 22 which serve as aligning means. To overcome this difficulty heretofore considered insuperable, a bar 82 having copy grippers 83 thereon is employed. Bar 82 is used in substitution for U-member 29 which is removed from barrel 23 and placed in storage. One of the shanks of bar 82 is then inserted in barrel 23 until the end of the other shank can be aligned and inserted in the opening at the other end of barrel 23. Bar 82 is then aligned as shown in Figure 1 by causing the forward run thereof to rest on top 20 of copy support 12. Copy grippers 83 are each provided with a barrel 84 so that when the grippers are mounted on rod 82 they are freely slidable to accommodate copy of a width anywhere from just exceeding the width of plate 18 to the full width of bar 82. It will be noted upon reference to Figure 14 that copy grippers 83 are provided with a mouth 85 and that surface 86 constitutes a limiting surface beyond which copy may not be inserted in the mouth of grippers 83. The limiting surface 86 is so positioned that it will lie in the same horizontal plane as the limiting surface constituted by the undersurface of that portion of strips 22 which is parallel to top 20 of slide 12. This arrangement is accomplished since the forward run of rod 82 rests on the top of strips 22. In this connection see Figure 3. Thus, when rod 82 is placed in operation, copy grippers 83 may have their mouths 85 aligned with the underside of strips 22 by merely forcing the forward run of rod 82 down into contact with the upper surface of strips 22. This eliminates chance of error since regardless of how many times rod 82 may be removed and replaced, once it is inserted in barrel 23, it is only necessary to swing bar 82 forward to point of contact with strips 22 to insure alignment of the copy grippers 83 in such a way that they will cooperate with copy gripper 21 in aligning the same edge of a piece of copy.

The operation of the copy holder as a whole, when rod 82 and grippers 83 are attached, is similar to the operation described in conjunction with Figure 1. In releasing the paper, however, it is necessary to separately release the edge from each of the grippers 83 in addition to

effecting the release of bar 21. The mouths of copy grippers 63 are opened by pressing the mouth portion toward the straight portion depending from barrel 84. It will be recognized that limiting surface 86 will be aligned with the limiting surfaces of L-strips 22 when the clip is in closed or gripping position as shown in Figure 14. The raised portion 87 in the forward run of rod 82 is for the purpose of permitting use of thumb rest 28, when wide copy is in the machine.

Although the foregoing description has been concerned with a preferred embodiment of this invention, it will be understood that many modifications of the illustrated construction may be made within the scope of the appended claims.

What is claimed is:

1. In a copy holder including, a stationary guide, a copy support mounted thereon for telescoping movement, a piston rod attached to the copy support, and means acting through said piston rod for raising and lowering said copy support, a cylinder adapted to receive a part of said piston rod, an abutment on said guide, the end of said cylinder through which said piston rod passes resting thereagainst, resilient means interposed intermediate a part of said guide and the other end of said cylinder, whereby said cylinder is held in position against said abutment and may be removed by compression of said resilient means.

2. In a copy holder including, a stationary guide, a copy support mounted thereon for telescoping movement, a piston rod having one end attached to the copy support, and means acting through said piston rod for raising and lowering said copy support, a piston detachably mounted on the end of said rod remote from the end attached to said copy support, said piston being of a diameter in excess of the diameter of the rod, a cylinder adapted to receive said piston, an abutment on said guide, one end of said cylinder resting thereagainst, and a leaf spring interposed intermediate a portion of said guide and the other end of said cylinder, said spring normally holding said cylnder in engagement with said abutment, said rod passing through an aperture in said abutment into said cylinder, said piston being too large to pass through the aperture, whereby said cylinder may be removed from operative position by compression of said spring thereby permitting easy replacement of said piston without removal of the rod.

3. In a copy holder including, a stationary guide, a copy support mounted thereon for telescoping movement, a piston rod having one end attached to the copy support, means acting through said piston rod for raising said copy support, and means for releasing the raising means, bearing means on said guide for said rod, a piston detachably mounted on the end of said rod remote from the end attached to said copy support, said piston being of a diameter in excess of that of the rod, a cylinder adapted to closely receive said piston, said cylinder being open at one end for the reception of the piston and having only a very small aperture near the other end, an abutment on said guide having an aperture therein to closely receive said rod, the open end of said cylinder resting against that part of the abutment defining the aperture, and compressible spring means interposed intermediate a portion of said guide and the substantially closed end of said cylinder normally frictionally holding the open end of said cylinder in contact with said abutment, whereby the device may be assembled by passing the rod through the aperture in the abutment, attaching the piston, compressing the resilient means, passing the open end of the cylinder over the piston and releasing the spring means which will then hold the cylinder in position.

4. In a copy holder including, a base, relatively movable members carried thereby, one of said members serving to support copy and the other including line designating means, means for moving one of said members to bring a selected line of copy into designated position, and an operating lever for actuating said moving means, the extent of movement of the lever determining the extent of movement of the movable member, means for selectively adjusting the extent of movement of the lever to one of three amplitudes, and separate means for selectively effecting adjustments intermediate three amplitudes, both of said means being carried by said lever, whereby quick adjustments may be made for copying material of normal spacing while adjustments for irregular spacing may be made.

5. In a copy holder including, a base, relatively movable members carried thereby, one of said members serving to support copy and the other including line designating means, means for moving one of said members to bring a selected line of copy into designated position, and an operating lever for actuating said moving means, the extent of movement of the lever determining the extent of movement of the movable member, means presenting a limiting surface underlying said lever, and a second lever pivotally attached to the first lever, said second lever including several chordwise surfaces located at different distances from the point of pivotal attachment, said second lever being movable to present any one of said chordwise surfaces to said base, whereby the stroke of the first named lever may be limited to an extent determinable by adjustment of said second lever.

6. In a copy holder including, a base, relatively movable members carried thereby, one of said members serving to support copy and the other including line designating means, means for moving one of said members to bring a selected line of copy into designated position, and an operating lever for actuating said moving means, the extent of movement of the lever determining the extent of movement of the movable member, means presenting a limiting surface underlying said lever, a second lever pivotally attached to the first lever, said second lever including several chordwise surfaces located at different distances from the point of pivotal attachment, said second lever being movable to present any one of said chordwise surfaces to said base, and resilient means for maintaining the surface selected in the position selected whereby the stroke of the first named lever may be limited to an extent determinable by adjustment of said second lever.

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