July 25, 1967 J. H. PATRICK ETAL 3,332,399

COPY HOLDER

Filed Oct. 20, 1965 4 Sheets-Sheet 1

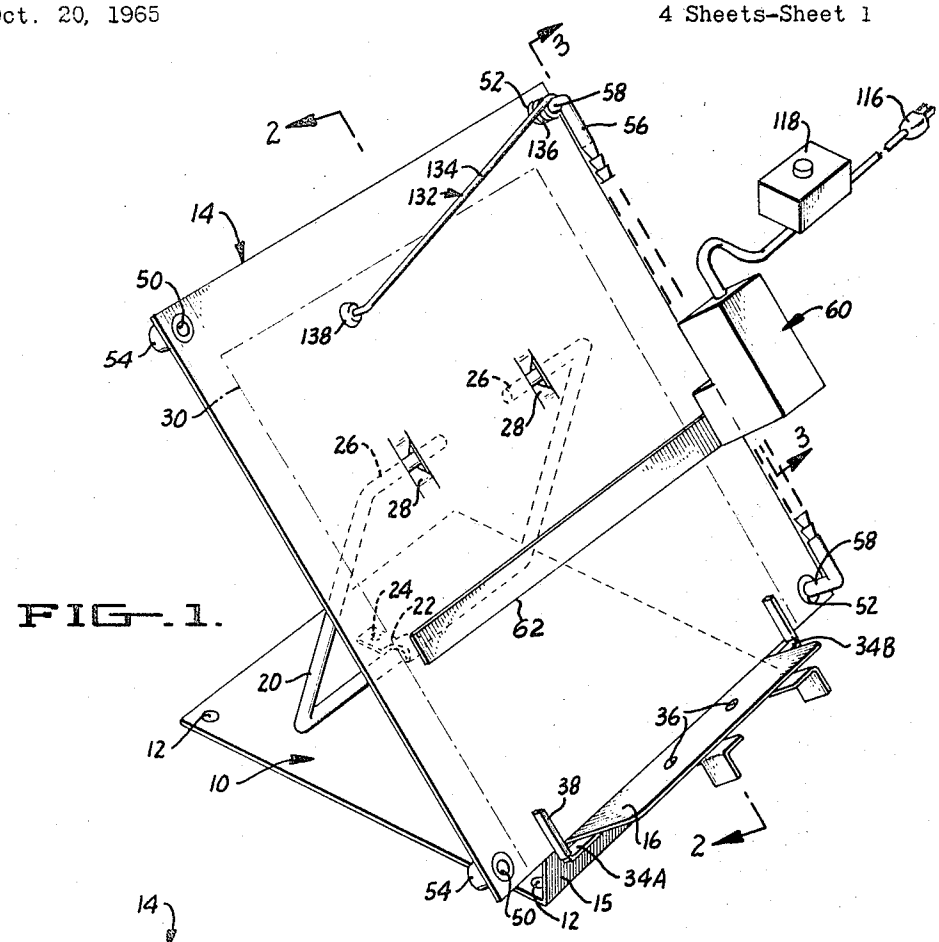


FIG. 1.

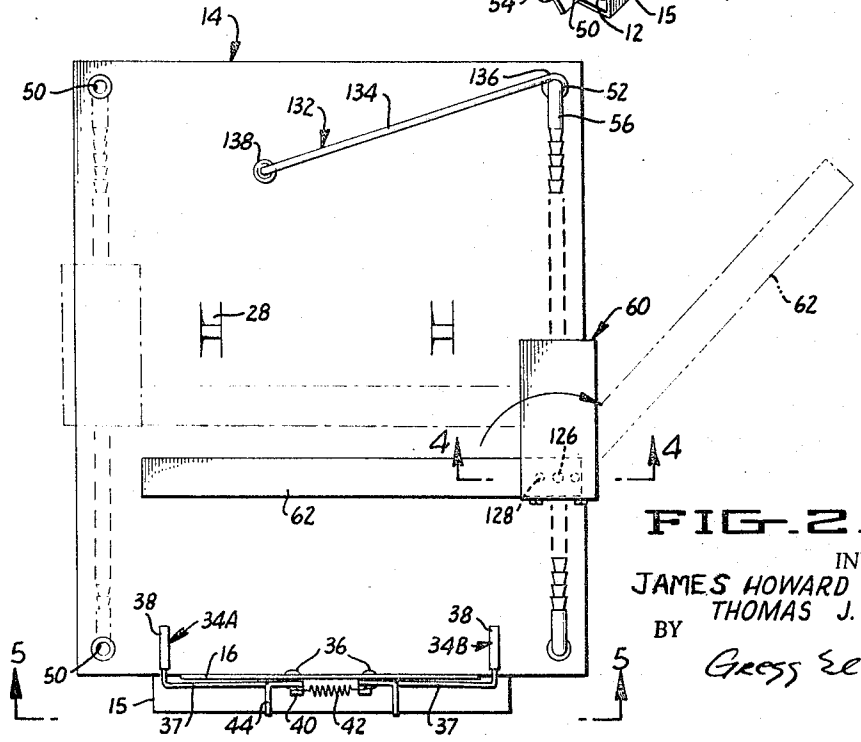


FIG. 2.

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COPY HOLDER

Filed Oct. 20, 1965 4 Sheets-Sheet 2

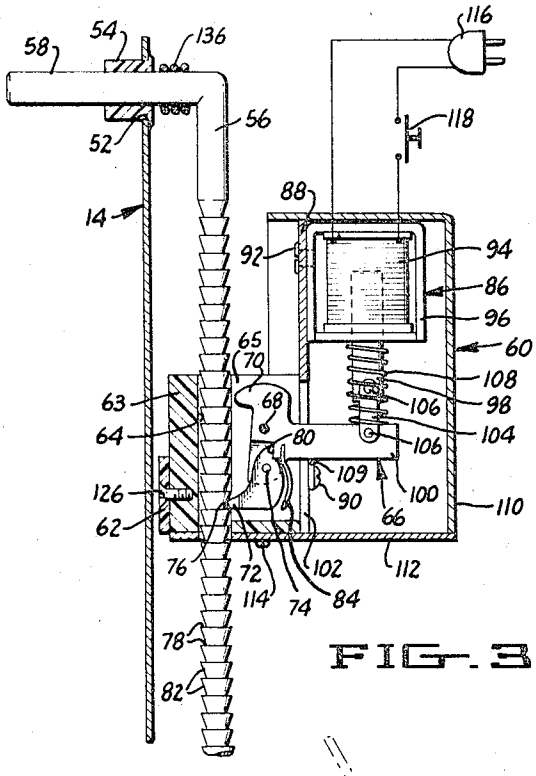


FIG. 3.

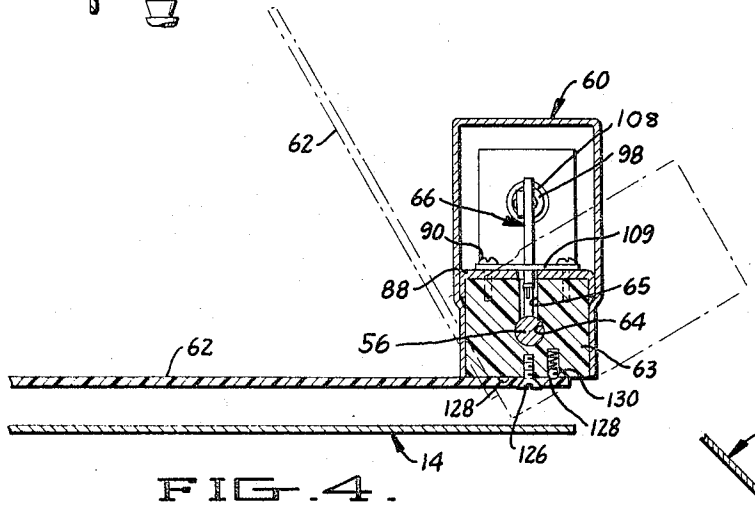


FIG. 4.

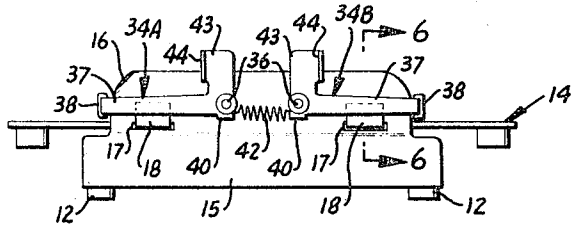


FIG. 5.

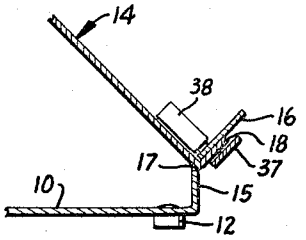


FIG. 6.

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COPY HOLDER

Filed Oct. 20, 1965 4 Sheets-Sheet 3

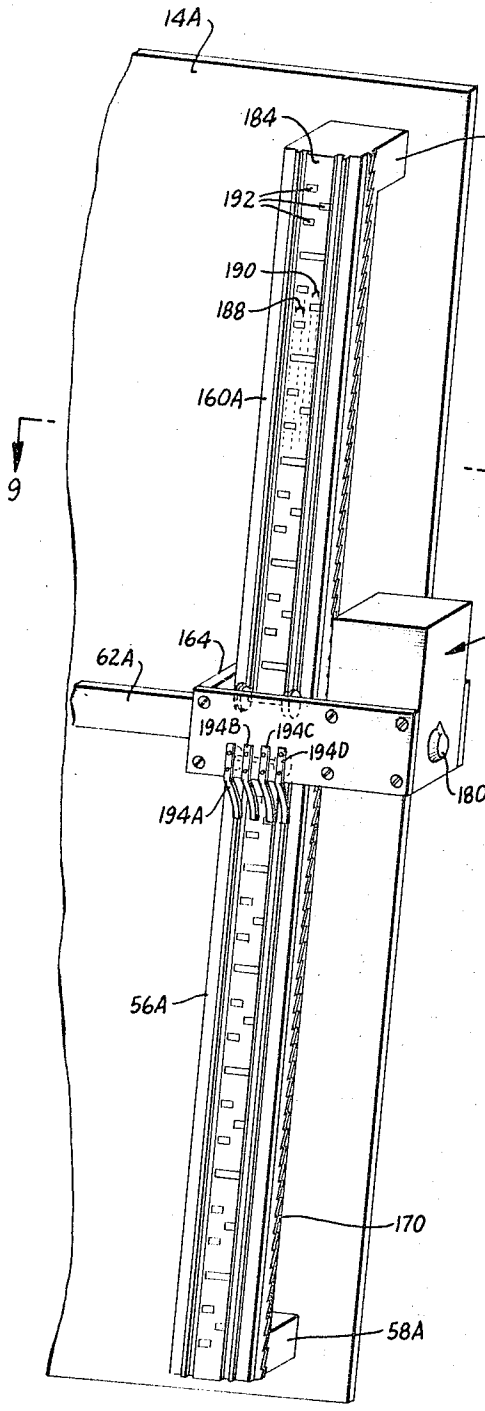


FIG. 7.

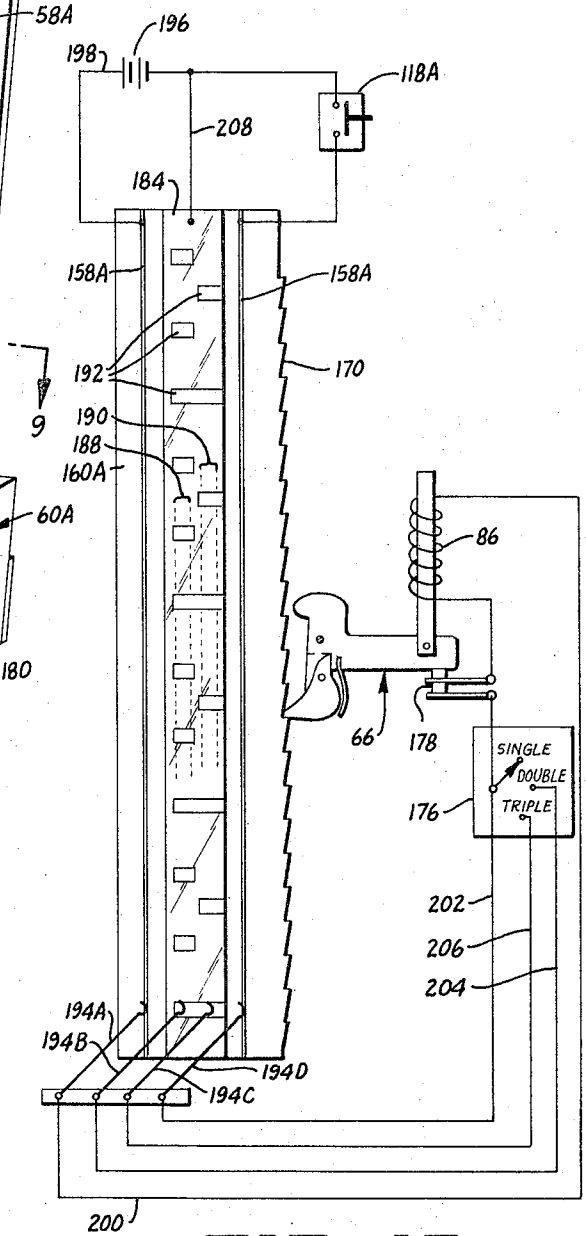


FIG. 10.

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COPY HOLDER

Filed Oct. 20, 1965 4 Sheets-Sheet 4

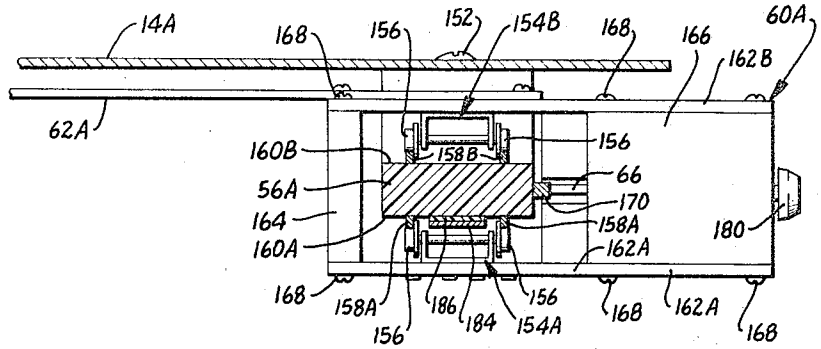


FIG. 9.

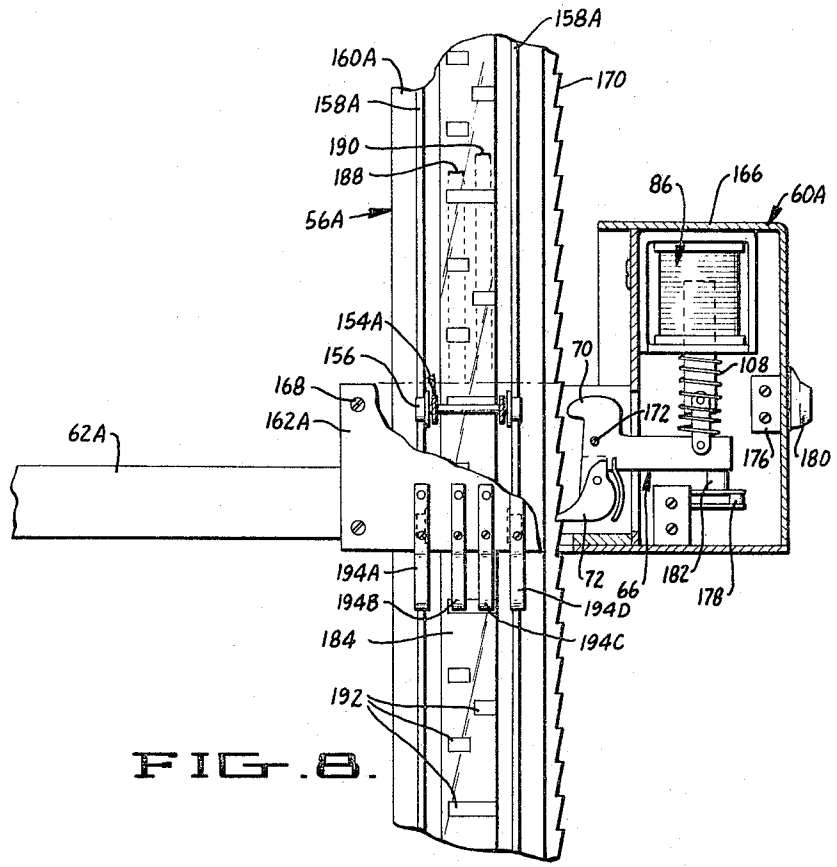


FIG. 8.

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United States Patent Office 3,332,399 Patented July 25, 1967

3,332,399

COPY HOLDER

James Howard Patrick, Burlingame, and Thomas J. Zilka, Mill Valley, Calif., assignors to Modern Wholesale Stationers, Inc., San Francisco, Calif., a corporation of California

Filed Oct. 20, 1965, Ser. No. 498,630
8 Claims. (Cl. 120—34)

This invention relates to a copy holder for holding copy to be transcribed and more particularly to a copy holder which includes a line guide member extending thereacross and movable theeralong under control of an electrically operated means.

A copy holder is often used by the operator of key operated machines such as a typewriter to support a document in a generally upright position for ease in viewing while transcribing information from the document to the machine keyboard. A typical copy holder includes a generally rectangular-shaped plate against which the copy is held. Often a line guide extends across the plate and is movable therealong to the desired line to guide the operator in reading the copy. With many prior art arrangements the line guide is manually movable by the operator. Thus, each time the operator completes a line of information from the document the line guide is moved down to the next line of information. This requires removal of the operator's hand or hands from the keyboard to the copy holder to manually advance the line guide.

An object of this invention is the provision of an improved copy holder having a remotely controlled line guide.

An object of this invention is the provision of an electrically operated line guide for use with a copy holder, which line guide is movable upon actuation of a switch under control of the operator.

An object of this invention is the provision of an electrically operated line guide for use with a copy holder, which line guide is movable automatically by means of a periodic supply source therefor.

An object of this invention is the provision of a copy holder with improved spring biased retaining means for retaining the copy on the holder.

An object of this invention is the provision of an improved connecting means between a generally horizontally disposed base member and the inclined plate against which the copy is held.

These and other objects and advantages are provided by attaching the line guide to a mounting head which is movable along a notched rod extending longitudinally of the copy holding plate. A pawl is pivotally attached to the mounting head which pawl is normally resiliently biased by a spring into engagement with the notched rod to support the mounting head thereon. A solenoid is provided to actuate said pawl, and energization of the solenoid may be under control of a switch which is conveniently located for actuation by the operator. Alternatively, the solenoid may be periodically energized by the connection of a source of periodic current pulses thereto. When the solenoid is energized the pawl is moved to its actuated position and returns to normal position upon deenergization. During operation of the solenoid the head drops by gravity to step the line guide. By pulsing the solenoid, the mounting head may be stepped along the rod and if desired a suitable switching means may be employed for single, double and triple space stepping of the line guide.

In the drawings wherein like reference characters refer to the same parts in the several views:

FIGURE 1 is a perspective view of a copy holder embodying this invention;

FIGURE 2 is a front view of the copy plate taken along line 2—2 of FIGURE 1;

FIGURE 3 is a longitudinal sectional view through the mounting head taken along the line 3—3 of FIGURE 1;

FIGURE 4 is a transverse section through the mounting head taken on line 4—4 of FIGURE 2;

FIGURE 5 is a lower end view taken along line 5—5 of FIGURE 2;

FIGURE 6 is a cross sectional view taken on line 6—6 of FIGURE 5;

FIGURE 7 is a fragmentary perspective view of a modified form of copy holder which includes means for single, double and triple spacing of the line guide;

FIGURE 8 is a fragmentary front elevational view of the mounting head and rail shown in FIGURE 7;

FIGURE 9 is a fragmentary cross sectional view taken on line 9—9 of FIGURE 7; and

FIGURE 10 is a circuit diagram showing the electrical circuit for the modified form of invention shown in FIGURES 7 through 9.

Referring now to FIGURE 1 of the drawings a copy holder is shown comprising a generally horizontal base member 10 which may be provided with legs 12 adjacent the corners thereof for support on a generally plane surface. An inclined copy holder or panel member 14 is supported on the base. An upwardly extending flange 15 is formed at the forward edge of the base which flange is formed with a forwardly inclined shelf or ledge 16 at the upper free end thereof. As best seen in FIGURES 5 and 6 the shelf is provided with a pair of spaced slots 17 adapted to receive forwardly extending tabs 18 formed at the lower end of the panel member 14. As seen in FIGURE 1, a bracket 20 formed of heavy gauge wire or the like extends between the panel and base for support of the panel at the desired angle. The bracket 20 is of a generally U-shape with the horizontal base of the bracket attached to the base 10 by a resilient clip 22 fixed by rivets 24 or other suitable means to the base. The bracket may be slid into and out from under the arcuate free end of the clip, and is held firmly in position on the base when engaged by the clip. The upper ends 26 of the bracket are bent inwardly and engage loops 28 at the rear face of the copy plate 14. The loops may be simply formed by slitting the plate 14 along parallel lines and pressing the portion therebetween outwardly toward the rear of the copy plate. For storage and transportation of the device the plate 14 is removed from the base 10 by disengaging the wire bracket 20 from the clip 22 and then sliding the tabs 18 out of the slots 17. The bracket may then be pivoted against the rear face of the copy holder 14 and the copy plate disposed on the base.

In use, the document 30 to be transcribed (such as a sheet of paper or the like shown in broken lines in FIGURE 1) lies against the copy plate 14 with the bottom edge supported on the shelf 16. A pair of resiliently biased clamp members 34A and 34B are pivotally supported on pins 36 extending from the bottom of the shelf for clamping the lower end of the sheet 30 to the plate 14. The clamp members 34A and 34B are of similar construction and as best seen in FIGURES 2 and 5 each includes a laterally extending arm portion 37 with generally upright outer ends which may be covered with a tubular gripping member 38 of suitable material such as plastic, rubber or the like, for engagement with the sheet 30. The inner ends of the members 34A and 34B are formed with generally rearwardly extending tabs 40 having downwardly bent ends which are interconnected by a tension spring 42 to resiliently bias the gripping members against the sheet 30. A pair of generally forwardly extending arms 43 having downwardly bent finger gripping ends 44 are formed at the inner ends of the arms 37. When the ends 44 are urged together by the operator as by gripping the same between the thumb and forefinger,

the clamp members are pivoted away from the copy sheet for removal thereof and insertion of another sheet. The single tension spring **42** serves to return both members to clamping position when the lever arms are released.

The copy plate or panel member **14** is formed with two pairs of apertures **50** and **52** adjacent the corners thereof, and short length tube sections **54** extending to the rear of the panel are attached to the panel at the apertures by swaging, welding or other suitable process. A notched rod **56** (comprising a stationary rack member) with rearwardly directed arms **58** at the opposite ends thereof is removably mounted in either of the pair of apertures **50** at the left-hand side of the plate **14** or the pair **52** (as illustrated) at the right-hand side, as desired. A tight frictional engagement of the arms **58** in the holes is provided by constructing the notched rack member **56** of resilient steel and forming the arms **58** with a small non-parallelism, such that when the arms **58** are inserted into the holes a tight frictional engagement is provided. With this arrangement the arms may be inserted a variable amount to accommodate copy of varying thickness.

A mounting head **60** carrying a line guide **62** is adapted for axial movement along the racks **56**. As seen in FIGURES 3 and 4 the head is shown comprising a generally rectangular shaped block **63** which is provided with a bore **64** through which the rack **56** extends. A slot **65** is formed in the block and extends from the bore **64** to the front face thereof. A double ended pawl **66** is pivotally mounted in the slot on a pivot pin **68** extending between the slot walls, which pawl cooperates with the rack **56**.

As seen in FIGURE 3, one end **70** of the double ended pawl is normally disengaged from the rack **56** and preferably this end is smoothly curved for reasons which will become apparent hereinbelow. The other end of the double ended pawl **66** is provided with a separate pawl element **72** pivotally mounted on a pin **74** carried by the pawl. The pawl element **72** is preferably provided with a generally flat edge **76** which normally engages a flat land portion **78** of one of the notches formed on the rack **56**. In the position of the pawl element **72** illustrated in FIGURE 3, further clockwise rotation thereof is prevented by engagement of the pawl element with a shoulder **80** formed on the pawl **66**. The head **60** is thereby locked against downward movement along the rack **56** by the positive engagement of the pawl element **72** with a notch on the rack. The head **60** can, however, be raised by simply pushing the same upwardly along the rack. As the head is raised, the pawl element **72** pivots in a counterclockwise direction about the pin **74** as viewed in FIGURE 3 as the pawl element rides along the inclined truncated face **82** of the adjacent higher notch. A leaf spring **84** suitably attached to the pawl **66** as by welding or the like and engaging the pawl element **72** resiliently biases the pawl element in a clockwise direction as viewed in FIGURE 3 toward engagement with the abutment **80** to return the pawl element to the illustrated position as the head is pushed upwardly and the pawl element enters the adjacent higher notch.

Pivotal movement of the pawl **66** about the pivot pin **68** is under control of a solenoid **86** carried by the head. As seen in FIGURES 3 and 4 a U-shaped channel bracket **88** is attached by screws **90** to the block **63**, with one end of the bracket extending upwardly therefrom. The solenoid **86** is attached to the other side of the bracket at the upper end thereof by screws **92**. The solenoid comprises a coil **94** carried by a bracket **96** and an armature **98** reciprocably movably mounted within the coil. The pawl **66** is formed with an arm **100** which extends from the block **62** and outwardly through a slot **102** in the bracket **88**. The arm is connected to the armature through a connecting link **104** and suitable connecting pins **106**. A compression spring **108** between the bracket **96** and pawl arm **100** serves to resiliently bias the pawl **66** in a clockwise direction about the pivot pin **68** as viewed in FIGURE 3 for engagement of the pawl element **72** with the rack. A stop member **109** carried by the screws **90** spans the slot **102** and limits clockwise rotation of the pawl **66**. When the solenoid is energized, the armature **98** is drawn upwardly into the coil whereupon the spring **108** is compressed and the pawl **66** is pivoted in a counterclockwise direction as viewed in FIGURE 3 for engagement of the pawl end **70** with the rack. When the solenoid is deenergized, the spring **108** expands to return the pawl to the illustrated position. A two piece housing comprising wall part **110** and a separate bottom **112** encloses the head with the wall part **110** clipping over the block **93** and the bottom fastened thereto by screws **114**.

The solenoid may be energized by any suitable supply source such as batteries or dry cells, not shown, which may be carried on the base **10**, if desired. In the illustrated arrangement the solenoid is shown attached to a plug **116** which is adapted for connection to a 110 volt A.C. supply through a normally open switch **118**. The switch may be located adjacent the keyboard of the typewriter for finger actuation by the operator, or it may be suitably located for foot or knee actuation. If desired, the switch may be incorporated in the keyboard of the typewriter or the like machine for actuation by a key thereof.

Regardless of the location of the switch or the source of solenoid power, when the switch **118** is closed, the solenoid is energized and the pawl **66** is rapidly pivoted whereupon the pawl member **72** is withdrawn from one notch of the rack and the other end **70** of the pawl enters another notch. The actuation of the armature **98** and attached pawl **66** is sufficiently rapid such that upon energization of the solenoid, the head and attached line guide **62** remain substantially stationary.

When the solenoid is deenergized upon reopening of the switch **118**, the armature **98** and attached pawl **66** are returned to the illustrated normal position by the spring **108**. The return of the solenoid from the energized position to the normal deenergized position under the combined force of the pring **108** and the force of gravity on the movable parts is at a much slower rate than when the solenoid is energized. Consequently, during the time that the pawl **66** pivots back to normal position the head **60** with the attached line guide **62** drops the distance of one notch on the rack at which point the pawl element **72** engages the next lower notch on the rack. The weight of the head and strength of the spring **108** are selected to provide for the above-described head movement for the distance of one notch upon deenergization of the solenoid. It will be apparent, therefore, that the head **60** may be moved downwardly with a step-by-step movement by alternately energizing and deenergizing the solenoid **86**. If desired, the head may be moved down manually by energizing the solenoid and pushing down on the head. The curved pawl end **70** in engagement with the rack **56** then functions substantially as a detent member which is resiliently urged against the rack by the solenoid action. With this arrangement after the copy sheet is put on the plate, the operator can easily and rapidly move the line guide down to the desired level. Also, as mentioned above, with the solenoid deenergized, the line guide is easily manually moved upwardly aaginst the action of the spring biased pawl member **72**.

The notches on the rack **56** preferably extend around the entire periphery thereof whereby the head is povitable about the rack axis. When inserting a copy sheet on the plate **14** the line guide **62** therefor may be swung outwardly away from the plate and out of the way as viewed in broken lines in FIGURE 4.

In the illustrated arrangement the rack **56** and head **60** are located adjacent the right-hand edge of the copy plate **14**. For convenience some operators may prefer that the rack and head be located adjacent the left-hand edge of the plate. With this arrangement, this may be accomplished by simply removing the arms **58** of the rack from the apertures **52** in the plate **14** and reinserting them into the apertures **50** adjacent the left-hand longitudinal edge

of the plate. The line guide 62 which is pivotal about the axis of a mounting pin 126 is pivoted to extend in the opposite transverse direction across the plate 14. Holes 128 (see FIGURE 4) are formed at diagonally opposite points from the pin 126 and receive a spring biased detent number 130 carried by the block 63, which detent member is received in the holes to releasably lock the line guide in either transverse extending position. Also, as mentioned above, the rack arms 58 may be inserted through the sleeves 54, any desired amount to accommodate copy of various thickness. With this arrangement therefore a single sheet or an entire book may be placed on the copy holder and the line guide positioned adjacent thereto.

When required, a retaining device 132, as seen in FIGURES 1 and 2 may be mounted on the upper leg 58 of the rack for holding the upper end of the copy sheet against the plate 14. The novel retaining device is made of resilient rod material and has an elongated arm portion 134 which is coiled at one end 136. The coiled portion, is slid onto the upper arm 58 prior to insertion of the arm into its mounting hole. The other end of the arm 134 is bent to extend rearwardly and is provided with a rubber or plastic tip 138 which engages the copy. The device may be removed from the copy by lifting the arm 134 to bend the same and swinging the arm about the axis of the upper leg 58 to the desired position. When the arm is released it springs back into engagement with the copy sheet 30 to hold the same against the plate 14.

For multiple space operation of the line guide, the switch 118 may be pressed and released the number of times required for the desired spacing. In an alternative arrangement illustrated in FIGURES 7 to 10 the solenoid is provided with an energization circuit for pulsing the same one, two or three times upon actuation of a control switch for single, double or triple space operation of the control head. With this arrangement a rod 56A with rearwardly directed arms 58A is attached to a copy plate or panel member 14A as by screws 152 (as seen in FIGURE 9). A mounting head 60A with a line guide 62A extending therefrom is adapted for longitudinal movement along the rod 56A. In the illustrated arrangement the head is provided with a pair of inwardly facing carriages 154A and 154B having flanged wheels 156 which ride on tracks 158A and 158B attached to the front and rear faces 160A and 160B, respectively, of the rod for travel therealong. Obviously, a sliding engagement or other suitable means may be employed for movably mounting the head 60A on the rod 56A.

The carriages 154A and 154B are attached to the inner faces of front and rear frame members 162A and 162B, respectively, of the head by any suitable means not shown. The ends of the frame members are interconnected by an end frame member 164 and the solenoid housing 166 at opposite ends thereof attached thereto by screws 168. It will be seen that the frame members 162A, 162B and 164 together with the solenoid housing 166 form a head having a central opening through which the rod 56A extends.

One side of the rod 56A is provided with teeth 170 extending therealong and comprising a stationary rack for cooperation with the double ended pawl 66 pivotally mounted on a pin 172 extending between opposite walls of the solenoid housing 166. The pawl 66, may be of the same construction as the pawl 66 shown in FIGURES 3 and 4 and described in detail above and requires no further description. Further, the solenoid 86 for operation of the pawl may also be of the same type as described above. The pawl and rack function in the same manner as described. Briefly, with the solenoid deenergized the pawl 66 is pivoted by the spring 108 into a position wherein the pawl element 72 engages the rack to lock the head against downward movement along the rod. When the solenoid is energized the pawl element 72 is withdrawn from one notch of the rack and the other end 70 rapidly enters another notch to prevent the head from dropping downwardly under the force of gravity along the rod 56A. When the solenoid is denergized the pawl 66 is returned to the normal position illustrated in FIGURE 8. During this return movement of the pawl the head 60A drops the distance of one notch on the rack 170 to advance the line guide 62A one space. The details of this operation are the same as described above with reference to the embodiment shown in FIGURES 1 to 6.

The pulsing circuit for the solenoid 86 includes a selector switch 176 and an interrupter switch 178 as best seen in FIGURE 8. The selector switch 176 may be mounted within the solenoid housing 166 and provided with a control knob 180 for manual actuation of the switch. The interrupter switch 178 is also mounted within the housing 166 by any suitable means not shown and has normally closed switch contacts which are under control of the solenoid 86. When the solenoid 86 is energized the normally closed interrupter switch contacts are opened by the member 182 extending between the pawl 66 and one switch arm.

The pulsing circuit further includes an elongated strip 184 of conducting material attached to the rod through an insulating member 186. Any suitable means such as cement or adhesive may be employed for fastening the strips together and to the rod 56A. The strip 184 includes two parallel rows designated 188 and 190 which extend longitudinally thereof. Each row includes alternate electrical conducting and electrical insulating areas, the insulting areas being designated 192. Such areas simply may comprise apertures formed in the conducting strip which are filled with insulating material. Alternatively, the conducting strip 184 may be deposited on the insulating base 186 in the illustrated pattern using printed circuit techniques. Obviously, any other suitable means may be used to form the rows of alternate electrical insulating and conducting members.

The one row 188 is employed for double spacing and the other row 190 is employed for triple spacing. (Neither row is required for single spacing.) The electrical insulating areas 192 in the row 188 are spaced apart the distance of two notches on the rack, while the insulating areas 192 in the row 190 are spaced the distance of three of said notches.

For brushes 194A, 194B, 194C and 194D are carried by the head 60A, with the outer two brushes 194A and 194D in contact with rails 158A and the inner two brushes 194B and 194C in contact with the rows 188 and 190 of the strip 184. As the head moves along the rail the two outer brushes remain in contact with the rails whereas the two inner brushes alternately contact conducting and insulating portions of the strip 184.

Reference is now made to the schematic circuit diagram of FIGURE 10 wherein a low voltage supply such as a battery 196 is shown for energization of the device. One battery terminal connects through a lead wire 198 to one rail 158A which rail connects through the brush 194A and a lead wire 200 to one terminal of the solenoid 86. The other terminal of the battery connects through a normally open push button switch 118A, the other rail 158A, brush 194D, a lead wire 202 and the interrupter switch 178 to the other terminal of the solenoid 86. The switch 118A is suitably located for actuation by the operator, and when the switch is closed it will be apparent that the solenoid 86 will be energized. Upon energization of the solenoid the interrupter contacts 178 open whereupon the solenoid is immediately deenergized. As described above the weight of the head 60A and strength of the spring 108 are selected to provide for the downward movement of the head along the rod a distance of one notch on the rack 170 for each cycle of operation of the solenoid. With the selector switch 176 in the illustrated "single" step position, it will be apparent that if the switch 118A is held closed by the

operator the interrupter contacts **178** will alternately open and close whereupon the head **60A** will move downwardly step-by-step along the rod until it reaches the lower end of travel or until the switch **118A** is reopened. In operation, the switch **118A** is normally only momentarily closed by the operator for single step operation of the device when the switch **176** is in the illustrated position. It will here be noted that the brushes **194A** and **194D** could be eliminated from the construction of the device by simply connecting the battery **196** and switch **118A** directly to the solenoid and contacts **178** rather than through said brushes and rails **158A**.

For double and triple spacing operation the selector switch is set to the appropriate "double" or "triple" space position for connection of one of the brushes **194B** or **194C** to the interrupter switch **178**. It will be seen that the brushes **194B** and **194C** connect through conductors **204** and **206**, respectively, to the selector switch **176**. The brushes **194B** and **194C**, associated conductors **204** and **206** and switch **176** are in shunt circuits with the switch **118A**, which circuits include also the coded contact strip **184** and a conductor **208** connecting the battery **196** to said strip **184**.

Assuming that the selector switch is set to the "double" space position, a circuit from the battery **196** through lead wire **208**, the strip **184**, brush **194B**, conductor **204**, and switch **176** to the interrupter contacts **178** is completed whenever the brush **194B** leaves an insulating section **192** and contacts the conducting strip **184**. The adjacent insulating sections **192** in the double spacing row **188** are spaced apart the length of two notches on the rack **170** and stepping of the head is stopped when the brush **194B** is in contact with an insulating section **192**. In double spacing operation, when the operator momentarily closes the switch **118A**, the solenoid **86** is energized through said switch for a single step of the head along the rack **170** in the manner described above. When the head drops one step the brush **194B** contacts the strip **184** and electrical connection therethrough from the battery to the interrupter switch **178** is completed for again energizating the solenoid **86** when the interrupter contacts reclose. Consequently the head **60A** will step again. At the end of the second step the brush **194B** engages an insulating member **192** whereupon the head **60A** stops after stepping twice for double spacing of the line guide **62A**.

The triple spacing operation is accomplished in substantially the same manner as the above described double spacing function. With the selector switch **176** set for triple spacing, the head **60A** is stopped with the brush **194D** in engagement with one of the insulator members **192**. When the switch **118A** is momentarily closed the solenoid **86** is energized in the manner described above to step the head **60A** the distance of one notch along the rack. With the head so disposed, the brush **194C** contacts the electrically conducting strip **184** for energization of the interrupter contacts **178** through the switch **176**. After two more cycles of operation of the solenoid **86** the brush **194C** will engage another insulating section **192** whereupon stepping of the head **60A** ceases. Since the insulating sections **192** in row **190** travelled by the brush **194C** are spaced the distance of three notch lengths of the rack **170** the line guide triple spaces upon momentary closure of the switch **118A**. It will be apparent, therefore, that with a single actuation of the switch **118A**, the line guide may be stepped one, two or three spaces depending upon the setting of the selector switch **176**, for copying single, double and triple spaced copy material.

If desired, the contacts **118** or **118A** may be actuated periodically for periodic actuation of the solenoid **86**. For example, the contacts **118** or **118A** may be included in a timer switch, with the contacts under control of a motor driven cam member. With the motor operating at a constant speed the switch contacts **118** or **118A** are periodically closed by the cam for periodic energization of the apparatus. Speed control means may be included in the energization circuit of the motor if desired, to control the motor speed for control of the rate at which the line guide is stepped.

The invention having been described in detail in accordance with the requirements of the patent statutes, various other changes and modifications may suggest themselves to those skilled in this art within the spirit and scope of the invention defined in the appended claims.

We claim:

1. A copy holder comprising a substantiantially flat copy plate adapted to receive copy thereon;
- a line guide extending across said plate;
- a mechanism including a mounting head carrying said line guide and movable longitudinally along said copy plate upon actuation thereof to effect movement of said line guide over copy carried by said copy plate;
- a solenoid carried by said movable mounting head for actuation thereof; and
- an electrical circuit for energization of said solenoid to control actuation of said mechanism, said electrical circuit for energization of said solenoid including an interrupter switch under control of said solenoid, and switching means under control of the mounting head position in series circuit with said interrupter switch.

2. A copy holder comprising a substantially flat copy plate adapted to receive copy thereon;
- means supporting said plate in a generally upright position;
- a rack with teeth formed thereon carried by said copy plate and extending longitudinally thereof;
- a mounting head carried by said rack and movable therealong;
- a line guide carried by said mounting head and extending generally transversely across said copy plate;
- a pawl pivotally mounted on said mounting head and engageable with said rack for supporting said mounting head when the pawl is in engagement with said rack; and
- means carried by said mounting head and movable therewith for pivoting said pawl for disengaging the same from the rack to permit movement of said mounting head therealong;
- said last-mentioned means comprising an electrically operated solenoid carried by said mounting head, and an electrical circuit connected to said solenoid for momentarily energizing said solenoid, said electrical circuit including switch means for pulsing said solenoid once for single spacing and a plurality of times for multiple spacing of said line guide.

3. A copy holder comprising a generally horizontally disposed base member having an upright flange along the front edge thereof;
- a copy shelf formed by a forwardly inclined upper end on said flange;
- means forming a slot in said copy shelf;
- a generally upright copy plate having a tab formed at the lower end thereof for insertion through said slot and support of said copy plate on said shelf;
- means between said base member and copy plate for support of said copy plate in a generally upright position; and
- a pair of copy clamping members pivotally mounted on the bottom of said copy shelf and having bent end portions extending generally upwardly for engagement with said copy plate; and
- resilient means attached to said copy clamping members beneath said shelf for resiliently biasing the bent end portions into engagement with said copy plate.

4. A copy holder comprising a substantially flat copy plate adapted to receive copy thereon;

a line guide extending across said plate;

a mechanism including a mounting head carrying said line guide and movable longitudinally along said copy plate upon actuation thereof to effect movement of said line guide over copy carried by said copy plate;

a solenoid connected to said mechanism for actuation thereof; and

an electrical circuit for energization of said solenoid to control actuation of said mechanism, which electrical circuit includes an interrupter switch under control of said solenoid, an elongated strip of electrical conducting material with insulating portions spaced therealong, a brush carried by said mounting head and slidably engaging said strip and insulating portions thereon, and means electrically connecting said interrupter switch and brush to said solenoid for automatic stepping of said mounting head when said brush engages said strip.

5. A copy holder comprising a generally horizontally disposed base member having an upright flange along the front edge thereof;

a copy shelf formed by a forwardly inclined upper end on said flange;

means forming a slot in said copy shelf;

a generally upright copy plate having a tab formed at the lower end thereof for insertion through said slot and support of said copy plate on said shelf;

means between said base member and copy plate for support of said copy plate in a generally upright position;

a clamp member for holding the upper end of copy to said copy plate;

said clamp member comprising an elongated arm of resilient material which is coiled at one end and bent at an angle at the other end; and

a cylindrical mounting arm extending from said copy plate adjacent the upper end thereof over which the turns of the coiled end of said resilient arm extend for attachment of said arm to said copy plate with said bent end thereof in engagement with said copy plate;

said resilient arm being pivotable about said mounting arm for selectively positioning the bent end thereof on the copy supported by said copy plate.

6. A copy holder comprising a copy plate;

a clamp member for holding copy to said copy plate;

said clamp member comprising an elongated arm of resilient material which is coiled at one end and bent at an angle at the other end; and

a cylindrical mounting arm extending from said copy plate over which the turns of the coiled end of said resilient arm extend for attachment of said arm to said copy plate with said bent end thereof in engagement with said copy plate;

said resilient arm being pivotable about said mounting arm for selectively positioning the bent end thereof on the copy supported by said copy plate.

7. A copy holder comprising a substantially flat copy plate adapted to receive copy thereon;

means supporting said plate in a generally upright position;

a rack with teeth formed thereon carried by said copy plate and extending longitudinally thereof;

a mounting head carried by said rack and movable therealong;

a line guide carried by said mounting head and extending generally transversely across said copy plate;

a pawl pivotally mounted on said mounting head and engageable with said rack for supporting said mounting head when the pawl is in engagement with said rack;

means for pivoting said pawl for disengaging the same from the rack to permit movement of said mounting head therealong;

said pawl having first and second ends and being pivotable between first and second positions wherein the respective first and second ends engage teeth on the rack for the support of the mounting head; and

said mounting head being moved by gravity one tooth length along the rack when said pawl is disengaged from said rack during pivotal movement thereof from said first position to said second position.

8. The copy holder recited in claim **7** wherein said mounting head remains substantially stationary on said rack during pivotal movement of said pawl from said second position to said first position.

References Cited

UNITED STATES PATENTS

1,571,658	2/1926	Coles	120—34
1,800,071	4/1931	Hevenor	120—34
1,881,102	10/1932	Sperling	120—28
1,881,103	10/1932	Sperling	120—34
1,980,300	11/1934	Sperling	120—34
2,283,493	5/1942	Dickinson et al.	120—34
2,311,717	2/1943	Warren	120—28

FOREIGN PATENTS

28,213	12/1908	Great Britain.
312,110	10/1933	Italy.

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