

April 4, 1939.

H. C. STEVENS

2,153,103

COPY HOLDER

Filed June 26, 1936

4 Sheets-Sheet 1

Fig. 1.

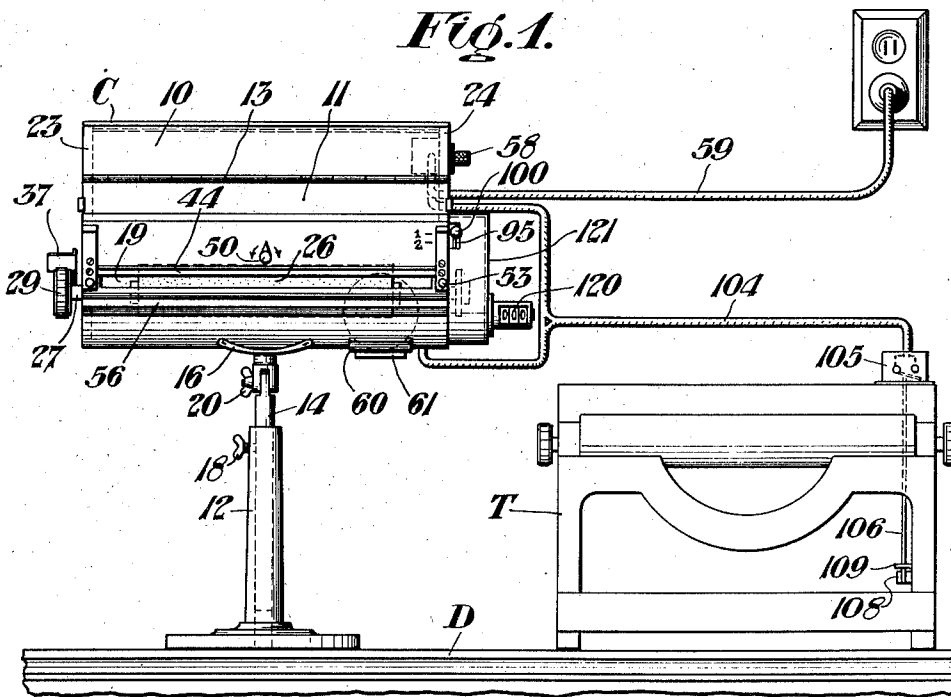
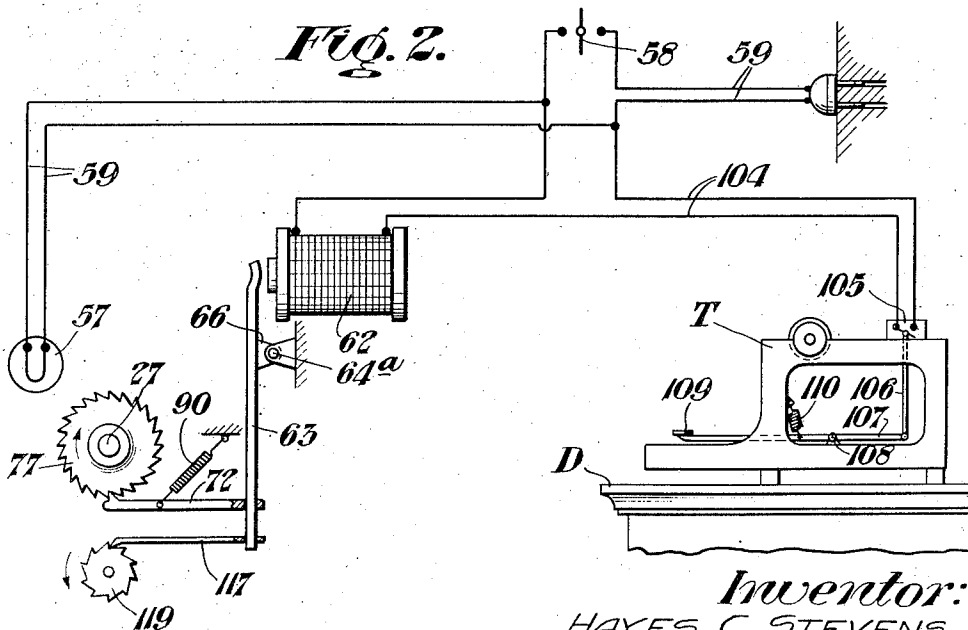


Fig. 2.



Inventor:
HAYES C. STEVENS,
by *Usina & Kauber*
his Attorneys.

April 4, 1939.

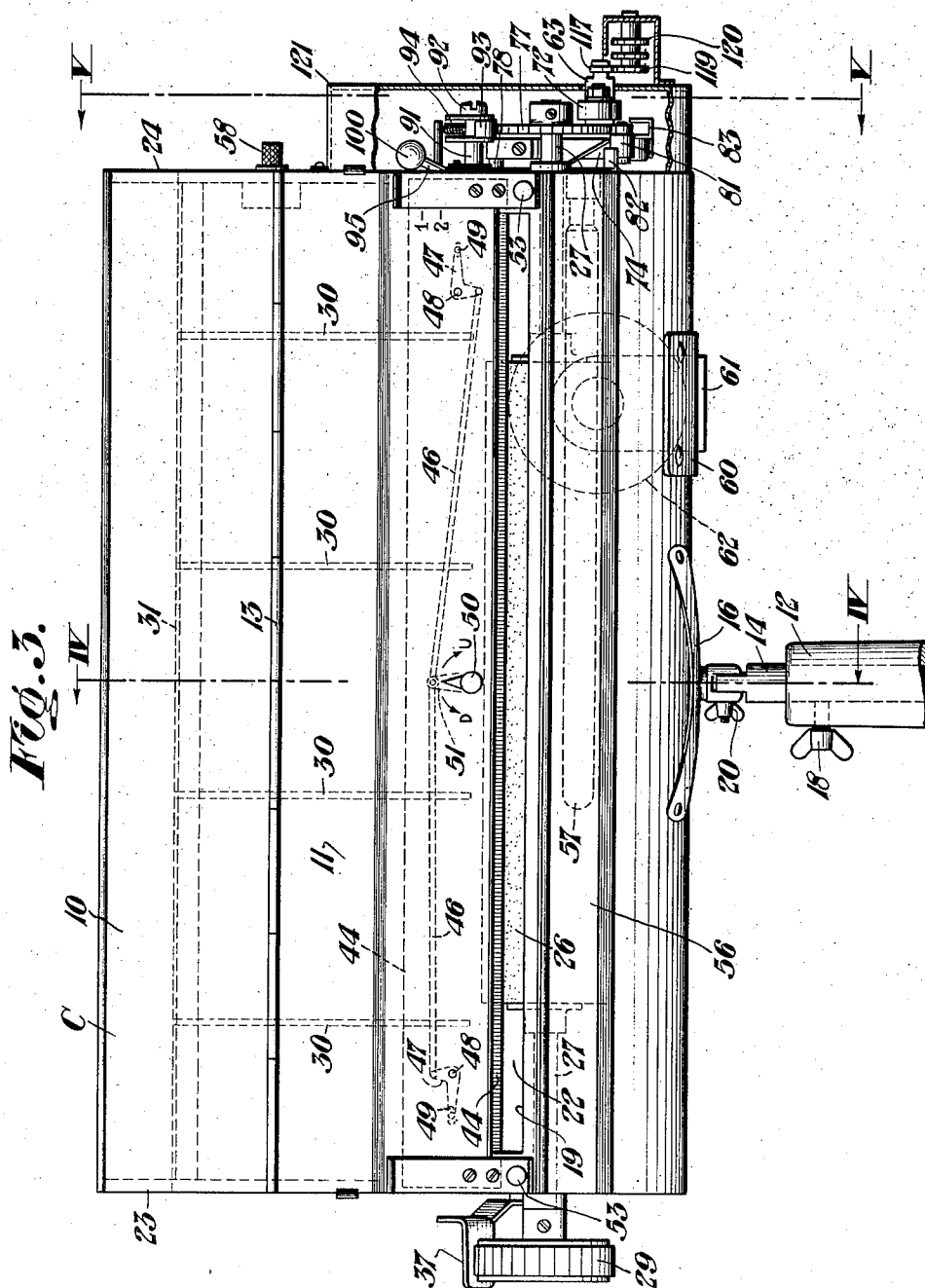
H. C. STEVENS

2,153,103

'COPY HOLDER

Filed June 26, 1936

4 Sheets-Sheet 2



Inventor:

HAYES C. STEVENS,

by: *Usina & Rumber*
his Attorneys.

April 4, 1939.

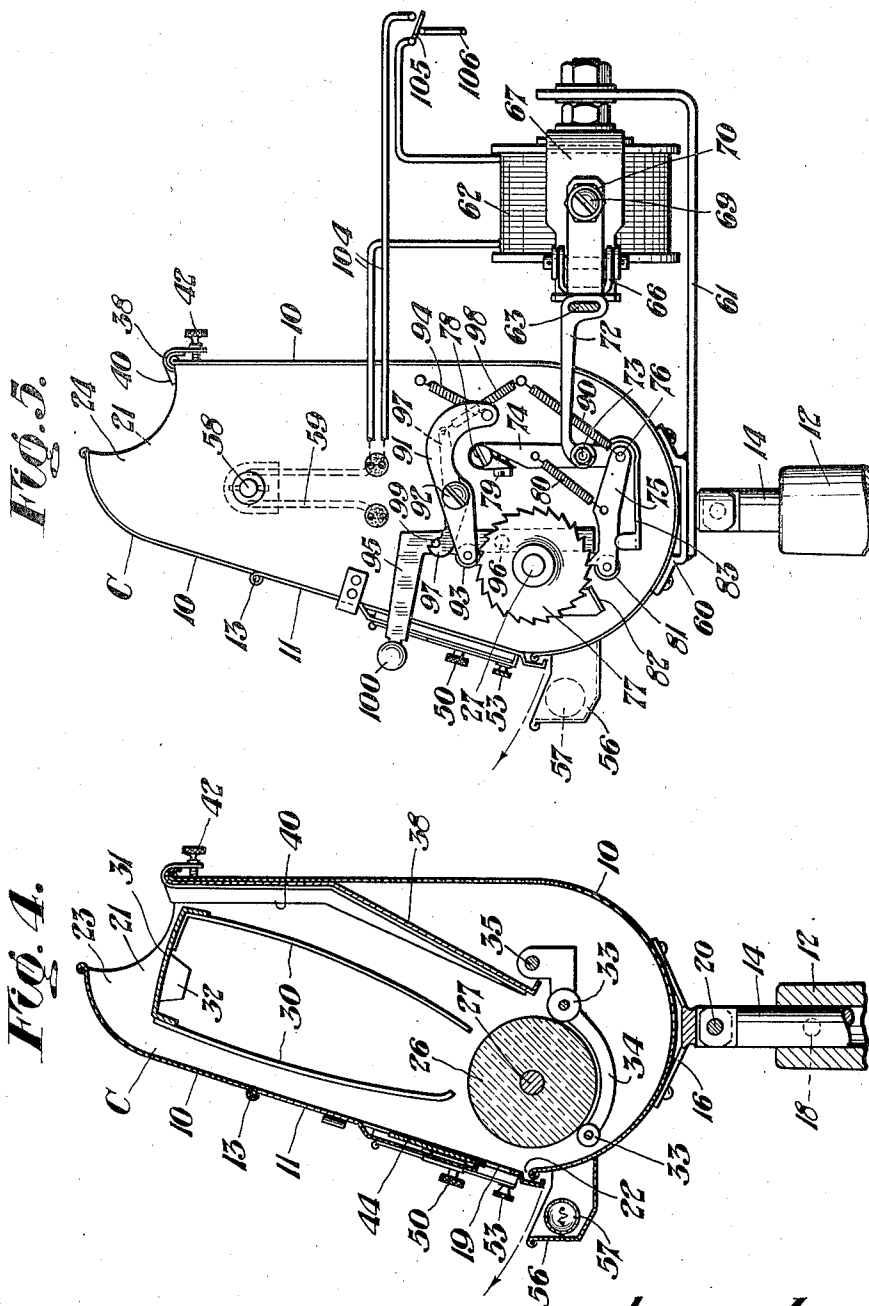
H. C. STEVENS

2,153,103

COPY HOLDER

Filed June 26, 1936

4 Sheets-Sheet 3



Inventor:
HAYES. C. STEVENS,
by *Usina & Hauber*
his Attorneys.

April 4, 1939.

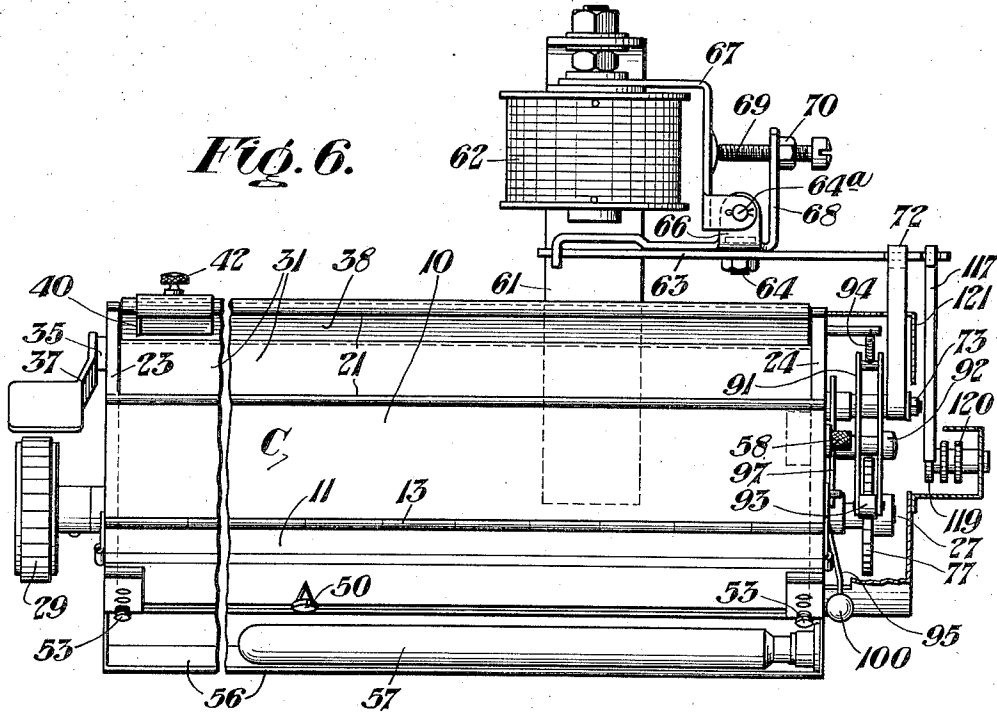
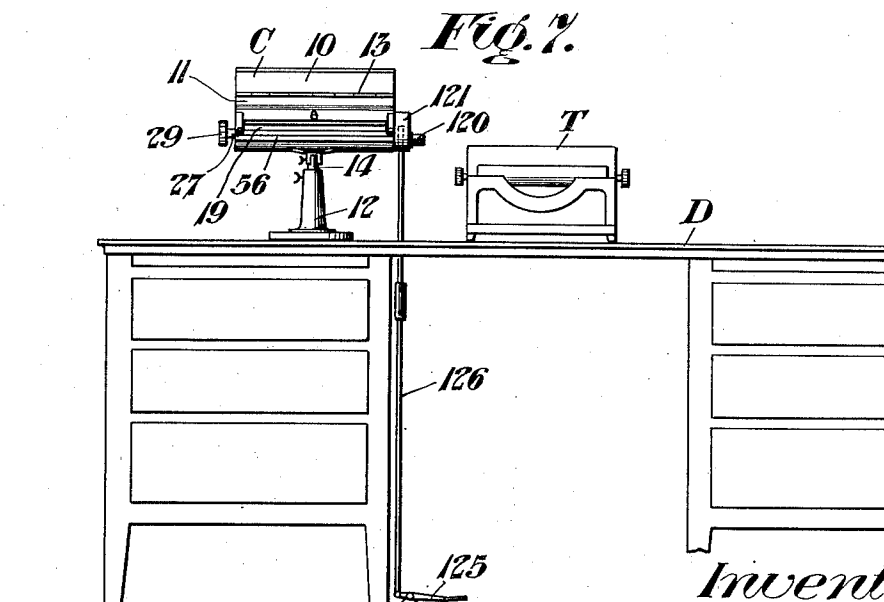
H. C. STEVENS

2,153,103

COPY HOLDER

Filed June 26, 1936

4 Sheets-Sheet 4



Inventor:
HAYES C. STEVENS,
by *Usina & Kauber*
his Attorneys.

UNITED STATES PATENT OFFICE

2,153,103

COPY HOLDER

Hayes C. Stevens, Dormont, Pa.

Application June 26, 1936, Serial No. 87,546

8 Claims. (Cl. 120—32)

The invention relates to copy holders and more particularly to an improved type of copy holder made so that it exposes only a predetermined amount of the copy held by it.

5 The general object of this invention is to present an improved, inexpensive and easily operated copy holder which overcomes objections common to those of the present type.

One object of the invention is to provide a 10 copy holder which is so constructed that the copy held in it is exposed and advanced one or more lines at a time.

Another object of the invention is to provide means for conveniently advancing the copy in 15 the copy holder one or more lines at a time by remote control.

In accordance with the patent statutes one best known form of the invention is illustrated in the accompanying drawings wherein:

20 Figure 1 is an elevation of one embodiment of my invention, showing it in combination with a standard typewriter.

Figure 2 is a simplified diagram of the electric circuit and the actions produced by the remote 25 control means.

Figure 3 is an enlarged elevation, partly in section, of my invention.

Figures 4 and 5 are cross-sections taken on lines IV—IV and V—V of Figure 3.

30 Figure 6 is a plan, broken near one end, of Figure 3.

Figure 7 is an elevation of a modification of my invention.

Referring to Figure 1 of the drawings, which 35 illustrates an application of the invention, the letter T indicates a typewriter mounted on a desk D having a copy holder C associated therewith which incorporates the principles of the invention. The copy holder C includes a sheet 40 metal casing 10 mounted on a base 12 so that the casing can be adjusted to the most convenient position by the typist. Preferably, this is accomplished by forming the base 12 with a vertical bore receiving a post 14 which is pivotally secured 45 to a bracket 16 on the casing. Thumb nuts 18 and 20 in the base 12 and on the bracket 16, respectively, hold the mounting means in their adjusted positions.

The casing 10, substantially oval shape in 50 cross-section, has a longitudinal opening 21 in its top surface and a rectangular aperture 22 in the lower half of its front surface, both of which extend the length of the casing 10. Side-walls 23 and 24 close the end of the casing 55 10. The aperture 22 is normally closed by a door

11 hinged, as at 13, to the casing 10 but adapted to be swung open in the direction of the arrows in Figures 4 and 5 to expose the interior of the casing.

Within the casing 10 and directly behind the 5 aperture 22 is a rubber roll 26 mounted on a shaft 27, journaled in and extending through the side-walls 23 and 24. The rubber roll 26 serves as supporting means for copy in the copy holder C. The end of the shaft 27 extending 10 through the side-wall 23 has a circular knob 29 secured to it so that the roll 26 can be manually rotated if desired.

Guide arms 30 are provided to guide the copy inserted through the aperture 21 onto the roll 15 26 and from it back to and out of the aperture 21. The arms 30 are mounted on the flanges of a channel member 31 which is secured to the inside of the side-walls 23 and 24, immediately below the aperture 21 by brackets 32. To aid 20 the arms 30 in guiding copy onto the roll 26, and to center and straighten said copy, a guide plate 33 is suspended from the rear edge of the casing 10. Positioned on the guide 33 is a metal plate 40 having a perpendicular side flange which 25 functions to true up one edge of the copy paper so that the paper enters the roll 26 perpendicular to it and at the desired place as the plate 40 can be moved longitudinally on the guide 33 and fixed in any desired position by a set screw 42 30 which bears on the casing 10.

In order to secure positive motion between the roll 26 and the copy paper around it, small rollers 33 are mounted to bear resiliently but releasably upon the roll 26. Preferably the rollers 33 are 35 rotatably supported by arms 34 uniformly spaced along the roll 26 and rigidly attached to a shaft 35 which is journaled in the side-walls 23 and 24 and extends through the side-wall 23. The shaft 35 is mounted behind the roll 26 in such 40 a manner that the copy paper guided to the roll 26 by the arms 30 and the plate 33 goes between the arms 34, which are arcuate in shape that they may fit closely to the surface of the roll 26. This makes the copy paper go between the rollers 45 33 and the roll 26 so that the pressure of the rollers 33 on the roll 26 binds the copy paper to the roll 26 and insures positive movement of the paper.

The end of the shaft 35 extending through the 50 side-wall 23 has a lever arm 37 fixed to it. When the arm 37 is pushed down it rotates the shaft 35 through an arc, thereby moving the arms 34 and the rollers 33 away from the surface of the roll 26. This removes the pressure holding the 55

copy paper to the roll 26 and permits straightening or movement of the copy paper without moving the roll 26. The journalling of the shaft 35 in the side-walls 23 and 24 produces sufficient friction to hold the shaft 35 in any position in which it is placed.

The door 11 of the casing 10 is formed with a relatively narrow rectangular aperture 19 which exposes portions of the copy mounted by the roll 26 so that it can be read from the front of the copy holder C. The distance between lines on the copy may vary and the aperture 19 may expose more than one line at a time. A cover 44 is slidably mounted on the door 11 to vary the opening of the aperture 19, so as to expose but one line of copy through the aperture 19.

A cover 44 is provided the position of which, relative to the aperture 19, is preferably controlled by means of rods 46 which are pivotally attached to one end of the bell cranks 47. The bell cranks 47 are pivotally mounted at 48 on the door 11 and their other ends are attached to the cover 44 at 49. The ends of the rods 46, not attached to the bell cranks 47, are pivotally fastened to a lever 51 journalled in the center of the door 11. Movement of the shaft 51 is controlled by a knob 50 on the outside of the door 11. This provides a convenient means for varying the exposure of the copy as, when the knob 50 is turned clockwise, the arms 46 cause the levers 47 to raise the cover 44 and increase the exposure of the aperture 19. Then to decrease the exposure, the knob 50 is turned counter-clockwise and the cover 44 is lowered. The D and U arrows, shown in Figure 3, signify the movement of the cover 44 caused by turning the knob 50. As the cover 44 remains in any position in which it is placed, the copy can be exposed a line at a time if desired. The movement of the cover 44 also allows alignment of the exposed part of the aperture 19 with a line of the copy and dispenses with the necessity of adjusting the copy in the copy holder C.

If the transcriber finds it necessary to read lines of copy on either side of the line which is exposed, or to estimate his relative position in the copy, the cover 44 and the door 11 can be raised as a unit by pulling outwardly and upwardly on a knob 53 on the door 11 (as shown in Figure 4). This swings the door 11 on its hinge 13 and exposes nearly all of the copy in the copy holder C.

An open top reflector 56 is mounted on the casing 10 parallel to and just beneath the aperture 22 and is provided with an elongated electric lamp 57 positioned therein. As diagrammatically seen in Figure 2, leads 59 are connected to any convenient source of current supply and have a switch 58 which controls the supply of electrical energy going to the lamp 57.

The invention contemplates moving the copy in the copy holder C by remote control and one method of producing this result is by an electro-magnet assembly shown in Figures 5 and 6.

An electro-magnet 62 is connected in parallel with the lamp 57, as shown in Figure 2. It is mounted in back of the copy holder C by a bracket 61 which is secured to the bottom of the casing 10 by any convenient means, such as by a bracket 60. A flat bar 63 is pivotally mounted at its center by a bolt 64 to a U bracket support 66 so that one end of the bar 63 is in juxtaposition to the core of the electro-magnet 62. The support 66 is mounted on a pin 64^a which serves as a fulcrum for the assembled unit.

When the electro-magnet 62 is energized, it pulls the adjacent end of the bar 63 against the end of the magnetic core, due to the movable mounting of the bar 63. The amount of movement of the bar 63 is controlled by a bracket 68 which is rigidly mounted on the bar 63. The bracket 68 has an arm extending perpendicular to the bar 63 carrying a screw 69 with a lock nut 70 on it. The screw 69 is adapted to bear upon the support 67 when the end of the bar 63 is moved away from the electro-magnet 62. It will be seen that if the position of the screw 69 in the bracket 68 is varied, it correspondingly varies the distance traversed by the end of the bar 63 away from the electro-magnet 62 before the screw 69 prevents further movement by bearing upon the support 67.

The end of the bar 63 on the opposite side of the fulcrum 66 from the electro-magnet 62 has an extension arm 72 attached at right angles to its longer side. The arm 72 is pivotally secured as at 73 to a split-headed upright 74, which is pivotally mounted on the side-wall 24 by a screw pin 78. An adjusting screw 79 on the split-head of the upright 74 can be tightened so that sufficient friction is produced between the upright 74 and the screw 78, on which it swings, to prevent gravity from moving the upright 74.

A lever arm 75, provided with a pawl, is pivotally mounted at 76 on the free end of the upright 74. A spring 80 holds the pawl of the arm 75 in contact with a ratchet-wheel 77 mounted on the shaft 27 so that a forward movement of the arm 75 rotates the ratchet-wheel 77. The arm 75 has a cylinder 81 which may be rotatable and which extends perpendicular to the arm 75 at its free end. The cylinder 81 strikes a fixed deflector 82 when the arm 75 moves too far forward and disengages the pawl from the ratchet-wheel 77. A spring-guide 83, normally fixed to the upright 74, keeps the arm 75 in alignment with the ratchet-wheel 77.

An arm 91 is pivotally mounted above and in vertical alignment with the ratchet-wheel 77 by a screw 92. The screw 92 engages with the side-wall 24 and acts as a fulcrum for the arm 91. The arm 91 has a roller 93 at one end and a spring 94 is connected to the other end in such a manner that the spring forces the roller 93 to constantly bear on the wheel 77 and prevent un-actuated movement of the wheel 77.

When the electro-magnet 62 is energized it pulls the adjacent end of the bar 63 to it and, due to the fulcrum action of the bracket 66 the other end of the bar 63 is forced in the opposite direction, or towards the copy holder C. The extension arm 72 transmits this movement of the end of the bar 63 to the upright 74 which, in turn, is moved forward. Then, as the lever 75 is held substantially at right angles to the free end of the upright 74 and the pawl on lever 75 engages with the under side of the ratchet-wheel 77, the shaft 27, with the roller 26 on it, is moved in a clockwise direction by the forward movement of the upright 74.

As soon as the electro-magnet 62 is deenergized, a spring 90 connected to the free end of the upright 74 and the side-wall 24 cooperates with the spring 80 and pulls the actuating mechanism back to its starting position.

To prevent the electro-magnet 62 from being energized when the switch 58 is closed, an auxiliary switch 105 is placed in leads 104 which supply power to the electro-magnet 62. The switch 105 is operated by an arm 106 connected to a

lever 107, fulcrumed at 108 to a key 109 on its free end. The switch 105 is held open by a spring 110 connected to the arm 107 and closed only when the key 109 is depressed, so that when the key 109 is released, the spring 110 again opens the switch 105. The switch 105 and assembly is shown as being mounted on an ordinary typewriter T, but it could easily be placed at any remote position as for example on the deck D or other suitable place.

This provides one method of controlling the movement of copy in the copy holder by remote control, but other methods are contemplated by the invention, as, for example, by a foot pedal 125 connected by a rod 126 to the ratchet-wheel 77, shown in Figure 7.

The movement of the bar 63, and thereby the movement of the copy, can be controlled by adjusting the screw 69 in the arm 68 but a standard spacer arm 95 is provided as a more convenient method for obtaining a standard amount of movement of the roll 26 by energizing the electro-magnet 62 once. The arm 95 is pivotally mounted on the side-wall 24 at 96 which is behind the ratchet-wheel 77. The arm 95 can be moved so that the cylinder 81 of the arm 75 strikes and rides over the lower end of arm 95 when it is being pulled back for its next movement. The movement of the arm 95 is controlled by a spacer hook arm 97 which has three recesses in its top near one end. The arm 97 also uses the screw 92 as a fulcrum and has a spring 98 which forces the arm 97 against a pin 99 in the arm 95 so that the pin 99 is always in one of the recesses in the arm 97. The arm 95 is moved by a knob 100 which projects out from the casing 10 at the end adjacent the side-wall 24.

When the knob 100 is in its lowest position, as shown in Figure 3, the pin 99 is in the recess nearest the end of the arm 97. This puts the free end of the arm 95 in such a position that the cylinder 81 can move back the distance of the pitch of two ratchet-teeth before striking the arm 95. Then the pawl of the arm 75 rotates the wheel 77 forward, the pitch of two teeth by one forward movement and thereby gives a double spacing movement to the roll 26. If single spacing is required, the knob 100 is moved up so that the pin 99 is in the middle recess of the arm 97. This moves the free end of the arm 95 forward so that it only allows the arm 75 to move back the pitch of one ratchet-tooth before the cylinder 81 hits the arm 95. Then, to remove the pawl from engagement with the ratchet-wheel 77, the knob 100 is moved to its uppermost position, which puts the pin 99 in the recess nearest the fulcrum 92 of the arm 97. Now the free end of the arm 95 bears more or less downwardly on the cylinder 81 and forces the arm 75 down by stretching the spring 80 so that the pawl is disengaged from the ratchet. When this is done, the roll 26 can be moved in a counter-clockwise direction and thereby effect a second exposure of the copy paper on it. The numerals 1 and 2, shown on the casing 10 in Figure 3, represent the position of the knob 100 required to secure single or double space movement of the roll 26.

Another feature of the invention is a lever 117 rigidly connected to the bar 63 and provided with a pawl on its free end. The pawl on the lever 117 engages with a ratchet 119 of a counter 120 and it, as well as the arm 117, is moved when the electro-magnet 62 is energized. This movement turns the counter 120 as the arm 117 is

engaged with the ratchet 119 connected to it. This provides means for counting the number of lines of copy transcribed as the copy holder C is designed to rotate a new line of copy into view each time the bar 63 is moved by energizing the electro-magnet 62 and such movement can be taken as a unit in reading the counter 120.

A cover 121 is provided to enclose the operating mechanism so as to improve the appearance of the copy holder C and protect the mechanism from dirt.

It will be appreciated that the scope of the invention is not limited to the specific form of the invention illustrated and described, but is actually defined in the appended claims.

I claim:

1. A copy holder comprising a casing adapted to substantially conceal copy paper being advanced therethrough, a hinged door forming a portion of said casing and being constructed and arranged to be swung away from said casing so as to expose a substantial amount of said copy paper being advanced through said casing, said door being provided with a longitudinally directed slot which constantly exposes a portion of said copy paper, a cover slidably carried by said door for covering a portion of the slot in said door, said cover being mounted on said door so as to maintain one of its edges parallel to one edge of the slot in said door, and means associated with said door for changing the vertical position of said cover in relation to the slot in said door whereby only the desired portion of said copy paper is exposed through the slot in said door.

2. A copy holder comprising a casing adapted to substantially conceal copy paper being advanced therethrough, means journaled in said casing for advancing copy paper therethrough, a hinged door forming a portion of said casing and being constructed and arranged to be swung away from said casing so as to expose a substantial amount of said copy paper being advanced through said casing, said door being provided with a longitudinally directed slot which constantly exposes a portion of said copy paper, a cover slidably carried by said door for covering a portion of the slot in said door, and means associated with said door for changing the vertical position of said cover in relation to the lot in said door whereby only the desired portion of said copy paper being advanced through said casing is exposed through the slot in said door.

3. A copy holder comprising a casing adapted to substantially conceal a copy paper as it is being advanced therethrough, said casing having a slotted opening in the top portion thereof through which the copy paper is adapted to be inserted, a roller arranged within said casing below said opening for advancing the copy paper therethrough, means arranged within said casing for guiding said copy paper down and around said roller and upwardly out through said opening, and means arranged in the front wall of said casing for exposing a portion of said copy paper therethrough.

4. A copy holder comprising a casing adapted to substantially conceal a copy paper as it is being advanced therethrough, said casing having a slotted opening in the top portion thereof through which the copy paper is adapted to pass, a roller arranged within said casing below said opening for advancing the copy paper therethrough, means for guiding said copy paper down and around said roller and upwardly out through the opening, said means including a

plurality of arms arranged within said casing above said roller, and means arranged in the front wall of said casing for exposing a portion of said copy paper therethrough.

- 5 5. A copy holder comprising a casing adapted to substantially conceal a copy paper as it is being advanced therethrough, said casing having a slotted opening in the top portion thereof through which the copy paper is adapted to pass,
- 10 a roller arranged within said casing below said opening for advancing the copy paper therethrough, a plurality of arms arranged within said casing above said roller, a guide plate arranged within said casing rearwardly of said arms and
- 15 said roller, said arms and said guide plate adapted to cooperate together to guide said copy paper down and around said roller and upwardly out through the opening and means arranged in the front wall of said casing for exposing a portion
- 20 of said copy paper therethrough.
6. A copy holder comprising a casing adapted to substantially conceal a copy paper as it is being advanced therethrough, said casing having a slotted opening in the top portion thereof
- 25 through which the copy paper is adapted to be inserted, a roller arranged within said casing below said opening for advancing the copy paper therethrough, a guide plate arranged within said casing rearwardly of said roller, means arranged within said casing above said roller forwardly of
- 30 said guide plate with which said guide plate is adapted to cooperate to guide said copy paper down and around said roller and upwardly out through the opening, and means arranged in the front wall of said casing for exposing a portion
- 35 of said copy paper therethrough.

7. A copy holder comprising a casing adapted to substantially conceal a copy paper as it is being advanced therethrough, said casing having a

longitudinally extending opening in the top portion thereof, a roller arranged within said casing below said opening for advancing the copy paper therethrough, means arranged within said casing for guiding said copy paper down and

5 around said roller and upwardly out through said opening, a door hingedly arranged on the front of said casing and adapted to swing outwardly to expose a substantial amount of the copy paper, said door having a longitudinally extending slot

10 therein for exposing a portion of said copy paper therethrough and a cover slidably arranged on said door for adjusting the size of the exposure of said slot therethrough.

8. A copy holder comprising a casing adapted to substantially conceal a copy paper as it is being advanced therethrough, said casing having a longitudinally extending opening in the top portion thereof, a roller arranged within said casing below said opening for advancing the copy paper

20 therethrough, means for intermittently rotating said roller a predetermined distance, means arranged within said casing for guiding said copy paper down and around said roller and upwardly out through said opening, a door hingedly arranged

25 on the front wall of said casing and adapted to swing outwardly to expose a substantial amount of the copy paper, said door having a longitudinally extending slot therein for exposing a portion of said copy paper, a cover slid-

30 ably arranged on said door for adjusting the size of the exposure of said slot therethrough, and means arranged on said door for moving said cover vertically to adjust the size of said slot whereby only the desired portion of said copy

35 paper is exposed therethrough.

HAYES C. STEVENS.