

No. 771,174.

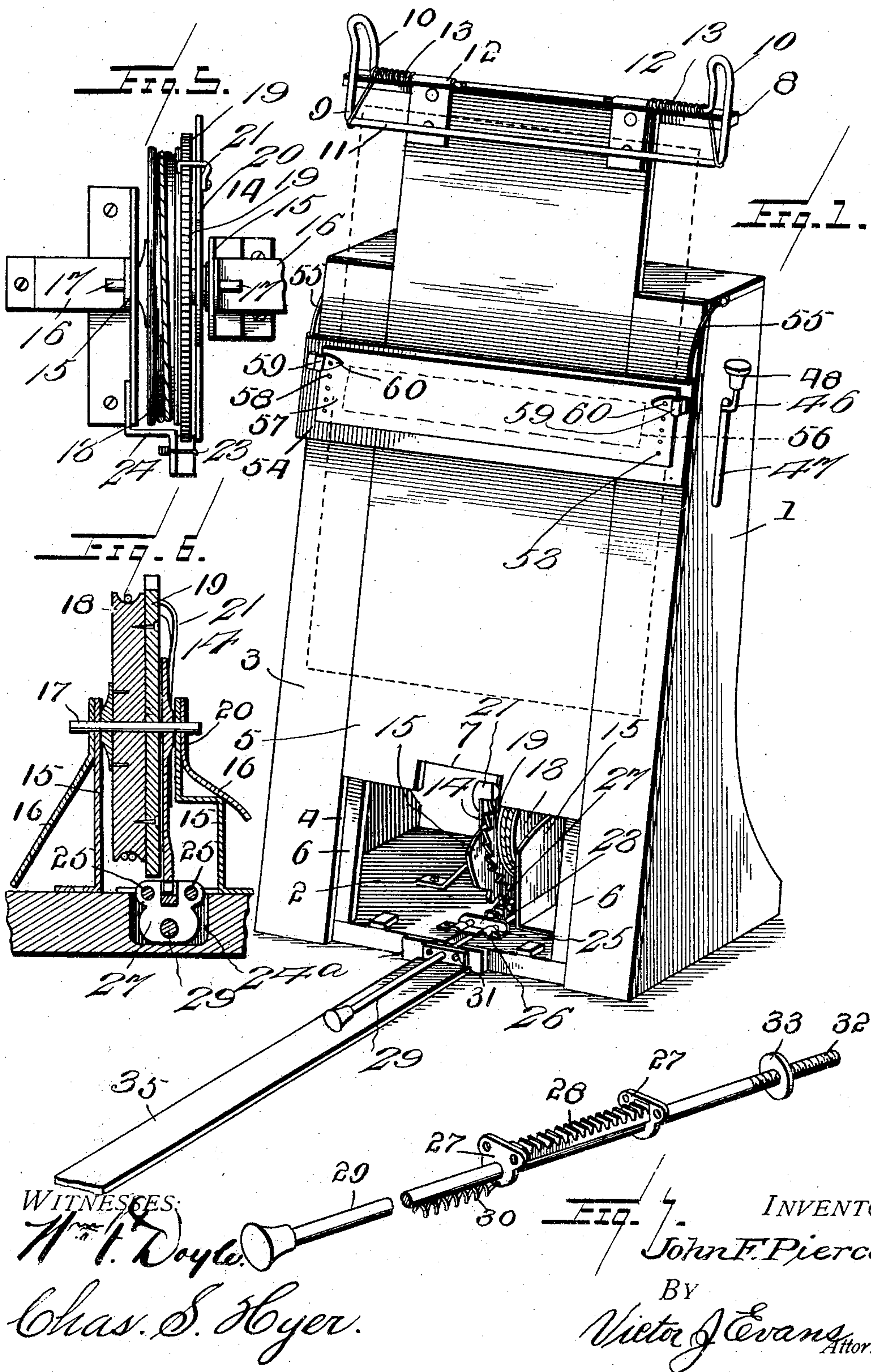
PATENTED SEPT. 27, 1904.

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COPY HOLDER.

APPLICATION FILED OCT. 10, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



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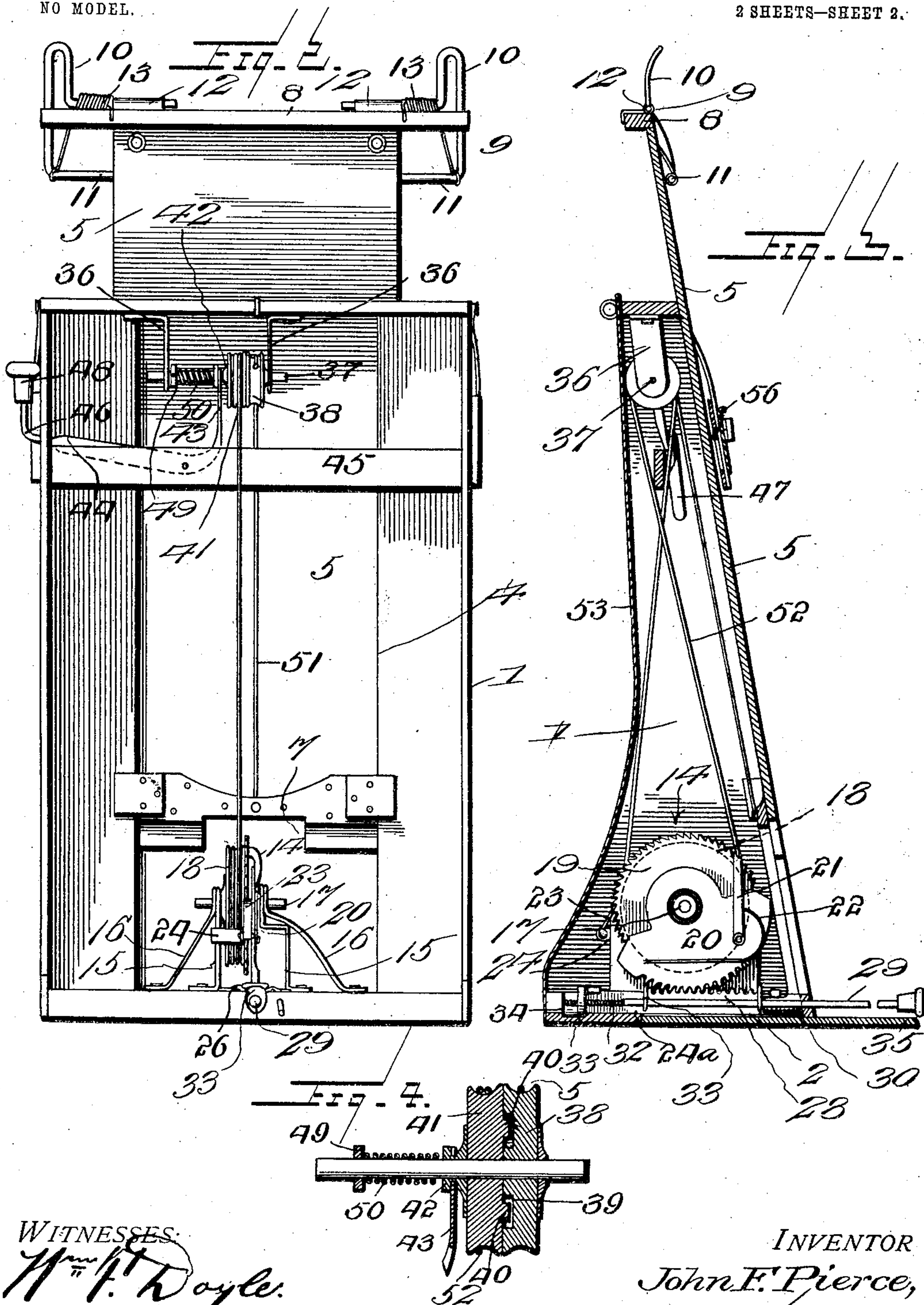
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WITNESSES

Wm F. Doyle.
Chas. S. Hoyer.

INVENTOR

John F. Pierce,

 B_Y

Victor J. Evans
Attorney

UNITED STATES PATENT OFFICE.

JOHN F. PIERCE, OF ROWLESBURG, WEST VIRGINIA.

COPY-HOLDER.

SPECIFICATION forming part of Letters Patent No. 771,174, dated September 27, 1904.

Application filed October 10, 1903. Serial No. 176,564. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. PIERCE, a citizen of the United States, residing at Rowlesburg, in the county of Preston and State of West Virginia, have invented new and useful Improvements in Copy-Holders, of which the following is a specification.

This invention relates to copy-holders adapted for general use, but particularly by type-writer copyists.

The holder embodying the features of the invention is placed in convenient position in relation to the type-writing machine and has a main operating element projecting in proximity to the keyboard of such machine for actuation at intervals by the operator.

The holder comprises in its construction a support having a movable carrier to which a step-by-step elevating movement is imparted by the actuation of feeding mechanism engaged by a cord or analogous flexible device attached to the carrier, the feeding mechanism being in part separable through the medium of clutch devices to release the carrier and permit it to gravitate in normal position when starting at the head-line of a copy-sheet after one sheet may have been completed or to any other lower point desired.

The invention further contemplates the provision of the use of a special form of line-marker capable of adjustment to expose one or more lines and serve as a guide for the eye of the copyist toward one point on the copy while the latter is being moved upwardly step by step.

The invention further consists in the construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of a copy-holder embodying the features of the invention. Fig. 2 is a rear elevation of the holder with the back plate or covering removed. Fig. 3 is a transverse vertical section therethrough. Fig. 4 is a longitudinal vertical section through compensating mechanism controlling the elevation and gravitation of the copy-carrier. Fig. 5 is a top plan view of the feeding mechanism. Fig. 6 is a

longitudinal vertical section of the mechanism shown by Fig. 5. Fig. 7 is a detail perspective view of the feeding element or bar engaged by the operator to impart a step-by-step elevating movement to the carrier.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numeral 1 designates a casing of suitable material and dimensions, which is increased in dimensions toward its base 2 to give the entire holder a stable support when in use. The face 3 of the holder has a slot 4 extending full length thereof in a vertical position, the said face being inclined rearwardly from the base 2 toward the upper end of the casing to dispose the copy at a proper angle for inspection of the operator. In the opening 4 a carrier 5 is movably mounted and bears against guides 6, secured against the rear portion of the face 3, the front surface of the carrier being flush with the similar surface of the face, so that the copy may be held smoothly against said face. The lower end of the carrier is formed with a slot 7 to clear a portion of the mechanism disposed on the base 2, and the upper end of said carrier has a stop-bar 8 to strike against the upper end of the casing 1 and limit the downward movement of the carrier. The upper end of the carrier also has thereon a paper holder or clamp 9, with upstanding looped extremities 10 for convenience in operating the clamp, the latter also including a lower holding-bar 11, extending transversely across the carrier. The free ends of the loops 10 are directed inwardly and rotatably held in bearing-straps or analogous devices 12 and surrounding a portion of the said ends. Inside of the loops 10 are springs 13, which are terminally secured in such manner as to cause the clamp to remain normally closed and bear with sufficient tension on the paper or copy applied to the carrier as to resist accidental disengagement of said copy.

The carrier is elevated by a step-by-step movement, and to arrive at this result a feeding mechanism 14 is disposed on the central portion of the base 2 in upright position and transversely of said base. The feeding mech-

anism comprises uprights 15, having braces 16 attached thereto and to the base. In the upper extremities of the uprights and braces a shaft or arbor 17 is rotatably mounted, and
 5 keyed to the said shaft is a grooved winding disk or wheel 18, with a ratchet-wheel 19 attached to one side thereof and rotatable therewith. The ratchet-wheel is of greater diameter than the disk or wheel 18, and in close position
 10 relatively to the ratchet-wheel a toothed segment 20 is loosely held on the shaft or arbor 17 and carries a pivoted dog 21, having its upper end extending over and shaped to engage teeth of the ratchet-wheel. The dog
 15 21 has a spring 22 secured thereto and to the toothed segment to restore it to normal position, and to prevent the ratchet-wheel from moving backwardly or slipping during adjustment and render the feeding movement
 20 or rotation of the disk or wheel 18 positive a stop-pawl 23 engages the rear portion of the ratchet-wheel and is held by an angle-arm 24, extending over from one of the uprights.

The base 2 is formed with a transversely-
 25 extending central depression or slot 24^a, and over said slot a pair of guide-rods 25 are held in fixed position by metal clips 26 engaging the same at opposite ends, as clearly shown by Figs. 1 and 2. The guide-rods 25 are held
 30 spaced apart from each other, and thereon the front and rear heads 27 of a rack-bar 28 are slidably mounted. The heads 27 have openings through the centers of the lower portions thereof, through which a feeding-bar
 35 29 is inserted, the said heads being secured to the feeding-bar to cause the rack-bar 28 to be moved equally with the feeding-bar against the resistance of a retractile spring 30, attached to the lower portion of the front head
 40 27, and a front bearing-plate 31, through which the feeding-bar 29 movably projects. The rear extremity of the feeding-bar 29 is formed with screw-threads 32, and thereon is an adjusting-disk 33, adapted to strike against
 45 a rear shoulder 34, provided by reducing the rear part of the slot 24^a, to thus limit the movement of the bar 29 and control through the feeding mechanism the elevation or step-by-step movement of the carrier 5. By changing
 50 the position of the disk 33 on the feeding-bar the rack-bar 28 may be caused to have a short or longer movement, as may be desired to actuate the carrier proportionately to the spaces between the lines of the copy held thereby. The feeding-bar 29 may be of any desired
 55 length and extends centrally through the front of the base 2 over a lower bracing or supporting bar 35, which operates to prevent the holder as an entirety from tipping forwardly and as an auxiliary for maintaining said holder in upright position. This brace also prevents the holder from moving backwardly when the carrier is elevated to its full extent and the center of gravity thus changed
 65 by inserting the strap under a part of the type-

writing machine or holding it in any other manner without interfering with the operation of the feeding-bar 29.

In the upper portion of the casing a compensating and release mechanism is located
 70 and consists of hangers 36 depending from the top of the casing and having a shaft or arbor 37 movably mounted in the lower extremities thereof and disposed in the same direction as the shaft or arbor 17. Fixed on
 75 the shaft or arbor 37, near one of the hangers 36, to rotate therewith is a winding-drum 38, having recesses or seats 39 in one face thereof for engagement with projections 40 on the contiguous face of a compensating clutch-disk
 80 41, which is shiftable on the shaft or arbor 37 and has a grooved sleeve 42 attached thereto, which is engaged by the inner angular end 43 of a shifting-lever 44, fulcrumed to a cross-bar 45 within the casing and also provided
 85 with an outer upwardly-projecting stem 46, movable in a slot 47 in the upper portion of one end of the casing, the said stem having a knob or analogous device 48 on its upper end. Between the collar 42 and a stop-collar 49,
 90 movably held on the shaft 37, is a spring 50, which surrounds the shaft and operates to normally throw or move the clutch-disk 41 into engagement with the drum 38. The drum 38 and clutch-disk 41 are both periph-
 95 erally grooved, and engaging the said drum is a cord or other flexible connection 51, which is attached to the center of the lower end of the carrier 5 and also to the said drum. The cord or other connection 51 winds on and un-
 100 winds from the drum 38 in accordance with the upward and downward movements of the carrier, as will be more fully hereinafter explained. A continuous belt 52 surrounds the disk 18 and clutch member 41, the said belt
 105 being crossed to impart proper movement to the clutch member and the shaft or arbor 37 in elevating the carrier and also wound more than once around the disk 18 and clutch member to prevent slipping of the belt and insure
 110 a proper transmission of motion from the feeding mechanism to the shaft or arbor 37. The disk 18 is of materially greater diameter than the clutch member or disk 41, so that a slower movement of the feeding mechanism
 115 will impart a faster movement to the shaft or arbor 37 to elevate the carrier the requisite distance to give the proper line-space or shift of the copy on the carrier proportionately to the adjustment of the feeding-bar 29.
 120

As the feeding-bar 29 is pressed rearwardly by the operator the segmental rack 20 is shifted or moved on the shaft or arbor 17 in the same direction as the movement of the
 125 said bar. This swing or movement of the segment 20 causes the dog 21 to pull downwardly on the ratchet-wheel 19 and rotates the disk 18 in the same direction. Owing to the crossed belt 52 the movement of the clutch-disk 41 is reversed or rotates in a rearward
 130

direction and a similar rotation is imparted to the drum 38, which causes the cord or other flexible connection 51 to wind on said drum and elevate the carrier. This operation is continued until the copy held by the carrier has been fully reproduced, or as much thereof as desired, and if the intervals between the lines of the copy vary the feeding-bar 29 will be depressed a sufficient number of times to bring the line desired to be followed on the copy upwardly in line with the eye of the operator or at a suitable point on the carrier which may be used as a guide, and will be more fully hereinafter referred to. After the copy has been completed and it is desired to lower the carrier 5 the operator depresses the outer extremity of the shifting-lever 44 and disengages the clutch-disk 41 from the drum 38, and the weight of the carrier is such that it will immediately gravitate and return to normal position, thereby unwinding the cord or other connection 51 from the drum. It will be observed that the carrier may be restored to normal position very quickly and without delay incident to a disorganization of any of the parts, and as soon as the carrier reaches its lower normal position the shifting-lever 44 is released, and the clutch member or disk 41 immediately reengages the drum 38. The carrier 5 is loose enough to readily fall by its own weight, and it is unnecessary for the operator to manually lower the same except through the operation of the shifting-lever 44 just described.

To render the interior of the casing accessible, the back thereof is in the form of a removable sheathing 53, having a shape corresponding to the contour of the casing. When it is desired to rectify any irregularities of the mechanism within the casing, the back 53 can be quickly detached and afterward reapplied, and in view of the simplicity of the several parts the mechanical knowledge of an ordinary person will be all that is necessary to readjust the parts. The removable back is also especially convenient in changing the adjustment of the feeding-bar 29 in view of the fact that the disk 33 is located near the rear edge of the base.

The improved copy-holder as thus far described can be used without any additional features; but to complete the efficiency of the same it is provided with a marker or eye-directing means consisting of a drop-plate 54, having hangers 55 secured to opposite ends thereof and pivotally attached to the opposite ends of the top portion of the casing, whereby said plate may be readily raised and lowered. In its normal position the plate 54 rests closely against the face 3 and the contiguous face of the carrier and operates in addition to its marking and guiding function as a means for holding the copy-sheet in place. The plate 54 has a longitudinal slot 56 to expose the lines of the copy therethrough, and

over the slot is an adjustable space-strip 57 for controlling the extent of exposure of the slot 56 and regulate the display through the slot of one or more lines of the copy, as may be required. The opposite ends of the space 57 are formed with indentations 58, and said ends are slidable under spring-clips 59, having projections in their inner free ends 60 to engage the indentations 58. By springing the clips outwardly their projections will be disengaged from the indentations 58 of the space-strip, and the latter may be moved upwardly or downwardly and positively maintained in adjusted position by allowing the said clips to again engage the same.

From the foregoing it will be seen that the improved copy-holder is exceptionally convenient in its operation and the parts being of a comparatively simple nature will not be subject to ready disorganization or breakage, and, moreover, a positive actuation of the carrier will ensue. The materials employed in the construction of the holder may be varied at will, and such other strengthening or auxiliary attachments that may be found necessary in the construction of the device will be used at will. Changes in the proportions, dimensions, and minor details may also be resorted to without departing from the spirit of the invention.

Having thus fully described the invention, what is claimed as new is—

1. In a copy-holder, the combination of a casing, having an opening in the front face thereof, a carrier vertically slidable in said face and having means for holding a copy, a feeding means within the lower portion of the casing, a compensating and winding means in the upper part of the casing, and a flexible connection between the carrier and the winding means.

2. In a copy-holder, the combination of a casing, a carrier vertically movable in the casing and having copy-holding means, a feeding mechanism within the casing, a compensating and winding means also within the casing, a continuous crossed belt between the feeding means and the compensating means, and a flexible connection between the carrier and winding mechanism.

3. In a copy-holder, the combination of a vertically-movable carrier, a feeding means for the carrier, a compensating and winding means in connection with the carrier, a flexible connecting means between the feeding means and compensating means and the winding means and the carrier, whereby the latter may be elevated by a step-by-step movement, and release mechanism to permit gravitating movement of the carrier.

4. In a copy-holder, the combination of a carrier for holding a copy, of feeding means for elevating the carrier by a step-by-step movement including a drum directly connected with the carrier, flexible connections between the

carrier and the initial operating means, whereby the carrier may be elevated, and means for restoring the carrier to normal lowered position.

5 5. In a copy-holder, the combination of a vertically-movable carrier having means for holding a copy, a feeding means, a compensating and winding mechanism, the winding mechanism being separable from the compensating means, and flexible connections between
10 the carrier, the winding means, the compensating means, and the feeding means.

6. In a copy-holder, the combination of a carrier, feeding mechanism for elevating the
15 carrier, winding mechanism flexibly attached to the carrier, and compensating devices connected to the feeding means and releasable from the winding means to permit the carrier to return to normal position by gravitation.

20 7. In a copy-holder, the combination of a casing, a carrier movably mounted therein and having means for holding a copy thereon, a feeding mechanism, a depressible feeding-bar for actuating the feeding mechanism, a
25 compensating mechanism for receiving the motion from the feeding mechanism, a winding device flexibly connected to the carrier, and separably related to the compensating mechanism, and means for separating the latter
30 from the winding mechanism to permit the carrier to gravitate to normal position.

8. In a copy-holder, the combination of a casing, a carrier movably mounted in the front of the casing having means for holding
35 a copy, a feeding mechanism, a feeding-bar cooperating with the feeding mechanism, a compensating mechanism, a winding-drum, a crossed belt between the feeding mechanism and the compensating mechanism, and a flexible
40 connection between the drum and the carrier, the compensating mechanism being separable from the drum to permit the latter to have unretarded movement and the carrier to gravitate to normal position.

45 9. In a copy-holder, the combination of a casing, a carrier movably mounted in the casing, a feeding mechanism, compensating and winding devices, means for separating the compensating from the winding devices, a
50 crossed belt between the feeding mechanism

and the compensating device, and a flexible connection between the winding device and the carrier.

10. In a copy-holder, the combination of a casing, a carrier vertically adjustable in the
55 front portion thereof and having means for holding a copy, feeding mechanism for the carrier including a reciprocating bar, for initially actuating the feeding mechanism, compensating and winding devices, and flexible
60 connections between the feeding mechanism and compensating device and winding device and carrier.

11. In a copy-holder, the combination of a casing, a carrier movably mounted in said casing, a feeding mechanism including a rotatable
65 disk with a ratchet-wheel attached thereto, a swinging toothed segment having a dog cooperating with said ratchet-wheel, a feeding-bar carrying a rack-bar to engage the said
70 segment, means for restoring the feeding-bar to normal position, a compensating device operative by the said feeding mechanism, and a winding-drum in separable relation to the operative device and having a flexible connection
75 with the carrier.

12. In a copy-holder, the combination with a casing, of a carrier movably mounted therein, a feeding mechanism including an adjustable
80 bar for regulating the degree of movement of the carrier, a winding-drum having a flexible connection with the carrier, and a rotatable device in separable relation to the winding-drum and having a flexible connection
85 with the feeding mechanism, the separation of said rotatable device from the winding-drum permitting the carrier to gravitate to normal position.

13. A copy-holder having an elevatable carrier and an adjustable line-guide, consisting
90 of a longitudinally-slotted drop-plate, and an adjustable device over the slot of the plate to regulate the degree of exposure of the slot.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN F. PIERCE.

Witnesses:

W. C. HOOTON,
M. H. PROUDFOOT.