

1,217,112.

The image contains two technical drawings of a mechanical device, labeled Fig. 1 and Fig. 2. Fig. 1 is a perspective view of the main assembly, showing a base with various components labeled with numbers: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200. Fig. 2 is a side view of the device, showing the profile of the main body and the internal components. It includes labels for parts like 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200.

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1,217,112.

Patented Feb. 20, 1917.
3 SHEETS—SHEET 2.

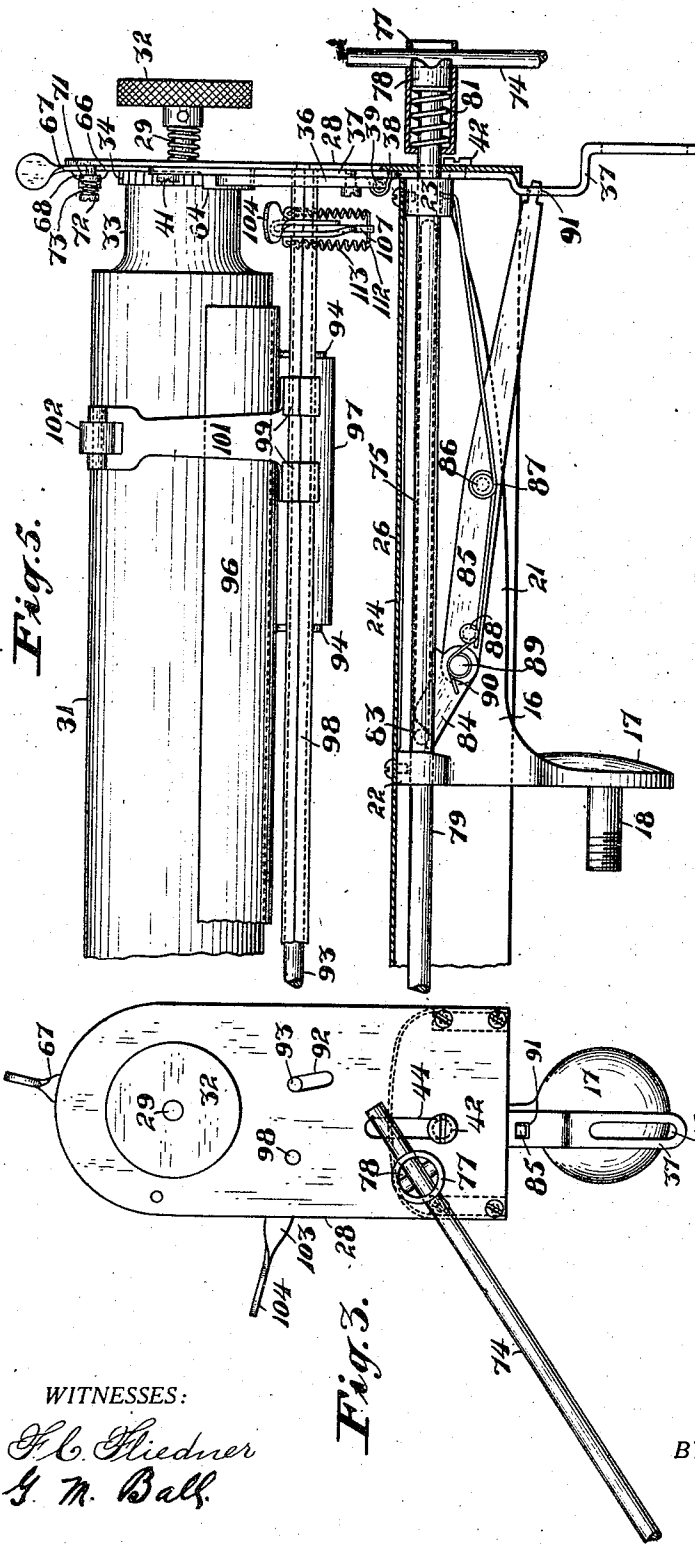


Fig. 3.

WITNESSES:

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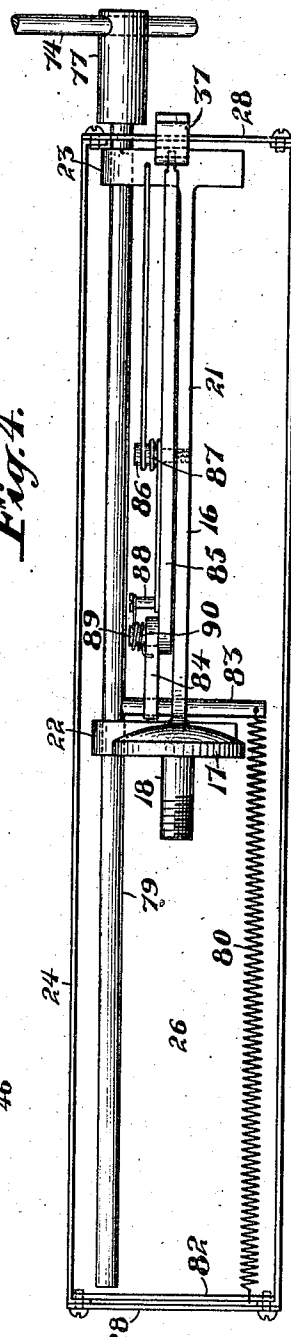


Fig. 4.

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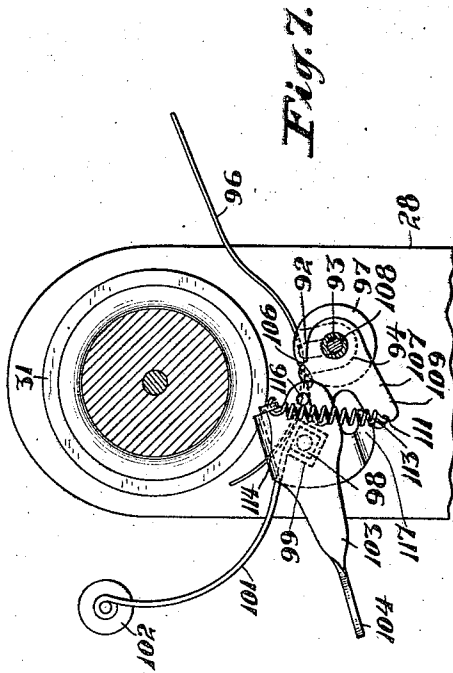
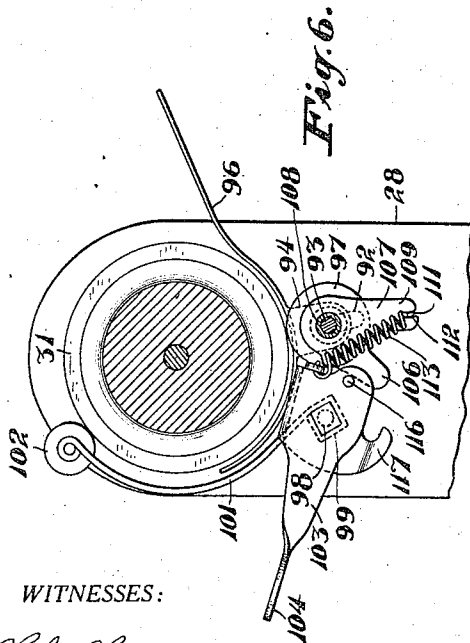
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W. E. GIBSON.
COPY HOLDER FOR TYPE WRITING MACHINES.
APPLICATION FILED MAR. 25, 1914.

1,217,112.

Patented Feb. 20, 1917.

3 SHEETS—SHEET 3.



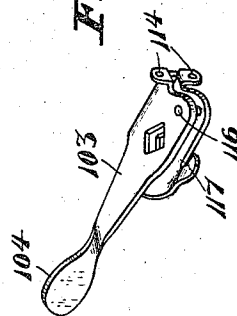
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Fig. 9.



Fig. 8.



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UNITED STATES PATENT OFFICE.

WILLIS E. GIBSON, OF OAKLAND, CALIFORNIA.

COPY-HOLDER FOR TYPE-WRITING MACHINES.

1,217,112.

Specification of Letters Patent.

Patented Feb. 20, 1917.

Application filed March 25, 1914. Serial No. 827,056.

To all whom it may concern:

Be it known that I, WILLIS E. GIBSON, a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented new and useful Improvements in Copy-Holders for Type-Writing Machines, of which the following is a specification.

The present invention relates to improvements in copyholders for typewriting machines in which, to display, convenient for observation, successive lines thereof, the copy is advanced either automatically with the rotation of the platen of the typewriting machine or manually by the depression of a key adjacent to the typewriting keys. The object of the invention is to provide a copyholder of this description which can be attached to a typewriting machine of any of the common makes, in a very short time and without removing the typewriting machine from its support, which can readily be collapsed to permit it, when not in use, to be lowered with the typewriting machine into a receptacle in a desk or otherwise, and which will be simple in construction and contain comparatively few parts. A further object is to provide in such a device an improved means for holding the copy in position on the roller.

In the accompanying drawing, Figure 1 is a perspective view of a rear portion of my improved copyholder, showing also a part of a typewriting machine and its connection therewith; Fig. 2 is a similar view of a front portion of the copy holder; Fig. 3 is an end view of an upper part thereof; Fig. 4 is a bottom plan view of said upper part; Fig. 5 is a broken vertical section thereof; Fig. 6 is a sectional view of a copy feed roller, showing in side elevation parts immediately adjacent thereto; Fig. 7 is a similar view, said parts being in a different position from that in Fig. 6; Fig. 8 is a perspective view of a controller; Fig. 9 is a similar view of a regulating plate.

Referring to the drawing, 1 indicates a casting having two horizontal oppositely extending arms 2 and 3. The arm 2 is at its outer end enlarged and formed into a hook 4 adapted to hook around one A of the rear posts of the typewriting machine, while the arm 3 is reduced at its outer end and passes through a hole in an end of a hook 5 adapted to engage the other rear

post B of the typewriting machine. Said reduced portion is threaded, as shown at 6, to screw into a wing nut 7. Thus the space between the two hooks 4 and 5 can be varied as desired to permit the device to be clamped on typewriting machines varying in width. Said casting is supported centrally by an upright 8, in the front portion of the lower end of which is an angular recess 9, to engage the rear edge C of the frame of the typewriting machine. From the center of said casting there extends rearwardly and then vertically upward an arm 11, which at the top extends rearwardly, as shown at 12, and is enlarged and centrally apertured, as shown at 13, and is formed at the top with a stop shoulder 14.

16 indicates a casting having a depending enlarged boss-shaped portion 17, from the center of which extends at right angles a threaded stem 18, which can pass through the apertured portion 13 of the casting 1, a wing nut 19 being screwed upon the end of said stem 18 to clamp the enlarged portion 12 to the boss-shaped portion 17. By unscrewing the wing nut 19 the copyholder can be turned downward on the arm 11, so that it can be readily lowered, with the typewriting machine, into a receptacle provided for the machine. Said casting 16 has a longitudinally extending member 21 and two members 22, 23, extending transversely from the respective ends of said longitudinal member. The upper part of the casting 16 is received within a rectangular casing 24, open at the bottom, and the top 26 of which is secured by screws to the members 22, 23. To flanges formed at the ends of said casing 24 are secured end plates 28, which are extended upwardly to provide bearings for a shaft 29 of a copy feed roller 31, said shaft having thereon at its ends milled wheels 32, by which it can be turned manually. At the right-hand end said roller 31 is reduced in diameter, as shown at 33, and carries a ratchet wheel 34, which is adapted to be engaged by a pawl 36 pivoted on a slide piece 37, said pawl being moved outward at its lower end, and inward at its upper end, by a spring 38 coiled around an arm 39 extending from said slide piece. Said slide piece slides in contact with the adjacent end plate 28, being guided by screws 41, 42 through slots 43, 44. The lower end of said slide piece is formed with a slot

46 through which passes a screw 47 screwed into the upper end of a link 48, the lower end of which is pivotally connected to a lever 49 contained within a sheet metal casing 51, said casing being removably connected to the casting 1 by means of a screw 52, screwed through a hole in an upright 53, secured to and extending upwardly from said casing 51, said screw being also screwed into a hole in the hook 4. The front end of the casing 51 is detachably supported upon the typewriting machine by means of a hook 54 engaging the side rail D of said machine near the front keys at the right-hand side. The lever 49 is pivoted in said casing 51 near its center by means of a screw 58, and its front portion extends through a slot 59 in the front end of the casing. The front end of the lever is bent upwardly to form a stem 62 and thereon is secured a key 63. On depressing the key 63 the link 48 moves upward, causing the slide piece 37 to move upward to carry therewith the pawl 36, and thereby advancing the ratchet wheel 34 and roller 31.

It can now be seen how easily and quickly this device can be attached to, or detached from, an ordinary typewriting machine without requiring the typewriting machine to be removed from its support, and all that is necessary is to place the recessed portion 9 of the upright 8 on the frame of the machine at its back, cause the fixed hook 4 to engage one rear post of the machine, and the movable hook 5 to engage its other rear post, tighten up the nut 7, which completes the attachment of the casting 1 to the machine, and then cause the hook 4 of the casing 51 to engage the side rail of the machine, whereupon the attachment is complete.

In order to determine the extent to which the ratchet wheel and copy feed roller are advanced, there is provided an arcuate shield 64, extending around a portion of the ratchet wheel from a plate 66 pivoted on the roller shaft 29 between the ratchet wheel and the adjacent end plate, said plate 66 having extending therefrom an arm 67 having projecting from one side a rib 68, which can pass into either one of three grooves 69 in a plate 71, through apertured ends of which pass screws 72 screwed into the adjacent end plate, coiled springs 73 around said screws being compressed between their heads and the ends of said plate 71. When the arm 67 is moved to regulate the extent to which the roller is turned by the pawl, said plate 71 is, by said projecting rib 68, pushed away from the end plate against the force of said springs 73 until the rib 68 passes into the adjacent groove 69, whereupon the springs return the plate to its normal position.

In order that the roller may be advanced automatically with the platen of the type-

writing machine, I provide a rod 74, around the front end of which is a rubber tube 76, which tube is adapted to be impinged upon by a portion of the typewriter carriage in its movement to the right to begin a new line of typewriting. Said rod 74 passes through diametrically opposite holes in a sleeve 77 slidable upon a head 78 on the end of a rod 79. A spring 81 coiled around the rod is compressed between said head 78 and the inwardly flanged inner end of the sleeve, and normally press said sleeve inwardly. In the outer face of said head are two grooves crossing one another, the surfaces of said outer face between the grooves being rounded. Said rod 79 is prevented from turning on its axis by means hereinafter described, and, when the rod 74 is in one of said grooves, the rubber-covered front end thereof is in a position to be impinged upon by a portion of the typewriter carriage to operate the copyholder automatically. But when it is in the other groove it is out of the path of the carriage and no automatic operation takes place. It is compelled to be in one of these two positions because, if moved out of either groove, it is, by reason of said spring and rounded surfaces, either returned to said groove or moved into the other groove. It is held against longitudinal movement by being compressed between the sleeve 77 and the face of the head 78 by the pressure of the spring 81.

The rod 79 slides through bearings in corresponding ends of the transverse members 22, 23 of the casting 16, and is normally drawn to the left by means of a coiled spring 80 of which one end is attached to a bar 82 attached to the left-hand end plate 28, and the other end is attached to an end of a stem 83, extending through a slot 75 (shown in dotted lines in Fig. 5) the other end of which stem is attached to said rod 79. Said stem also, by its impingement against the left-hand member 22 of said casting 16, forms a stop for the rod 79 when the spring 80 returns said rod to its normal position. Said stem is normally received within a rounded recess in the outer end of an arm 84 pivoted on the end of a lever 85, pivoted by a pivot pin 86 upon the longitudinal member 21 of the casting 16, and said stem, moving with said rod causes the inner end of said arm 84, which is the end by which it is pivoted to the lever 85, to descend against the force of a spring 87, coiled around the pivot pin 86, and of which one end engages the outer transversely extending member 23 of said casting 16, and the other end engages a screw 88 screwed into the lever. A spring 90 is coiled at one end around the pivot 89 of the arm 84, and at the other end around said screw 88, which normally holds said arm in its position engaging the stem 83. When said stem has moved a sufficient dis-

tance to the right, and the arm 84 has passed its vertical position, the spring 90 having been thus put under tension, the stem 83 escapes from the recess in the end of the arm, whereupon, by the tension of the spring 90, the arm 84 and the lever 85 immediately resume their normal position. The other end of said lever 85 extends through a slot 91 in a bent portion of said slide piece 37, so that, when the right-hand end of said lever is raised, so is also the slide piece, which, by means already described, then rotates the ratchet wheel and paper roller. When the typewriter carriage returns, so also does the rod 79 under the tension of the spring 80, and the stem 83 passes the end of the arm 84 putting the spring 90 under tension, which spring, as soon as the stem passes the arm, restores the arm to its normal position.

In short slots 92 extending obliquely upward and forwardly in the end plates 28 are the ends of a shaft 93 passing through pairs of apertured ears 94 formed in a sheet metal copy guide 96 around the copy feed roller, and rubber rollers 97 are contained on said shaft between the ears of each pair. Pivotaly supported in said end plates are the round ends of a square shaft 98, on which can slide pairs of square sleeves 99 formed on sheet metal curved arms 101, the free ends of which carry rollers 102 for holding the copy to the copy feed roller 31. On said square shaft are controllers 103 having square holes by which they fit on the shaft and having extensions 104 to form finger pieces, which may be raised or lowered by the fingers to turn the shaft 98. Said controllers are of folded sheet metal, and are prevented moving longitudinally on said square shaft by the fact that between the folds of each controller extends an arm 106 of a regulator plate 107, through which passes a reduced terminal portion of the shaft 93, a short sleeve 108 surrounding said shaft 93 between said plate 107 and the adjacent end plate 28 of the machine. In the terminal portion of an arm 109 of said regulator plate 107 is a notch 111, through which extends a central portion of a spring wire 112, formed into two coiled springs 113, the ends of which are secured to apertured lugs 114 extending outwardly from the two portions of the controllers adjacent to the rear end of the fold thereof. Through the two portions of the controller at the rear of the square shaft 98 extends a pin 116, which, when the finger 104 is in its raised position, presses upon the upper edge of the arm 106. As said finger is depressed, the lugs 114 to which said springs are attached move forwardly. The pin 116 rises and the arm 106 rises with it under the tension of the springs 113. Said tension resists the depression of the finger 104, and the movement of the pin 116 toward said springs, until the pin 116

arrives at, and passes between, said springs, and then the springs 113 contract and the arm 109 moves suddenly to its final position, shown in Fig. 7, in which final position said arm 109 abuts against an extension 117 of said sheet metal controller 103. In this position, the controller plate 107 acts as a lever of the first order, the pin 116 being the fulcrum, and the springs 113 constituting the power, which acts to draw the shaft 93 to the bottoms of the slots 92, thus drawing the guide 96 and rollers 97 away from the feed roller 31 at the same time that the rollers 102 are moved away therefrom by the rocking of the shaft 98. When said finger 104 is again raised, said pin 116 depresses said arm 106 and increases the tension of the springs 113 until said springs pass said pin, whereupon the springs are able to contract, drawing down the lugs 114, the pin 116 bearing down upon the top of the arm 106 until the regulator plate assumes a position shown in Fig. 6. By this provision the copy guide 96 and rollers 97 and 102 are always in one of two positions, in one of which positions they are closely adjacent to the copy feed roller, and in the other position remote therefrom, to permit the copy to be readily removed from the roller.

By a "side rail" in the claims is meant one of the right or left rails of the typewriting machine, as distinguished from a back or front rail thereof.

I claim:—

1. In a typewriter copyholder, in combination with a typewriting machine, a support for the copyholder upon the typewriting machine, having a central portion resting upon the rear of the frame of the typewriting machine, hooks engaging the rear posts of the machine, one of said hooks being adjustable, and means for clamping said hooks to said posts.

2. In a typewriter copyholder, in combination with a typewriting machine, a supporting means, means whereby the supporting means is detachably secured to the rear of the frame of the typewriting machine, a copy feed roller supported upon said supporting means, a train of operative mechanism for manually advancing said copy feed roller, the power end of said train extending adjacent to the typewriting keys, a casing for a portion of said train, and means for detachably supporting it on a side rail of the frame of the typewriting machine.

3. In a typewriter copyholder, in combination with a typewriting machine, a supporting means, means whereby the supporting means is detachably secured to the rear of the frame of the typewriting machine, a copy feed roller supported upon said supporting means, a train of operative mechanism for manually advancing said copy feed roller, and extending outside of, and adja-

cent to, a side rail of the typewriting machine, and means for detachably supporting it on said machine.

4. In a typewriter copyholder, in combination with a typewriting machine, a supporting means, means whereby the supporting means is detachably secured to the rear of the frame of the typewriting machine, a copy feed roller supported upon said supporting means, a train of operative mechanism for manually advancing said copy feed roller, and extending outside of, and adjacent to, the side rail of a typewriting machine, and a support for the front portion of said train, having a hook arranged to hook over said side rail.

5. In a typewriter copyholder, in combination with a typewriting machine, a supporting means, means whereby the supporting means is detachably secured to the rear of the frame of the typewriting machine, a copy feed roller supported upon said supporting means, a train of operative mechanism for manually advancing said copy feed roller, said train comprising a lever extending to the front of the machine at

one side thereof, an operating key for said lever, a casing for said lever and in which the lever is pivoted, one end of said casing having a part resting upon the adjacent side rail of the typewriting machine, and the end thereof being detachably connected to said supporting means.

6. In a typewriter copyholder, in combination with the typewriting machine, a support, means for securing said support to the frame of the typewriting machine, a copyholder pivotally mounted upon said support, operative means for advancing the copy on said holder, and means for supporting the power end of said operative means upon the typewriting machine, said operative means being jointed in line with the pivotal axis of said copyholder upon its support.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WILLIS E. GIBSON.

Witnesses:

FRANCIS M. WRIGHT,
G. M. BALL.