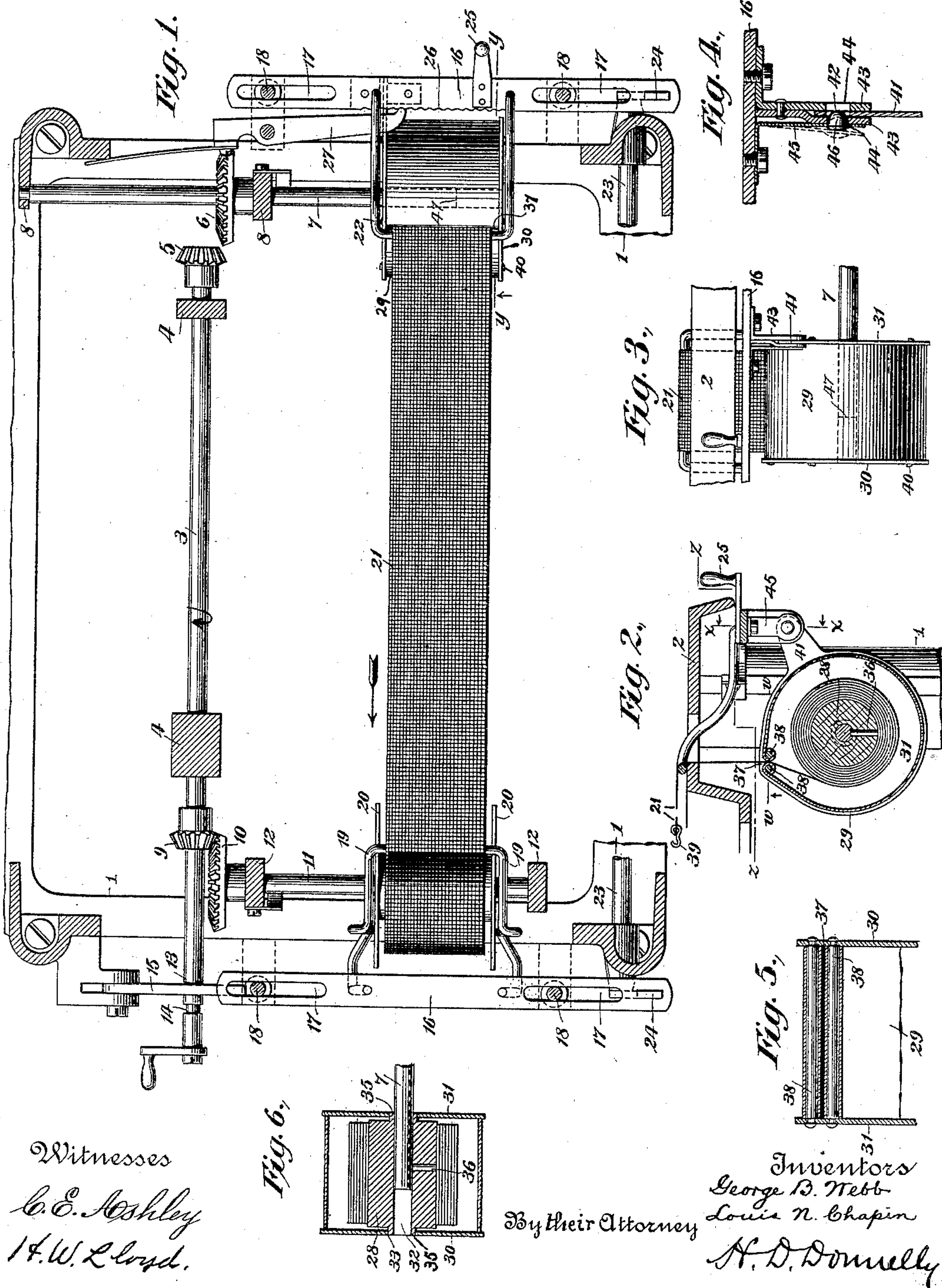


(No Model.)

G. B. WEBB & L. N. CHAPIN.
TYPE WRITING MACHINE AND RIBBON HOLDER THEREOF.
No. 473,718. Patented Apr. 26, 1892.



Witnesses
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UNITED STATES PATENT OFFICE.

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TYPE-WRITING MACHINE AND RIBBON-HOLDER THEREOF.

SPECIFICATION forming part of Letters Patent No. 473,718, dated April 26, 1892.

Application filed November 2, 1891. Serial No. 410,664. (No model.)

To all whom it may concern:

Be it known that we, GEORGE B. WEBB, a resident of New York city, in the county of New York and State of New York, and LOUIS N. CHAPIN, a resident of Brooklyn, in the county of Kings and State of New York, citizens of the United States, have invented certain new and useful Improvements in Type-Writing Machines and Ribbon-Holders
10 Thereof, of which the following is a specification.

Ribbons for type-writing machines vary greatly in quality both as to fabric and ink or coloring-matter employed, and for this reason
15 some ribbons are considerably more efficient and durable than others. The purchaser or user of ribbons is usually, however, unable to judge of the superiority of one ribbon over another, and hence frequently buys a ribbon
20 of inferior quality supposing it to be of the best make.

Numerous dealers in type-writer supplies sell such inferior ribbons as the ribbons made by the manufacturers of the standard machines especially for their respective machines to the great detriment of the trade and reputation of such manufacturers, and dealers frequently resort to the practice of removing from a wrapper or package bearing the
25 name or business-card of the manufacturer a standard or first-quality ribbon and substituting therefor a lower grade or poorer quality of ribbon.

Our invention has for its main object to
35 provide a check to such fraudulent and dishonest practices, and thus afford protection to the standard manufacturer and to the consumer who is desirous of purchasing only first-class ribbons.

To these ends our invention consists in putting up the ribbon in a box or case of peculiar construction and in constructing the type-writing machine in a peculiar way to receive such box or case, all as will be herein-
40 after more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a horizontal section of a portion of a Remington type-writer, taken on a plane below the
50 top plate of the machine and on about the

line $z z$ of Fig. 2. Fig. 2 is a vertical section taken at the line $y y$ of Fig. 2 with the top plate added. Fig. 3 is an elevation taken at the right-hand side of the machine. Fig. 4 is an enlarged vertical section taken at the line
55 $x x$ of Fig. 2. Fig. 5 is a horizontal section taken at the line $w w$ of Fig. 2. Fig. 6 is a central horizontal section through the spool and case and showing the spool-shaft in elevation.

In the several views the same part is designated by the same numeral of reference.

1 designates the frame-work of a Remington type-writer, and 2 the top plate thereof.

At the rear of the machine is a transverse
65 shaft 3, which rotates in suitable bearings 4 and which, as usual, is connected to the carriage-driving mechanism of the machine. (Not shown herein, however.) At the right-hand end of said shaft is a beveled pinion 5,
70 adapted to engage with a beveled gear 6 on a ribbon-spool shaft 7, mounted to turn in suitable bearings 8. Near the other end of said shaft is arranged another beveled pinion 9, adapted to engage with a beveled gear 10 on
75 a ribbon-spool shaft 11, mounted in suitable bearings 12 at the left-hand side of the machine. The said shaft 3 is provided with two grooves 13 and 14, adapted each to receive a pivoted latch 15 to hold said shaft against
80 longitudinal movement accidentally and to maintain either set of beveled gears in engagement as desired.

At each side of the machine beneath the top plate is arranged a sliding bar 16, which
85 is slotted out, as at 17, and supported by screws 18, passing through said slots from below and entering threaded holes in the top plate. The slide 16 at the left-hand side of the machine is provided with a ribbon-sup-
90 port and ribbon-spool carrier 19, composed of wire and so bent as to embrace the ends or heads of a ribbon-spool 20 on the shaft 11 and to extend above the heads of said spool to form a rest or support for the inking-ribbon
95 21. The slide 16 at the right-hand side of the machine is provided with a ribbon-support 22, also formed of wire, preferably. The said slides 16 are connected together in the usual way by a transverse rock-shaft 23, hav-
100

ing at each end a vertical rocker-arm 24, working in a slot in the forward end of each of said slides.

The slide at the right-hand side is provided 5 with a hand-piece or knob 25, by which both of said slides may be simultaneously moved back or forth and the ribbon connected therewith moved widthwise to provide a new or fresh surface for the type to strike against. 10 The right-hand slide 16 is also provided with a series of notches or a rack 26 for the engagement of a spring-actuated dog 27 by which said slides and the ribbon may be held against accidental movement. 15 The ribbon-spool at the left-hand side of the machine is of the ordinary construction, while that at the right-hand side of the machine is made in accordance with our improvements. The ribbon spool or bobbin 28 at the 20 right-hand side is arranged within a case or box having a substantially cylindrical body 29 and cylindrical heads 30 and 31, all of metal. The spool 28 is hollow or provided centrally with an opening 32 to enable the 25 spool to be fitted upon the shaft 7, and the heads 30 and 31 of the box or case are provided with holes 33 in line with the central opening in the spool to permit of the case fitting upon said shaft also, and to afford bearings for journals 35 on the ends of the spool 30 28, so that the spool may rotate freely in the heads of the case and be held in proper position within said case when detached from the machine. The shaft 7 is formed with a 35 longitudinal groove, as indicated at Fig. 2, and the spool 28 is provided with a radial pin 36, which enters said groove so that the shaft and the spool may turn at all times together, while, when desired, the spool may be moved 40 lengthwise of said shaft. The ribbon is fastened at one end upon the spool 28 and then wound upon the same. The free end of the ribbon passes out through a slot 37, formed by two cross-pins 38 at the ends of the circular body 45 portion 29. The slot 37 is just wide enough to permit the passage therethrough of the ribbon, and the free end of the ribbon is provided with hooks 39 or other devices incapable of passing through said slot, and hence of permitting the 50 free end of the ribbon to accidentally fall or be wound into the casing or box. The said hooks 39 are, after adjustment of the spool upon its shaft 7, passed up over the ribbon-support 22, (which does not embrace the spool 55 box or case,) thence across the machine to the opposite spool 20, and are fastened thereto or to a piece of tape secured upon said spool. The ends of the pins 38 are slightly longer than the width of the body portion 29 and pass 60 through holes in the covers or heads 30 and 31. The body portion 29 is formed around its edge on each side with a series of pins or studs 40 to also enter coinciding holes in the covers or heads 30 and 31. The ends of the 65 pins 38 are prolonged, and the pins or studs 40 are provided for the purpose of enabling the covers or heads 30 and 31 to be securely

riveted to the body portion 29 after the placement in position within of the spool 28.

In practice we preferably first rivet or se- 70 cure one head, then put in the spool with the ribbon thereupon, passing the leading end of the ribbon edgewise laterally into the slot 37, and then put on the other head or cover and rivet it securely upon the body portion 29. 75 When the ribbon has thus been placed within the case or box, it cannot be removed and another ribbon substituted for it without cutting off or filing away the heads of the pins or studs or otherwise destroying the box and 80 presenting some evidence of the box having been tampered with.

The head or cover 31 is provided with an arm 41, which is connected to the right-hand slide 16 to enable the box and the ribbon- 85 spool 28 to move back and forth with said slide and the ribbon-spool 20. The arm 41 is provided with an eye 42, which passes in between two depending plates 43 on the under side of the slide 16, having perforations 44 in line with 90 the perforation 42 in the arm 41. On the under side of the slide is also fixed a depending spring 45, provided with a conical or spherical pin 46, adapted to pass through the opening 95 in one of the plates 43 and engage the opening 42 in the arm 41 to lock or hold the same in position and effect a connection between the box or case and the right-hand slide 16. The eye 44 in the rearmost plate 43 may be 100 dispensed with, if desired. The spherical or conical pin 46 enables the arm 41 to be pushed into the slot or housing between the plates 43 and automatically locked, and also permits it to be withdrawn or unlocked therefrom with- 105 out moving the spring 45 laterally by hand. The outer end of the shaft 7 terminates at the dotted line 47 at Figs. 1 and 3, so as to leave sufficient room between it and the frame of the machine for the slipping on endwise of 110 the spool 28 and its box or casing. After the spool and box have been slipped upon the shaft 7 the box is turned by hand until the eye in the arm 41 is sprung into the space between the two plates 43 and caught by the conical pin 46. 115

In the positions of the parts at Fig. 1 the shaft 3 by the driving mechanism of the machine is rotated in the direction of the arrow thereat, and the ribbon is caused to wind upon the left-hand spool 20, the spool 28 and the 120 shaft 7 turning as the ribbon pays off from the last-mentioned spool. If the shaft 3 be moved longitudinally, so that the catch 15 may engage with the groove 14, the beveled gears 5 and 6 will be thrown into engagement 125 and the gears 9 and 10 out of engagement, and thereafter as the shaft 3 continues to rotate in the same direction the shaft 7 will be turned and the ribbon wound lengthwise in the reverse direction or back upon the spool 28. 130

When the ribbon through usage has become worn or exhausted, a fresh or new ribbon in another box or casing may be substituted in its place, and by reason of the employment of

the boxes this substitution of ribbon may be more conveniently effected and with less liability of soiling the hands than heretofore.

The box or case must be held in or on the machine against turning, so as to keep the slot 37 in proper position at all times to deliver the ribbon in the right direction, and the attachment of the box must be made either to some stationary part of the machine or to some part which has only a lateral movement—such, for instance, as the slide 16.

Instead of making the boxes or cases of metal and riveting on the head or heads, the boxes or cases may be made of wood, pasteboard, celluloid, or other material, and glued or otherwise permanently put together, so as to prevent change of ribbon without trouble and detection.

In addition to the advantages above alluded to, the employment of the boxes prevents the drying-out of the ribbons easily and the accumulation of dust thereon while the ribbons are in stock or on the machine.

What we claim as new, and desire to secure by Letters Patent, is—

1. The combination of a type-writer ribbon, a slotted case incapable of being opened without destruction, and a spool arranged within said case and incapable of being extracted without destroying said case.

2. The combination of a type-writer ribbon provided at one end with fastening devices, a slotted case incapable of being opened without destruction, and a hollow spool arranged within said case and incapable of being extracted without destroying said case, the said case being provided with open bearings and the said spool being provided at its ends with hollow journals.

3. The combination, with a slotted case incapable of being opened without destruction, of a spool journaled within said case and incapable of being extracted without destroying said case, and a type-writer ribbon connected to said spool and adapted to pass out through the slot in said case.

4. The combination, with a slotted case having perforated heads, of a hollow spool arranged within said case and incapable of being extracted without destroying the same and having hollow journals fitted to the perforations in said heads to permit the passage of a ribbon-spool shaft, and a type-writer ribbon

connected to said spool and adapted to pass out through the slot in said case. 55

5. The combination of a type-writer ribbon, a spool, and a slotted case provided with means to enable its attachment to a type-writing machine.

6. The combination, in a type-writing machine, of a shaft or axle, a slotted case fitted thereon, and a spool bearing a ribbon arranged within said case and adapted to slide on said shaft and constructed and arranged to rotate within said case. 65

7. The combination, in a type-writing machine, of a shaft or axle, a slotted case adapted to slide thereon, a spool bearing a ribbon arranged within said case and also adapted to slide on and turn with said shaft, and means for preventing rotation of said case. 70

8. The combination, in a type-writing machine, of a shaft or axle having a groove and a spool bearing a ribbon within a slotted case and provided with a pin to engage said groove. 75

9. The combination, in a type-writing machine, of a shaft or axle, a spool bearing a ribbon, a slotted case inclosing the same, and a catch or fastening to prevent turning of the case. 80

10. The combination, in a type-writing machine, of a shaft or axle, a spool bearing a ribbon, a slotted case inclosing the same and provided with an arm, and means on the machine to engage said arm to hold the case in proper position for the paying out or taking up of the ribbon. 85

11. The combination, in a type-writing machine, of a shaft or axle, a spool bearing a ribbon, a slotted case inclosing the same, and a slide connected to said case. 90

12. The combination, in a type-writing machine, of a shaft or axle, a spool bearing a ribbon, a slotted case inclosing the same and provided with a perforated arm, a slide, a depending perforated plate thereon, and a catch-pin. 95

Signed at New York city, in the county of New York and State of New York, this 22d day of October, A. D. 1891.

GEORGE B. WEBB.
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Witnesses:

JACOB FELBEL,
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