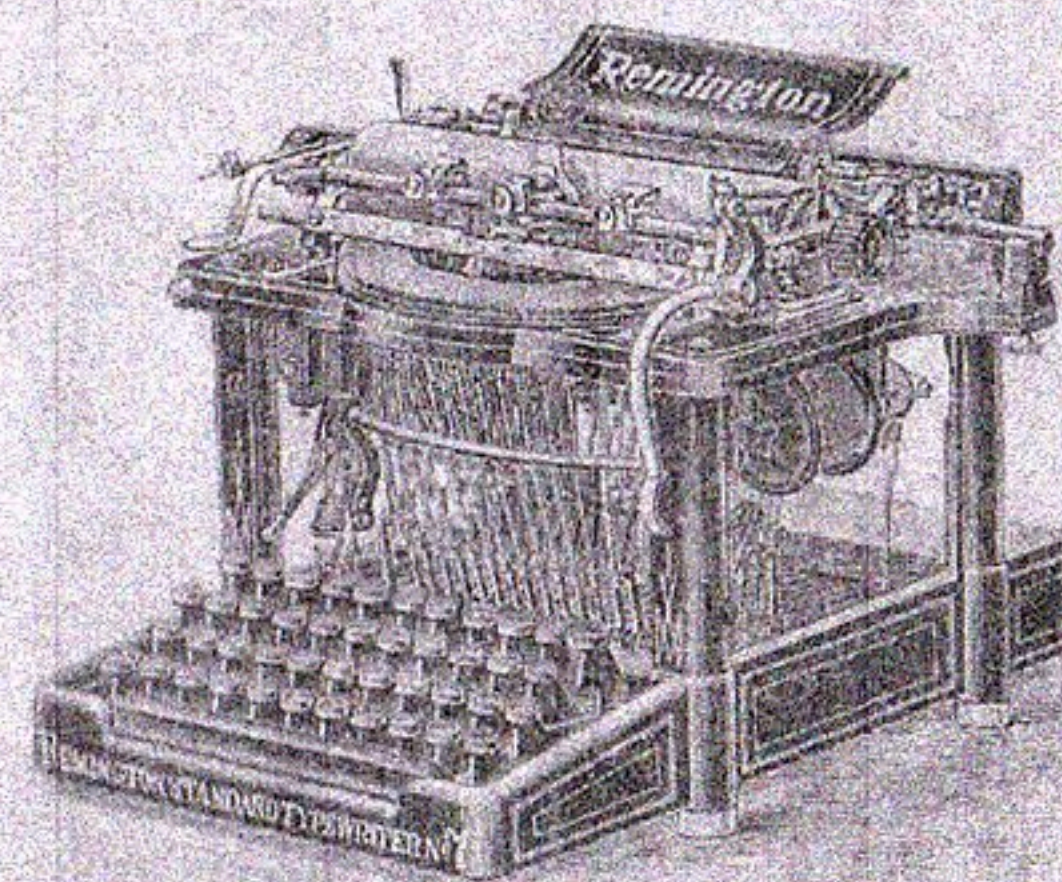


Directions for Using

The

Remington Standard Typewriter

Models Nos. 6 and 7



Wyckoff, Seamans & Benedict

327 Broadway, New York, U. S. A.

THE
REMINGTON STANDARD TYPEWRITER,

MANUFACTURED ONLY BY

Wyckoff, Seamans & Benedict,

327 BROADWAY, NEW YORK, U. S. A.

BOSTON,

15 School Street.

PHILADELPHIA,

105 South 9th Street,
(Continental Hotel).

BALTIMORE,

131 East Baltimore Street.

WASHINGTON,

Le Droit Building, cor. 8th
and F Streets, N.W.

ROCHESTER,

312 Wilder Building.

BUFFALO,

58 Niagara Street.

CLEVELAND,

137 Superior Street.

CINCINNATI,

213 West 4th Street.

INDIANAPOLIS,

34 East Market Street.

KANSAS CITY,

105 West 9th Street.

LONDON, ENGLAND, 100 GRACECHURCH STREET.

LIVERPOOL,

14 C North John Street.

BIRMINGHAM,

23 Martineau Street.

MANCHESTER,

84 Cross Street.

LEEDS,

40 New Briggate.

BRISTOL,

1 Bristol Chambers, Nicholas St.

SHEFFIELD,

37 Surrey Street.

CHICAGO,

169 La Salle Street.

ST. LOUIS,

714 Locust Street.

ST. PAUL,

94 East 4th Street.

MINNEAPOLIS,

14 South 4th Street.

DULUTH,

323 West Superior Street.

DES MOINES,

221 5th Street.

PROVIDENCE,

42 Custom House Street.

DENVER,

1645 Champa Street.

MILWAUKEE,

89 Mason Street.

OMAHA,

1710 Farnam Street.

RICHMOND, VA.,

706 East Main Street.

NEWCASTLE-ON-TYNE,

12 Neville Street

HULL,

Paragon Chambers.

Paragon Street.

EDINBURGH,

1 North St. David Street.

GLASGOW,

183 W. George Street.

PARIS, FRANCE,

18 Rue de la Banque.

DIRECTIONS

For Using the Nos. 6 and 7 Remington Typewriter.

INTRODUCTORY.

The operation of the Remington Typewriter is so simple that no one need experience any difficulty in learning to use it. All that is really necessary is to insert a sheet of paper, and then touch the keys, but a correct understanding of the mechanism will greatly increase its usefulness to the operator.

Careful attention to the following instructions will be of much benefit to those who desire to become thoroughly familiar with the machine, and expert in its use and care.

In general appearance, the new Remington models do not differ very materially from the previous ones, which have been for so many years the favorites of users of writing machines. The general principles of the Remington model, which experience has tested so severely, and with such gratifying results, are retained. Operators who are familiar with the other Remington models will not have any difficulty in at once making use of the No. 6 or No. 7. Many changes of the details of construction, tending toward a greater ease and convenience of operation, speed, strength, durability, and range of work, have been introduced.

The manner in which the Remington performs its work is of the simplest. For the benefit of those unfamiliar with typewriters, it may be said that the Remington Typewriter may be considered as composed of three general parts, as follows:

THE KEYBOARD—By which the operation of the machine is directed.

THE TYPE MECHANISM—By which the desired letters are, one after the other, in any desired sequence, imprinted upon the paper.

THE CARRIAGE—Which holds the paper in the proper position for writing, and which, by its regular movements, provides for the spacing of letters and lines.

A very brief examination of the machine will serve to make the operator familiar with these general parts, and the absolute simplicity and directness of their relation to one another. Every portion of the machine is readily accessible, and, by the aid of the following illustrations and explanations, no difficulty will be experienced in understanding the function of every portion of the machine.

To make the ensuing directions intelligible, and especially to illustrate the points wherein the Nos. 6 and 7 Remington differ from the other Remington models, three views of the general working parts of the machine are given, and also four illustrations of portions of the mechanism not so clearly shown in the general views.

Figure 1. A front view of the whole machine ready for work. (Page 3.)

Figure 2. A front view of the machine as it appears with the paper carriage raised, to permit the operator to look at the writing in the machine. (Page 6.)

Figure 3. Illustrates the marginal stop mechanism, as seen from the right hand side of the machine when the paper-shelf is removed; also shows escapement wheel locking mechanism. (Page 9.)

Figure 4. Exhibits the line-space pawl and gauge, illustrating the method of changing the space between the lines, as explained in Section 11. (Page 11.)

Figure 5. A view of the machine as it appears from the rear, with the carriage in position ready for writing. (Page 15.)

Figure 6. Illustration of the automatic ribbon reversing mechanism. (Page 18.)

Figure 7. Illustration of the mechanism producing the transverse or cross-feed movement of the ribbon. (Page 19.)

NOTE.—The same number in any of the illustrations always indicates the same part of the machine.

Right or left in these pages applies to the part of the machine at the right or left (as the case may be) of a person seated in front of and facing the machine.

Preparing for Operation.

SECTION 1. Machines are shipped from the factory properly adjusted for full width paper and full length lines, and are ready for immediate use when unpacked. The rubber feet, which lessen the noise, and prevent the machine from marking any desk or table upon which it may be placed, are readily inserted in the bottom of the hollow posts,

If the machine is to be used to print on paper which is only eight inches wide, move the right hand paper guide (CC 1, see Figure 1) on the front of the carriage to the left enough to permit the edge of the paper, when inserted as directed in Section 3, to pass well underneath the paper guide (68 J), say five spaces of the scale, if the type in the machine is pica, and place the left hand marginal stop (45 X) a slightly greater distance, say six spaces pica, in towards the centre of the machine.

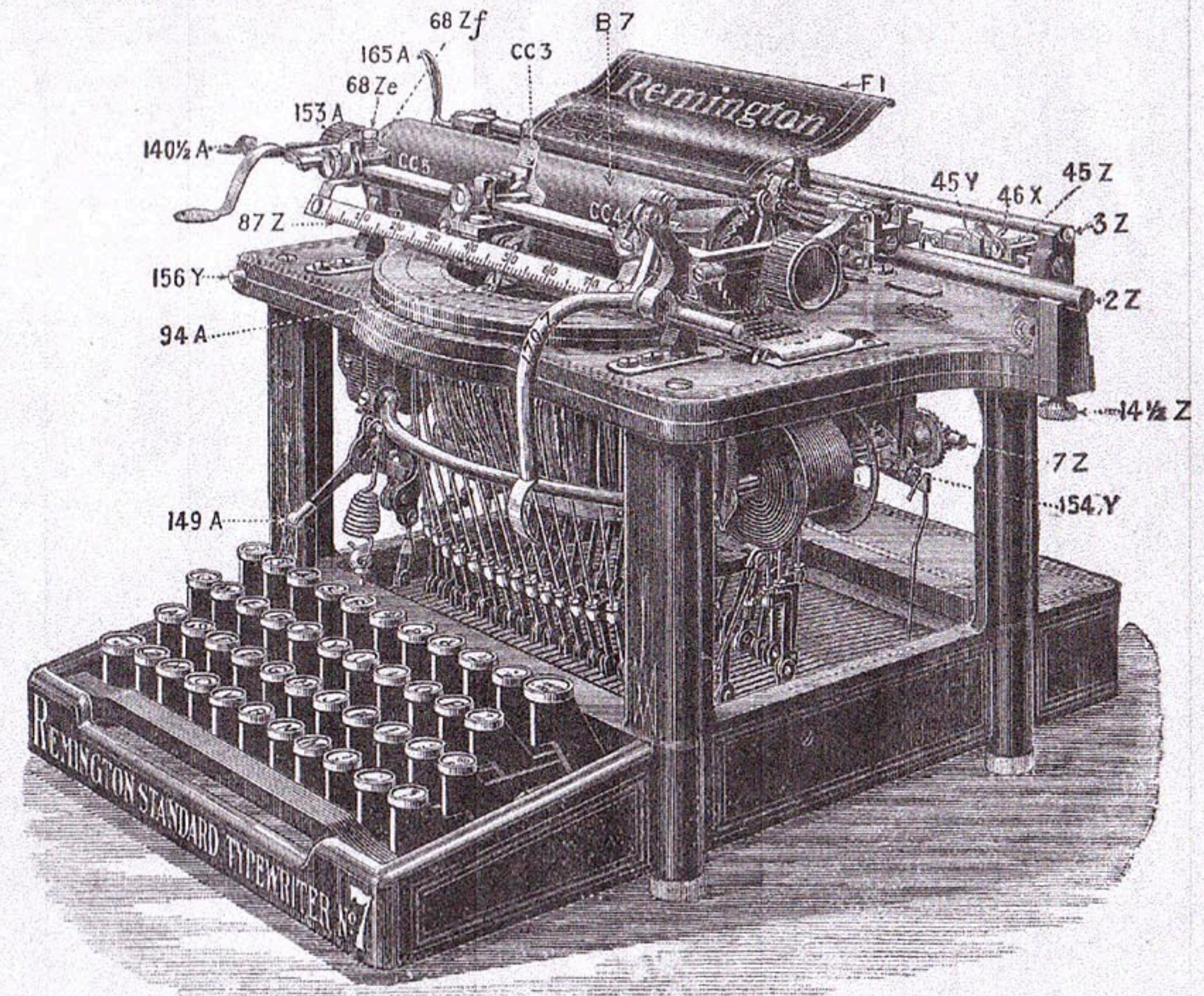


FIGURE 1.

Correct Position at the Machine.

SECTION 2. The operator will find it an advantage to learn to maintain a correct position at the machine from the start. An erect posture will be found to be less fatiguing than to incline the body either backward or forward. It is advisable to sit close to the machine, which should be placed at such a height as will permit the operator to

hold the arm, from the elbow to the wrist, in about a horizontal position. If this is impracticable, it is better to have the arm incline slightly downward from the elbow.

Placing the Paper.

SECTION 3. Lay the paper upon the paper-shelf (F 1), with the edge close down to the cylinder (B 2) and the feed rolls (G 1), and the side edge of the sheet about even with the outside corner of the left cylinder scale hinge (124 B). Press back the top of the central paper guide (CC 3), and turn the cylinder from you by one of the thumb wheels (153 A) until the lower edge of the paper has passed an inch or an inch and a half beyond the scale (86 Z), bringing it beneath the central paper guide; then pull the top of the latter forward as far as it will come, thus clamping the paper close to the surface of the cylinder. If the edge of the sheet of paper is not parallel with the scale, slacken the pressure of the feed rolls (G 1) upon the paper by pressing down the feed roll release key (165 A). Draw back the side of the sheet that projects too far, until it is quite parallel with the scale, and then roll it in until the portion of the sheet upon which you desire to commence writing is reached. The proper place to begin is easily determined by the help of the scales (see Section 5).

Adjusting the Paper Guides.

SECTION 4. The machine is fitted with two paper guides (CC 4 and CC 5) and an envelope guide (CC 3), which render instantaneous adjustment for any width of paper or any size of envelopes an easy matter. A perfectly smooth and uniform fitting of the paper to the surface of the cylinder, which is essential to good printing, is secured by the guide pieces (68 Z g and 68 Z h, see Fig. 2), which adjust themselves automatically to any thickness of paper through the guide holders (68 Z a, 68 Z b) and the guide holder springs (68 Z f), but the pressure upon the paper can at any time be increased or diminished by turning the little thumb-nuts (68 Z e) to the right or left, as may required. All of these guides slide easily upon the front bar of the carriage, and remain in the position in which the hand of the operator leaves them, without turning the large thumb screw which faces the operator. To do the most effective service, the left hand and right hand ones should be so placed that the edges of the sheet of paper come well under the little rolls (68 P) which they bear, and the centre one about midway between the two. These rolls are useful to carry the paper along after the lower edge of the sheet has passed the feed rolls (G 1), when it is desirable to print close to the

bottom of the sheet; but they can be thrown entirely off the paper and out of the way when not wanted, by merely lifting them away from the cylinder by the little handles provided for that purpose. The central guide (CC 3) is thrown away from the cylinder by simply pressing the top of it toward the rear of the machine.

The Scales.

SECTION 5. The position of the printed character upon the paper is determined by the scales, both of which read from left to right. The position upon the line that any letter will occupy when printed is always shown by the front scale (87 Z), in conjunction with the front scale indicator (94 A). The character will be printed directly over the corresponding mark upon the cylinder scale (86 Z).

The printed characters will appear upon the paper with the bottom line of the letters exactly parallel with the edge of the cylinder scale, and distant from it by exactly the space represented by moving the cylinder *two* notches of the ratchet (145 A) on the right hand end of the cylinder. To print upon a given line, as in the case of filling out blanks or inserting dates in a printed letter-heading, bring the line on which it is desired to print exactly to the edge of the scale. (This may be accomplished by turning a little beyond the exact place, and drawing back the paper to the precise position, as explained in Section 3.) Then turn the cylinder upward *two* notches, and the bottom of the letter printed will be found upon the line that was brought to the edge of the scale.

The Feed Roll Release.

SECTION 6. The pressure of the feed rolls (G 1) upon the paper is instantly removed by pressing back the feed roll release key (165 A), which, with the rolls (68 P) and the central envelope guide (CC 3) also thrown off, will permit the adjusting of the weakest or most delicate paper without danger of tearing. This key is conveniently placed, so that a slight movement of the fingers of the left hand will suffice to give the needed pressure, even when the carriage is up.

To Begin a New Line.

SECTION 7. To return the carriage to begin a new line, pull the carriage lever (170 Z) toward you, but not hard enough to raise the carriage from its track; then give a *gentle* pressure to the right

until brought to a full stop by the margin stop (45 Y). The forward pull revolves the cylinder and carries the paper into the proper position for the next line, and the pressure to the right returns the carriage to the beginning of the writing line.

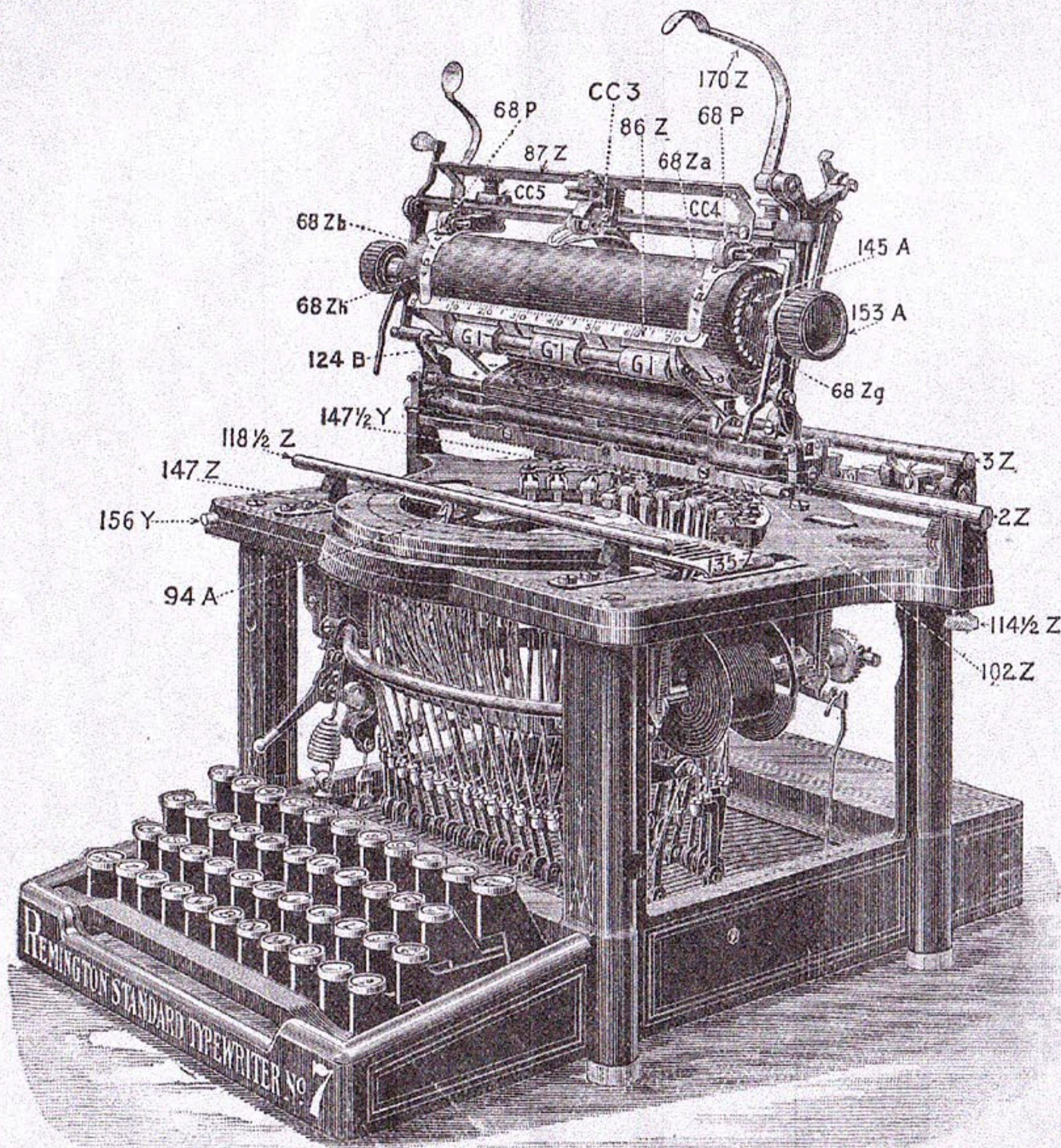


FIGURE 2.

The Carriage Release.

SECTION 8. The position of the writing line does not change unless the carriage lever be pulled forward. The carriage can be freely moved toward the right at any time, but it cannot be pushed toward the left without first depressing the carriage release key (140 1/2 A). By pressing this down, the carriage can be moved to right or left freely at any time.

Reprinting.

SECTION 9. The cylinder is held in position by the roll of the cylinder stop spring (71 B, Figure 4) engaging in the teeth of the ratchet head (145 A), the line space pawl (47 A) being held out of contact with the ratchet, thereby enabling the cylinder to be turned backward or forward at any time, and always be securely locked in whatever position it may stop.

To reprint upon the line of writing (that is, before the paper has been shifted by the operation of the carriage lever), it is only necessary to pull the carriage to the right until the indicator (94 A) points to the scale mark next to the left of the one at which it is desired to make the impression. When the hand is removed from the carriage, it will drop back to the proper point for reprinting at the desired spot.

If the reprinting is to be done on lines that have been previously written and turned forward, turn the cylinder downward by one of the thumb wheels (153 A) until the line upon which the reprinting is to be done is two spaces away from the edge of the cylinder scale. (The eye soon learns the correct distance, but, if any difficulty is experienced at first, the line can be turned down to the scale, and then the cylinder moved back again *two* spaces.) Then proceed as directed in the preceding paragraph.

If the correction is to be made on a sheet which has been removed from the carriage, replace it again as at first, and turn the paper forward until the printing appears above the cylinder scale. Then adjust one of the printed lines, preferably one near to the line on which the correction is to be made, to the edge of the cylinder scale, in the manner described in Sec. 5, so as to make sure that the character to be reprinted will fall exactly upon the line of writing. Since the writing of the machine is all in parallel lines, this adjustment of the paper will suffice for any reprinting which has to be done on the sheet, as it is only necessary to turn the cylinder forward or backward until

the line on which the reprinted correction is to be made is two spaces above the edge of the cylinder scale, to enable the operator to place any character in any desired position. When adjusting the paper for the position of the line, care should be taken to see that the centre of the letters upon the line upon which the adjustment is made corresponds with the graduated marks on the edge of the cylinder scale. The best way of testing this is by noticing the position of letters having a straight central stem, such as i, m or l. This is especially important when the reprinting to be done is the replacing of single letters erroneously printed in the original writing. Careful attention to these points will enable the operator to correct the misprinting of even a single character so that the insertion cannot be distinguished from the original writing.

Regulating the Margins and Changing the Lines.

SECTION 10. Margins are regulated by the marginal stops (45 W, 45 X, 45 Y, 45 Z, see Figure 3) which slide on the marginal stop-bar (8½ Z). The latter is graduated to correspond with the markings on the scales, and all the stops are movable, so that they can be set to begin and end the lines of writing at any point.

When the machine is set for full length lines, the writing always commences at the point shown by 0 on the scale. If it is desired to begin the lines farther away from the left hand side of the sheet, so as to leave a margin down that edge of the page, it can readily be done by moving the right marginal stop (45 Y) to the left. To do this, take hold of the right marginal stop cam lever (46 V), and push it to the left until the little indicator (46 T) is exactly upon the mark on the graduated bar (8½ Z) which corresponds with the point on the front scale at which it is desired to begin the writing. For convenience, margins are usually set to commence at 5, 10, 15, etc. If it is desired to commence at any intermediate point, it can readily be done by setting the indicator the requisite number of points away from the nearest numbered mark.

If it is desired to shorten the line on the right, as, for instance, when writing on a narrow sheet of paper, it is only necessary to set the left marginal stop (45 X) so that its indicator (46 S) points to the place at which it is desired to stop the writing. The bell will invariably give warning a few spaces before the end of the line, as fixed by the left marginal stop, is reached.

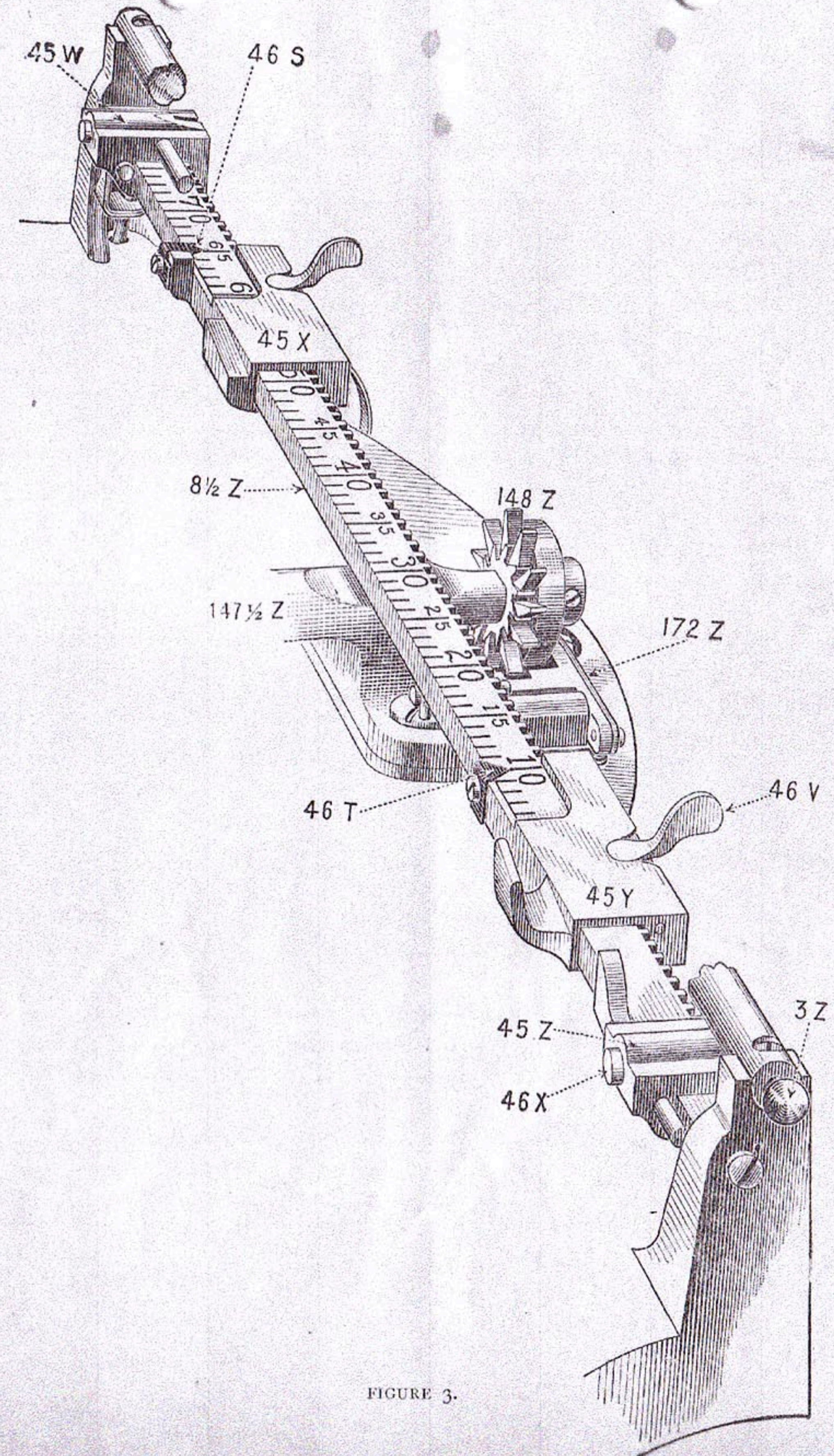


FIGURE 3.

At this point, the further operation of the keys is impeded by the action of the letter spacing lock, which gives the operator warning and prevents further writing on the sheet, unless the marginal stop release mechanism (referred to below) is used.

If it is desired to extend the line of writing beyond the limits set by the marginal stops on either the right or the left hand side of the paper, it can be done by pushing in the marginal stop release push button (156 Y, Figure 1), which tilts the bar (8½ Z) so that the carriage can be moved in either direction past both the marginal stops, thus allowing the carriage to run to the full length of line indicated by the position of the marginal stops (45 W and 45 Z). This permits the insertion of a few additional characters to complete a word or syllable at the end of the line, or the writing of marginal notes or headings on the left hand margin of the sheet.

When the final stops (45 W and 45 Z) are pushed to their respective ends of the bar (8½ Z), the carriage will run to the extreme length of line which the machine is fitted to write. Both of these stops can be moved to any desired point on the rod (8½ Z) by pressing in the catch head (46 X). This permits the full use of the marginal devices on paper of any width.

Changing Space between Lines.

SECTION 11. The machine is constructed for three different widths of line spacing. These are regulated by the space gauge (95 A, see Figure 4). When the little checked end of this gauge is lifted up as far as it will go, the machine is adjusted for the widest spacing, equal to three notches of the ratchet (145 A) on the cylinder. When it is pulled forward and downward to its next stopping place, the spacing equals two notches of the ratchet, and, when depressed to its lowest point, it is adjusted to the narrowest spacing, or one notch.

Detaching the Paper Carriage.

SECTION 12. This is seldom necessary, but in case of need it can be done without the aid of any tool. Occasionally it may be desirable to remove or replace the carriage with another, fitted for special work, such as one with a very hard cylinder, for manifolding more than ten copies at once.

Place the carriage at 25 on the scale, and put the fingers of the left hand beneath the main spring wheel (142) to hold it steady, while the right hand is employed to unhook the carriage strap (118 Z) from the hook (164 Z), and hang it upon the knob on the right hand end of the carriage guide rod (3 Z, see Figure 3), to prevent the main spring getting loose and running down when the weight of the

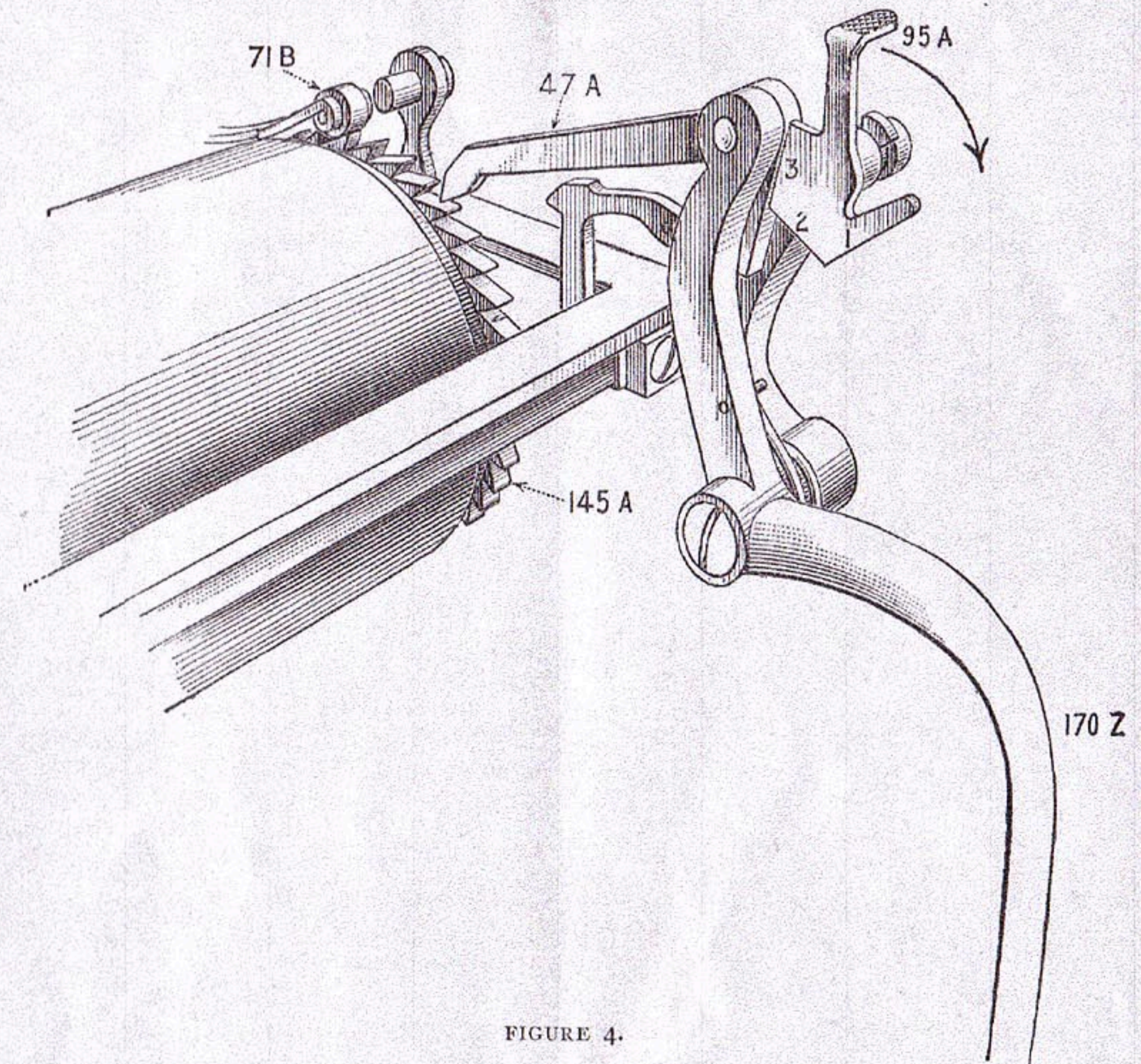


FIGURE 4.

carriage is taken off it. Then loosen the thumb screws (14½ Z) sufficiently to release the way rod (2 Z) (they are so constructed that they will not drop out and get mislaid; simply turn them to the left to loosen and to the right to secure the carriage), and the carriage can be lifted off. To replace it or to substitute another for it, pass the way rod through under the back rolls (148 A), and then replace both rod and carriage together, taking care to see that the forked arm

which extends backward from the rear of the carriage enters the groove in the little sleeve (123 A, Figure 5) which slides upon the carriage guide rod (3 Z). Then again tighten the thumb screws (14½ Z), attach the strap (118 Z) to the hook (164 Z) again, and the machine is ready for service.

Be careful not to let the carriage strap slip from the fingers while transferring it.

The Shifting Cylinder.

SECTION 13. Every type bar in the machine carries two types. The cylinder determines by its position which of the two shall strike the paper. When the cylinder occupies the forward position, that is, toward the front of the machine, the small letters and the characters upon the double keys which are *nearest* to the operator will be printed. When the cylinder is moved backward as far away from the operator as it will go, the machine will only print capital letters and the characters which are farthest away from the operator when the keys which bear two imprints are operated.

The position of the cylinder is governed by the position of the shifter (149 A). When this lever points downward, the cylinder is in its forward position, and the machine will consequently print small letters, as described above. When it is lifted up, the cylinder is thrown back, and the capitals only, with the characters farthest away from the operator where the keys bear two characters, will be printed.

The Shift Keys.

SECTION 14. The purpose of the shift keys, either one of which can be operated as may be most convenient, is to change the position of the cylinder so as to print a character contained in the other "case," or shift. (Following the custom of printers, the capitals and other characters in that shift are frequently called the "upper case," while the small letters are known as the "lower case"). By depressing either shift key, the cylinder is instantly shifted to the other position, but is returned to its former place immediately upon removing the finger from the key, by the action of the spring attached to the shifter. From this it will be seen that, when the shifter is set in the normal position for writing the lower-case characters, the use of the shift key enables the operator to insert any capital or other character from the upper case at will, and instantly return to the lower case; while the opposite is true, if the machine be set in the upper case.

The Type Keys.

SECTION 15. Every type key represents two types, either of which can be printed by striking the same key. The keys with only one letter upon them print both the capital and small letter represented. All the other type carrying dissimilar characters have both characters indicated upon the key. The "lower case," or front ones, will be printed when the machine is set to write small letters without the use of the shift key, and the "upper case," or rear ones, when the machine is set for capitals.

The Space Key.

SECTION 16. The spaces between words are made by depressing the long bar which extends across the front of the keyboard, known as the space key. The depression of this bar at any portion of its length moves the carriage to the left just the width of one letter. The operator should, of course, strike it once after every word, and also when it is desired to make spaces other than those between words, such as at the beginning of paragraphs, etc.

To Do Nice Work.

SECTION 17. Strike the keys with a quick, *staccato* touch, having sufficient force and promptness to throw the type against the cylinder. Strike but one key at a time, and be sure to release that one before striking another. Strike the key squarely, evenly, and with a uniform touch, and take your finger off the key, as nearly as possible, at the exact time that the type strikes the paper. If anything, let the finger leave the key a little before, rather than after, the type strikes, for, if the key be pushed after the type has struck the paper, the work is apt to be blurred.

If the writing is to be done on very thin paper, it is best to put two sheets into the machine at once.

Very neat work can be produced by giving due attention to the details of paragraphing, punctuation, etc. Each new paragraph should be commenced at least five spaces from 0 on the scale; and the space key should be struck three times after every sentence.

Words can be emphasized, where necessary, by using the underscore. The underscore is used by setting back the carriage to the beginning of any word, phrase or sentence which it is desired to empha-

size, and then striking the underscore once for every character, excluding spaces.

Fine headings can be made by striking the hyphen a given number of times, then the O several times, and then the hyphen again as many times as at first, thus:-----OOO-----. A great variety of other fancy headings can be made by the exercise of a little taste and ingenuity on the part of the operator.

Captions for legal work may be made by using the hyphen for the upper and lower lines, ending with a mark made by holding the space key down and striking the parenthesis ;
 -----) (then still holding the space key down
 -----) (thus preventing the carriage from moving
 -----) (forward), turn the cylinder upward one notch, strike the parenthesis again ; repeat the operation until the two lines made by the hyphen are joined. The right and left hand parentheses can be used alternately for this, if desired.

Making Corrections.

SECTION 18. For ordinary adjustment of the paper, or erasing, the carriage is raised until supported upright by the carriage lock (194) beneath the paper-shelf. If a stronger and firmer support is desired, the carriage can be pushed back until it rests solidly upon the paper-shelf. It is better not to revolve the cylinder while the carriage is in this latter position, as it is apt to derange and soil the work.

Regulating the Carriage Tension.

SECTION 19. The carriage moves to the left by the force of a coiled spring contained in the main spring wheel (142). A flexible metal strap (118 Z) connects this with the carriage. The tension of the main spring determines the amount of force which draws the carriage. It is desirable that the carriage move promptly, but it is also quite important that the tension should not be too strong, so as to cause unnecessary wear upon the escapement wheel (148 Z) and the dogs (64 Z and 65 A). Usually a pull of one pound will move the carriage promptly, if the guide rod (3 Z), the way rod (2 Z), and the shift rail (118½ Z) are always kept clean. A greater tension can be safely applied, if necessary, but a pull of one and a half pounds ought to be quite sufficient under any circumstances. The carriage tension may be increased by turning the tension ratchet (53½), (which is done by

twirling the bell (128 Z) towards the right between the thumb and fingers) and diminished by lifting up and down the handle of the tension pawl (73) which holds the ratchet against the pull of the main-spring. Prompt and easy action of the machine cannot be expected unless the rods named above be kept clean.

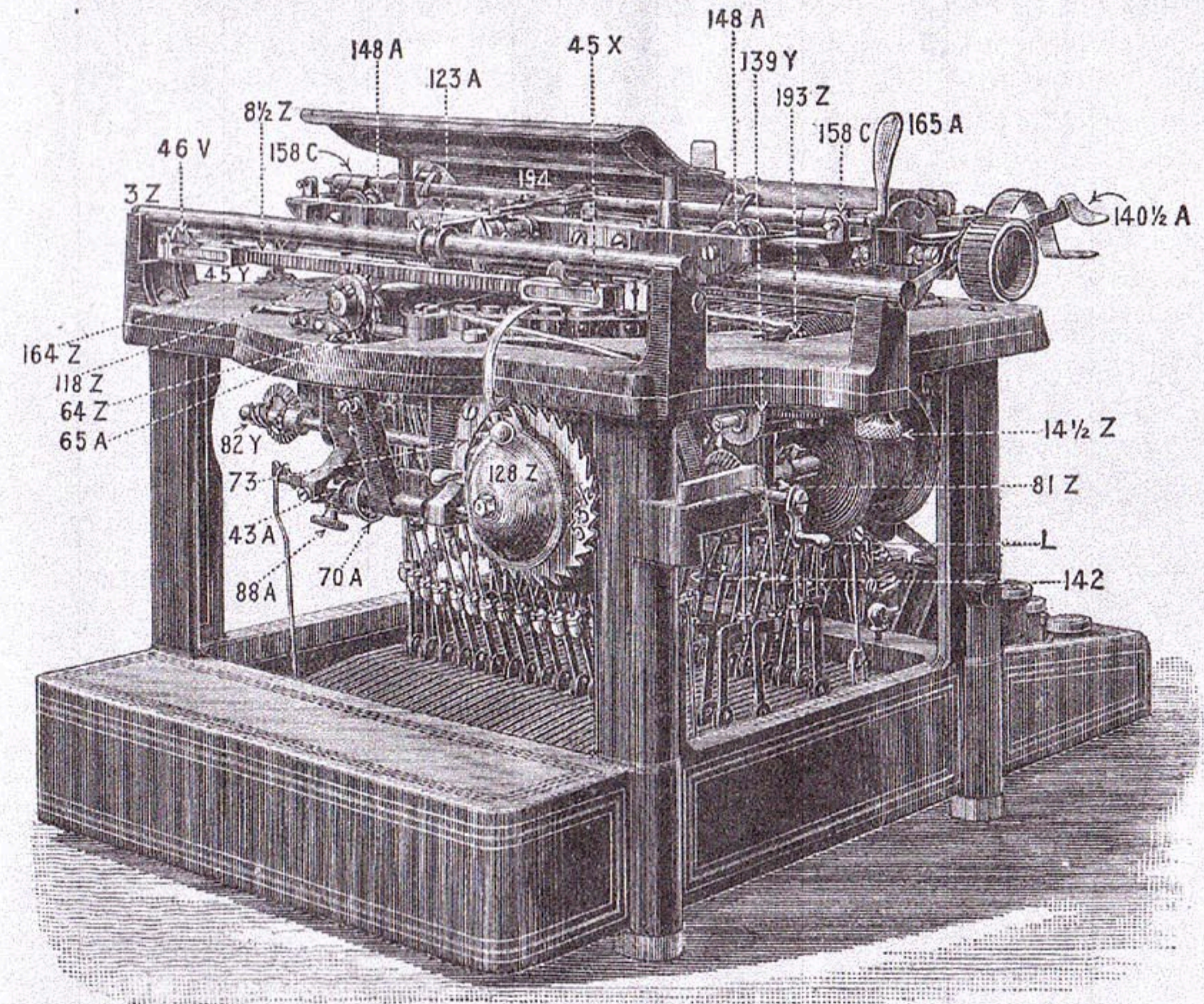


FIGURE 5.

The Finger Key Tension.

SECTION 20. The amount of tension on the finger keys is regulated by the loosely coiled spring (70 A), one end of which is secured in the tension collar (43 A) which is on the hub of the rocker, at the back of the machine. To increase the tension on the keys, turn the thumb screw (88 A) to the right ; to diminish it, turn to the left.

The Letter Spacing.

SECTION 21. The step-by-step motion of the carriage, whereby the letter-spacing is performed, is accomplished by the action of the spacing dogs (shown at 64 Z and 65 A, Figure 5) upon the little escapement wheel (148 Z, Figure 3). These dogs are called the "rigid" dog (64 Z) and the "loose" dog (65 A). They are mounted upon the upright arm of the rocker, at the back of the machine, at such a height as will permit them to slightly engage the teeth of the escapement wheel just above them, and thus prevent it from revolving, save as motion is communicated to them by the operation of the machine. The loose dog (65 A) is so adjusted as to spring forward until it stands opposite the next notch of the escapement wheel every time that a key is depressed, and the rocker brought forward to a point where the rigid dog (64 Z) engages with the escapement wheel. As soon as the key is released, the rocker goes back to its old position, but the loose dog enters the notch of the escapement wheel which is next to the one from which it has just been released; the carriage then moves on, carrying the loose dog along with it, until the motion is checked by the loose dog coming against the upright arm of the rocker, which stops it exactly in a line with the rigid dog, and exactly the space of one letter from the point at which it started.

The Rack and Pinion.

SECTION 22. The motion of the carriage is communicated to the escapement wheel by means of the little pinion wheel (147½ Y) upon the front end of the same shaft. This engages the teeth of a light letter-spacing rack (102 Z) attached to the lower part of the carriage truck. To release the carriage from the pinion wheel so that it can be moved along in either direction, you have but to depress the carriage release key (140½ A.)

The Ribbon Movement.

SECTION 23. The ribbon mechanism of the new models retain all the advantages of the old method of the No. 2 Remington, but is, in addition, entirely automatic. It relieves the operator of any care of the ribbon after it is once put into the machine, until it is worn out, and secures the utmost economy by using every portion of its surface. The automatic reversing movement is perfectly simple, and

does not make the operation of the keys any more laborious, since it in no way depends on the action of the keys for its motive power, nor does it in any way interfere with the free movement of the ribbon from spool to spool by the operator in case a change from copying to record ribbon, or *vice versa*, becomes desirable.

The ribbon passes beneath the ribbon plate (135 Z, Figures 2 and 6), and moves across the type basket with every motion of the carriage from right to left. By this action the ribbon is gradually unwound from one of the spools and wound upon the other, thus presenting a fresh part of its surface to every impression of the type. This movement is accomplished by the mainspring of the machine acting upon the long gear shaft (7 Z) and the small bevel gears which are attached to it, the action being, as far as the longitudinal motion of the ribbon is concerned, precisely the same as in the No. 2 Remington.

When the ribbon is completely unwound from either spool, the ribbon reverser locking-pin lever (154 Y, Figure 6) is no longer confined in the hub of the spool, but it falls by its own weight as soon as the turning of the spool brings it to the under side. This action thrusts out the reverser locking-pin (154 Z) into the worm gears (82 X or 82 Y, as the case may be), causing the long gear shaft (7 Z) to move longitudinally a sufficient distance to disengage the bevel gear on the long gear shaft from the shaft bearing the full spool, and, by carrying the roll (81 X) of the gear shaft latch (81 Z) over the central point of the latch spring lock (81 V), moves the gear at the other end of the shaft into engagement with the gear of the shaft on which the empty spool revolves, thus reversing the action of the gears, and causing the ribbon to commence to rewind itself upon the spool just emptied. When this is accomplished, the identical mechanism at the other side of the machine performs a similar action, and so on indefinitely. When the long gear shaft (7 Z) is pushed in towards the centre of the machine, the ribbon will wind upon the right hand spool. When the shaft is pulled out as far as it will come, the ribbon winds upon the left hand spool.

If it is desired to reverse the movement of the ribbon before the spool is completely unwound (as when using ribbons of different colors or copying and record ribbons), it can be done by simply pushing in or pulling out (as the case may be) the long gear shaft. The ribbon can be moved from spool to spool quickly by turning the little crank L.

The ribbon also has an automatic transverse movement across the type basket, which enables the use of every portion of its surface. This

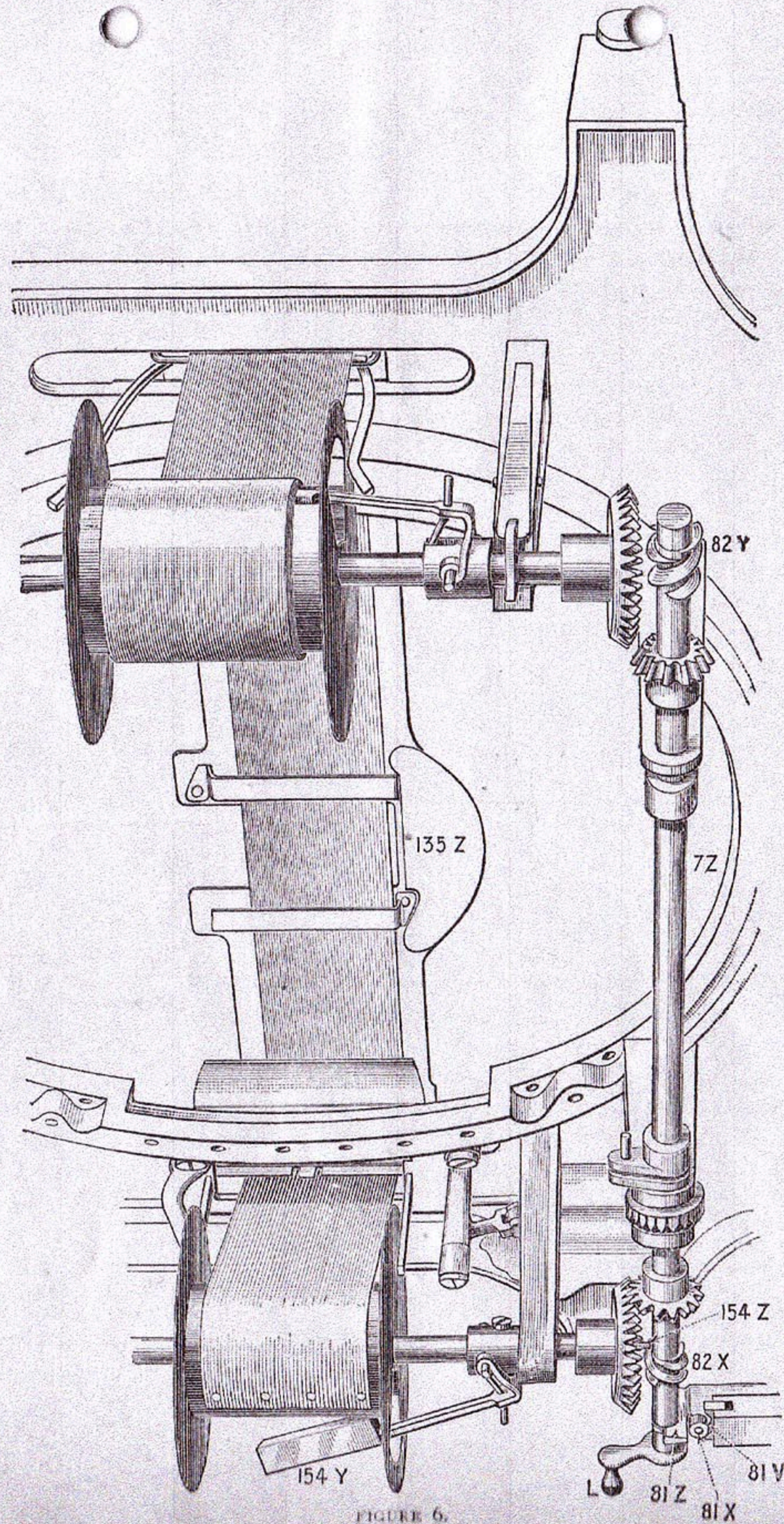


FIGURE 6.

is accomplished by the cross feed ratchet wheel (139 Y, Figure 7), which actuates a worm gear (139 W), the upper end of which carries a cam (139 V) which moves the ribbon plate transversely. When necessary to lift the ribbon plate for cleaning the type or any other purpose, be sure that it is far enough towards the front of the machine to pass the lower edge of the paper-shelf. If it happens to be too far back to do this, take hold of the left hand end, near the hinge, and pull it forward. The spring on the shaft beneath will return it to its former position when it is released from the hand. To permanently change the position of the ribbon plate, turn the ratchet wheel (139 Y) continuously downward until the ribbon plate is in the desired position. If it at first moves in a direction contrary to that desired, continue this motion until it reverses automatically and returns to the desired spot.

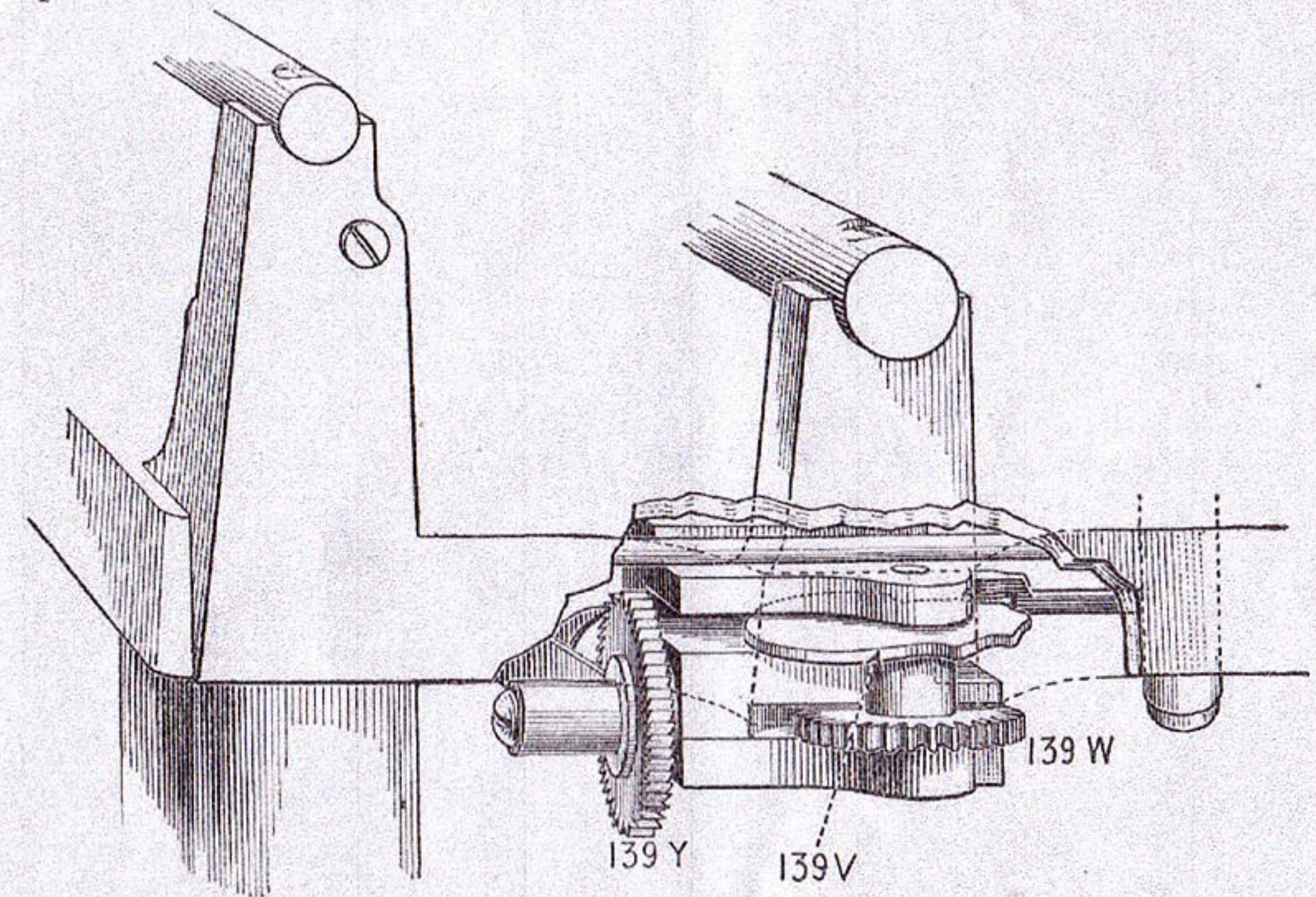


FIGURE 7.

Detachable Ribbon Spool Shaft.

SECTION 24. The right hand ribbon spool shaft can be conveniently detached from the machine, and the old ribbon replaced by a new one wound upon the spool, or upon a new one which may be substituted for it.

This shaft is held in place by two small latches, which are held in position by stiff, flat springs. To remove the shaft from the machine: Pull the long gear shaft (7 Z) to the left as far as it will go, so as to disengage the bevel gear on its right hand end from the gear on the end of the ribbon spool shaft. Then pull the shaft outward and downward, and thus release it from its bearings. Return it in the same manner after refilling or replacing the spool, making sure that the rear latch goes into the groove cut in the shaft quite close to the gear wheel on it, and also that the heads of the spools are between the light arms that project downward from the ribbon shield.

Changing Ribbons.

SECTION 25. A short piece of tape is fastened securely to the axle of each of the two ribbon spools. When necessary to change ribbons, pin one end of the new ribbon to one of these pieces, and shift the long gear shaft (7 Z) into position to turn that spool. The ribbon can then be readily wound on the spool by turning the crank (L). When the whole of the ribbon has been thus transferred to the spool, pass the free end of the ribbon through the hole in the top plate just above it, and then through the guides on the under side of the ribbon shield (135 Z), and so on down through the corresponding slot in the opposite side of the top plate, and pin the end of the ribbon to the end of the tape on that spool.

The ribbon shield is hinged on the left hand side of the machine, so that it can easily be raised to admit of passing a ribbon, cleaning the type, or for any other purpose. The hinge is so constructed that the shield is supported in an inclined position by raising it upward to an angle of about 45 degrees from the horizontal. This is the most convenient position for changing ribbons. In case of need, when cleaning types or making any adjustments in the type basket, the ribbon shield can be lifted entirely out of the machine by grasping it firmly near the left hand side of the type basket and pulling it upward. When replacing it, care must be taken to press it firmly down upon the ribbon plate carrier shaft (193 Z). A slight resistance will be felt from the spring which holds it in its proper place until the bearing is pushed closely down upon the shaft. When the ribbon shield is replaced in the machine, be careful to see that the right hand ribbon spool is between the arms which project downward from the right hand end of the shield.

In order to avoid frequent changes of the ribbon in the machine, operators who are often called upon to do work with both copying and record ribbons will find it convenient to put half of a record ribbon on one of the ribbon spools in the machine, and half of a copying ribbon on the other one. The ends of the two can be smoothly pinned together, making one ribbon. By the use of the little crank (L) on the end of the long gear shaft (7 Z), the ribbon can be rapidly transferred from one spool to another, thus making either the copying or record portion of it available as desired. When doing this, the operator should be careful to reverse the action of the ribbon mechanism (see Section 23) when the ribbon is about half unwound from either spool, to avoid the annoyance of finding work done with the wrong kind of ribbon. It will be evident that the same expedient can be resorted to if it is ever desirable to use more than one color of ribbon at the same time.

New Ribbons.

SECTION 26. Neat and attractive-looking work cannot be done with ribbons that are poorly inked, or are made from too coarse a fabric. Use none that are coarser than the one furnished with the machine, which is of the "W. S. & B. Paragon Brand." The quality of this brand is guaranteed by the manufacturers of the machine, and it can always be relied upon to give satisfaction. These ribbons are for sale everywhere by the local dealers in the Remington Typewriter, as it is to their interest to furnish users with the best supplies obtainable.

Black record ribbons are not affected by the atmosphere, and the work done with them does not change in appearance.

Indelible copying ribbons, also, are not affected in any way by the atmosphere, and the original print will never become illegible from exposure to light. As now manufactured, the various other colors of copying ribbons which are now supplied are but little affected, and, unless continuously exposed to the action of the light for a long period, can be considered as permanent for all practical purposes.

* All ribbons not in actual use upon the machine should be kept in tin boxes similar to the ones in which all Paragon ribbons are packed.

To Make Press Copies.

SECTION 27. Work done with any of the copying ribbons can be copied in a letter press in the ordinary way, but a little more water should be used, and the book allowed to remain in the press a trifle longer than for pen writing, if the thicker grades of tissue paper are used. Damp cloths or sheets of blotting paper, placed between the hard backing and the leaf that is to receive the copy, are as good a way of moistening as any that can be resorted to. With care, good copies can be taken upon any grade of tissue that is suitable for copying pen writing; but, by using a fine and tough grade of tissue, copies that rival the original writing in clearness and permanence can be taken with ease. The Remington Letter Copying Books are made especially for this purpose, and will be found the best that can be used where quick and certain results are required.

Another Method of Copying.

SECTION 28. Use rather thin paper, place a sheet of semi-carbon (*i. e.*, with only one carbonized surface) with the clean side toward the letter sheet, and another sheet of thin paper between it and the cylinder of the machine. Both sheets will then be well printed, and one of them can be retained as a copy, and, if desired, filed away with the letter to which it is a reply.

Manifolding.

SECTION 29. By using carbon paper, from three to twenty duplicates of the same writing can be printed at one time, the number depending upon the thinness of the paper used. Place the sheet upon which the writing is to be done upon a flat surface. Lay a sheet of semi-carbon paper upon it, with the carbonized surface upward. On this lay another sheet of writing paper, and so on until the requisite number of sheets of writing paper are put together, each with a sheet of carbon next to it. Put the whole into the machine in the usual way, taking pains to see that the whole of the sheets are placed within the grasp of the feed rolls at the same time, so that the writing will appear on the same part of every sheet. Write in the ordinary manner, excepting that it will be necessary to tap the keys a little more sharply, the amount of force to be used being governed by the number of copies which are being printed.

If necessary, a still larger number of duplicates can be made by the use of full carbon, interleaved with sheets of thin oiled tissue paper.

Clean the Type.

SECTION 30. In order to produce neat work, it is necessary to keep the type of the machine clean. The accumulation of ink from the ribbon, and of the dust which settles upon the machine, has a tendency to fill up the types, especially those which have inclosed central spaces, such as o, e, a, s, g, d, p, etc. This is quickly shown by the indistinctness of the imprint. Every part of every letter should print with perfect clearness, and, if it does not, it is probable that the type require cleaning. This is best done by throwing the carriage back upon the paper-shelf, so as to be well out of the way. Be sure the ribbon shield (135 Z) is far enough toward the front to permit it to pass the lower edge of the paper-shelf (F 1) when up. If it is not, it can be pulled forward (see Section 23), then raise it until it will support itself in an upright, inclined position, as described in Section 25. If preferred, the ribbon shield can be entirely removed from the machine, taking the ribbon along with it, but this is not essential. The best way to clean the type is to raise the type bar and take hold of it with one hand, holding it firmly, but taking care not to bend the type bar nor to displace it, and pick out the accumulation with an ordinary brass pin. After doing this it is well to brush off the types with the type brush.

The trouble of picking the dirt out of the type with a pin can be avoided by the frequent use of the type brush.

Cleaning.

SECTION 31. It is of the utmost importance that the typewriter be kept free from dust and perfectly clean. Like all other machinery, the best results can only be expected when the machine is kept clean, and the working life of any machine can be greatly prolonged by careful attention to this point.

If the typewriter be used daily, the best way is to brush the dust off, clean the rods, rolls and types every day. If only used at intervals, it should be done every time you sit down to the machine.

When not in use, the machine should be kept carefully covered, for, if left exposed to the dust of sweeping, it will settle upon the rods, and when the carriage is moved the rolls crush it, causing it to adhere to both rods and rolls, especially the latter, until the motion of the carriage is seriously impeded thereby, or possibly stopped. No machine will work well with an accumulation of dust or dirt upon these rolls; therefore, above all, keep them clean.

Other parts will be injured by the accumulation of dust, but in no other part will it be so quickly fatal to good and easy work.

SECTION 32. The type bar shield (147 Z), which covers the type bars under the front of the carriage, can be removed by pulling it toward you. To replace it, lay it squarely on the centre of the top plate in front, and secure it in place by a gentle push backward.

Oiling, When and How.

SECTION 33. Never use any but the very best oil (such as that used for clocks and watches) upon the typewriter. Porpoise-head oil seems to meet the requirements better than any other.

Never put on oil without afterward wiping off all the surplus that can be found outside the actual spot where friction can be caused, as it cannot do any good toward lubricating, but only catches the dust, and forms a gum that will prevent the machine from running lightly.

The top rods (2 Z, 3 Z, 118½ Z), upon which the carriage runs, and by which it is guided, ought to be cleaned every day by wiping with a cloth slightly saturated with oil, but only the slightest trace of oil should be left upon the surface.

The pinion-wheel shaft and escapement wheel should be oiled occasionally, by putting a drop of oil in each of the two oil holes which will be found in the top of the pinion-wheel stand (147½ Z, Figure 3).

Oil, when needed upon any other part of the machine, can be supplied best by dipping the end of a broom straw or the point of a pin into the oil, and then touching the spot to be oiled with it.

If at any time the teeth of the escapement wheel and the points of the dogs get dry and begin to wear, apply a little oil to the teeth of the escapement wheel. Two or three drops will be sufficient for all the teeth.

At intervals of about two months the type bar bearings should be oiled very lightly with a splint or broom straw.

The bearings of the spool shafts and the long ribbon movement shaft also need occasional oiling.

The joints of the carriage oscillator (158 C) will need occasional oiling; the upper joints can easily be oiled at the top, and the lower ones can be oiled through the oil holes made through their inner sides for that purpose.

Remembering these instructions, any of the wearing surfaces of the machine may be oiled, if necessary. **BE VERY CAREFUL NOT TO PUT ON TOO MUCH OIL. WIPE OFF ALL THE SURPLUS. NEVER USE ANY BUT THE VERY BEST.**