

- A. Shift-Key-Lock.
- C. Trip-Adjust-Nut.

#### D. Rock-Arm.

- E. Carriage-Spring-Drum.
- F. Margin-Stop-Rack-Bar.
- G. Left-Inner-Margin-Stop.
- H. Left-Outer-Margin-Stop.
- I. Detent-Pawl-Shift.
- J. Line-Space-Regulator.
- K. Left-Carriage-Lock.
- L. Left-Carriage-Release-Key.

M, M. Scale-Bar-Ears.

- N. Platen-Ratchet-Wheel.
- O. Line-Space-Lever.
- P, P. Margin-Paper-Guldes.
- Q. Platen-Roller.
- R. Scale-Bar.
- S. Pressure-Roller.
- T. Type-Guide,
- U, U. Ink-Pads.
- V. Platen-Catch.
- W. Platen-Knob.
- X. Margin-Stop-Release-Key.
- Y, Y. Name-Plate-Screws.



# THE WILLIAMS TYPEWRITER.

#### CARRIAGE LOCK.

1. On opening the box the machine will be found screwed to the bottom of the box by four screws, screwed from the outside of the box into the baseboard. Take these four screws out and lift the machine out and remove the metal cover, then unscrew the carriage-locks. The carriage-locks are two vertical screw-rods, one at each end of the carriage; the left one is shown in the cut at K. They screw upward into the carriage rail, and their office is to lock the carriage firmly, so that no other tying or wiring is necessary when shipping the machine. Unscrew the carriage-locks before using the machine, and always screw them up when shipping the machine or traveling with it.

#### INSERTING PAPER.

2. See that the carriage is central in the machine. Raise the scalebar (R) by either of the ears (M M), pulling the scale-bar clear back till it stands alone, and the pressure-roller (S) is lifted from contact with the platen (O). Then, holding the sheet of paper in the natural position, top end up and face front, place the bottom edge of the sheet between the platen and pressure rollers and push the sheet down till its top edge is even and parallel with the top edge of the scale-bar (R), then let the scale-bar down on the paper and roll the paper forward by the platenknob (W) to the point where the writing is to begin. This operation is very simple and a little practice will enable any one to insert paper with great ease and rapidity. Before inserting the paper see that the two margin-paper-guides (P P) are set at the proper distance apart for the width of paper used. See Section 10 for instructions on the Margin-Paper-Guides. Before beginning to write set the Left-Inner-Margin-Stop (G) at the point where the line of writing is to begin, and the Right-Inner-Margin-Stop at the point where the line should end. See Section 8 for . instructions on the Margin-Stops.

To remove the paper, lift the scale-bar (R) to a self-standing position. It will be then noticed that the paper is entirely free. Take hold of the right edge of the paper and remove from the machine, or the paper may be withdrawn direct from the rear paper-case, at either end of the carriage, and with either hand.

#### CARRIAGE MOVEMENT.

3. In regular work the Carriage is returned to the right at the end of each line by pushing the Line-Space-Lever (O) to the right, which propels the carriage, and at the same time turns the Platen-roller (Q) forward for the next line of writing, all with a single motion of the left hand. Do not take hold of the Line-Space-Lever (O) with the finger and thumb, which is a slow method, but push the top of the lever over to the right with two or three fingers of the left hand, a swift light push or stroke that should take less than a second of time.

The carriage may be moved to the right at any point without turning the Platen or making a line-space, by simply pushing or pulling it without operating the Line-Space-Lever, and the Line-Space-Lever may be operated without moving the carriage, thus turning the Platen to the next line or further while the carriage remains stationary. There are two Carriage-Release-Keys, right and left, one at each end of the Carriage. The left one is shown in cut at L. By depressing either of the Carriage-Release-Keys the carriage can be moved to the right or left without turning the Platen or changing the line of writing. To operate either Carriage-Release-Key, place the forefinger against the end of the carriage rail and depress the Key with the thumb. The left Key is the one generally used.

The Carriage-Spring is enclosed in the revolving Drum (E). To increase the tension of the Carriage-Spring turn the large screw on which the Drum (E) revolves, to the left, with a long screwdriver, inserted from the front of the machine between the type-bar-levers. Turning this screw to the left winds up the Carriage-Spring and increases the tension. To lessen the tension operate the Ratchet dog at the rear side of the Drum (E). Do not alter the tension of the carriagespring unnecessarily. The lighter the tension the better, provided it is sufficient to propel the carriage fast enough.

#### LINE-SPACE-REGULATOR.

4. The Williams excels all other machines in the number and variety of its line spacings, and the convenience of the Regulator. The Line-Space Regulator is shown at J in cut. There are five spacings, represented by as many notches, numbered I, 2, 3, 4, 5 on the Regulator. Pull the handle of the Regulator to the left until the teeth clear the pin, then move the Regulator up or down to the desired notch. Spacings I, 3, 5 are identical with the spacings in use on most of the leading and standard machines. No. 2 is the popular medium spacing of the No. 2 Williams machine, and No. 4 is a new intermediate spacing that will commend itself to many operators.

#### KEYBOARD.

5. Each key controls two type or characters, either of which may be printed by striking the same key. In normal position the keys bearing letters print the "lower case" or small letter, and the capital letter is printed by depressing either of the two shift-keys and then striking the desired letter key. The upper tier of keys, and those other keys which bear two characters, print the lower character at normal position and the upper character by depressing either shift-key. To lock the Shift, so as to print all capitals, depress the left Shift-key and then push the Shiftlock (A) either forward or backward, which locks the Shift. To release the lock, simply push it the reverse way from the direction in which it was locked. Always hold the Shift-key down firmly while printing a capital. Use the left Shift-key in regular work, as it is much more convenient than the other one. The Margin-Stop-Release-Key (X), located just back of the top row of keys, at right side, is a valuable auxiliary to the Keyboard. It has two functions. When the keys lock at the end of the line, a touch on this key releases the key-lock, and when it is desired to write on either margin of the paper, a touch on this key permits the carriage to pass beyond the regular stop, the margin to be written on.

#### SPACE-BAR.

6. The long bar extending across the front of the Keyboard is the Space-bar. The Space-bar should be struck after each word, except when a punctuation is used. The Space-bar is also used to make short spaces between sentences, and in beginning paragraphs, by striking it several quick successive strokes. The Space-bar moves the carriage forward one letter space each time it is struck, and when held down it holds the carriage from moving when the letter keys are struck, which is a very useful function in tabular work, inserting letters, etc.

#### TYPE-GUIDE.

7. The Type-guide (T) insures good alignment of the type, and also acts as a guide and pointer for the printing.

The throat of the Guide shows exactly where the next letter will print, and the outer ends come just to the bottom of the line of writing, and with the writing always in plain sight all kinds of tabular work can be done with the greatest readiness and accuracy.

Should a word or letter be omitted, and the error noticed before the end of the line is reached, it is only necessary to push the carriage to the right till the Type-guide is over the point where the error occurred, and the omission can then be corrected. Should it be necessary to return to any given line, after the platen has been turned from that line, turn the platen forward or backward by the Platen-knob (W) until the ends of the Type-guide come to the line of writing, then move the carriage to the right or left as desired.

The Type-guide must not be spread open, or sprung wider apart under any circumstances. To do so will inevitably destroy the alignment of the machine. If any of the type seem to bind or stick in the Type-guide, see that there is no dried ink adhering to the sides of the type, or the Type-guide, then rub the throat of the Type-guide with the point of a soft lead pencil, which will lubricate the **surfaces** and correct any tendency of the type to stick in the guide.

#### MARGIN-STOPS.

8. There are four Margin-stops, two right and two left, designated Right-Outer, Right-Inner, Left-Outer and Left-Inner-Margin-Stops. The two left Stops are shown in the cut at G and H. The four Stops are all located on the same bar, called the Margin-Stop-Rack-Bar (F). This bar is graduated and numbered to correspond with the graduations and numbers on the Scale-Bar (R). The position on the Margin-Stop-Bar of the Left-Inner-Margin-Stop determines the point at which the line of writing begins, and the position of the Right-Inner-Margin-Stop determines where the line ends. For instance, to have the line begin at 10 and end at 60 on the Scale-Bar, set the Left-Inner-Margin-Stop at 10 and the Right-Inner Margin-Stop at 60 on the Margin-Stop-Rack-Bar. The Right-Inner-Margin-Stop determines where the line ends, and also where the bell rings, and where the Key-Lock operates. When this Stop is moved to shorten or lengthen the line the bell-trip and the key-locking device move with it, so that wherever the line ends there the keys lock and the bell rings.

To write in the left margin, depress the Margin-Stop-Release-Key (X) with right hand and push carriage to the right as usual with left hand until it stops against the final or outer margin-stop. After writing in the left margin the carriage returns to the left, bringing the body of the page under the type again by simply striking the space-bar a few times. To write in the right margin, touch the Margin-Stop-Release-Key when the keys lock at the end of the line, which enables the carriage to pass the regular or inner stop, and the writing can be continued on the right margin until the final or Right-Outer-Margin-Stop is reached. Two margins may be made at the right side by setting the Right-Inner-Stop far enough to the left to allow for the double margin, say at 50, and the Right-Outer-Margin-Stop at 60, then a touch of the Margin-Stop-Release-Key as the carriage stops at each Stop will allow it to pass each Stop and thus two margins can be used as readily as one. The two Outer-Margin-Stops determine by the distance they are set from the inner stops the width of the right and left margins, and the Outer-Stops should be set so that they will stop the carriage at the beginning and end of its run before the type can strike the Margin-Paper-Guides (P P). The convenience of the Margin-Stop-Release-Key (X), and the ease with which all the margin stops are adjusted for writing on either or both margins, are equaled by no other writing machine.

#### KEYBOARD LOCK.

9. The Williams has a device by which all keys are automatically locked at the end of each line. With both Right-Margin-Stops set to the right as far as they go, the keys lock one letter space from the end of the line, permitting one additional character to be printed by a touch on the Margin-Release-Key (X). The Right-Inner-Margin-Stop may be set so that any desired number of letters can be printed after the keys lock. This is very convenient for operators, as each one can adjust the machine to suit any width of paper, length of line, and width of margin desired. No matter where the line ends, there the keys lock, automatically, and there the bell rings its alarm as the end of the line is approached; and a touch of the Margin-Release-Key (X) releases the lock and frees all the keys.

#### MARGIN-PAPER-GUIDES.

10. The Margin-Paper-Guides (P P) slide on the scale-bar (R), to which they are attached, and they should be set, one on each margin of the paper near the edge of the sheet. They are so easily adjusted and their purpose is so evident that no further instructions are needed.

#### INTERCHANGEABLE PLATEN.

11. The Platen-Roller (Q) is more quickly and easily changed on the Williams than on any other typewriter. To remove the Platen, raise the detent Pawl-Shift (I), raise the Scale-Bar (R) by the ears (M M), throwing the Scale-Bar clear back, the same as when inserting paper, then raise the Platen-Catch (V), which will release the Platen-Knob (W) and its shaft; pull the Platen-Knob out to the right, which will disconnect the Platen-Roller from its bearings, and it is then simply lifted out of the machine. Replace the Platen by reversing this operation, taking care to see that the Platen-Catch (V) is pushed down into its proper position, thus locking the Platen-Roller securely in its place.

#### INK-PADS.

12. The type rest normally upon a pair of ink-pads, which are incased in pans.

The pans can be readily removed from the machine by raising the type as directed in Section 17, and lifting the pan by its handle.

The ink pans are made interchangeable, so that new pads in new pans can be supplied to fit all machines. When the ink pads are changed for those of another kind or color, be careful to clean the type before changing the ink pads. When the inking begins to get dim, from long use of pads, it is better to re-ink the pads than to put in new pads; the pads can be re-inked several times, and will last for years. To re-ink the pads, remove the ink-pans as directed, and drop 8 or 10 drops of Williams ink on the surface of each ink-pad, using a broom-straw to take the ink from the bottle to the pads. Distribute the ink evenly on the pad by rubbing it in with a small penknife blade, hair-pin, or wire nail; replace the ink-pads in the machine. If either ink-pad is found to be too heavily inked, raise the type-bars as directed in Section 17, and take some of the ink from the surface of the pad by pressing a piece of ordinary blotter on the inkpad, repeating the operation until the surplus ink is sufficiently removed. If any individual type is inking heavier than the others, raise that type-bar and the two contiguous ones and touch the ink-pad where that type rests, with a piece of blotting paper a few times, thus removing the surplus from that point. Should any type ink too faintly, raise the type-bar and two contiguous ones, and with a broom-straw deposit a small drop of ink on that part of the pad where that type rests. Sometimes a bristle from the typebrush or some other small substance may get on the ink-pad and prevent one or more of the type from inking properly, and the removal of such foreign substance from the pad will correct the difficulty. The ink pads are composed of fine piano felt, with a covering of chamois skin, and if through any accident the chamois skin covering should be displaced so that any of the type did not rest on it, those type would not ink properly, and replacing the chamois covering would correct the trouble. As a matter of fact, the ink-pads on the "Williams" require far less care and attention than the ribbons on any ribbon machine, and the foregoing hints are given in case of accidents that may occur through carelessness or other causes.

Use no inks but the Williams inks, and mix no other ink with them, and do not mix two colors or kinds of Williams inks together.

#### INKS.

13. Use no other inks on the Williams machine except our inks. These inks are made especially for our machine, and are the results of exhaustive researches and experiments by chemists who have no superiors in this line. There are two kinds of inks used on the Williams machine, Oil-Base Ink and Quick-Copying Ink, and each kind is furnished in a variety of colors. The vehicle, or fluid base of the Oil-Base inks is a nondrying oil which holds the coloring pigments in perfect chemical solution, thus producing an ink that is fluid enough to distribute evenly through the ink-pads, that will not evaporate, that will not smudge the paper nor spread in copying, and that is positively unaffected by weather or climate. This ink makes excellent and permanent letterpress copies, but requires to be left in the press two minutes or longer to produce the best results. Our Quick-Copying Inks are made for those of our patrons who demand an ink that shall give instantaneous letterpress copies, and while these inks are as good in all respects as the typewriter ribbons, and the pad inks of other machines, and give instant copies, they have the defects of their kind and will spread the color in copying, the same as do the ribbon machines. We prefer and recommend the Oil-Base Inks, and equip all machines with pads saturated with these inks, unless otherwise directed.

The mixture of any other inks with our inks is fatal to them, and operators must not permit other inks to be put on the ink-pads.

#### LETTERPRESS COPIES.

14. Typewritten matter is copied in the ordinary way. The Williams Oil-Base Inks require two or three minutes in the press to obtain the best results, but in compensation for the little additional time they produce most beautiful, uniform and permanent copies, without any smudging or running of the color. No matter how long the letter is left in the press there is no spreading or smudging, and this permits fifty or more letters to be placed in the letter-book at one copying. Our quick copying inks give instantaneous copies, the same as ribbon writing and pen writing, but like all quick copying inks they are apt to spread and run, if a little too much moisture is used. We prefer and recommend our Oil-Base ink-pads, and equip all machines with them unless otherwise directed. The best method of applying the necessary moisture in copying is to place dampened cloths between the leaves of the letter-book. The Perfection Copying Bath, sold by us, is the best device for keeping the copying cloths evenly and properly moistened.

#### MANIFOLDING.

15. The "Williams" is a manifolder of unequaled power. From one to twenty duplicates of the same writing may be made at once by using carbon paper; the greater the number of copies required the thinner the paper should be.

Where it is desired to strictly maintain the alignment in executing a great number of manifolding copies, a reduced sized platen will be found advantageous. These are furnished by us at a reasonable price, and are easily substituted for the regular platen; furthermore, they are harder and, therefore, will give much better results in manifolding.

For five or six copies, the touch on the keys need not be any heavier than the ordinary stroke; but, when a larger number of duplicates is required, the stroke should be a little sharper and the hard platen should be used.

#### CUTTING STENCILS.

16. To prepare a stencil for using with the Mimeograph or Neostyle, it is necessary to observe the following directions:

- I—Thoroughly clean the type of the machine by brushing with a clean brush; then place strips of oil-paper over each ink-pad, so that the type will not come in contact with the pads, or leave the regular pads in position without change, as in regular work. The ink prevents the type from sticking, acts as an oil, and the work under progress is in plain sight.
- 2—Lay the sheet of stencil paper (with the face or writing side down) on a smooth flat surface, and place the perforated silk over it, leaving an equal margin at the upper end and sides; cover the silk with a sheet of *backing*, and fold the extended margin of the stencil sheet over the same at the top, and crease down with hand so that it will stay in position. If old style Mimeograph, the sides of the stencil will also have to be creased.
- 3—Now place the sheets, as arranged, in the typewriter, using care to guide them round in the front paper case and under the type guide, smoothly at first, so as not to break the stencil paper. If proper care is used, the paper will feed through the machine perfectly smooth.
- 4—Proceed to write the letter, or cut the stencil, giving each letter a sharp, firm stroke with uniform pressure, and if doubtful about any letter, or special character, strike it lightly a second time.

If the above directions are carefully followed, a clean-cut stencil will be the result—the handsomest you ever saw.

#### CLEANING THE TYPE.

17. The type should be cleaned each morning before the machine is used. To do this take the small steel rod which accompanies each machine, raise the outside type-bar slightly, on the front part of the machine, slide the rod under the type-bars, just back of the type, then lift all the typebars of the quadrant with the rod until the type come together, forming a solid mass, then, holding up firmly with the rod, turn the type-brush bristles upward, and brush the *underside or face of the type*, brushing lengthwise of the type, not sidewise. Repeat the operation on the rear quadrant type, until all the type are brushed. This brushing keeps the type clean, makes the inking more even and uniform, prevents the type from sticking to the ink-pads, and takes but a few seconds' time. Should any individual type fail to print clean and clear, raise the type and brush it.

#### REGULATING THE TRIP.

18. Depress any key on the keyboard and watch the type as it rises from the ink-pad, describing a semicircle on its way to the paper. When the type reaches a point about three-fourths of an inch above the paper a sharp little click will be heard. This click is the noise made by the escapement when it is released or tripped by the action of the key-lever, and the point at which it trips is technically called the "Trip." When properly adjusted the "Trip" should be about three-fourths of an inch above the paper. Should the type descend too close to the paper before tripping there would be danger of the letters printing on top of each other or "Piling up." In use the Trip of the machine gradually becomes lower, and needs adjusting at long intervals. To adjust the Trip on the Williams push both the Right-Hand-Margin-Stops to the right as far as they go. then run the carriage to the left as far as it goes, which will bring the Keylock into action and lock all the keys. The keys being locked, reach in with the right hand to the Rock-Arm (D) and depress it firmly, which will bring the Trip-Nut (C) up from its socket. Now, turn the Trip-Nut with the forefinger. Turn to the right to raise the Trip and to the left to lower it. Turn the Trip-Nut only a quarter or half turn at a time, and then test the Trip as described in the beginning of this section, until it is just right.

Be careful to leave the Trip-Nut (C) down in its place between the lugs, which prevent the nut from turning.

#### PRESSURE-ROLL-RELEASE.

19. At each end of the Pressure-Roll (S), and close to the heel of the Scale-Bar Ears (M M), there is a small curved lever, called Pressure-Roll-Release.

Lifting either or both of these levers raises the Pressure roller clear of the Platen at either or both ends, and enables the operator to adjust the paper quickly and accurately to any required position. If the paper is not parallel with the Scale-Bar, it is adjusted by raising one lever, and by raising both levers the sheet can be moved sideways. The simplicity and efficiency of this little device commend it at the first trial, and the operator finds directly that the paper can be placed exactly where it is wanted.

After adjusting the paper, be careful to snap the Pressure-Roll-Release down before resuming work on the machine.

#### OILING.

20. The frequency with which the machine will need oiling depends largely on the use and care given it. If the machine is kept under cover when not in use, and is regularly and daily cleaned and dusted, but little oil will be required. None of the carriage bearings or large balls should ever be oiled. Any other part of the machine, where friction becomes evident, may be oiled at times as needed, but if kept clean and free from dust it ought to run for months at a time without oiling. The throat of the Type-Guide (T) should be rubbed occasionally with the lead or graphite of a soft lead pencil where the type strike it. This acts as a lubricant.

When oil is used the least possible quantity should be applied, and any surplus wiped off, as the surplus oil collects dust and grit, and is a damage to the machine. Use the best obtainable oil. Poor oils thicken, gum up and become sticky, and some oils contain injurious acids. The Williams Typewriter oil is a carefully prepared, pure, fine oil, especially adapted for typewriter use.

#### SPECIAL INSTRUCTIONS FOR BEGINNERS.

21. Do not move the carriage when the Scale-bar is raised. It is never necessary to do so, and if done the Scale-bar will get scratched and marred. After learning to insert the paper and the movement of the carriage, which should take but a few minutes, the operator should print all the 84 characters in the following manner: Strike each key on the keyboard, alternating with the Space-bar, then depress the left Shift-key and lock it with the Shift-lock (A), and strike each of the keys again, alternating with the Space-bar as before. This will print the two characters formed by each key, and will show the variety and significance of all the 84 characters, teaching their location and the scope of the keyboard.

Never take hold of margin-paper-guide to open or move scale-bar, but use its proper handle at either end.

Do not try to lift machine by taking hold of carriage.

The touch of the keys is staccato—a quick, light stroke with the ends of the fingers. Strike but one key at a time and release that one before striking another. Do not hold the keys down, or allow the finger to linger on the key. Do not strike one key hard and another soft, but try to acquire a firm, even, uniform touch rather than to attain speed, which will come after the touch and keyboard are mastered. Above all, do not pound the keys, which is a vicious habit common to third-class operators.

Keep your machine clean and free from dust. Do not expose it to dampness and moisture. Always cover it when not in use. Always clean and brush the type every morning before using the machine. Dust and brush it daily.' Rub the bright parts and the japanned surfaces occasionally with chamois.

In ordering supplies or parts be sure to state the NUMBER of your machine, which will be found under the name WILLIAMS, on the Name-Plate of the machine.

If the machine should be sent in for repairs, ship it, carefully packed. by Express or Freight, prepaid, to

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#### THE WILLIAMS TYPEWRITER COMPANY,

Factory, Derby, Conn., U. S. A.

New York Office, 310 Broadway. London Office, 57 Holborn Viaduct.

## DON'T

### TOUCH THE MACHINE UNTIL YOU READ THIS.

Machines are shipped with carriage locked.

- DON'T try to use machine or raise scale-bar, until carriage-lock is released.
- DON'T try to lift machine by taking hold of carriage.
- DON'T take hold of margin-paper-guide to open or move scale-bar.
- DON'T move scale-bar except by its proper handle at either end.
- DON'T move carriage or run machine when scalebar is up.
- DON'T use machine until platen has been put into carriage, and the paper covering removed from ink-pads.
- DON'T pour on oil if a type-arm sticks; it is probably from rust. A little touch of benzine or kerosene on its pivots or bearings will probably correct it. (See Instruction Book.)