Underwood 450

Carriage locking lever
The carriage locking lever (17) is used to lock the carriage in a central position, holding it firm whilst the machine is being carried. Whenever the machine is put into its case, the carriage should be locked in this way and the line-space and carriage return lever (6) folded back and pushed downwards towards the left.

Line-space selector
The line-space selector (8) is used to set the vertical spacing between consecutive lines of types. There are three alternative positions, plus the neutral position 0 (in which the spacing mechanism is disengaged and the platen can rotate freely). The 0 position is used when corrections or additions are to be made between the lines, or when it is desired to type on a line that does not correspond exactly to one of the standard spacings. Although at 0 the lever temporarily disengages the line spacing mechanism it does not alter the registration of the mechanism so that when the lever is subsequently returned to one of the other settings it will always be possible to re-locate exactly the previous typing line.

Variable line spacer
When the variable line spacer knob (7) is pushed in, the platen can be rotated freely, and the knob is usually used in this way when a page of typescript has to be re-inserted in the machine, and aligned.

Margin stops
The two margin stops (10) are used to set the left-hand and right-hand margins.

To set the left-hand margin, with a sheet of paper in the machine move the carriage so that the pointer inside the card holder (13) is at the point at which the margin is required to be set: then move the margin setting stop to the right as far as it will go.

To set the right-hand margin, move the carriage to the left by means of one of the carriage release levers (9) until the indicator in the type guide is at the point at which the right-hand margin is to be set: then move the right-hand margin stop to the left as far as it will go.

Paper guide
Once the left-hand margin has been set, it is advisable to move the paper-guide (11) until it is up against the left-hand edge of the sheet of paper. This will enable further sheets to be inserted in the machine in the same position, so maintaining a constant margin setting.

Margin release and paragraph indentation key
This key (3) serves a double purpose: (a) it enables the typist to type outside the limits set by the margin stops. (b) it also gives automatic paragraph indentation. If the key is depressed whilst the carriage is being brought back to the start of a new line, the carriage will not stop at the left-hand margin as set, but at a point one inch to the right of the margin.

Paper release lever
When the paper release lever (16) is pulled forward, the paper is no longer held firmly by the platen. The lever is used when aligning the paper in the machine and also when several sheets, with carbon paper, have to be inserted. The lever should always be in the locked position whilst typing.

Space-bar and half spacing
In addition to moving the carriage forward a space at a time to sepa-
rate one word from the next, the space-bar is of great value in making corrections when a letter has been omitted, or too many letters typed. For example, if the typist has typed... a very good idea... instead of... a very god idea... the missing letter o is inserted as follows: 1) Erase the word god. 2) Set the carriage against the letter y of very. 3) Over-type the y, depress the space bar and, holding it depressed, type the letter g. 4) Allow the space bar to rise, depress it and, again holding the bar depressed, type the letter o. 5) Type the remaining letters o and d in the same way.

Tabulator
The tabulator is used for typing tables of words or figures in any arrangement of vertical columns. When the number of columns required is known, and their positions decided, a stop must be set for each of them.

Setting the stops
Move the carriage to the point at which the indicator in the card holder (13) coincides with the beginning of the first column required, and push the tabulator setting lever (4) backwards. Then move the carriage along to the point at which the second column is to commence, and set the second stop in the same way. Set further columns also in the same way.

Tabulation
Once the stops have been set, and the carriage moved to the left-hand margin, if the tabulator key (23) is depressed the carriage will automatically move to the first column setting. On depressing the tabulator key a second time, the carriage will then move to the second setting, and so on.

Clearing the tabulation stops
To clear a single stop, first bring the carriage to that stop by depressing the tabulator key. Then pull the tabulator setting and clearing lever forward. To clear all the stops at once, move the carriage as far to the right as it will go and then, with the tabulator clearing and setting lever (4) held in the forward position, depress the tabulator lever (4).

Ribbon colour and stencil selector
When the lever is set in the uppermost position (blue) the upper part of the ribbon will be in use: with the lever at the lower (red) position the lower part of the ribbon is in use. With the lever at the intermediate position (white) the ribbon is not in use at all, and this is the correct lever setting for cutting stencils.

Touch tuning control
The setting lever (5) which is located under the top cover, to the left of the machine, can be set in three positions, giving a heavier or lighter touch as desired.

Carriage release levers
When either of the carriage release levers (9) is depressed the carriage can be moved freely in either direction.

Changing the ribbon
First remove the top cover, and disengage the ribbon from the guide slots of the ribbon vibrator: then wind all the ribbon onto one spool. Unscrew the two knurled ring-nuts which hold the spools in place, and take the spools out. Attach the new ribbon to the empty spool and wind it on until the metal ribbon stop, which is fixed in the ribbon about six inches from the end, is covered. Replace the spools on their shafts, taking care that the red part of the ribbon is underneath. Fully tighten the knurled ring-nuts, and insert the ribbon into the ribbon vibrator.

Maintenance
The Olivetti Underwood 450 requires very little maintenance, however heavy the workload, but the best results will naturally be obtained if it is treated with the care that every precision machine deserves. Always slip the dust cover over the machine when it is not in use. Also, clean the typefaces and platen at regular intervals.
Finally, have the machine thoroughly serviced from time to time by the Maintenance Division of your Olivetti Underwood branch or agent, or a reliable typewriter maintenance firm.

1 Shift-key
2 Shift lock
3 Margin release and paragraph indentation key
4 Tabulation setting and clearing lever
5 Touch tuning control
6 Line-space and carriage return lever
7 Variable line spacer
8 Line-space selector
9 Carriage release levers
10 Margin stops
11 Movable paper guide
12 Paper supports
13 Card holder
14 Paper guard and erasing table
15 Ball rod
16 Paper release lever
17 Carriage locking lever
18 Transparent paper holders
19 Type guide
20 Detachable top cover
21 Ribbon colour and stencil selector
22 Back-space key
23 Tabulator key