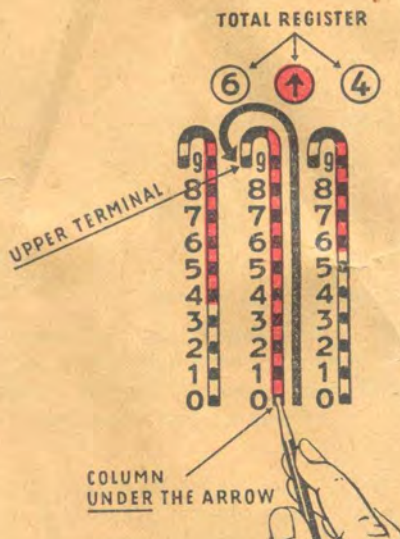


How to operate the Forward Adding and Subtracting Machine

Short rules:



Push down holes in white part of slide to terminal '0'. Push up and turn round the bend, holes in red part of slide to upper terminal.



When red arrow signal appears, push up from terminal '0' and turn round the bend to upper terminal.

For adding up long columns of figures the machine can be easily placed directly on the page underneath the first figure. After the first amount has been set, lower the machine to the next etc.

To clear register to zero:

Pull the handle at the top of the machine up as far as possible and push it back again. If one or more of the registers show an arrow showing down instead of a zero, insert the stylo into one of the holes of the column and slide downwards, setting the register to '0'.

Addition and Subtraction:

Place the metal point of the stylo vertically into the hole on the right hand side of the number which you wish to add. If the hole shows white, push downwards until you reach '0'. If, however, the hole shows red, push upwards and **completely round the bend** to the upper terminal point.

For additions, use only the front side of the machine.

$$\begin{array}{r} 27,66 \\ + 37,23 \\ \hline 64,89 \end{array}$$

Set the figures on the machine in the same sequence as you write them, i. e. put the stylo into No. 2 of our example in the fourth column from the right and push down to terminal '0', then take the 7 from the third column from the right and push down all the way, follow up with the two '6' from the second and first columns. The figure 37,23 is now added by drawing down the '3' which shows white, all the way down, while the '7', which shows red, must be pushed upwards and around the bend to the upper terminal. The holes for No. '2' and '3' are again in the white field and should consequently be pushed downward. The result '64,89' is now shown in the total registers.

$$\begin{array}{r} 27,66 \\ + 37,23 \\ + 554,10 \\ \hline 618,99 \end{array}$$

The figure '554,10' is subsequently added in exactly the same manner by pushing the number '5' downward (in the fifth column from the right), the number '5' (in the fourth column) up and around the bend to the upper terminal point, number '4' down, number '1' down, the '0' need not be set, this column remains untouched. The result will show in the registers as '618,99'.

Subtraction:

Figures which you want to subtract, are handled in exactly the same manner on the reverse side, of the machine (Subtraction side).

16,85
 - 3,17

 13,68

Clear the machine by pulling the handle at the top all the way out and push it back again. Now set the figures '16,85' on the addition side of the machine, turn the machine around and on the reverse side (the subtraction side) set the figures '3,17', i.e. number '3' downwards, number '1' downwards, number '7' upwards and around the bend. The result can now be read off at the total register.

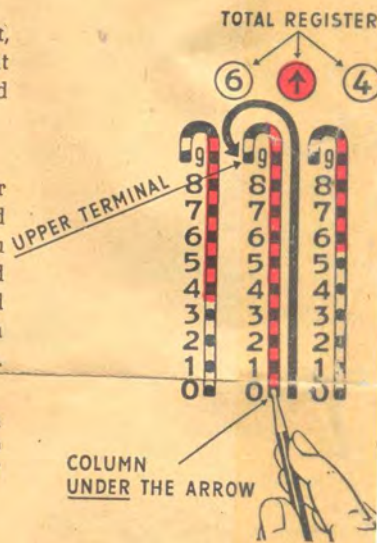
Red signal with arrow:

A red arrow signal in the total register indicates that, before continuing with the calculations, you should put the stylo into position '0' of that particular column and push all the way up and around the bend.

326,73
 + 43,70

 370,43

After having set the two figures shown in our example, the arrow signal appears in the third window from the right. This indicates that you should insert the stylo at '0' of this column and draw upward all the way and around the bend to the upper terminal point, after which you can read the result, i.e. 370,43 at the total register.



This simple movement becomes necessary only when adding up tens over two or more columns, in those rare instances where it does not work automatically during the operation.

Automatic Service Control:

It is practically impossible to operate the machine incorrectly because automatic checks inside prevent a white number being pushed up or a red one downwards. The machine blocks automatically and the stylo cannot reach its terminal point. At the same time, an arrow appears at the upper window. In this case, leave the stylo inserted in the hole and move it in the direction of the arrow to the opposite end of the machine in order to record a correct reading. The same applies when a red hole is pushed down instead of upwards.

Appendix:

If you have omitted to remove the red arrow sign which has appeared during your calculations, the machine will still add up correctly. The symbol disappears again during further operation, or a correction blocking takes place at the upper curve of the slide, which prevents the stylo reaching the upper terminal point. This blocking is released and the correct reading attained by drawing from No. '1' of the next column to the left (this is the only case where you do not start from '0') and push up all the way around the bend to the terminal point.

40,98
 + 0,07
 + 0,06

 41,11

When adding, the arrow signal will appear when the number '7' is drawn. If you omit to rectify this, the stylo will be held fast by the correction block, when trying to add the '6'. The correction block is released by placing the stylo into No. '1' in the second column from the right and pushing up around the bend to the upper terminal point.