

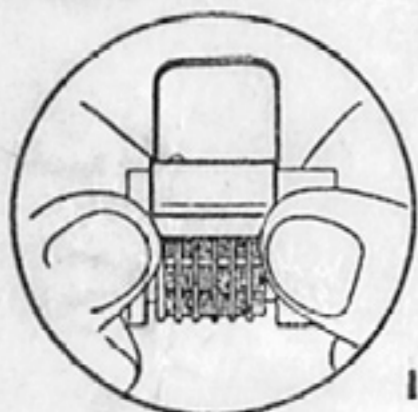
The MORAC

Regd. Trade Mark

A
CEFMOR-BREHMER
PRODUCT

TYPE HIGH NUMBERING MACHINE INSTRUCTIONS

FOR CONVERSION OF NUMBERING MACHINES FROM BACKWARD TO FORWARD MOVEMENT
AND VICE VERSA



WARNING. Do not attempt any wheel changing without using the pawl arresting clip (Part No. 11), Auxiliary Shaft (Part No. 6) and Ejector Shaft (Part No. 10). Take care that noughts which are sinkable are turned away from the printing plane.

OPERATION OF CONVERSION

Hold the machine upside down placing the curled edge of the pawl arresting clip against the bases of the retaining pawls and with the thumbs press into position. By so doing the bases of the retaining pawls are depressed whilst the tops are lifted clear of the wheels, at the same time the clip grips firmly the bottom of the machine, see figure 1.

It is now necessary to hold in position the actuating pawl. Push the small catch on top of the clip round so that its top connects and slides over the comb locking it securely, see figure 2. Release Plunger.

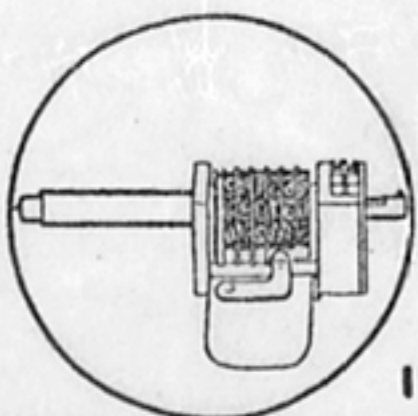
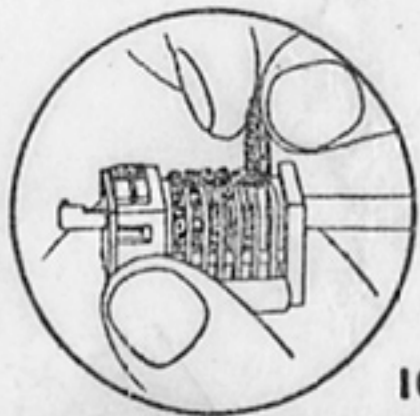
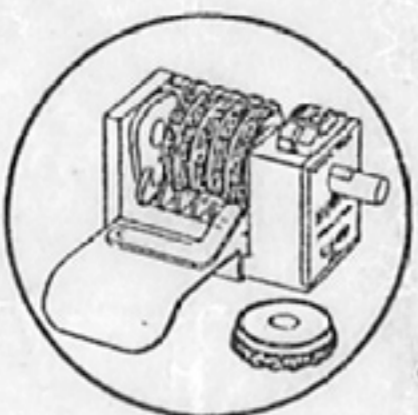
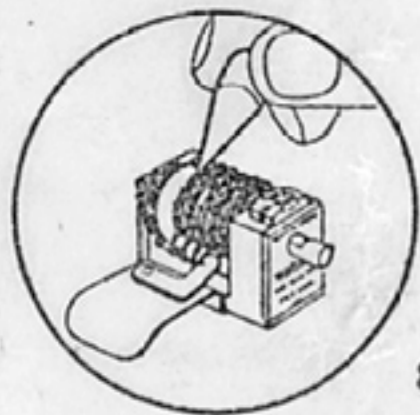
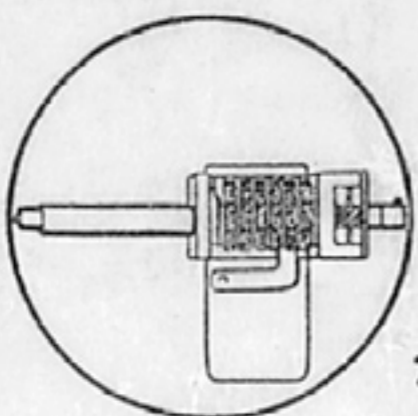
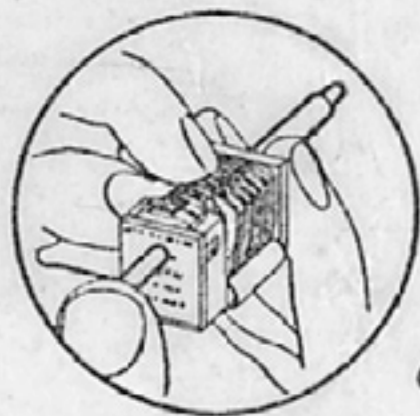
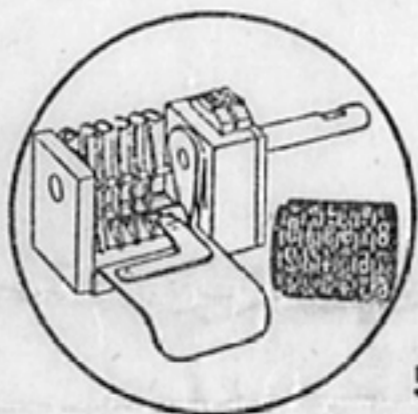
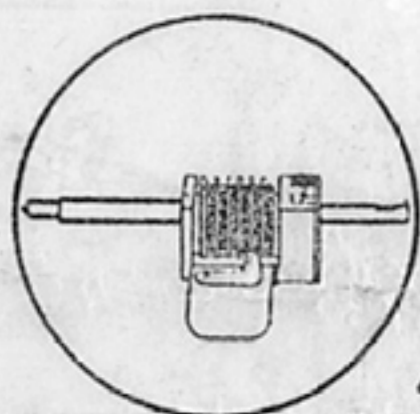
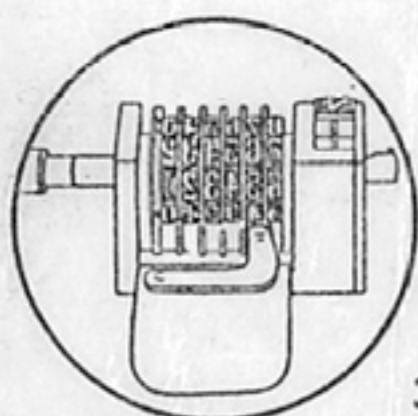
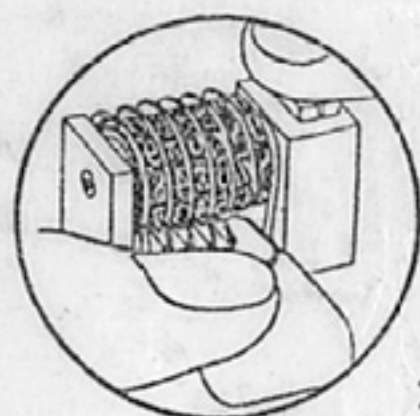
The machine is now quite ready for the next operation preparatory to the removal of the wheels. Take the small auxiliary shaft, part No. 6, and insert it into the end of the machine at the main shaft hole (not the plunger end) and push out the main shaft a short distance. Using the shorter end of the Ejector Shaft, part No. 10, push home the auxiliary shaft until the flange on the ejector finishes flush against the end wall, see figures 3 and 4. The main shaft is now almost completely ejected.

The wheels are now ready for removal from the machine. To do this withdraw shaft ejector and slightly relieve the main shaft, $1/32$ " is sufficient, when the wheels can be lifted clear from the machine with the fingers, see figure 5.

The machine is now ready for the change wheels; these wheels, which should also be mounted on an auxiliary shaft, are then placed into position in the machine taking care that the unit wheel is at the end farthest away from the plunger. Re-insert shaft ejector, oscillate wheels gently with the forefinger of one hand whilst with the finger of the other hand ensure that the pip on the end of the shaft ejector has connected with the corresponding depression in the auxiliary shaft, whilst the main shaft which has been relieved slightly, connects on the opposite end.

Having placed the wheels in position it is now necessary to eject the small auxiliary shaft. Holding the machine in the right hand, grip the shaft ejector between the forefinger and middle finger whilst the ball of the thumb is placed to the end of the main shaft, the thumb and forefinger of the left hand holding the wheels steady, see figure 6. Pressure is now applied by the thumb of the right hand to the end of the main shaft which re-enters the machine simultaneously ejecting the auxiliary shaft. The main shaft is now back in its original position.

Depress the plunger, swing the catch away from the actuating pawl, release plunger, remove the clip, give the wheels a preliminary turn with the thumb to ensure that they are turning freely and that the retaining pawls are connecting properly, and the machine is ready for use again.



INSTRUCTIONS WHEN USING SKIP OR REPEAT WHEELS

Press into position the pawl arresting clip in exactly the same manner as described for the conversion of the machine from forwards to backwards, see first paragraph and figure 1.

The longer end of the shaft ejector is inserted into the shaft hole at the end of the machine furthest away from the plunger and pushed home until the flange of the ejector finishes flush against the wall of the machine. This ejects the main shaft for a certain distance, see figure 7.

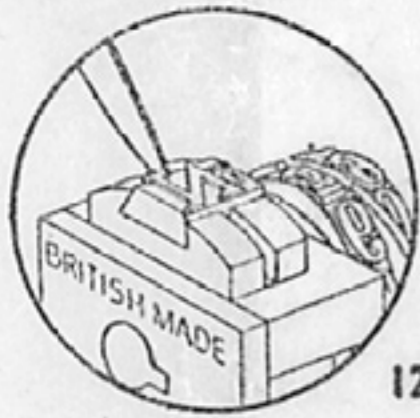
Remove the shaft ejector and the unit wheel is left loose. With the plastic peg, part No. 24, the wheel can be dislodged as shown in figure 8 and lifted out of its position, see figure 9.

To insert the repeat or skip wheel hold the machine in the left hand and slip the wheel into the space left by the removal of the unit wheel making sure that the ratchet is in alignment with the retaining pawl, see figure 10, centralis-

ing it by inserting the longer end of the shaft ejector into the shaft hole, see figure 11.

With the thumb press back the main shaft into its original position, depress the plunger and slip back catch, release plunger, remove arresting pawl clip, give the wheels a preliminary turn with the thumb to ensure that they are turning correctly and the machine is ready for use.

The Morac can be used to print with 2, 3, 4, 5 or 6 wheels always using the characters adjacent to the No. slide. This operation is accomplished by substituting a Blank Unit wheel, part No. 29, for the normal unit wheel, also substituting a Blank 2nd to 6th wheel for the 2nd, 3rd or 4th normal wheel as the case may be. The wheels may be exchanged by using the same method as given for skip and repeat wheels above.



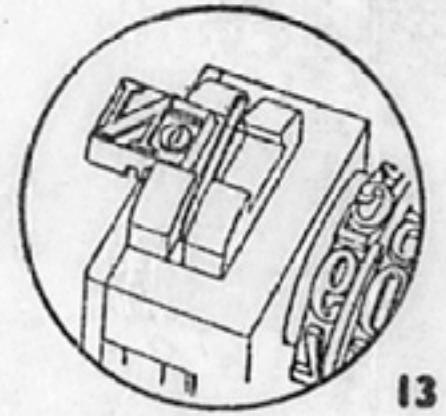
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INSTRUCTIONS FOR REMOVAL OF No. SLIDE IN ORDER TO SUBSTITUTE A DIFFERENT PREFIX SLIDE

To remove the slide depress the locking spring with the point of a pocket knife, see figure 12.

The slide is now released and can be slid off the plunger, see figure 13.

To replace, depress spring as above and slip the slide back into position.



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Skip wheels for use in "Morac" Type High Numbering Machines can be supplied to print skipping 2, 3, 4, 5, 6, 7, 8, 9, or 10.

SIZE AND STYLE OF FIGURES— **N^o 123456**

CLEANING AND OILING

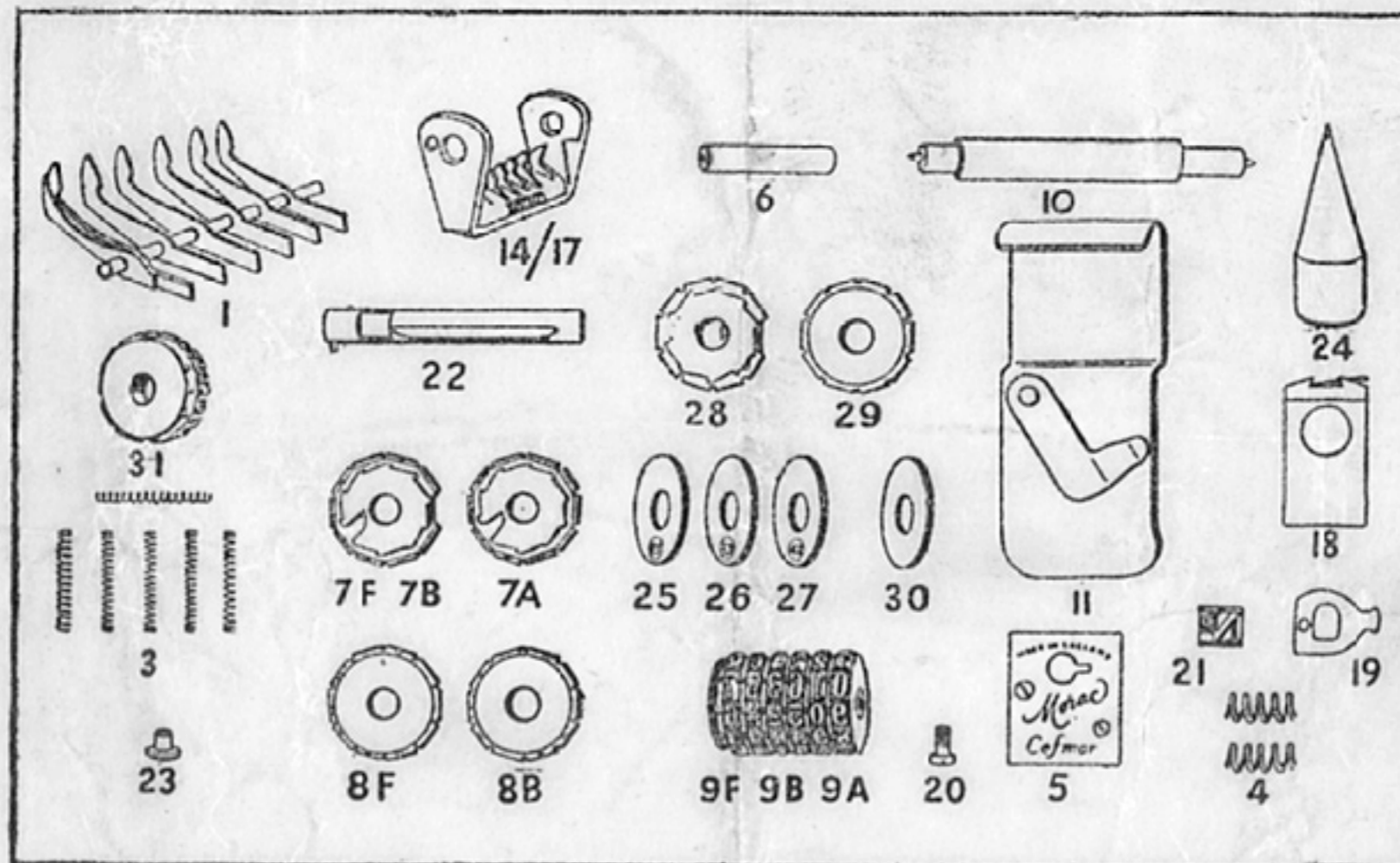
When necessary the "Morac" Numbering Machine should be cleaned by immersing it in a small bath of "Cefmor" Solvent; while in the solvent the plunger should be depressed and the wheels revolved several times to ensure the liquid reaches all parts of the machine. Provided the solvent is passed through a fine gauge mesh or blotting paper it can be used a number of times.

To oil the "Morac" Numbering Machine immerse it in a bath containing Microtime Oil Type H; the plunger should be depressed a few times and the machine left to drain. When all surplus oil has drained away wipe the faces of the number wheels with a smooth cloth on the finger, being careful not to catch the cloth on any of the pawls.

Microtime Oil can be supplied in the British Isles by CEFMOR-BREHMER Ltd. Overseas users can obtain from British Industrial Products in their country.

SPARE PARTS LIST

- 1 Set of Retaining Pawls complete with retaining pawl shaft
- 3 Set of retaining Pawl Springs
- 4 Set of two Plunger springs
- 5 End Plate
- 6 Auxiliary Shaft
- 7f Forward 2nd to 6th wheels with sinkable noughts
- 7b Backward 2nd to 6th wheels with sinkable noughts
- 7a Backward 2nd to 6th wheels with fixed noughts
- 8f Forward unit wheel
- 8b Backward unit wheel
- 9f Set of wheels with sinkable noughts, forward, with Auxiliary shaft.
- 9b Ditto, backward
- 9a Ditto, backward, with fixed noughts
- 10 Shaft ejector
- 11 Pawl arresting clip
- 14/17 Actuating pawl assembly



- 18 Plunger
- 19 Rocker arm
- 20 End or base plate screw
- 21 "No" slide
- 21a "No" slide spring
- 22 Main shaft
- 23 Brass end to retaining pawl spring
- 24 Plastic peg
- 25 Duplicate repeat wheel
- 26 Triplicate ditto
- 27 Quadruplicate ditto
- 28 Blank 2nd to 6th wheel for 2, 3, 4, or 5 figure numbering (in conjunction with one wheel, part No. 29)
- 29 Blank Unit wheel for 2, 3, 4 or 5 figure numbering (in conjunction with either 1, 2 or 3 wheels, part No. 28)
- 30 Continuous repeat wheel
- 31 Skip wheel. Please state skipping required when ordering
- 32 Repeat 10 wheel

See over for skipping instructions

SKIP WHEELS FOR USE IN "MORAC" NUMBERING MACHINES SUPPLIED IN SETS
(When ordering state whether for backward or forward numbering)

Unit wheels are numbered as follows for forward numbering:-

Machines	To Print Skipping 2		To Print Skipping 3			To Print Skipping 4				To Print Skipping 5				
	1	2	1	2	3	1	2	3	4	1	2	3	4	5
1	1	2	1	2	3	1	2	3	4	1	2	3	4	5
3	3	4	4	5	6	5	6	7	8	6	7	8	9	0
5	5	6	7	8	9	9	0	1	2	1	2	3	4	5
7	7	8	0	1	2	3	4	5	6	6	7	8	9	0
9	9	0	3	4	5	7	8	9	0	1	2	3	4	5
1	1	2	6	7	8	1	2	3	4	6	7	8	9	0
3	3	4	9	0	1	5	6	7	8	1	2	3	4	5
5	5	6	2	3	4	9	0	1	2	6	7	8	9	0
7	7	8	5	6	7	3	4	5	6	1	2	3	4	5
9	9	0	8	9	0	7	8	9	0	6	7	8	9	0

For backward numbering the above numbers are inverted

Unit wheels are numbered as follows for forward numbering:-

Machines	To Print Skipping 6						To Print Skipping 7							To Print Skipping 8								To Print Skipping 9								
	1	2	3	4	5	6	1	2	3	4	5	6	7	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	9
1	1	2	3	4	5	6	1	2	3	4	5	6	7	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	9
7	7	8	9	0	1	2	8	9	0	1	2	3	4	9	0	1	2	3	4	5	6	0	1	2	3	4	5	6	7	8
3	3	4	5	6	7	8	5	6	7	8	9	0	1	7	8	9	0	1	2	3	4	9	0	1	2	3	4	5	6	7
9	9	0	1	2	3	4	2	3	4	5	6	7	8	5	6	7	8	9	0	1	2	8	9	0	1	2	3	4	5	6
5	5	6	7	8	9	0	9	0	1	2	3	4	5	3	4	5	6	7	8	9	0	7	8	9	0	1	2	3	4	5
1	1	2	3	4	5	6	6	7	8	9	0	1	2	1	2	3	4	5	6	7	8	6	7	8	9	0	1	2	3	4
7	7	8	9	0	1	2	3	4	5	6	7	8	9	9	0	1	2	3	4	5	6	5	6	7	8	9	0	1	2	3
3	3	4	5	6	7	8	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	4	5	6	7	8	9	0	1	2
9	9	0	1	2	3	4	7	8	9	0	1	2	3	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
5	5	6	7	8	9	0	4	5	6	7	8	9	0	3	4	5	6	7	8	9	0	2	3	4	5	6	7	8	9	0

For backward numbering the above numbers are inverted

To Print Skipping 10

The wheels are supplied in a series 0-9. Each wheel of the set having one number only and designed to remain stationary in the machine. The 10s wheel revolves as unit wheel with machines printing as follows :-

Machines	1	2	3	4	5	6	7	8	9	10
	0	1	2	3	4	5	6	7	8	9
	10	11	12	13	14	15	16	17	18	19
	20	21	22	23	24	25	26	27	28	29

Skip 10 wheels are universal for both backward and forward numbering

